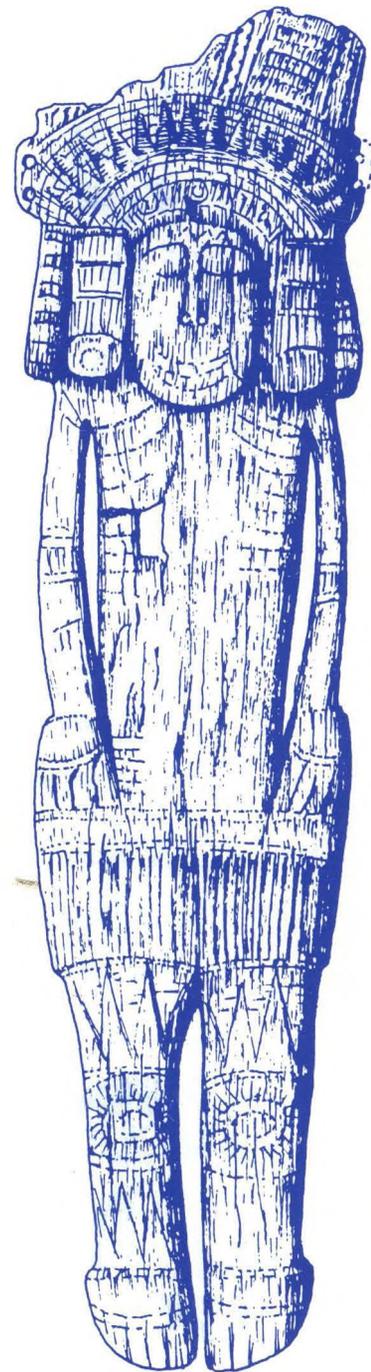
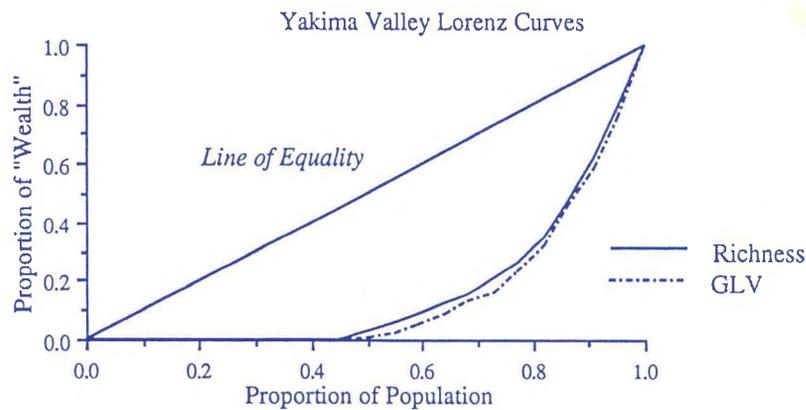
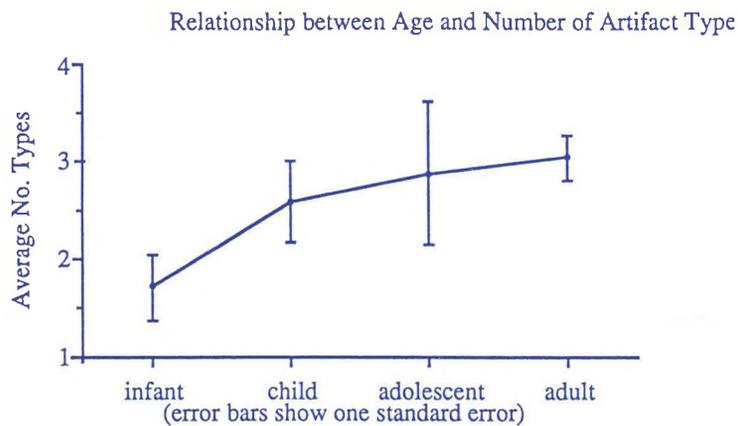
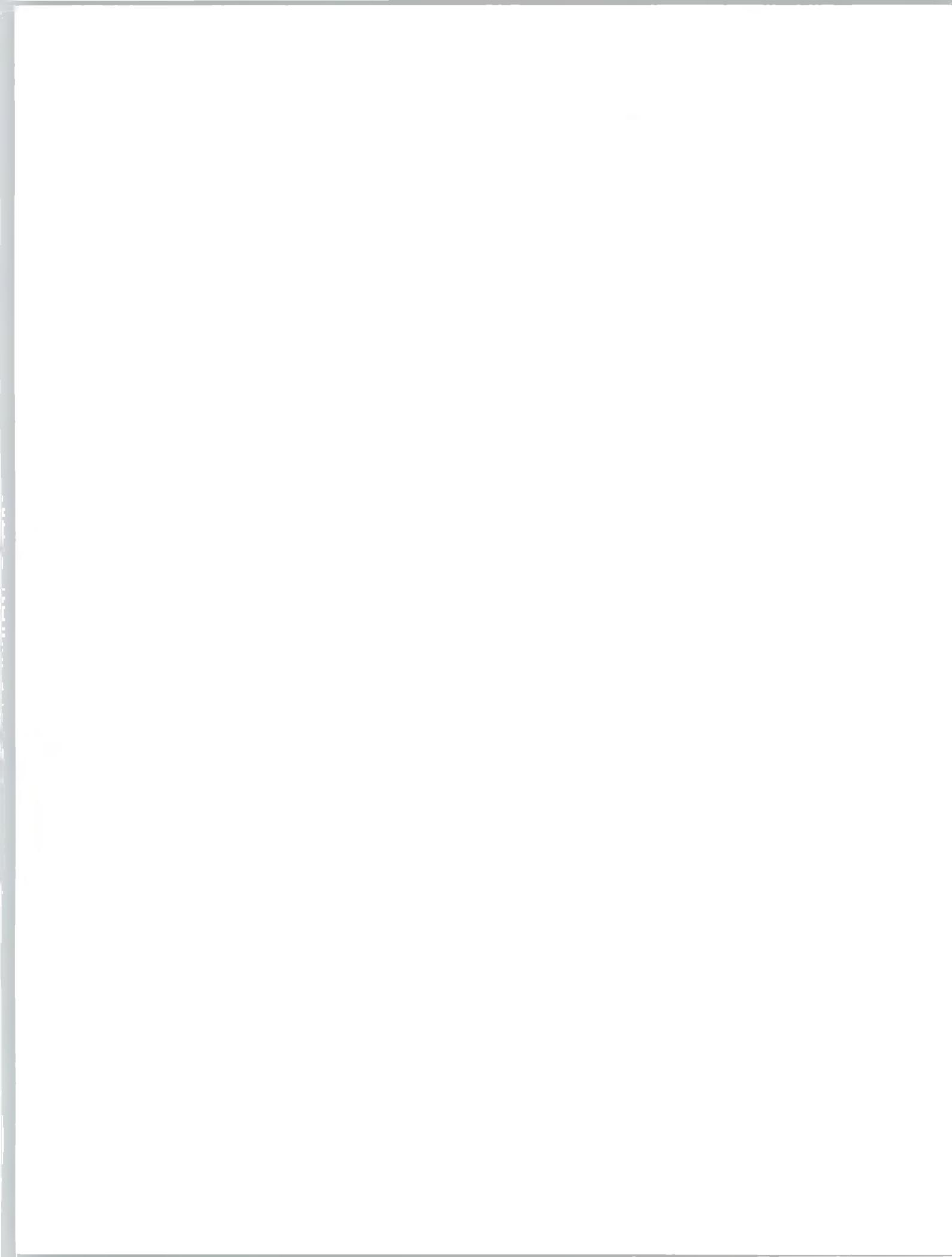


Mortuary Variability and Status Differentiation on the Columbia-Fraser Plateau



Rick J. Schulting

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Burnaby, B.C.



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Plateau**

by

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**Archaeology Press
Simon Fraser University
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V5A 1S6**

1995

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Canadian Cataloguing in Publication Data

Main entry under title:

Mortuary Variability and Status Differentiation on the Columbia-Fraser Plateau

ISBN 0-86491-150-5

1. Indians of North America - Northwest North
America - Burial Practices. I. Schulting, Rick J. 1964-
II. Simon Fraser University.
Department of Archaeology Publication No. 21.

Printed and bound in Canada.

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Acknowledgments

This work is in essence my Master's thesis. A few minor modifications have been made. It could not have been completed without the generous assistance of numerous individuals. Foremost among these is my senior supervisor, Dr. Brian Hayden, whose ideas I have always found challenging. The other members of my committee, Drs. Jack Nance, Mark Skinner, and Roderick Sprague, were also invaluable, and their comments are much appreciated. Dr. Sprague in addition provided me with unpublished data that would otherwise have been unavailable. I wish to thank Dr. Roy Carlson, Director of Archaeology Press, for his editorial services, as well as for the use of his personal library. I would especially like to thank a number of museum personnel for their help in facilitating access to the collections and documentation of their respective institutions; these include: Jaymie Brauer of the American Museum of Natural History, Julie Stein of the Burke Museum, Betty Long of the Maryhill Museum, Robert Pammatt of the Canadian Museum of Civilization, Randy Manuel of the Penticton Museum, Dan Bruce of the Kelowna Centennial Museum, Lynn Duckworth of the Kamloops Museum, Joyce Johnson of the Department of Anthropology at the University of British Columbia, Barbara Winter of the Museum of Archaeology and Ethnology at Simon Fraser University, and Dan Savard and Nancy Romaine of the B.C. Provincial Museum. I am very grateful to all of these individuals for the assistance that I received.

I would like to thank Simon Fraser University for the financial support I received during my M.A. programme, without which it would not have been possible to complete this work. I owe a debt of gratitude to my parents for their unending support. Thanks to Natalie Munro, Hartley Odwak, and Greg Richmond for their support, and for putting up with sections of this work that I occasionally inflicted on them in its guise as my thesis. Finally, I would like to acknowledge and thank Joanna Ostapkowicz for her encouragement and confidence in my work.

CHAPTER 1

INTRODUCTION

Native burial practices in the Plateau culture area have been the focus of a number of studies (for example, Sprague 1959, 1967; Sanger 1968a; Rodeffer 1973; Sarbescue 1955). These studies have dealt primarily with culture-historical problems of regional and temporal variation. Such research is essential as a first step in dealing with a complex phenomenon, but there are factors other than space and time which contribute to the observed variation in burial practices. It is clear that there is great variation in the amount and types of grave inclusions contained in Plateau burials. This variation is especially pronounced in the protohistoric and early historic periods, but can be traced back at least into the late prehistoric. Socioeconomic status differentiation has been invoked to help account for some of this variation (e.g. Sanger 1968a), but only in a rather cursory fashion. The emphasis in the culture-historical approach has been on those data which are most appropriate for this end, especially the presence of Euroamerican grave goods and the form, position, and orientation of burials. A second result of this approach is that intra-assemblage variability has tended to be downplayed in the interests of characterising a group of burials as a whole in order to fit it into a time period. A further limitation of previous research is that, while changes in burial assemblages have been noted between the late prehistoric, protohistoric, and historic periods, and have been useful in distinguishing these periods, little effort has gone into explaining the social changes underlying the observed differences.

The goal of the present work is to explore variability in Plateau mortuary assemblages, with an emphasis on that portion of the variability which can be related to socioeconomic status differentiation. By necessity the research focuses on the differential distribution of grave inclusions. Particular attention is given to discovering differences in mortuary structure between different regions of the Plateau, and between the middle prehistoric (approximately 4000-2000 B.P.), the late prehistoric (approximately 2000-200 B.P.), and the protohistoric period. Historic period documentation suggests that certain areas of the Plateau were characterised by more complex social organisation than others. These can seemingly be related to especially productive fishing locales, which presumably allowed the creation of greater surpluses to fuel economic competition. The formal testing of this hypothesis linking mortuary variability, social complexity, and resource richness is not a component of this work, although it is with such eventual goals in mind that the research is undertaken. Since there is essentially no framework upon which to build, much of the work will be exploratory. In terms of Gibbon's (1984) classification of research strategies, this work can best be described as an exploratory investigation in which archaeological data are examined and patterns sought. Hypotheses are more likely to be generated than tested in an approach of this kind.

The importance of this research involves a number of different issues. Ray (1939), based on his ethnographic work with the Sanpoil and Nespelem, has argued that the pristine Plateau social system was strongly egalitarian. Much of the emphasis on Plateau societies as egalitarian has probably resulted from the strong contrast these societies presented during the historic period to those of the neighbouring Northwest Coast, in which social complexity was of an high order. Whatever its origin, this outlook was accepted for many years. Recently there has been a shift in emphasis to examining social differentiation, whatever its degree, *within* Plateau societies. In 1973, Stryd suggested that the existing evidence was not compatible with the degree of egalitarianism normally attributed to Plateau societies ethnographically. At this point the question arose as to whether more complex societies existed on the Plateau in the past (i.e. in pre-ethnographic times). Some support for such an idea exists in the form of very large pithouse villages with bimodal house-size distributions in the Mid-Fraser Canyon area (Hayden 1990a; Hayden *et al.* 1985) and in the Middle Columbia area (Osborne 1951; Schalk 1983); these villages seem to have been abandoned long before European contact. The analysis of mortuary data can be used to explore the degree of status differentiation present at various times and in various regions on the Plateau, and can thus address

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the question of whether more differentiated social systems existed in the past than were known on the Plateau in the ethnographic period.

Changes in social organisation are widely held to have occurred on the Plateau during the protohistoric period, in response to the influx of new wealth, the horse and later the gun, and shifting trade relationships (cf. Stapp 1984). The more detailed question of how European trade goods were incorporated into the native value system and their relationship to the proposed social changes is a topic of interest on the Plateau that is only starting to receive attention. Burial data are arguably the single most useful form of evidence in dealing with such questions. The present study attempts to document changes in mortuary behaviour occurring at this important juncture and examine what changes occurred within different regions between the late prehistoric and protohistoric periods in terms of how material culture functioned in the social system and in its ability to differentiate status. Related to this goal is an examination of the distribution of age/sex classes against the distribution of grave inclusions in order to bring out any indications of a shift to greater emphasis on ascribed as opposed to achieved status, or vice versa.

The present work also investigates some more basic research questions. The primary referents of mortuary behaviour are age and sex. Little research on differences in the mortuary treatment of age/sex classes has been undertaken using archaeological data on the Plateau. The relative status positions of men and women has recently become an area of active interest in archaeology (e.g. Erhenberg 1989; Gero and Conkey 1991). Ackerman (1982, 1992) has suggested that, ethnographically, women enjoyed relatively high status on the Plateau, in some cases and in some spheres equal to that of men. Burial data, used with caution, offer one of the best means of testing this hypothesis (cf. Hayden 1992a). Age and sex associations of artifact classes found as grave inclusions are also of great interest. Grave inclusions, together with ethnographic data and "common sense", are sometimes used to infer the sex of burials on the Plateau, either in the absence of skeletal evidence (whether through poor preservation or an indeterminate result), or in spite of it. This situation, while not prevalent, is unacceptable, particularly in the absence of any quantitative studies using archaeological data.

The data needed for this study are scattered in various sources, many of which are unpublished, and are of varying quality. Thus, the same methods of analysis cannot be applied to all of the material. I therefore present relatively detailed analysis for some sites while for others I can give little more than a subjective impression of the data. While data from burial sites on both the Columbia and the Canadian Plateaus will be utilised, the database from the latter is unfortunately far smaller, and little in the way of quantitative analysis may be attempted at this point. Any apparent trends will simply be discussed and compared to the patterns seen in the larger samples of the Columbia Plateau. But the inclusion of data from both areas is not solely due to sample size problems. The boundary is, after all, to a large extent artificial, and the Plateau as a whole presents a coherent culture area, a fact often neglected in more recent syntheses. This work should, then, be regarded as a preliminary effort to bring some of this information together and begin to suggest patterns and questions which may be addressed in future work.

The Plateau

The Plateau culture area as originally defined by Wissler (1922) and Kroeber (1939) encompasses a well-defined natural geographical area, bounded to the east by the Rocky Mountains and to the west by the Coast Range in British Columbia, and by the Cascades in Washington. The southern boundary is marked by a gradual shift into the Great Basin with its desert adaptations. The precise northern boundary is equally arbitrary, with both Plateau physical and cultural characteristics grading slowly into the Subarctic culture area. With the exception of this northern boundary, there is fair agreement between the physical and cultural boundaries. Adaptations to the west of the Rockies are distinctly different from those to the east. For the most part this can be attributed to the presence and importance of salmon in the west as opposed to bison in the east. This distinction becomes progressively blurred on the eastern Columbia Plateau as well as in the Kutenai area of southeastern British Columbia in the protohistoric and historic periods, as the horse enabled parties to efficiently make the journey across the Rockies to hunt bison and return with dried meat and other commodities. As might be expected, the western boundary is also somewhat vague, since both Plateau and Northwest Coast cultures relied heavily on salmon and so share certain traits. Nevertheless, distinct linguistic as well as other cultural differences mark the coast/interior division.

Mortuary Studies on the Plateau

Sprague's *Aboriginal Burial Practices in the Plateau Region of North America* (1967) remains the most thorough analysis of Plateau burial patterns considered from a culture-historical perspective (though

see also Sprague 1959; Rodeffer 1973; Sanger 1968a). Emphasising data from the Lower Snake region in particular, Sprague proposed a Plateau-wide pattern based on three periods. Late prehistoric burials are found flexed on the side and interred in simple pits or in talus slopes. This is followed by a brief period, corresponding to the protohistoric, of extreme trait variability including the use of cairns, burning over graves, and wooden cists, all accompanying a flexed body. Finally, historic burials are characterised by bodies extended on the back in rough coffin-like boxes. The occurrence of grave inclusions is seen as increasing steadily through these three periods. These are only broad patterns, and there remains of course considerable variability, both temporally and regionally. Considerable overlap in burial practices has also been recognised, but since the main goal has been the construction of these general sequences, such overlaps have generally been dealt with only very superficially. There is certainly the potential for the occurrence of different burial regimes within an area at one time to provide information on social organisation. It has been suggested, for example, that those groups active in nativistic movements rejected the Christian-derived extended coffin burials of the historic period and continued to bury their dead in more traditional ways (Sprague 1967). It should also be recognised that different segments within society may have accepted Christianity quite early, either as a status symbol, or, more pragmatically, to help facilitate trading relations with whites (these two possibilities are not mutually exclusive). Again, such considerations are largely beyond the scope of this paper, but need to be mentioned if only to suggest the complexities involved.

The burial classification proposed by Sprague (1967), though originating mainly from data collected in the Lower Snake area, is intended to be applicable on a Plateau-wide scale. A number of important regional variants are, however, recognised. Cremation, for example, has long been a topic of interest and debate. Evidence for the practice is widespread in the Plateau, and it was certainly known prehistorically from the Lower and Middle Columbia, especially in The Dalles (W. Strong *et al.* 1930; Butler 1957, 1959, 1962, 1965; Garth 1952; E. Strong 1959a, 1960a), Yakima (Smith 1910), Lower Snake (Combes 1968), Okanagan (Atkinson 1952; Caldwell 1954a, b; Chatters 1986), and Kamloops areas (Smith 1900; Richards and Rousseau 1987). A host of other alternative burial practices can also be found both archaeologically and ethnographically, including canoe burial, basket burial among the Lillooet, volcanic ash dome burial among the Yakima, cave burial, and so on. These will be discussed in more detail, when warranted, on a region by region basis.

Unfortunately there is little information on the significance of these different burial forms. As we have seen, Sprague (1959, 1967) and Rodeffer (1973) suggest that much of the variation is temporal and spatial in nature, and indeed this is undoubtedly the case. Still, both researchers recognise that within any one region and at one point in time, there almost always seem to have been alternative disposal methods (see also Daugherty and Dammel 1952). An attempt to relate these to socioeconomic status on the basis of the ethnographic information offers some, though rather limited, insight. For example, Curtis (1911a:99) states that, among the Wishram of The Dalles, slaves were deposited along the edges of talus slopes. Poor people lacking wealthy relatives were not buried at all among the Thompson and Shuswap, but were left exposed or covered with brush (Teit 1900, 1909). Teit (in Sprague 1967) notes that it was the wealthy who were occasionally cremated among the Athapaskan-speaking Chilcoltin. Such references are very limited in the literature, and require corroboration when they do occur. Data from excavated burials can provide a better means of determining whether, within different regions, certain burial types are more often associated with richer graves in terms of artifact inclusions. Any such analysis clearly must also take into account the temporal trends noted by Sprague, Rodeffer, and others.

The ethnographies are of even less use when it comes to discovering whether any differential burial treatment existed based on age and/or sex. Ray (1932) states that, among the Sanpoil-Nespelem, children were accorded the same treatment at death as adults. In his culture element distribution, Ray (1939) notes the practice of basket burial among the Lillooet (see also, Teit 1906) and the Carrier; in both cases this practice was reserved for infants and small children. This was a prevalent practice among the Coast Salish as well (Barnett 1955; Yarrow 1881).

For the most part there has been little attempt to deal with mortuary variability on the Plateau from the perspective of socioeconomic status differentiation. Occasionally basic observations are made on the treatment of age/sex classes, particularly if there are any obvious differences, which is rarely the case. There are a few examples of more in-depth analysis of mortuary remains. Pullen (1970) has provided one of the few statistical analyses of an historic Plateau burial site, the Palus site (45-FR-36B), originally excavated and reported by Sprague (1967). The analysis focused on the distribution of glass trade beads, but again the emphasis was primarily on chronology, although wealth and age distinctions were also

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addressed. The results indicated that the Palus "... likely did not have an equal wealth distribution" (Pullen 1970:74), and that adults on average had more beads than infants and children. Dumond and Minor (1983) used chi-square to examine the relationship between grave inclusions and age/sex classes at Wildcat Canyon (35-GM-9). A discussion of their results is presented in Chapter 6. As part of an analysis of prehistoric fishing, Johnston (1987) presents a brief summary and discussion of sex differentiation in the occurrence of fishing gear in burials on the Columbia Plateau. None of the above examples approach the scope of the study attempted here.

Organisation of Chapters

Mortuary analysis has generated much ongoing debate in archaeology, and has cultivated a strong connection between theory and method. The degree of background information and explanation that is necessary depends to a large extent on the theoretical perspective with which one approaches the topic. To those who agree with the approach used here, little explanation of its rationale is needed, while others may question every step. Chapter 2 briefly discusses the history of recent mortuary analysis from a theoretical point of view, identifying the major points forwarded by those advocating different positions. Out of this discussion emerges the theoretical position taken in the present work. Chapter 3 deals with the design of data collection, the variables to be used, and the methods of analysis to be employed.

Chapter 4 begins by outlining the theoretical rationale behind the differential attribution of value to artifact types by the archaeologist. It then goes on to list some of the various items most commonly found as grave inclusions on the Plateau, and discusses them in terms of their potential association with wealth and prestige. The limited available ethnographic information relating to the value of artifact classes is also summarised, thus combining both etic and emic approaches in the study of value (cf. Hayden 1984).

Chapter 5 presents a detailed summary and discussion of ethnohistoric and ethnographic accounts of the various Plateau ethnolinguistic groups inhabiting the study area. Because the protohistoric is one of the periods of interest in this study, ethnohistoric and ethnographic accounts are invaluable, and are drawn upon extensively, both in a general Plateau-wide sense and when discussing specific groups. For each group a number of key components are addressed, including sociopolitical organisation, socioeconomic structure, ownership of resources, and burial practices. In all cases the emphasis is on those aspects of the society that inform on, or have the potential to inform on, socioeconomic inequality. The interplay between these sources of data and the archaeological record is expected to be far more informative than either could be alone. Thus the use of ethnography will basically be threefold: 1) to gain insight into the assigned relative value of various artifact classes, as well as any emic perceptions relating to spiritual significance, age and gender specificity, and so on, 2) to provide an independent measure of social complexity or socioeconomic differentiation, and "social distances" in various Plateau groups, and 3) to document the range of burial practices recorded for different Plateau groups.

Chapter 6 describes the mortuary site assemblages forming the basis of this work. Where the data are appropriate (in terms of a sufficient number of undisturbed burials with recorded grave associations), a series of detailed quantitative questions concerning each assemblage are posed. These include: 1) are subadults underrepresented beyond what could reasonably be expected given preservational biases? 2) are males and females equally represented? 3) are specific artifact classes associated with any particular age/sex group? 4) is the diversity of grave inclusions equally distributed among age/sex groups? 5) does the spatial organisation of burials over the site indicate any relationship with socioeconomic status? and 6) if alternative, roughly contemporaneous forms of burial are present at the same site, can they be distinguished in terms of age/sex structure and/or number and kind of grave inclusions?

Chapter 7 is concerned with achieving a broader perspective on the structure of mortuary variability over the Plateau as a whole. To this end, all of the burials from sites used in the quantitative analysis, in addition to a few others, are pooled for analysis. This obviates the problems with small sample size that consistently hamper an investigation of differentiation along the dimensions of age and sex at the level of the individual burial site/assemblage. The chapter also presents the use of the Lorenz curve and Gini index to compare the degree of inequality observed in the distribution of artifact types in the various assemblages. Gini indices, together with more qualitative data, are used to investigate the development of socioeconomic inequality on the Plateau, and additional lines of evidence are brought to bear. Finally, discussion turns to an examination of the patterning observed and an attempt to interpret it.

Chapter 8 summarises the results and presents a series of proposals for future research into mortuary behaviour and socioeconomic status inequality on the Plateau.

THEORETICAL BACKGROUND

Mortuary analysis has provided some of the most fertile ground for theoretical debate in archaeology. Despite this, O'Shea (1984:xi) has stated that no coherent archaeological theory of mortuary differentiation has emerged. Nevertheless, the potential inherent in the analysis of mortuary remains is great: human burials are one of the few cases in which the archaeologist is directly confronted with the purposive behaviour of past peoples. Furthermore, the variability expressed represents some of the most concentrated data available in the discipline, with information on demography, paleopathology, nutrition, environmental stress, material culture, trade, ritual, ideology, and social organisation.

There exist two main trends in mortuary analysis and interpretation. The first of these may be identified with the processualist position. The second approach to mortuary analysis is more eclectic. It may be loosely identified with the post-processualist position in current theoretical debate. Both processualists and post-processualists agree that mortuary remains provide one of the most productive sources for inferences about past social systems (Bartel 1982; Binford 1971; Bradley 1984; Chapman and Randsborg 1981; Morris 1987; O'Shea 1984; Pader 1982; Parker Pearson 1984; Renfrew and Shennan 1982; Saxe 1970, 1971; Tainter 1975, 1978). The departure comes in how the data are to be interpreted and what questions are taken to be of the greatest interest.

Renewed interest in mortuary studies, at least in North American archaeology, can be traced directly to the so-called New Archaeology. Seminal works by Binford (1971) and Saxe (1970, 1971) have been particularly influential in most if not all subsequent studies of mortuary analysis and can be viewed as having defined its basic theoretical underpinnings.

The basis for both Binford's and Saxe's approach is found in Goodenough's (1965) discussion of social role theory, incorporating the concepts of *social identity* and *social persona*. Social identity is roughly equivalent to a social position (such as father, hunter, shaman), while social persona refers to the composite of social identities which are relevant in any given social interaction. Briefly, the processual approach holds that social position in life is more or less isomorphically related to the treatment received upon death (Binford 1971; O'Shea 1984; Saxe 1970, 1971). Mortuary behaviour is neither static nor does it change as "fashion" dictates (*contra* Kroeber 1927), if by fashion we mean something whimsical and removed from the structure of a society. Direct positive correlations are expected between the rank held by the deceased and the number of persons having duty-status relationships with the deceased (Binford 1971), which in turn determines to a large extent the nature and degree of societal involvement in the mortuary ritual.

O'Shea's (1984) *Mortuary Variability: An Archaeological Investigation* offers one of the best and most detailed discussions, combined with a case study, of the processualist programme. O'Shea (1984:10) writes: "... it is reasoned that patterning in the variability of mortuary remains will reflect a consciously selected set of distinctions that will be congruent with the social positions held by the deceased in life". This is reiterated more formally in three important principles (O'Shea 1984:21): 1) mortuary differentiation is patterned, and its elements are integrated with other aspects of the sociocultural system, 2) mortuary differentiation, though not necessarily isomorphic, is consistent with social position in life, and 3) complexity of mortuary differentiation will increase with complexity of society at large. It is this last proposition that Binford (1971) tested with a random sample of 42 ethnographic societies drawn from the Human Relations Area Files. Societal complexity, however, was approximated by subsistence strategy (hunter-gatherer, pastoralist, shifting agriculturalist, and sedentary agriculturalist), which introduced the confounding variable of sedentism (cf. O'Shea 1984). Nevertheless, most researchers have pointed to Binford's study as providing strong support for the proposition that mortuary complexity increases with social complexity, and this position is accepted in principle here.

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Various refinements have been made on this approach since its inception in the early 1970's. The majority of these, however, have involved the development and elaboration of techniques of analysis designed to quantify the variability observed in mortuary assemblages in a way that extracts the most and the most reliable information on past social organisation (cf. O'Shea 1984).

More general to the processualist programme, there is an emphasis on generating valid cross-cultural generalisations as an essential step in scientific explanation. O'Shea (1984:47) states: "... the success of the analysis is related directly to the specificity of the generated expectations and their suitability for testing with archaeological evidence". The validity of cross-cultural generalisations is another major point on which those espousing post-processualist views strongly differ (Hodder 1986, 1984, 1982). Such "tests" are seen by them as very misleading, as they fail to take into account the historically contingent nature of culture.

Goodenough's ideas on social roles, and by implication their use by researchers such as Saxe and Binford, have been criticised by, among others, Pader (1982), who suggests that people do not always abide by the "rules", as is assumed by the models. Roles in this context are only models, and have an associated range of variability. Any model is only an approximate framework within which to begin work, a starting point. If large discrepancies are noted, the model must be modified for that particular situation, or, if enough such discrepancies are found, a new model generated. This, of course, is nothing other than the procedure by which any science or discipline as a whole progresses. Morris (1987) responds well to this criticism when he states that forms and conventions of expression are part of any social structure; the breaking of rules is "noise", a constant which is filtered out. It is also important to consider the level at which analysis is being undertaken (Hayden & Cannon 1982). A study aimed at investigating patterning within large groups should not be subject to the criticism that it may misinterpret individual cases.

The emphasis in what can be broadly defined as the post-processualist approach is on the potential for material culture to be used in ways that either actively create and perpetuate the ideologies of the dominant group within a society, or purposely misrepresent relationships. Mortuary practices in this view are not seen as a direct reflection of social organisation but as a material representation of idealised relationships formulated about the dead (Parker Pearson 1982). In one sense this is a caution against assuming an overly simplistic relationship between mortuary remains and the structure of the society that produced them. But in another sense this perspective can also provide some more constructive ways of thinking about mortuary data. Hodder (1986, 1984, 1982) advocates a detailed consideration of the particular historical position of a society and its use of symbolism within that context.

While individuals act within "historically contingent ideologies" (Hodder 1986), their actions must be at some level rational—ultimately this can be reduced to the need for the continued existence of the social group. And as the archaeological record is largely the result of group rather than individual behaviour (Hayden and Cannon 1982), the sum of individual actions are amenable to generalisations which do help to "explain" the behaviours, in the sense that they expose underlying rationales that are valid cross-culturally. Thus an understanding and explication of group behaviour is possible through a materialist paradigm. At the same time, it is also recognised that this type of investigation by no means exhausts the range of interesting questions that can be asked concerning human behaviour and culture (see especially Hodder 1984)—a simple shift of perspective, and it is just the idiosyncratic and historically contingent form a behaviour takes that becomes of primary interest, rather than its broad commonalities with the functionally equivalent behaviours seen in other cultures.

The oft-mentioned caution that mortuary ritual can misrepresent "true" social organisation (Braithwaite 1984; Hodder 1982; Parker Pearson 1982, 1984; Shennan 1982; Shanks and Tilley 1982; Bradley 1984), while valid, has probably been overemphasised, at least in terms of its ability to confound the "processualist" programme. There are examples in mortuary analysis in which social inequalities have been downplayed (e.g. Bradley 1984; Morris 1987; Shanks and Tilley 1982), and it is easy to imagine cases wherein inequality would be exaggerated (cf. Randsborg 1982). And it is even possible to envision a scenario in which real inequalities would be reversed, so that the elite would be made to appear "poor" and vice versa (Cannon 1989), although this would seem to be unlikely in pre-state level societies. Even if the relationship between mortuary behaviour and living society is not always straightforward, however, there is no need to abandon the underlying premise of mortuary analysis—that mortuary treatment informs on the living social structure of a society. Contrary cases are in themselves of great interest, but there is every reason to expect that they can be detected by a careful examination of context and other lines of evidence, especially settlement data (cf. Bradley 1984; McGuire 1992a) and the analysis of prestige items and trade networks. The potential for material culture to be manipulated to express or undermine

(see Braithwaite 1984) the dominant ideology can be recognised without invalidating either the value of cross-cultural generalisations or the need for rigorous (at least as rigorous as possible given the nature of the questions being asked) hypothesis building and testing. Indeed, the conditions under which such situations occur can be incorporated into a research design, rather than simply serving as cautionary tales, as so often seems to be the case.

The theoretical position adopted here is that processualist and post-processualist approaches are not necessarily mutually exclusive (cf. Bradley 1984 and Morris 1987). They merely emphasise different aspects of human behaviour, and because of this they employ different methods and theoretical constructs as being more appropriate to their goals. The way in which material culture is used in mortuary ritual can best be viewed as a form of communication, in which certain symbols are employed to convey information (Hodder 1986; Parker Pearson 1982; Peebles 1971; Tainter 1978). The debate centres to a great extent around how to interpret what it is that is being communicated; nevertheless, it remains largely one of emphasis rather than content (Morris 1987).

What suffices as explanation also differs between the two theoretical approaches: processualists seek to understand and explain through the use of cross-cultural generalisations, often within a cultural-ecological framework, while post-processualists tend to emphasise particular historical contexts. And it is here, despite their mutual antagonism, that it may be possible to achieve some synthesis of the two approaches (cf. Wylie 1989). Each can offer new insights and suggest relationships that the other may have overlooked, and so can increase the range of questions asked by both, at the same time serving as a check against the always dangerous assumption that knowledge can be complete and that nothing remains to be asked. Functional and symbolic interpretations may be not only non-contradictory, but complementary (Hodder 1984, 1986). Recent work by scholars such as Bradley (1984), McGuire (1992a), Morris (1987), and Randsborg (1982) demonstrate a healthy trend in the discipline; one which recognises the strengths and value of both approaches in our explanation and understanding of the past.

The integration of Marxist concepts with the study of the archaeological record has been especially productive (McGuire 1983; 1992a, 1992b; Parker Pearson 1984; see also Trigger 1989). The attraction is fairly obvious, given the archaeologist's emphasis on material remains and the Marxist's emphasis on differential control of and access to wealth and the "means of production". Indeed, Marxist concepts of control and exploitation and the use of ideology to rationalise the existing power structure are perhaps becoming the dominant view on how and why social stratification evolved (see papers in Brumfiel and Earle 1987; Earle 1977). At least I have the impression that such concepts have recently been cited more frequently than the competing view that the elite perform a necessary function in society and are being reasonably compensated for this role. Allowing for their Marxist vocabulary and framework, discussions of how material culture in general and ritual surrounding death in particular can be used to legitimise the existing social order are not far removed from many "processualist" views. A model incorporating dynamic conflict within societies can in many cases be more illuminating than a model treating societies as coherent single entities. The combination of both perspectives is particularly powerful. At some level society as a whole must adapt to its natural and cultural environment, but it does so within a context that includes the different and possibly conflicting interests of groups within the society. Thus there are two levels of analysis especially relevant to archaeology—the relationships between groups within a society and the relationships between different societies. The relationships between individuals, on the other hand, are usually not accessible in the archaeological record.

These ideas are worth considering in some detail in that they are directly relevant to the present work. Given the premise that mortuary behaviour is used, along with other means, to establish and reinforce social relationships, including social inequalities, it becomes important to ask at what level this communication occurs. Is the display of wealth and status in the funerary context intended for other individuals in the deceased's immediate family, for all individuals in the community, for the deceased's social class within the community, for all classes within the community, for the deceased's social class in a number of outside communities, and so on. It is fairly obvious that there are a number of levels at which it might be useful to emphasise one's social position and status. It is unrealistic to expect that one or another of these levels can be isolated from all the rest and labelled as *the* correct one. Still, it is entirely valid to investigate which levels receive more emphasis than others and the situations under which this occurs.

How can the group(s) at which the funerary display is directed be detected in the archaeological remnant of mortuary behaviour? From what can be gathered from specifically Plateau ethnographic accounts and from general ethnography on mortuary behaviour in societies of comparable complexity, it

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may be assumed that the group "doing the burying" was in most cases the deceased's family. "Family" is of course a relatively imprecise term, and can refer from anything to a single individual to an extended group of related kin. In the case of the death of an infant, only the very immediate family might be involved, possibly only the mother in the case of stillbirth. It is unlikely that such an event would call for wider participation, and thus the display of status in this context would be essentially pointless as regards communication to other individuals. With an older child or adolescent, the resources of a larger family group would likely be involved, while the entire community might participate in the event itself, if only as witnesses. With this larger group participation comes the potential to establish and reinforce social relationships. The inclusion of burial offerings with the deceased is observed by those present, who in turn might communicate their observations to other individuals not attending, both within and outside of the immediate community.

But unless a substantial outside contingent is present, such as may indeed occur with the burial of a particularly important individual, grave inclusions have only limited utility in communicating status outside of the community. A more appropriate means of communicating status at this level involves the erection of a permanent or semi-permanent marker over the grave, in conjunction with the placement of the grave itself in a conspicuous location. This not only has the ability to be seen by individuals of other groups passing by, but also greatly strengthens the message of differential status within the community, since it remains as a visible reminder of the funeral and reaches beyond to the next generation who did not even attend the event itself. Even if the name of the specific individual is lost within a few generations, family or corporate group affiliation can be preserved for very long periods, making this a very effective means of communication, one which can lead to the naturalisation of social inequalities. In its developed form this leads to the establishment and maintenance of discrete cemeteries for the exclusive use of corporate groups, a phenomenon discussed in more detail later in this chapter.

The hierarchy of levels is increasingly inclusive as one moves outside of the group. Thus if an elaborate grave marker is erected, capable of displaying the wealth and prestige of an individual and/or group for an extended period of time, we would expect that the grave inclusions incorporated at the time of actual burial and the associated funerary feast were also more elaborate than average, communicating a similar message to the participants at the funeral (with the proviso that the use of grave inclusions is a culturally accepted means of displaying status). In some cases, such as the long barrows of Neolithic Britain, it may be that monuments are erected solely to communicate power relations to outside groups (Bradley 1984)—in such cases group solidarity appears to be the most important factor, and displays of individual status within the collective burial monuments may be suppressed.

Inequality and Status

The term "status" itself has perhaps been used overly loosely in the context of mortuary analysis, and in anthropology in general. As stated earlier, Goodenough's (1965) discussion of the concepts of status and social role has been very influential among processualist-inclined archaeologists interested in mortuary analysis. The concepts "status" and "role" as used by Goodenough are intended for use in defining and investigating interactions between individuals or groups in given situations, a set of duties and obligations. This situation clearly has parallels with what we generally mean by status in an archaeological context. Status can be operationalised when dealing with archaeological mortuary data by observations on the treatment of the deceased. An individual of high status participates in a wider network of obligations than one of lower status; this is reflected at death by increased community energy expenditure in the mortuary ritual (Binford 1971; O'Shea 1984; Tainter 1978; Tainter and Cordy 1977).

A complementary approach that has received somewhat less attention is found in the work of sociologist Peter Blau. Blau, in his seminal 1977 work *Inequality and Heterogeneity: A Primitive Theory of Social Structure*, introduces a number of concepts and measures of social inequality that are in many ways directly applicable to questions of status and inequality in an archaeological context (cf. McGuire 1983). One of the most important contributions of Blau's work is in his clear and concise definition of terms. *Social differentiation* is defined as the distribution of a population among its social positions. *Inequality* and *heterogeneity* are the two forms that this differentiation assumes; the fundamental character of social structure is defined by the degree to which the two in their various possible guises intersect (Blau 1977).

The difference between inequality and heterogeneity depends on whether the positions among which people are distributed constitute a rank order or are inherently unordered categories, respectively. Thus "...the theoretical concept of status refers to a continuous gradation, whatever the nature of the empirical measures" (Blau 1977:8). That is, there is an underlying independent gradation of the parameter

in question that may be only roughly reflected in ordinal scale measurements. For example, the ordinal positions of colonel and general are seen as essentially arbitrary divisions of an underlying and theoretically continuous gradation in military authority. Status is understood to refer to "...all attributes of people that exhibit gradations, not only those associated with prestige or power" (Blau 1977:8). Status, then, applies to age, intelligence, income, and so on. Every analytical dimension of status is also one in inequality (Blau 1977:45). In contrast, heterogeneity deals with those positions in society that are in and of themselves unordered. This includes categories such as religion, sex, occupation, and the like. Of course, these categories may become strongly associated with status in practice, such as when a high socioeconomic group within a society identifies itself through religious affiliation, but the two things remain logically distinct nonetheless.

Thus, from a theoretical standpoint, there are any number of types of status possible within society. Of these, only a few may be relevant to a particular research question. For the purposes of the present work, status differentiation refers mainly to differentiation along socioeconomic lines. Status, unless otherwise specified, is to be understood to refer to socioeconomic status throughout the body of this work. Furthermore, relative, rather than absolute, status is referred to, since it is the more robust and intuitively acceptable means of defining status (Blau 1977:57). Socioeconomic status is in itself a rather broad concept, and can easily be viewed as consisting of separate kinds of status as defined here. While this may be true in theory, these conceptually distinct kinds of status are in practice highly intercorrelated; that is, different dimensions of status frequently tend to co-occur within the same individual or group. Superior status entails superior social resources, which in turn have "... general validity in social interaction as a currency that can be exchanged for services or other resources" (Blau 1977:104).

The term "elite" is occasionally used in this work to refer to the subgroup in which most of the economic and political power in a social group is invested. Blau (1977:47) defines the elite as the top stratum of any status dimension. In small-scale societies there is typically far less separation of conceptually different status dimensions, especially in the economic and political spheres, so that it is possible to speak of an overall elite without reference to a particular status dimension. Blau (1977:47, 70) arbitrarily operationalises the elite broadly as the top 1% of the population in question along any given status dimension; clearly this is overly restrictive in terms of the scale of sociopolitical organisation on the Plateau—in many groups there would be no identifiable elite if such a criterion were used (the basic sociopolitical unit on the Plateau was the village/band, which in many cases would number fewer than 100 individuals). The actual figure used is not important in any case; the underlying idea is that the elite refers to some small *constant* fraction of the population (Blau 1977:70). I therefore take the liberty of defining the elite as approximately the top 10% of the population in question. A more precise definition is neither necessary nor desirable for the contexts within which the term will be used.

Stratification generally can be taken to refer to the unequal distribution of socially valued goods and roles in a society (McGuire and Netting 1982). Thus, in the classic Weberian sense, stratification is equated with inequality. And stratification always tends to have an economic aspect, in which scarce goods and services are selected as symbols of status (Fallers 1973).

The Basis of Inequality

Inequality is everywhere. The forms it takes from place to place and from time to time may vary, but the heterogeneous nature of people assures that it will always exist at some level. In certain contexts, particular manifestations of inequality may be minimised or entirely suppressed. It seems to be the case that, in simple foraging societies such as the !Kung, competitive, self-aggrandising behaviours are maladaptive, and thus resisted in deference to the immediate goal of survival of the group as a whole (Price and Brown 1985:12; Cashdan 1980; Layton *et al.* 1991). As Hayden (1990b) has emphasised, the nature of the resource base that foragers subsist on tends to be vulnerable to overexploitation. The amassing of a surplus by an individual or a group is not socially acceptable under these conditions, since such behaviour entails a clear threat to the group's survival as a whole. The end result is that, far from being some kind of natural human state, social "leveling mechanisms" are actively imposed on the ambitions of more competitive individuals (Cashdan 1980; Flanagan 1988). Thus, rather than being considered generous or acquiring prestige through sharing game, !Kung hunters are publicly mocked for the small size and poor quality of their kills, regardless of how large and fat the animal is in reality.

Under conditions of more abundant and predictable resources quite a different set of behaviours come into play, particularly when those resources are storable. Individual initiative and efforts to amass resources are now extolled as great virtues. The group is not threatened by these activities, since there is,

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under normal circumstances, enough food for all. And it is under these conditions that territoriality and boundary defence can be expected to appear in hunter-gather societies (cf. Dyson-Hudson and Smith 1978; Layton 1986; Layton *et al.* 1991; see also Chapters 4 and 5). There are, of course, limits on the extent to which any resource may be exploited, but largely due to technological constraints these limits are only rarely reached in small-scale societies.

The distinction between K- and r-selected species is a useful one to make here (Hayden 1990b). While K-selected species can be easily overexploited even with relatively simple technologies, r-selected species, with their high reproductive and growth rates, are extremely resistant to such overexploitation. Of the three most important food resources on the Plateau—salmon, roots, and ungulates—two (salmon and roots) are practically invulnerable to overexploitation with the available aboriginal technologies. Two of the most important root resources on the Plateau, camas and bitterroot, may be what are referred to as “increasers”: that is, to a certain point, yield actually increases as a result of harvesting (Ames and Marshall 1980; Marshall 1991). Ungulates, a K-selected group, may have been another matter. Certainly intense pressure was put on the large ungulates such as elk after the gun was introduced, and the range of this species greatly contracted, including local extinctions, as seen in the Nicola Valley by the 1830's (Teit 1900; Wyatt 1972).

The role of storage in the development of complex hunter-gatherer societies is difficult to overemphasise. A number of researchers (Ames 1991a; Ames and Marshall 1980; Hayden 1990b, 1992b; Keeley 1988; Price and Brown 1985; Testart 1982) have argued convincingly that the capacity for storage is a necessary prerequisite for the development of socioeconomic inequality in hunter-gatherer-level societies. The relative importance of salmon and roots in the development of the ethnographic Plateau pattern have recently been debated in the literature (Ames and Marshall 1980). This is likely to have varied considerably through time and space. But in either case, the Plateau can certainly be characterised as an area in which delayed return, as opposed to the immediate return system of classic foragers, predominated in the subsistence strategy (Woodburn 1982). The potential to store resources in excess of immediate subsistence requirements provides the incentive for individuals and/or groups to expend greater time and energy on food collecting. And once the value of foods has been increased through the intensive preparation often needed for storage, the question of ownership looms large. Testart (1982:527) suggests that storage is often, though not always, associated with a tendency towards the development of individual ownership. This could perhaps be modified to encompass increasing ownership at the family level as well.

This leads us directly to the important relationship between wealth and prestige in complex hunter-gatherer societies. Stored food beyond subsistence needs is a form of wealth. It may be exchanged for other, perhaps more desirable, foods, luxury goods, and services. All of these can in turn be used to acquire additional prestige, power, and status through competitive feasting or feasting of supporters (Hayden 1990b, 1992b, in press; see papers in Brumfiel and Fox 1994).

More or less equidistant between small-scale societies' two extremes of egalitarianism and hereditary chieftainship lies a peculiar social system in which wealth is accumulated only to be given away. This is the classic “Big Man” system, the anthropological recognition of which was first inspired by fieldwork in Papua New Guinea. It is through the distribution of wealth that an individual or group acquires and increases their prestige and power. Naturally, there exists a continuum among societies regarding the proportion of surplus that is given away and that which is kept for the individual's or group's own use. In some societies, those with the greatest prestige work the hardest yet are among the poorest members of their communities in material possessions—they have given away all of their wealth to gain social standing (Werner 1981). But even in such extreme cases, it is reasonable to assume that these individuals have the greatest amount of credit and debts owed to them, and so to represent them as “poor” may be misleading. In any case, on the Plateau such an extreme was rarely, if ever, seen. While generosity was considered a virtue throughout the Plateau, the wealthy were still distinguished from their poorer fellows by the quality and quantity of their possessions (see Chapter 5). At the same time, one of the most important uses of accumulated wealth was its “free” distribution at feasts. These feasts were held in recognition of many major life events—birth, naming, puberty, marriage, and death (Anastasio 1985). Men, and possibly sometimes also women, in some Plateau groups could acquire the title of “chief” through their repeated generosity in hosting feasts, even though they were of no relation to the family of the (loosely) hereditary political chief. Yet those who became “chiefs” in this way also acquired a degree of influence in the affairs of their communities (see ethnographic accounts in Chapter 5).

A key point to be made here involves the interrelatedness of different dimensions of status common in small-scale societies. There are a number of mechanisms responsible for this phenomenon.

Human psychology is clearly one factor; a series of very interesting studies cited in Berger *et al.* (1985) suggest that, independent of actual performance, high-status individuals of modern hunter-gatherer societies are typically perceived (emically, i.e. by the group itself) as performing better than low-status members of the same group in a variety of tasks. The linking of wealth and status has been criticised by McKay (1988:9), who refers to it as an "ideological commitment" on the part of modern scholars. There is, however, abundant ethnographic support, both specific to the Plateau (see Chapter 5) and cross-culturally, to the effect that the two are often strongly associated. Leadership, even in societies in which it is largely achieved, is generally "multiplex" (Meggitt 1967:22), status in one activity carrying over into another (see also Werner 1981 and Watanabe 1983). Wealth, or economic status, can be manipulated to gain prestige, or social status, which in turn can lead to influence over others in the community, or political status (cf. Blau 1977:105). Nor is the religious sphere separate from this system. The shaman in small-scale societies worldwide, including those of the Plateau, was often a figure of considerable political influence. Thus, it is not surprising that the position of shaman frequently tends to be monopolised by higher ranking families within a community (see for example Walker 1968:17 regarding the Nez Percé). Indeed, the entire guardian spirit complex on the Plateau can be interpreted, at least at one level, within a context of socioeconomic status differentiation. This idea is explored further in Chapter 4.

There will always remain a tension between the forces for egalitarianism and those for stratification. Usually the elite, who have both the most to gain under the *status quo* and the most to lose should it change towards greater equality (Blau 1977), will at the same time continually push the boundaries, attempting to maintain or increase the social distance between themselves and the rest of society. This second group, on the other hand, will attempt to minimise this distance. Fallers (1973:31) refers to this situation as a "battle of wits" between the elite attempting to preserve their symbolic priority and low-status persons attempting to devalue the status-symbolic currency. The dynamic equilibrium that is achieved will be the result of many factors, including: 1) the nature of the resource base, 2) the available technology, and 3) the "storability" of the resources given the technology.

Conspicuously absent from the discussion thus far are social and ideological factors (see Bender 1985, 1989). In general, social and ideological factors are seen as shaping the ways in which a society adapts to the restrictions more or less imposed upon it, as well as the potential offered, by the nature of the resource base and the available technology. This is certainly not a new idea, and can be traced directly to the influence of Leslie White (1949, 1955; see also Harris 1979). It is important, however, to expand this view somewhat to recognise that the cultural environment needs to be adapted to as much as the biophysical environment. A society's relationships, both within itself and with other groups, can have a great impact on the level of social complexity that is actually, as opposed to potentially, achieved (cf. Bender 1985). Trade and warfare provide two important examples of ways in which societies interact at this level that have frequently been implicated in cultural developments (Carneiro 1970; Brumfiel and Earle 1987; Redmond 1994). Both of these factors are particularly relevant during the contact period between indigenous and European peoples throughout North America, or at least evidence for them becomes more visible. Trade, and in some areas warfare, likely also played an important part in the development of social inequality prehistorically. But characteristics of the resource base are primary: "Resource availability and productivity determine the potential levels of accumulation for social display and competition" (Clark and Blake 1994:18).

Achieved vs. Ascribed Status

There has developed within the last decade or so in archaeology a great interest in documenting the emergence of sociocultural complexity. Chiefdoms are societies of intermediate complexity, and may be operationalised as exhibiting all or most of the following characteristics: ascribed status differentiation; regional economic organisation; relatively large populations and high density together with some form of regional sociopolitical integration; and the presence of individuals (i.e. chiefs) with the power to manipulate labour of supporters (Arnold 1992; Peebles and Kus 1977). Arnold (1992) identifies the key distinction between big man societies and chiefdoms as the extent to which ascribed status is present, marking a degree of permanence in the power of the elites. Because of its contribution to this research programme, the detection of hereditary inequality is often seen as one of the main objectives of mortuary analysis (Brown 1981; Peebles and Kus 1977). Thus, the study of the mortuary remains of infants and young children becomes of special interest due to its potential to differentiate achieved versus ascribed status. Despite this interest, there has been surprisingly little work focusing specifically on subadult remains. In an important and influential paper, Peebles and Kus (1977) outline a set of criteria for distinguishing from archaeological

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mortuary data societies in which status was probably achieved from those in which it was probably ascribed. Briefly, two major dimensions along which variability is organised are recognised, the subordinate and the superordinate. The subordinate dimension refers to those indicators of status structured along the lines of age/sex classes. In general, status is expected to increase as age increases, since in a society in which status is achieved, the older one gets, the greater the opportunity for achievement. Often, in societies of this sort, changes in status are automatic when an individual reaches certain stages in his or her life history (cf. David 1992). Of course, the model takes into account gender-based differences in status, so that male and female subgroups are treated separately, since sex and age are probably the most basic lines along which inequalities are expressed in any society. In Fried's (1967:33) classic formulation of an egalitarian society, "...there are as many positions of prestige in any given age-sex grade as there are persons capable of filling them." Nor need there be any implication that all adults of a specified age and sex will have equal status in the community; some may have through their actions achieved higher standing than others. Relating this to mortuary behaviour, then, we can expect the number of grave inclusions (for example) *on average* to increase as age increases within male and female sub-groups.

The superordinate dimension refers to indicators of status that cross-cut age/sex classes. In general, all age/sex classes are expected to be represented at each status level with the exception of the paramount category, which is expected to contain only adults, and usually only adult males (i.e. chiefs). The number of individuals at each progressively higher rank is expected to decrease, presenting a characteristic pyramidal structure, with the paramount rank constituting the apex (cf. Blau 1977:48).

In egalitarian societies (which seem to be becoming increasingly rare as what were previously termed "simple" societies are reexamined and redefined), sex and age are the major dimensions along which status is expressed. As Binford (1971:22) states: "When a child dies within a society in which social position is not inherited, very few duty status relationships outside of the immediate family are severed". But when a child dies in a society in which position is at least partly ascribed, a different set of criteria come into play. No longer is only the immediate family affected; the child has become a member of a larger social unit with more complex relations with other segments of society. And it is the role with the widest social significance, that affecting the largest section of the community, that is frequently emphasised in the mortuary ritual (Binford 1971; Goodenough 1965; Morris 1987). The child's membership in a high status family, lineage, or corporate group will be symbolised in the mortuary treatment accorded it.

In simple terms, the assumption is that the occurrence of some "rich" child graves is indicative of a society with some degree of ascribed status as opposed to purely achieved status (Binford 1971; Peebles & Kus 1977; Rothschild 1979). Peebles and Kus (1977) provide more explicit and specific expectations in this regard: in a society in which status is ascribed, there should be some subadult burials with more wealth than some adult burials. Furthermore, special status items usually reserved for adult males could be seen in a limited number of subadult burials and adult female burials.

Pader (1982) is often credited with one of the first systematic critiques of the basic processualist approach to mortuary analysis. She notes, among other things, that "rich" child burials are not necessarily always good indicators of ascribed status, since it is the parents that are doing the burying and that it is their status that is being communicated through the funerary medium. But this difficulty was in fact acknowledged by the very studies that first outlined the approach (see Saxe 1970). In a society in which status is primarily achieved, adults, usually "parents" in some sense or other, may utilise the occasion of the death of an infant or a child for aggrandising or "advertising" behaviour. Thus what is being reflected in the burial wealth in such a case is not the subadult's ascribed status, but rather the achieved status of another individual or group (Charles and Buikstra 1983; Pader 1982; Saxe 1970; see also Winters 1968). The presence of objects indicative of wealth in child graves has also been interpreted simply as an expression of grief on the part of parents (McKay 1988). Such reasoning ignores Binford's (1971) work and the more than two decades of subsequent mortuary research in favour of a return to psychological "explanations". Presumably the parents of those children whose graves lack inclusions did not particularly care for them.

Braun (see also Rothschild 1990), through his work on Hopewellian mortuary practices, has contributed some useful insights on identifying ascribed status through mortuary remains: If the burial treatment of children may be expected to follow the social position of its surviving family, then at some point in the life history, treatment of an individual must shift to the representation of that individual's own personal social identities. Ethnographically, this social shift universally occurs sometime during the age of biological puberty.... (Braun 1979:72). Braun did indeed find that in the mortuary population of the Hopewellian Klunk-Gibson mounds, adolescents had fewer artifacts than any other age group. A similar

pattern seems to appear at Indian Knoll, a Midwest Late Archaic cemetery analysed by Winters (1968). In this case, newborns were interred with few shells, infants and young children with moderate numbers, older children and adolescents with fewer, and adults with the most. This, then, is one potentially very useful way of differentiating between achieved and ascribed status.

McGuire (1992b:143,152), puzzled by the richness of Hohokam subadult burials, presents quite a different perspective on the position of older adolescents and young adults. He notes that young adults were of special status in Yuman society, since they were as productive as full adults, but were not yet married and so were unattached to any specific household group, and were relatively free to move between kin. Households desiring to attract their labour, then, would "woo" these individuals with expensive gifts, including ornaments that might be included with the individual upon burial.

The problems with differentiating achieved versus ascribed status are not only methodological; the entire issue is in fact reminiscent of the reaction by many archaeologists and cultural anthropologists against the simple application of Fried's (1967) and Service's (1962) typological schemes of level of sociocultural complexity (Brown 1971, 1981; Fallers 1973:82; Goldstein 1981; Peebles and Kus 1977; Renfrew and Shennan 1982; Whallon 1982). The problem with any typology is that too often the means come to be identified with the end. Thus some archaeological studies endeavor to place a particular culture into a typological scheme as an end in itself, and in doing so give the impression that no further questions remain. Questions concerning the context in which ascription occurs and its correlates are certainly of interest, but the mere labelling of a particular society into one form or the other does not itself achieve this end, and frequently it is at this point that the analysis ends. In response to this unsatisfactory situation, Plog and Upman (1983) advocate using continuous variables whenever possible, in order to realise more fully the range of past human sociopolitical organisation. This statement has equal relevance to the achieved versus ascribed status debate.

There is a widespread tendency to equate mortuary indicators of ascribed status with stratified or chiefdom-level social organisations, and, in this sense, rich child burials alone may not always be a good indicator. Rich child burials often appear to occur at lower levels of complexity than this (Hayden in press). Rather than argue in this all-or-nothing fashion, I suggest that the occurrence of rich burials does indeed indicate the presence of some level of ascribed status, but that this need not necessarily carry with it the common anthropological baggage associating ascribed status with a specific level of sociopolitical organisation. The dichotomy equating achieved status with egalitarian organisation and ascribed status with stratified organisation is probably too simplistic. It ignores the range of variation observed both ethnographically and archaeologically, and leaves little room for the investigation of how and why one mechanism of status comes to be emphasised over the other. It fails to recognise the transitional state between these two extremes.

Hayden (in press) presents a useful model attempting to account for the occurrence of rich child burials in the archaeological record. He points out that child growth payments, associated with public feasts and gift-giving marking important stages in a child's life cycle (birth and/or naming, ear piercing, puberty, etc.), involve an investment of wealth that might be expected to be mirrored in the child's burial should he or she die prematurely. In death as in life, this advertises their greater worth relative to other children in the community, making them more desirable as mates for children of other high status families (marriages were often arranged at a young age in these systems—this is documented for the Plateau [Teit 1900, 1906, 1909]), and giving them a "head start" in the social, economic, and political life of the community. And, most importantly, this can occur in the absence of formal, recognised rules for the inheritance of wealth and position (cf. Spencer 1994).

I therefore suggest that the theoretical debate over the identification and interpretation of rich infant/child burials is largely misdirected. Rather than being viewed as problem cases, I propose that it is just in these borderline situations that there exists the potential to investigate the interaction between material culture and the development of increased sociocultural complexity. This is nothing other than a part of the very process by which ascribed differentiation in various social systems evolves. When the surviving members of the family or lineage expend greater than average wealth on a member child's funeral, the community as a whole is given the impression that the death of a child in certain families is more momentous than in other families. When the wealth expended exceeds that for some adults, it sends yet a stronger message on the privileged position of some families or groups over others. Yet, were the question to be posed from a *emic* perspective, the answers received might very well indicate that status was not considered to be "ascribed" in the sense usually meant by anthropologists. The society might still hold to a more or less egalitarian ideology, but the behaviour of its members indicates an evolving tension

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between ideals and practices. As status differentiation becomes more firmly established, a nonegalitarian ethic can be expected to be more explicitly expressed.

Enough cautionary tales have been told (see for example Ucko 1969) to make it clear that any simple reading of mortuary behaviour is unlikely to be satisfactory. In societies in which lines of inheritance are firmly defined, for example, there would seem to be little point in destroying large amounts of wealth through burial that could otherwise be passed on to increase the wealth of the lineage (on the other hand, the need to curb inflation and maintain the system may account for the removal of wealth under such conditions). As Randsborg (1982) and Cannon (1989), among others, have pointed out, mortuary display seems to be at its greatest when the concept of inheritance is accepted, but not the specifics: just exactly to *whom* is the estate to be passed down? When this is a contentious issue, it becomes important to legitimise one's claim, and to advertise one's success in order to attract supporters, by the increased expenditure of wealth, beginning at the occasion of the death of the individual to whom one looks for legitimisation. This then acts as a kind of contract among the participants, who implicitly accept the validity of the claim.

Such a situation is not necessarily in the best interests of the elite, who might prefer to keep the wealth in their possession. At one level, it can be seen as a leveling mechanism, whereby discrepancies in wealth are moderated by the perceived need to remove or destroy wealth as part of the funerary rites. On the other hand, the situation is certainly not altogether without benefit to the elite, who acquire what has been referred to as social capital from their actions (Brown 1981). Social capital is not merely an abstraction—it imparts a degree of influence in the affairs of the community and often involves receiving support and services. Indeed, and this is an extremely important point, it is largely for prestige and power that big men or aggrandisers compete in the first place, rather than for physical resources as an end in themselves (Clark and Blake 1994:18). Thus, in many complex hunter-gatherer societies, it is possible to become known as a “chief” and to gain political influence within the community through the generous distribution of food and gifts, even if an hereditary chieftainship also exists. As shall be shown in Chapter 6, this situation certainly held for much of the Plateau. It is the ability to mobilise and manipulate wealth—in the form of foods, desirable prestige items, ritual, and sometimes women—that *defines* the elite (cf. papers in Brumfiel and Fox 1994). And in this sense, the expenditure of wealth may not be avoidable, at least at the level of the chiefdom (cf. Anderson 1994). This is what Hodder (1982) has referred to as the active role that material culture takes in creating inequality, rather than just passively reflecting it.

Emulation

A number of assumptions must be made explicit regarding how, and why, material objects are used to make symbolic distinctions in mortuary contexts. It is suggested that, during the late prehistoric period on the Plateau, and indeed throughout most of North America, symbolic status distinctions could be made using the presence of relatively rare items, often exotic and exhibiting labour intensive properties, such as elaborate carving. The situation in the protohistoric period is likely to have been somewhat more complex, as processes of acculturation interacted with the still-dominant Native value system (cf. Linton 1963). The introduction in the protohistoric period of the horse, together with the formation of new trade relationships and the availability of new sources of wealth, are widely thought to have been the catalysts for important social changes, changes that occurred, however, *within* the context of existing social systems on the Plateau (cf. Stapp 1984). Under such conditions one can expect a degree of instability caused by increased affluence, socioeconomic flux, and related status uncertainty. These effects would have been enhanced by the concomitant drastic demographic decline (see Spier and Sapir 1930; Teit 1900; Boyd 1990; Campbell 1989). The simple presence of certain artifact types in such a situation may become less effective as a means of differentiating socioeconomic status. Rather, an increasing spiral in the *amounts* of specific wealth items might be expected, especially if such wealth items were already recognised in the traditional status system. Cannon (1989:438) refers to this phenomenon as an “...inflationary spiral of display fueled by emulation...”. The most ambitious efforts towards ostentatious display arise when there is potential uncertainty in the reckoning of relative status positions within a society (Cannon 1989). Such a scenario not only has intuitive appeal, but has been fairly convincingly demonstrated cross-culturally (Cannon 1989; Randsborg 1982). One need only look to the situation on the Northwest Coast during historic times to see an example of a pattern of escalating competitive display. This is felt to be a useful theoretical model for looking at changes in the patterning of grave inclusions during the protohistoric period on the Plateau. It carries with it the implication that late prehistoric and protohistoric mortuary assemblages

must be analysed using somewhat different approaches and with different models in mind (see Schulting 1993a). This is done to only a limited extent in this work.

As their availability increased, prestige goods could be obtained by more and more members of a society, at least in small amounts. Successively lower social groups tend to adopt the material culture of high status groups (Morris 1987). This process of emulation would tend to undermine the value of a class of goods for acting as symbolic indicators of social standing (Cannon 1989; Morris 1987). In order to maintain the integrity of the symbolic system, the elite have two possible responses. The first is to prevent or slow down emulation by severely curtailing the availability of status items. One way of accomplishing this is through the removal of goods from circulation, either through burial in graves or hoards, or by destruction in some other context (Bradley 1984). Placement of goods with the dead offers an excellent opportunity for just this sort of behaviour; not only are goods removed from circulation, but the reputation of the family or lineage is strengthened at the same time. Parker Pearson (1984) refers to the need of elite classes to consume increasing quantities of surplus and prestige items as fundamental for the maintenance and/or advancement of prestige and power. As mentioned above, the "destruction" of goods has the concurrent function of accumulating what Brown (1981) and Parker Pearson (1984) refer to as social or symbolic capital rather than the economic capital seen in present industrial societies. In this sense, grave wealth can be seen as an investment (Brown 1981).

As a class of items becomes increasingly plentiful, a point is reached where this behaviour is no longer practical. The second response, then, is simply to adopt a new class of rarer items to indicate social status (Bradley 1984; Randsborg 1982). This pattern of innovation adoption by the elite has been widely recognised in the literature on mortuary analysis (e.g. Cannon 1989; Shennan 1982) and elsewhere (Fallers 1973). It is attested to by the occurrence of long-distance trade in luxury items so frequently seen in the archaeological record. Items made of exotic materials, even when superficially utilitarian in form, frequently exhibit no use-wear and occur in burial and/or ritual contexts, suggesting that they may be considered as functioning primarily as prestige items (cf. Binford 1962; Winters 1968). This option was limited on the Plateau by the continuing demographic and economic decline experienced in the later historic period.

The removal of wealth through burial or destruction also results in a continual demand for new wealth. It is possible that this in itself plays an important function in, to use an expression that may not be entirely inappropriate, "stimulating the economy". The need for new wealth stimulates the production of surplus goods and the development of trade networks. The elite, more specifically big men or aggrandisers, strive to achieve control over this surplus and to manipulate exotic wealth and prestige items obtained through trade in order to attract supporters. These in turn provide services and support. The support of a big man is shifting. If he (for they are almost invariably male) cannot continue to demonstrate his ability by providing feasts and prestige items, his followers will simply change their allegiance to someone who can (Anderson 1994; Spencer 1994).

Dimensions of Mortuary Variability

A number of dimensions of mortuary variability have been recognised in the literature; these are summarised in Table 2.1. The decision as to which of these dimensions to include in an analysis is greatly influenced by the nature of the data at hand as well as by the questions being asked of it. On the Plateau, mortuary variability is expressed in a number of forms, not all of which are relevant to the research questions being investigated here. Nevertheless, as these dimensions form the basic data from which any analysis must begin, they are briefly discussed below.

The biological variables of age and sex define the primary referents, or "subordinate dimension" in Peebles and Kus' (1977) terminology, of a mortuary population along which status differences may be expressed. All of the remaining variables are potentially able to inform on socioeconomic status, although in practice the majority often relate to other factors.

While not generally treated as a dimension of mortuary analysis, physical anthropology has much to offer beyond simple mortality profiles (Chapman and Randsborg 1981; Larsen 1987; Willems 1978). Analysis of human remains can provide information on relatedness, pathologies, stress markers, diet, occupation, and cultural modifications of the human body, all of which may be differentially distributed along lines of socioeconomic status. A number of important contributions in areas outside of the Plateau have been made relating socioeconomic status to life histories as provided by the analysis of human remains (Allison 1984; Coe 1959; Cook 1981; Haviland 1967; Mays 1989; Schoeninger 1979; Schurr 1992; Tainter 1980; White 1988). Osteological studies of metric and non-metric traits and dental studies, through

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the identification of family groups in cemeteries, and the inference of residence pattern, have enormous potential for mortuary analysis (Lane and Sublett 1972; Bentley 1991; Mays 1989). While there has been no comprehensive study of Plateau skeletal material from this perspective, a number of site reports have demonstrated what are likely genetic links between individuals buried in close proximity to one another (Sprague and Mulinski 1973; Skinner and Copp 1987), indicating the potential usefulness of this avenue of research.

Skeletal evidence can thus be used as an independent test for inferences derived from other mortuary variables (O'Shea 1984). In addition to serving as a check, the analysis of human remains provides insight into what the observed status differences actually meant in terms of past behaviours. Did higher status groups have a different, perhaps more nutritionally adequate, diet? Were they subject to more or less stress at different times of their lives? Did the elite belong to a different biological population? The answers to these questions and others are becoming accessible, and will serve to flesh out the picture provided by more traditional mortuary analysis. This having been said, the scope of the present work unfortunately does not permit an in-depth analysis of biological variables and their relationship to status differences as determined through mortuary treatment.

Table 2.1: Dimensions of Archaeologically Visible Mortuary Variability

<i>General category</i>	<i>Major dimensions</i>
1) Biological	<ul style="list-style-type: none"> a) demographic (age and sex) b) pathology (disease, trauma) c) nutritional data ($d^{13}C$, stature, etc.) d) genetic relationship (non-metric traits, DNA studies) e) cultural/behavioural modification of the skeleton
2) Preparation and treatment of the body	<ul style="list-style-type: none"> a) degree of articulation of the skeleton b) disposition of the burial (flexed on left side, etc.) c) number of individuals per burial d) orientation of long axis of the skeleton e) postmortem modifications of the skeleton/body
3) Mortuary facility	<ul style="list-style-type: none"> a) type of burial (inhumation, cremation, tree, etc.) b) type of receptacle (cist, box, basket, canoe, etc.) c) shape and dimensions d) raw materials used e) orientation of the facility f) depth of grave g) form of the burial area (cemetery, mound, etc.)
4) Grave inclusions	<ul style="list-style-type: none"> a) type b) quantity c) source/raw materials used d) placement in relation to body
5) Location	<ul style="list-style-type: none"> a) location of burial area in relation to settlement and/or to other relevant features (monuments, geographical features, etc.) b) location of grave within burial area c) location of body within grave

* - Table 2.1 is taken in part from O'Shea (1984:39) and Goldstein (1981:59).

The theoretical basis underlying the remaining variables as regards their relevance to the study of status differentiation lies mostly in either considerations of energy expenditure (Tainter 1975, 1978; Tainter and Cordy 1977), and/or with means of physically and symbolically differentiating social groups (Binford 1971; Goldstein 1980, 1981). Measures of energy expenditure have been strongly advocated by Tainter (1975, 1978; Tainter and Cordy 1977) as indicators of societal involvement in the mortuary ritual and hence of social rank. One frequently mentioned problem with this approach is that only a small part of the entire mortuary ritual is accessible, and thus measurements of energy expenditure based solely on archaeological remains may be misleading. The redundancy built into most symbolic systems of communication, however, suggests that what is preserved in the archaeological record can be used, with appropriate caution, as a fair indication of the entire energy expenditure at the time of death (cf. O'Shea 1984; Morris 1987).

Variables such as orientation of the body may predominantly relate to factors other than socioeconomic status differentiation, such as ideology (cf. Nassaney 1989; Ucko 1969), or, in the possibly common case of solar-determined orientations, ideology in combination with season of death (Saxe 1971). Preliminary investigation reveals that the variables of body position and orientation are probably not related to socioeconomic status differentiation in the Plateau assemblages investigated here. (Orientation may not be related to season either—one of the only palynological analyses that have been attempted at a Plateau burial site did not find a correlation between season of burial and body orientation [Sprague and Mulinski 1980]). They are therefore dealt with only superficially, except where they have potential to inform on possible confounding factors, such as the presence of two or more burial components at a site.

Burial form, often combined with location, can be a powerful way in which status differences are portrayed. Following the energy expenditure model, burial forms and facilities requiring more effort are considered on principle to be likely to reflect higher status. Non-burial (by which I mean simple abandonment of the body, and not, for example, cremation or above-ground box burial) is expected to always reflect a lower status form of body disposal than any form of burial. The ethnographic record suggests that non-burial is a common method of body disposal for slaves and the very poor and unaffiliated. Non-burial is, by definition, difficult to recognise in the archaeological record. But the absence of a particular age/sex class within a mortuary population, given adequate spatial coverage of the burial area, can be used to infer non-burial. Burial in another location is an obvious alternative to non-burial, but, as the range of variability in the age/sex structures of mortuary populations within the region becomes known, the relevance of this alternative can usually be addressed.

On the Plateau itself, talus burial has sometimes been suggested to be a low status form of disposal (e.g. Sprague 1967, 1971a). This is based both on the intuition that it represents less effort than either pit inhumation or cremation, the other alternatives in the area, and on an ethnographic snippet provided by Curtis (1911a:99), who states that, among the Wishram of The Dalles, the bodies of slaves were "... deposited at the foot of the bluff". Pit inhumations are by far the most common burial form on the Plateau. There are many possible minor variations, including the use of stone cairns and circles, and wooden cists and stakes. These elaborations are expected on average to indicate higher status forms of burial.

Cremation presents what is arguably the most elaborate form of burial visible archaeologically on the Plateau. It is thus expected, on average, to reflect higher status than either talus burial or pit inhumation, regardless of the elaborations on the general theme of the latter, discussed briefly above. Some researchers have suggested that cremation cross-culturally is frequently associated with higher status than other forms of burial (e.g. Hodson 1977; McGuire 1992b). Presumably this can be related to the need to gather large amounts of combustible material, sometimes in areas where such materials are scarce and valued for other uses. The dramatic quality of a burning pyre may also be a factor acting to enhance the potential for public display, essential if mortuary ritual is being used to communicate status differences (cf. McGuire 1992b). There is little ethnographic information concerning cremation specific to the study area. Teit (in Sprague 1967) notes that cremation was largely reserved for high status individuals among the Chilcoltin. Spier provides a relevant account of cremation among the Klamath of Oregon, demonstrating that status differences may be discernible on even subtle evidence:

The pyre of green logs, three or four feet high, stands in a slight depression on the ash-heap... of preceding cremations.... When the fire has burned down, several of the male relatives who stir it with long poles, roll the remains out to be rewrapped in a mat and burned again. It is said that bodies are hard to burn; the fire must be renewed several times.... *Poor people might not be able to burn the whole body* (Spier 1930:72)(emphasis mine).

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I would like to stress that, on theoretical grounds, the above discussion provides an *expected* pattern, i.e. a model. It is important to then test this model against independent data, such as the variety and number of grave inclusions, rather than to simply assume its veracity.

Depth of burial is a simple case in which greater effort is clearly involved, given the same type of soil, as depth increases. Linda King (1982), for example, successfully demonstrated a statistically significant positive correlation between depth of burial and grave wealth in a late prehistoric Chumash cemetery. Caution must be used when employing this measure in certain environments where the depth of the burial as found archaeologically may not bear a direct relation to that of the original excavation. Unconsolidated sandy soils are particularly prone to movement. Many burials in the Plateau are in soils of this type, making the use of grave depth as a behaviourally meaningful variable questionable in this case.

From a cross-cultural perspective, grave location seems to be most often used to indicate gross divisions of age, with children often being buried outside of the mortuary space reserved for adults. Binford (1971:22) has noted two general patterns: 1) burial of children under house floors with adults buried in a separate cemetery, and 2) burial of children around the periphery of the settlement or adult cemetery. In mediaeval Hungary, for instance, unbaptised infants were buried in the ditch surrounding the cemetery proper (Zentai 1979). Binford (1971:22) suggests that this behaviour can be explained by the different level of corporate involvement generated by the death of a child as opposed to the death of an adult (this idea has already been discussed in some detail earlier in this chapter). The age at which inclusion in the adult mortuary space occurs is itself of interest, since it is likely that this symbolises incorporation into the community (cf. Ucko 1969).

But grave location can also be an important variable reflecting social status. For example, an Act of Parliament in nineteenth century England sanctioned the reservation of the north part of cemeteries, furthest removed from the sun's beneficent rays, for the poor (Ucko 1969). Frequently the use of location to differentiate status is used in conjunction with burial facility. In the American Southeast, for example, prominent burials mounds are spatially segregated from the majority of non-mound interments, and, furthermore, a number of independent variables indicate that status increases as distance to the mound decreases (Peebles 1971, 1977).

It has been frequently suggested in the literature that the maintenance of discrete cemeteries for the exclusive use of one segment of a population is an excellent indicator of the presence of corporate groups. Saxe (1970, 1971) first formally hypothesised that corporate descent groups within a society, having rights and/or control over crucial but spatially restricted resources, will maintain for their exclusive use a bounded mortuary area in a prominent position near the resource in question. These cemeteries act to symbolise the continuity of the descent group and to legitimise its control of resources (Goldstein 1981). This relationship has been demonstrated cross-culturally with some degree of conviction (Goldstein 1981; Binford 1971; Chapman 1981; Charles and Buikstra 1983; McGuire 1992b; Mitchell 1991; Meggitt 1965; Tainter 1978; Tainter and Cordy 1977). As might be expected, it also appears that individuals in bounded cemeteries of this nature have on average more grave wealth than individuals excluded from such cemeteries (McGuire 1992a, b).

The process by which cemeteries come to function as territorial markers has actually been documented in historical cases. The Mbeere of Kenya prior to 1906 practised shifting cultivation in an "unfilled" landscape; during this time the dead were abandoned in no particular place and with little formality (Glazier 1984). Changes wrought at least in part by colonial rule, particularly efforts to create permanent farming settlements, brought about a considerable modification in the treatment of the dead. Glazier (1984:144) states that "... a grave site now establishes a visible connection between a particular territory and forebears within it, thereby forging new and socially valued links between the land and its claimants". A very similar process has been documented for the Temuan of Malaysia (Saxe and Gall 1977). Prior to the second world war land was owned communally, there was little or no shortage of land or other critical resources (i.e. population and resources were in balance), and there were no formal disposal areas for the dead. Again, changes brought about largely by government intervention increased land and resource stress. When the Temuan adopted wet rice cultivation in response, land became a very valuable and limited resource, and formal cemeteries appeared.

Goldstein (1981) proposed a modification of Saxe's hypothesis, pointing out that, while the correlation between the presence of discrete cemeteries and corporate groups exercising some degree of control over a spatially restricted resource seems to hold, the converse does not necessarily follow. That is, the absence of an exclusive bounded burial area cannot in itself be taken to infer the absence of corporate

structure. For various reasons (which Goldstein does not elaborate upon), the corporate group may assert itself through other means.

More recently, Charles and Buikstra (1983) have expanded upon the work initiated by Saxe and Goldstein. They still accept the basic premise that "... the occurrence of formal cemetery areas is associated with corporate lineal inheritance of crucial and restricted resources" (Charles and Buikstra 1983:114), but examine this relationship in more detail, suggesting additional postulates:

- 1) formal cemeteries correlate with semi-/sedentary subsistence strategies,
- 2) the degree of spatial structuring present in the mortuary domain will correlate with the degree of competition among groups for crucial resources,
- 3) within the larger society, corporate groups will be distinguished by inclusion in separate cemeteries or in distinct areas within a single cemetery,
- 4) inclusion of individuals in the cemetery implies inclusion of those individuals in the corporate group.

The intuitive proposition that formal cemeteries will correlate with a sedentary or at least a semi-sedentary settlement/subsistence strategy does not necessarily confound the proposition that such cemeteries reflect corporate group behaviour. The two are not mutually exclusive. Charles and Buikstra (1983:120, 124; see also Hodder 1982:31) note that corporate behaviour is actually a form of territorial behaviour, and as such the ritual affirmation of corporate structure "... is significant only within a context of resource competition". Again we see the emphasis on resource competition as the *raison d'être* of corporate structure: "The relationship among corporate descent, sedentism, and formal cemeteries hinges on the fact that the rights in question involve a resource that is fixed in space, predictable, and in sufficient quantity, such that the group can localise its activities around that vicinity" (Charles and Buikstra 1983:121). As Hofman (1986:49) notes, the presence of formal cemeteries is not expected under conditions of residential mobility where reoccupation loci are not predictable. Hofman cites abundant ethnographic support for this proposition (Radcliffe-Brown 1922:107; Wiessner 1983; Yellen 1976:65; etc.). At the same time, the absence of concentrated, predictable resources obviates the need to assert ownership and/or control of a location.

In a diachronic study of burials in the Illinois Valley, Charles and Buikstra (1983) found changes which they relate to the degree of corporate structure. During the Archaic, artifacts are associated with large multiple burial facilities rather than with specific individuals, thus emphasising the group as a whole. Because of the spacing of the cemeteries, it was suggested that the corporate unit probably corresponded to the village (Charles and Buikstra 1983:134). By contrast, during the Woodland period, artifacts more frequently appear to function as individual status markers, and a much higher degree of internal differentiation is apparent in the cemeteries (Charles and Buikstra 1983:134).

Goldstein (1980, 1981) has advocated a much greater consideration of spatial structure than is generally seen in mortuary analysis. It is proposed that all other variables should be examined in light of spatial patterning. The potential for space to yield information on social status is not limited to cases where such patterning is obvious: "If space was treated differently in life, then space will be treated differently in death" (Goldstein 1980:3). Two levels of analysis are proposed: regional and local. The regional level refers principally to the detection of possible site hierarchies in burial sites, just as seen in settlement studies. The local level refers to intrasite analysis. Goldstein's (1980) analysis of two Mississippian sites in the Lower Illinois Valley revealed complex use of space involving many levels, including the nonrandom placement of graves, orientation, body position, and the placement of artifacts around the body. In addition, many of these variables could be correlated with differences in grave inclusions. Clearly the level of complexity in the society being studied will play a large role in the degree to which space is structured. The differences apparent in Mississippian society may not be seen in what generally may be viewed as the organisationally simpler societies of the Plateau.

Preparation and treatment of the body for burial has been related to status differences in the literature. Increased complexity of treatment directly reflects greater time and energy input (Tainter 1975, 1978; Tainter and Cordy 1977)—thus the more steps that are involved, the greater status is assumed for the individual in question. Cremation with subsequent burial, for example, can be expected in general to reflect a higher status position than simple burial. As always, it is important to consider this not as a given, but as an hypothesis to be tested against other mortuary variables, such as the types and average number of grave inclusions in the different burial forms.

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Reburial, as indicated by the disarticulation of the skeleton in an otherwise undisturbed (i.e. by natural forces or looters) burial, can be suggestive of higher status treatment when not applied to all members of a community. When the practice is intentional, as opposed to reburial of accidentally uncovered remains, the grave location must be clearly marked. While evidence of this marking may not survive archaeologically, this presents at least the potential to differentiate such graves by the elaborateness of their surficial structures. Most importantly, the act of disinterment and reburial is not to be considered in isolation. Rather, in almost all ethnographically known cases, it only acts as the focus for a wider range of activities, often involving an associated mortuary feast, the distribution of gifts, and the "destruction" of new wealth at the grave upon reburial. As seen in Chapter 5, this certainly applies to some ethnographic Plateau groups.

While there exists some theoretical basis for seeing the practice of reburial as a higher status form of treatment, there are a number of other factors to be considered. Hofman (1986) notes that most models of mortuary behaviour for prehistoric groups are predominantly concerned with sedentary societies with well defined cemeteries in which most or all members of society are interred. In contrast, Hofman emphasises the mobility of hunter-gatherer groups and how this can be expected to affect mortuary remains. He writes: "... mobility and organizational flexibility must not be ignored or underestimated when interpretations are made which assign behavioural meaning to the mortuary remains of hunter-gatherer groups" (Hofman 1986:224). Secondary burial must be related first and foremost to group mobility and subsistence organisation before inferences dealing with status are considered. Secondary burial typically occurs in situations of logistic mobility and seasonal aggregation of dispersed groups. The remains of those who die away from a central village will often be brought back at some point after initial soft tissue decomposition. In contrast, formalised secondary burial is rare in groups organised along lines of residential mobility, since in this case there are no central locations to which to return the remains (Hofman 1986:49-51).

While written specifically in the context of the Eastern Woodlands, Hofman's contributions have clear application to the Plateau, an area characterised above all (at least for the last 4000 years or so) by a logistical settlement pattern involving semi-permanent habitation at specific locations in winter in conjunction with dispersal across the landscape throughout most of the remainder of the year. As detailed in Chapters 5 and 6, secondary burial is frequently mentioned in the area ethnographically and can be documented archaeologically as well. Hofman's model is thus worth considering in some detail. A set of expectations can be generated in order to differentiate the context of secondary burial. For logistically organised groups, secondary burials are expected to be proportionally higher in adult males, since this group disproportionately participates in activities such as long distance trade, hunting, and raiding (Hofman 1986:60). These activities can expose the adult male group to greater risk of mortality than experienced by other members of the community, and death, should it occur, is far from the village under conditions which may make it impractical to immediately return with the body. If an effort is to be made to subsequently return defleshed remains, it will result in secondary burial. Thus the mode of burial may be situationally determined.

But as also recognised by Hofman (1986:58-60, 166-168), differential status may also be a factor in the types of adult male-dominated activities listed. Furthermore, the decision of whether or not to make the effort of returning an individual's remains for burial in a centrally located cemetery may depend at least in part on the status of the deceased and that of the surviving family or lineage group (cf. O'Shea 1984:132). Thus, there is no unambiguous relationship between secondary burial and either mobility or status. The way to deal with this potentially complex and confusing situation is to examine carefully the context of secondary burial by evaluating other variables, especially the frequency and type of grave inclusions (Hofman 1986:63).

For aggregation sites of seasonally dispersed hunter-gatherer groups, the importance of burial in the group's cemetery will again depend largely on the deceased's status in the community—the remains of infants and senile individuals may be less likely to be returned than those of productive adults (Hofman 1986:167). In such a situation, the central cemetery should contain a disproportionate number of adolescent and young and middle adult burials, while the very young and the very old should be overrepresented at small dispersed burial sites (Hofman 1986:168).

There can be little question that there is a differential distribution of grave inclusions in Plateau burials. It must be assumed, however, that what is observed in the archaeological record is a fair reflection of the differences accorded to the treatment of the deceased at the times of their deaths (cf. O'Shea 1984). As has been pointed out many times, the actual burial is only part of the funeral, and the funeral in turn is

only part of a wider range of social activities surrounding death (Pader 1982). Each stage of the funerary process offers an opportunity for the direct or indirect expenditure of wealth. Perishable wealth items might have been, and in many instances almost certainly were, included in or on the grave. Wealth may also have been given away at mortuary feasts. The response to these problems is that mortuary ritual tends to show redundancy (Morris 1987; O'Shea 1984; Willems 1978). If something about social status is being communicated in the ritual, then it can be expected to be repeated in several different forms in order to reinforce the message. My working assumption, then, is that in a burial in which many goods were placed on the grave, hung on poles around the grave, or whatever, there would also be relatively many goods interred with the body. The funerary feast for such an individual would also be on average more lavish. Ethnographic accounts specific to the Plateau (Chapter 5) as well as more general ethnographic analogy suggest that this is a reasonable assumption. Similarly, it is unlikely that many burials would contain lavish wealth goods of a perishable sort, while at the same time being impoverished in non-perishable items. Hayden and Cannon's (1984) ethnoarchaeological study of the Highland Maya of Guatemala provides some cross-cultural support to the postulated strong correlation between perishable and non-perishable wealth items. Of course, these assumptions hold only in situations where certain prerequisites are met: grave inclusions must be a culturally accepted means of showing status (at present in European-derived societies they are not); there must be wealth items of a non-perishable sort present in the material culture, and so on. There seems little doubt, based on even the archaeological evidence alone, that these minimum conditions are met on the Plateau. Ethnographic data independently support this position. In general, then, we can expect that the amount of wealth represented by non-perishable grave goods bears a direct relationship to the overall amount of wealth expended on the funeral, as well as overall socioeconomic status differences present in the community.

As I have repeatedly emphasised, it is important to consider as many different possible indicators of status as possible. The possibilities for misinterpretation are far greater when any single dimension, such as the distribution of grave goods, is studied in isolation (Chapman & Randsborg 1981; Goldstein 1980, 1981; Hodder 1982; Hofman 1986). Be that as it may, grave inclusions are one of the dimensions that are commonly highly differentially distributed and most accessible in archaeological reports (cf. Rothschild 1979, 1990). Certainly this is the case in the Plateau, and as one of the most potentially informative indicators of socioeconomic status differences, they merit extensive study. Other dimensions of mortuary variability will also be considered when possible and when relevant to the research. I am not attempting, other than in a very general sense, to demonstrate that differences in wealth existed based on the evidence of Plateau burials—I believe that this is self-evident given my definitions of wealth and socioeconomic status. Rather, I examine the varying degree of the observed differences, and their structure in relation to the subordinate dimensions of age and sex. I also examine in some detail the role of various items of material culture in defining and displaying socioeconomic inequality

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METHODS

The vast majority of the burial data from both the Columbia Plateau and the Canadian Plateau relate to the late prehistoric (ca. 2000-200 B.P.), protohistoric, and historic periods. For the most part, the late prehistoric material is considered as one group and the protohistoric material as another. Historic material is not considered, except in a few instances, and then only peripherally. Mortuary variability will be compared in different regions of the Plateau during the prehistoric and protohistoric periods. The terminal date for the protohistoric period is determined on a region by region basis, fluctuating around A.D. 1830. The available earlier prehistoric material (>2000 B.P.) will be analysed separately in an attempt to investigate when the mortuary pattern seen in the late prehistoric period first appeared.

The study area encompasses much of the Plateau culture area as first formally defined by Wissler (1922) and subsequently by Kroeber (1939). Emphasis is on the western Plateau, including south-central British Columbia and the interior of Washington State. In terms of ethnolinguistic boundaries, this includes Interior Salish- and Sahaptin-speaking peoples, and, at The Dalles, Upper Chinookan-speakers (see Figure 5.1). The availability of the data largely limits the study to narrow strips along the Columbia and Fraser Rivers. The Columbia River, including a small strip along its south bank, also defines the southern extent of the study area. Some burial sites from eastern Washington are also discussed, but no material from Idaho or Montana has been incorporated. It is recognised that this presents something of a bias in terms of any attempt to generalise to the Plateau in its largest and most inclusive sense. To the north, the ethnographic territory of the Chilcoltin, although part of the Plateau culture area, is not included in the present study area because little burial data are available.

The sites discussed in Chapter 6 are grouped into six broad areas: the lower Middle Columbia, the Middle Columbia, the Upper Columbia, the Okanagan/Similkameen, the Fraser, and the Thompson. The lower Middle Columbia is differentiated from the remainder of the Middle Columbia in order to emphasise the uniqueness of The Dalles-Deschutes region. The transition from the Middle to the Upper Columbia is in the vicinity of Wenatchee. The American Okanogan is included in the Upper Columbia area, while the Canadian Okanagan/Similkameen is designated as its own area. The Fraser and Thompson areas are defined simply by their drainages.

The data needed for this study have been acquired through an extensive search of both published and unpublished site reports and papers, and museum collections. To a large extent this obviates any formal attempt to delimit a sampling universe, populations of observational units, and so forth. It is important nevertheless to examine critically the sample and to recognise its limitations as well as its potential.

While it makes no sense to speak of a formal sampling universe, it is possible to note the origin of the available material. This information provides some indication of the bounds of any inferences which might be made on the basis of the data. Within such a context, regional sampling biases quickly become apparent. The majority of controlled excavations of burial sites, especially a number of important sites along the Columbia River in Washington, have been undertaken under salvage conditions in preparation for inundation of the area by massive hydroelectric dam projects. This situation has naturally led survey and excavation to be particularly concentrated along certain stretches of the Columbia River in particular. An important point to be made here is that sites selected for major construction activities are often also those that were preferred habitation/resource extraction sites in aboriginal times, and for the same reasons; namely, the constriction of the river at these points that make damming more feasible also provided for excellent salmon fishing stations. On the Canadian Plateau, the tendency has been for locations perceived as attractive in prehistory to be viewed as desirable today, leading to the growth of modern towns such as Lillooet and Kamloops on important prehistoric site complexes. Both of these factors, then, have resulted in a bias in archaeological attention to important, valley bottom settlement locations. In a sense, this is an advantage rather than a problem, since such communities could be expected to exhibit the greatest

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socioeconomic differentiation, and this should be reflected in their mortuary behaviour (of course, this remains a disadvantage in the sense that some aspects of mortuary behaviour may be largely missing from the sample). Furthermore, ethnographic information suggests that an attempt would be made to return the remains of those who died during hunting expeditions or raids, etc., to the main village burial area (cf. Ray 1932; Teit 1900; Dawson 1891). This effort would probably be more likely to be made within the upper wealth stratum. This in addition to other considerations often tends to make higher status groups more visible in the archaeological record. Since the higher status groups thus may be more available for analysis, the end effect may be to lessen the degree of differentiation visible in the mortuary data, since status differences within each subgroup will be less than that between subgroups. The possible extent of this problem is difficult to address in the absence of more mortuary data from locations other than the valley bottoms.

The data available in the literature present a complex picture. While some burial assemblages can be definitely associated with nearby village sites, the majority cannot. The reported burial assemblages also vary greatly in terms of size and completeness of recovery. In no case have burials been excavated according to any kind of explicit probabilistic sampling design. A few burial sites seem to have been completely excavated, and so in a limited sense provide burial populations for study rather than samples. In other cases burials were identified and excavated on the basis of surface indicators, such as stone rings, "cedar" stakes, charcoal and ash, or talus depressions. This clearly presents the potential for a range of biases to enter into data collection, including: 1) differential preservation of more recent sites and/or sites in geologically stable locations, and 2) bias favouring those graves with more elaborate associated structures visible on the ground surface. In yet other instances, something perhaps approaching the equivalent of a "random" sample seems to have been achieved through accident, such as when a sand dune blow-out exposes an entire cemetery. The situation on the Plateau is not, of course, unique, and in any case the intention here is emphatically not to lay blame or to criticise the work of previous researchers in this regard but merely to identify the nature of the available burial assemblages. It should further be noted that burial sites in general are very rarely, if ever, excavated according to any random sampling procedure. It is more frequently the case that either an attempt is made to retrieve the entire assemblage, or, in salvage situations or in cases of accidental discovery, only those burials being impacted or in danger of being impacted are recovered. This latter situation is also seen frequently on the Plateau, usually providing small, yet often very important, opportunistic samples. A selected number of these sites will be discussed in some detail in the body of the work.

In many instances sample size presents a problem. Many sites, even when apparently fully excavated, yield only a small number of burials. The largest excavated prehistoric and protohistoric burial sites on the Plateau generally contain fewer than 100 individuals; and in every case but one less than half of this number are undisturbed and/or recorded adequately for present purposes (the exception being Old Umatilla, 35-UM-35B). Those sites that are sufficiently large to enable the use of statistical tests are naturally emphasised in the analysis. Burial sites providing information on a minimum of 20 undisturbed individuals approximate these requirements. In a few cases samples of between 10 and 20 have been used for some purposes, generally to provide at least some information on a period or region that would otherwise remain unrepresented. The Canadian Plateau is entirely lacking in even a single site that meets the criterion of a minimum of 20 undisturbed burials. Some of the many smaller samples available from both the Columbia and Canadian Plateaus are discussed to some extent, especially when they have the potential to shed additional light on some problem, or reveal interesting relationships in themselves. In a number of cases composite samples were constructed. Again, the rationale is that doing so provides at least some comparable information on an area that would otherwise not be represented. Use of these samples is restricted to only certain aspects of the analysis (refer to Chapters 6 and 7 for further discussion on a case-by-case basis).

It is known that a varying range of disposal alternatives existed for almost every group on the Plateau. To a large extent, these are assumed to be diachronic in nature, but it is also recognised that some were synchronic. Furthermore, it is unlikely that these disposal alternatives were neutral in terms of other aspects of society. On the contrary, there is limited ethnographic evidence to suggest that some types of disposal were definitely associated with certain social groups (see Chapter 5). The ideal situation would be to have available an adequate sample of burials from the full range of disposal types practised by a given social group (which for the most part may be identified as the village/band). This would permit statements to be made regarding the structure of patterned socioeconomic differentiation within the living community. Unfortunately this ideal is just that, and cannot be presently realised for any late prehistoric or protohistoric

sites (or "site groups" in this case). The palimpsest of occupations in most areas of the Plateau, and especially in those areas particularly favoured for one reason or another, and the virtual absence of radiocarbon or other dates, make trying to sort out geographically associated burial assemblages and occupation sites an impossible task in most circumstances. In a few cases a tentative relationship is indicated.

The nature of the available data greatly influences, and to a large extent, determines, the sphere of legitimate inference. Are we, then, simply to treat the burial assemblages as "populations" in themselves which are to be compared? This option is possible and it solves, or rather avoids, the above difficulties. At the same time, it places severe restrictions on the sphere of legitimate inference. There is some degree of flexibility that may exist as a result of how the collections are viewed. The burial assemblages are held to provide information, if imperfect, on the degree and pattern of socioeconomic differentiation within the living communities which produced them. They provide, in most cases, something of a minimum estimate of the degree of socioeconomic differentiation. Presumably in the majority of cases of reasonable sample size (say $n \geq 20$ burials), the recovered burials at least present a fair indication of the patterning within that particular mortuary regime. Where maps have been provided, the spatial distribution of burials from a particular site may be examined in order to check this assumption. Any indication of clustering of sub-groups of burials, unusually "rich" or "poor" burials for instance, could indicate more complex and organised use of space, related to temporal or socioeconomic factors. This would then be taken into account in any subsequent analyses (see for example the analyses of Whitestone Creek, 45-FE-24 and Rabbit Island, 45-BN-15).

It must be recognised that this approach could in some situations lend itself to emphasising patterning in socioeconomic status differentiation *within* a social stratum rather than both within and between social strata. This would result when a cemetery had been spatially segregated for the exclusive use of a particular status group within the society. An example of this may be seen from Dawson's (1891) ethnography on the Shuswap, wherein he notes that poor people and those lacking powerful relatives were not buried at all. In the case of an highly spatially structured cemetery of which only one section has been excavated, we must step even further back and be content with statements concerning the structure of only one aspect of mortuary behaviour, possibly relating only to one segment of the living society. As O'Shea (1984) notes, the problem then becomes how to determine when this is the case. There is often simply no way of doing this given the opportunistic samples available for the Plateau. No solution can be offered beyond a consideration of context as carefully as the available excavation reports will allow. The provisional nature of the results must also be emphasised.

Cowgill (1989) provides a somewhat different perspective on the population versus sample problem that is conceptually useful for this study. He suggests that even archaeological "populations" may be considered as only "samples" of what would be present at a site if the cultural groups responsible for the material record there had continued doing the same things in the same places for a longer period of time. Thus, the patterning observed in a particular burial assemblage may be viewed as representative (keeping in mind previously discussed issues) of the behaviour of a particular social group. Even when it is known that an entire site has been excavated, the assemblage is still considered a sample rather than a population. Inferences made concerning the larger hypothetical population must still be made using statistical techniques. This provides something of an intermediate perspective between the extremes of uncritical inference from a burial assemblage to the entire living community on the one hand, and strict limitation to the burial assemblage itself on the other.

Analytical Design

At the most basic analytical level, the relevant observational units are individual burials. The number of different variables that may be observed on such a rich unit are almost limitless (cf. Peebles in Willems 1978). Clearly some decision must be made as to which of these are to be considered relevant in light of the research questions being posed. At the same time it is also important to record information perhaps not relating directly to measuring dimensions of socioeconomic status, but rather relating to potentially confounding variables such as temporal change. (Refer to Table 2.1 for a list of burial attributes potentially available.) Since data from a number of excavations reported in varying quality are to be utilised, this list can be significantly reduced on practical grounds in order to provide comparability. Basic dimensions of mortuary variability recorded include the biological dimensions of sex and age, the number of individuals present in an interment, the type of burial, position and orientation of the body, the type and, where available, the quantity of grave inclusions.

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Age and Sex

The available information on Plateau burial assemblages often does not specify the limits of the "infant" and "child" age categories. In some instances, two researchers adopt different criteria for the same categories. For present purposes, the "infant" category is defined as 0-2 years of age, and "child" as >2-12 years of age. Thus in some cases my identifications will conflict with those reported in the cited primary sources. In a few site reports there is a "neonate" category, but it is too rare to figure into the quantitative analysis, and so will be dealt with only on a subjective basis. The "adolescent" category is equally rare, and is dealt with in the same fashion. This is likely the result of two factors: 1) recognition of the category is poor, such that it will frequently be subsumed under the categories of "child" and "young adult", and 2) adolescence is, among humans, almost universally the period of lowest mortality (see Weiss 1973). Accuracy in aging the skeleton becomes progressively more difficult once skeletal maturity is reached. For this reason, and because I must rely largely on assessments made by a number of researchers of varying qualifications and experience, the category of "adult" stands undivided and inclusive, subsuming "adolescent", and "young", "middle", and "old" adult (the "adolescent" category is revived in Chapter 7, in which data from all sites are pooled). While this limits the information potentially available on status changes throughout an individual's lifetime, it is preferable to the uncritical use of a wide range of other researchers' categories, especially given the early date of many of the assessments and the absence of a specifically Plateau reference population. In any case, even such broad categories are inconsistently reported in the literature, and the available sample sizes would most likely not permit testing of age-related variability in mortuary treatment at this level. For the purposes of most of the statistical tests presented in Chapter 6, then, two age categories are defined: 1) infant/child, also referred to on occasion as "subadult", although this does not technically follow the traditional use of the term within physical anthropology, and 2) adolescent/adult, often abbreviated to simply "adult".

Even less information is available on the sex of individuals. Where sex has been reported, I must simply rely on the competence of the researcher. It is unfortunately the exception rather than the rule that the criteria used to estimate sex are also reported. In some cases, especially when dealing with older reports, the attributions may be questionable. My own re-examination of human skeletal remains collected by Harlan I. Smith currently curated in the American Museum of Natural History provides two examples wherein sex had been reported incorrectly (Schulting 1993b). Given the early date of Smith's work, it is assumed that most reports are somewhat more accurate. Nonetheless this potential problem should be kept in mind throughout the analysis.

It is clear that important information can be gained simply from getting an indication of how closely the mortuary population resembles the expected age/sex structure of a living population. Before discussing this further, it might be worth emphasising that very real concerns expressed over the validity of paleodemographic studies (cf. Gordon and Buikstra 1981; S. Bender 1979) do not apply here, since the whole point is to test whether or not a mortuary assemblage *does* depart significantly from the model, rather than to correct for such departures. Mortality profiles are examined and compared to generalised profiles for pre-industrial societies to address the possibility that certain age/sex groups were being excluded or having only restricted access to the mortuary space.

As a first approximation, the expected sex ratio is roughly 50:50, and no more need be said on this at this stage. Weiss (1973) has constructed a series of mortality tables for pre-industrial societies, presenting a range of observed mortalities in different age groups. Mortality in the age group ≤ 15 was found to vary between 30 and 70%. These, then, are the parameters against which the Plateau burial assemblages are compared. The lower estimate of 30% mortality is conservative (i.e., it is usually higher than this); thus statistically significant departures from it are taken with some degree of confidence to reflect real differences; whether these are behavioural or preservational is another question to be addressed separately. At the other end of the reported range, 70% mortality is extremely high, and is unlikely to be met with under normal circumstances in anything even approaching a stable population. Such high mortality in the subadult segment of the population may be indicative of epidemic conditions.

The model is used to construct a null hypothesis assuming equal likelihood of burial for all age/sex classes, and against which the archaeological mortuary data are tested. Significant departures from the model (taking into account the possibility of differential preservation of subadult remains) suggest differential treatment in burial, either through burial in different locations, through non-burial, or through burial in a way that does not leave traces in the archaeological record. Differences in the treatment of age/sex classes are then examined for the previously defined regions of the Plateau and between the late prehistoric and the protohistoric, and compared to other dimensions of mortuary variability, such as the

distribution of grave inclusions. Binomial probabilities are used to test for significant departures from expected age and sex proportions in each assemblage of appropriate size.

Associations of artifacts with age and sex groups are investigated using chi-square and Fisher's exact test to test for non-random patterning. As the name implies, Fisher's exact test is the more accurate of the two, as it provides the actual exact probability of seeing a result as extreme or more extreme than that observed in the sample. Most of the available assemblages are far too small and too variable in terms of artifact types to allow much in the way of this kind of analysis. Many artifact types occur only once at a site. In order to partially circumvent this problem, artifact types from some burial assemblages are grouped into fewer, larger classes. Taking another approach to the problem, Chapter 7 presents an analysis using a combined sample comprising most of the sites discussed in Chapter 6 for which appropriate data are available.

Grave Inclusions and Assemblage Richness

Grave inclusions may be analysed either in terms of their presence/absence, leading to a richness measure, or in terms of their absolute quantity. Richness refers simply to the number of classes present. Diversity is a more complex term, combining richness with evenness (the order of abundance values) (Leonard and Jones 1989). Unfortunately, the quantity of grave inclusions with individual burials is often not consistently recorded for many Plateau sites. This places what may be seen as an undue emphasis on the types of grave inclusions present in a burial. Important typological considerations are held to be the form of an artifact—a morphological-functional category—and the raw material out of which it is made. In some respects this emphasis of type over quantity is less of a problem than might be expected, since arguments have been made to the effect that artifact type is in many instances a more sensitive symbolic indicator of status than quantity (Goldstein 1980; L. King 1982; Macdonald 1990; O'Shea 1984; Ravesloot 1988; Rothschild 1979, 1990). As Macdonald (1990:56) notes, grave good diversity (Macdonald uses the term "diversity" where I would use "richness", but the meaning is equivalent for my purposes) is an important variable, providing information on 1) an individual's or group's access to goods, and 2) the appropriateness of inclusion of certain categories of goods relative to the deceased's social position. Macdonald (1990) goes further than this by actually exploring the relationship between artifact diversity and a variable labelled "value", which ranks artifact types according to their use and the material of which they are made (see also O'Shea 1984). As hypothesised, there is a positive relationship between the two, even when an interaction variable is taken into account.

It is recognised that, to some extent, measures of artifact diversity or richness reflect the "taxonomic whims" (Rothschild 1990:59) of the archaeologist classifying the material. This problem can be controlled at least partially through the comparison of artifact descriptions and illustrations in a variety of reports from a number of sites. I have attempted to do this with the Plateau assemblages dealt with here. The broad similarity of material culture across the Plateau and the relatively close-knit group of researchers working in the area mean that very few changes had to be made in researchers' original classifications. Clearly not all can be considered as equivalent in value—to state the obvious, an unmodified flake does not have the same value as a whalebone club. While simple assemblage richness is still viewed as a valid and useful exploratory measure (cf. Macdonald 1990; O'Shea 1984), a more discriminating approach must be used in conjunction with the analysis of artifact diversity or assemblage richness.

Some types of goods are more indicative of high or special status than others, and these must be somehow ranked or weighted in the analysis. Possible means of achieving this involve the use of: 1) direct ethnographic analogy, 2) general analogy, and 3) quasi-theoretically derived value systems such as those of Binford (1962) and Winters (1968). At the most basic level, artifact classes can be divided into those more likely to have been involved solely in the technomic (the simpler term "utilitarian" is preferred here, albeit with the recognition that all material culture is purposeful and thus has "utility") sphere as opposed to those functioning more in the sociotechnic sphere as first outlined by Binford (1962). The two groups can then be analysed separately. The utility of this approach is demonstrated by Peebles (1971), who, in an analysis of a large series of burials from the Moundville site, found that the distribution of utilitarian grave inclusions varied largely along lines of age and sex, while the distribution of sociotechnic items did not, but rather cross-cut the subordinate dimensions.

For present purposes, Binford's ideotechnic sphere is collapsed into the sociotechnic, since this avoids the often difficult task of assigning artifact types to one or the other. The justification for this, as alluded to in the previous chapter, is that in small-scale societies, little separation is expected between

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economic, political, and religious spheres. Some items, such as polished celts/adzes, or, in the historic period, trade guns and metal axes, may have functioned in both the utilitarian and sociotechnic spheres. When found in a mortuary context, their sociotechnic function is seen as overriding any utilitarian concern for the purposes of the analysis.

From this basis, more complex artifact ranking systems can be devised. Following the work of Binford (1962) and Winters (1968), a number of researchers have devised weighting schemes in order to more accurately measure the "value" represented by sets of grave inclusions. While conforming to the underlying principles set out above, these approaches often differ dramatically in the number of artifact classes that are recognised and the weightings attributed to them. The weighting system used by O'Shea (1984) and subsequently modified by Macdonald (1990) is probably the most basic. Five categories are employed: 1) native implements, 2) native ornaments, 3) trade implements, 4) trade ornaments, and 5) sociotechnic objects. The weights used in this system, then, are simply the artifact's place in the rank order. It is designed largely for use in protohistoric contexts, where trade items occur. The dichotomy created between ornaments and other sociotechnic objects is problematic in some respects. The position adopted for the purposes of analysis is that ornaments *do* operate in the sociotechnic sphere, or at least share a greater affinity with it than with the utilitarian sphere.

McGuire (1992b) proposes a system which distinguishes 18 categories, thereby preserving more of the diversity present in a data set. Weighting scores are assigned based on the value of the artifact as determined by a combination of context, raw material, and labour investment represented. McGuire's depositional context variable—comprising "ritual-burial", "ornaments", and "ordinary"—provides something of an independent check on the perceived value of objects. Objects likely to have been discarded into general midden refuse would probably have less value than a class of objects always found in special contexts. The incorporation of a "labour" variable is useful, although in some cases the subjective evaluation of an object and its assignment to a "low", "medium", or "high" category may be problematic.

The approaches used by Goldstein (1980) and Ravesloot (1988) are intermediate between those of O'Shea and Macdonald and that of McGuire. Similar artifact forms are grouped into a number of broader classifications (e.g. "marine shell"). However, the intent in these cases was to facilitate cluster and principal component analyses, respectively, rather than to assign artifact weightings.

The scheme employed in this work is similar in intent and design to all of those discussed above. Table 3.1 presents a list of the more commonly occurring artifact types found as grave inclusions on the Plateau, together with their weightings. Individual artifact types are discussed in more detail in Chapter 4. Using McGuire's (1992b) terminology, the resulting weighted classes present a "grave lot value", or GLV. Certainly to some extent any weighting system is subject to the charge that it is arbitrary. One means of testing the validity of the proposed scheme is to use a variety of weighting scores. Simple linear regression can then be used to check the arbitrariness of the weighting system. The results of this exercise indicate a fair degree of robustness to the method as outlined, provided that the broad rank order of artifact classes remains the same (it is argued that this order has a fairly firm underlying theoretical basis).

The use of grave good richness as a measure of wealth, while convenient, is unfortunately unlikely to be equally useful under all circumstances. As discussed in Chapter 2, conditions of social instability coupled with access to new sources of wealth can create a context in which status distinctions are made through an escalating competition to expend more of a given class of wealth item in the funerary ritual and burial (cf. Cannon 1989). The conditions for just this sort of process seem to have existed on the Plateau during the protohistoric period. Emphasis during this period should perhaps, then, be on those cases where absolute quantities of grave inclusions are provided. Unfortunately these figures are not often reported consistently. Attribution of value also becomes more complicated by the presence of hundreds or even thousands of glass beads, which individually may not have been of much worth.

Moreover, using quantities in the analysis raises further difficulties when it comes to comparing the patterns in grave good distributions seen in the late prehistoric to those seen in the protohistoric, one of the explicit goals of this work. It would be possible to compare some sites from the two periods on the basis of quantities of inclusions, but this does not entirely circumvent the problem, since the ability of material culture to indicate status apparently did not operate the same way in the two periods. Additional insight might be gained by considering the primary referents of the structure of a mortuary population, age and sex, and noting how the pattern of grave good distribution changes across these subordinate dimensions. No easy solution to this problem is offered here, but differences in how material culture served to differentiate status in the two periods are in themselves of interest.

Table 3.1: Artifact Classes Found in Plateau Burials Together with Their Weightings

<i>Sociotechnic</i>	<i>x</i>	<i>Sociotechnic</i>	<i>x</i>	<i>Utilitarian</i>	<i>x</i>
Dentalium	4	"atlatl weight"	5	stone knife	1
Olivella	4	"paint pot"	5	stone point	1
shell disc bead	4	carved maul	5	scraper	1
Haliotis	4	stone club	5	flake	1
Glycymeris	4	nephrite celt	5	graver	1
Aletes	4	"charmstone"	3	drill	1
Pecten	4	effigy	3	core	1
unio	4	mica	3	chopper	1
shell ornament	4	ochre	3	misc. ch. stone	1
bone bead	3	graphite	3	abrader	1
bone/antler pendant	3	green "chalk"	3	whetstone	1
elk tooth pendant	3	copper clay	3	shaft smoother	1
beaver tooth die	3	copper bead	4	hammerstone	1
gaming bone	3	copper pendant	4	pestle	2
bone tube/whistle	3	copper bracelet	4	maul	2
bone/antler carving	3	copper club/spear	6	mortar	2
bone comb	3	misc. copper	4	gn. slate point	1
antler club	5	iron pendant	4	net weight	1
whalebone club	6	iron bracelet	4	stone celt	2
dog skull	5	iron knife	4	misc. gn. stone	1
bear claw core	3	iron tube	4	bone point	1
bear canine	3	musket part	5	bone awl	1
bear baculae	5	HBC axe	5	harpoon	1
raptor claw	3	misc. iron	4	flesher	1
woodpecker beak	3	silver pendant	4	flaker	1
misc. bone/antler	3	glass bead	4	antler wedge	1
nose piece	3	native copper item	4	beaver tooth	1
chipped eccentric	3	juniper seed bead	3	net gauge	1
turquoise	5	steatite ring	4	"mat creaser"	1
steatite bead	4	steatite carving	4	digstick handle	2
steatite pendant	4	steatite spoon	5	manuport	1
nephrite pendant	5	steatite tubular pipe	5	limpet shell	1
stone bead	3	sandstone tubular pipe	3	f/w clam shell	1
stone pendant	3	elbow pipe	5	f/w mussel shell	1
				misc. unid. stone	1

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Measures of Inequality

How does one measure status in burials? Sometimes a high status burial is obvious to the point of being ostentatious. The problem becomes describing and interpreting the burial assemblage as a whole, not just individual burials at one extreme or the other. A number of means of measuring inequality have been proposed in the literature on mortuary analysis. Researchers working within a processualist framework have been particularly apt to employ complex statistical methods on mortuary data. Unfortunately, it seems that too often in this type of analysis the methods entirely overshadow the substantive results (Whittlesey 1978). The emphasis in this work is on the investigation of status differentiation as evidenced in Plateau burial assemblages, and not on the development of any new technique. The analysis will be limited to those dimensions of variability consistently present and reported for the study area. This means, for the most part, an examination of the differential distribution of grave inclusions. A number of other dimensions may be addressed less formally, such as the type and location of the burial, and any postmortem treatment of the skeleton.

One way of ranking burials in terms of their burial inclusions is simply to plot the number of individuals against the number of types of artifacts found in association (cf. O'Shea 1984). This provides one means, albeit a simplistic one, of measuring inequality in grave good distribution, and has the advantage of not relying on absolute numbers of items, often not recorded or at least not reported in published form. (Of course, the same graphical display can be used equally well with absolute numbers of artifacts when these are available.) The resulting distributions will form the basis for much of the following analysis.

Some basic summary statistics can also be calculated for the distributions of artifact types. These statistics are used to provide for each assemblage a scale invariant measure of dispersion, the *coefficient of variation* V , which is simply the standard deviation divided by the mean, modified to vary between 0 and 1.0. The assumption is that assemblages which are more highly differentiated as measured by V will generally display greater socioeconomic inequality (cf. Pearson 1981).

The coefficient of variation, while very easy to compute and useful to a certain extent, is a fairly limited measure of inequality, most appropriate only for exploratory work (Allison 1978). Its most serious drawback is what Allison (1978) refers to as its lack of sensitivity to transfers; to use an example from modern economics, V is equally sensitive to transfers at all income levels: "Thus a transfer of \$100 from a person earning \$5,000 to another earning \$6,000 has the same impact as a transfer of \$100 from a person earning \$50,000 to another earning \$51,000" (Allison 1978:868). Intuitively, this is not very satisfying. However, as shall be seen in Chapter 7, the coefficient of variation is in fact strongly correlated with a more complex measure of inequality, the Gini index.

The Lorenz Curve and Gini Index

A very useful means of examining inequality that has seen some use in archaeology (McGuire 1983, 1992; Hayden and Cannon 1984; L. King 1982; O'Brien 1979; Morris 1987) is the Lorenz curve and its closely associated Gini index. The Lorenz curve was developed in econometrics, where it is widely used to investigate the degree of income inequality in modern situations (Blau 1977; Dagum 1985; Allison 1978; Gastwirth 1972; Gastwirth and Gail 1985). Basically, it may be thought of as a double ogive, plotting the cumulative proportion of individuals on the abscissa (x) against the cumulative proportion of some measure of "wealth" on the ordinate axis (y). The resulting curves provide graphical measures of relative inequality, which can then be compared to one another as well as to a theoretical *line of equality*, a straight diagonal line traveling from the origin to 1.0, 1.0, indicating conditions of perfect equality in the distribution of "wealth" (that is, 10% of the population holds 10% of the wealth present, 50% holds 50%, and so on) (Figure 3.1).

One empirically derived curve is said to dominate another when it lies completely above another—in other words, when the two curves are non-intersecting. In such a situation all summary measures of inequality will yield the same rank ordering of distributions (Gastwirth and Gail 1985). If, on the other hand, the Lorenz curves of two distributions cross one another, then it will always be possible to find two functions that will rank them differently, depending on what part of the curve is emphasised (A. Atkinson 1970:247).

The Gini index (G) further condenses the information in a Lorenz curve into a single—some would call it the best (Gastwirth 1972)—numerical summary of the amount of inequality present in a data set. The measure has the advantage of being interpretable at a very intuitive level and of allowing quantified comparisons, provided of course the same measure of wealth is employed. The Gini index is usually

defined in terms of the Lorenz curve (Allison 1978; Blau 1977; Gastwirth 1972); it is based on a calculation of the area between the empirical Lorenz curve and the theoretical line of equality, and is free to vary between 0 (perfect equality) and 1.0 (absolute inequality). McGuire (1983) suggests the simple formula:

$$G = \left(\sum_{i=1}^n X_i Y_{i+1} \right) - (X_{i+1} Y_i) \quad (\text{from McGuire 1983})$$

where X is the proportion of the population and Y is the associated proportion of some measure of wealth. Alternatively, the formula may be written as:

$$G = \sum_{i=1}^n s_j [(n-j)/n - (j-1)/n] \quad (\text{from Silber 1989})$$

where s_j is the proportion of some measure of wealth held by the individual or group whose wealth has the j^{th} rank in the distribution, assuming that $s_1 \leq s_2 \leq \dots \leq s_j \leq \dots \leq s_n$, and n is the number of individuals in the sample. The proportion of wealth used here is the "proportion of artifact classes", which refers to the proportion of the total number of *artifact type occurrences* in the assemblage. Each artifact type occurrence is considered separately; thus, as many types will occur more than once, there need not be any one-to-one correspondence between artifact richness (i.e. the number of artifact types present in an assemblage) and the total "wealth" present in the assemblage. The Gini index is a measure of *relative inequality*; thus an assemblage with 99 burials containing no goods and one burial with a single item will have an identical Gini value to one with 99 burials lacking goods and one burial with 100 items. In both cases, a single individual has 100% of the wealth present in the assemblage. Thus the interpretation of results needs to be approached with some caution and a good deal of common sense.

The major drawback of the Lorenz curve and Gini index is that tests of statistical significance for very small samples have not been pursued within the field of econometrics, where the measure was developed and sees most of its use. The methods that have been advocated for use with "microdata" (taken to mean sample sizes of about 300 or larger) are very computationally complex and still require sample sizes far in excess of what are available in most archaeological contexts. Taubman (1977) used the nonparametric Kolmogorov-Smirnov test (K-S) to test for significant differences between Lorenz distributions. The problem with this test is its relatively low power to discriminate. When applied to Plateau mortuary data, K-S tests revealed significant differences only between extremely divergent Lorenz curves (Schulting 1993a).

Fortunately, there is another approach to this problem, one which makes no parametric assumptions and still retains reasonable power. This is simply to perform randomisation tests. The two distributions to be tested are pooled and samples of the same size as the empirical samples are repeatedly drawn and their Gini indices calculated. The differences between the Gini indices for the two samples over a specified number of runs (in this case 1000) are compared to the observed difference in the two sample distributions. Significance at the desired level then simply becomes a matter of noting the proportion of repetitions in a large number of runs that display a difference in their Gini indices equal to or greater than that observed between the two samples (Figure 3.2).

Levels of Significance

For the purposes of this work, a test yielding a result at the .10 level is taken as "significant". The more familiar .05 and .01 levels of significance are employed when they are reached. Thus three different levels of probability are used, ranging from very tentative to relatively secure. Whenever practical, actual probabilities are reported rather than just the significance level achieved. The use of the less demanding .10 level is justified in the context of the analysis in that no formal hypothesis testing is presented. Rather, the exploratory nature of the enterprise is such that it is considered more of a loss to reject a possibly significant relationship (a Type II error) than to accept a relationship that may turn out to be fortuitous (a Type I error).

Figure 3.1: Lorenz Curves Showing Perfect Equality and Absolute Inequality

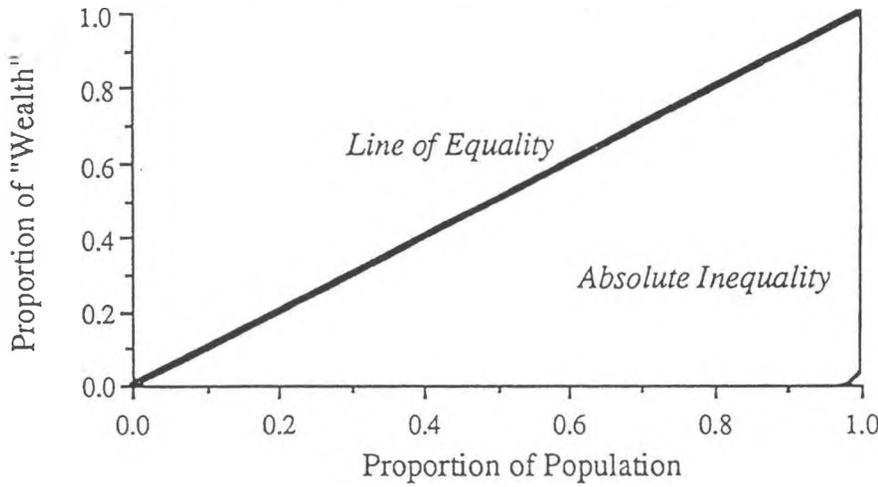
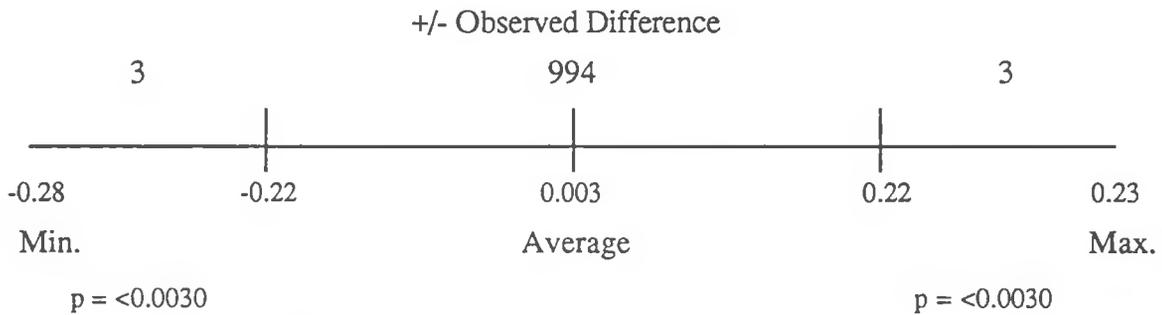


Figure 3.2: Example of Randomisation Test Run Comparing Two Sample Gini Indices

<i>Current Status of Experiment</i>		<i>Observed Sample Statistics</i>		
Size of sample 1 =	30	Sample #1	Sample #2	Gini1 - Gini2
Size of sample 2 =	25	n	30	25
No. of random partitions =	1000	Gini	0.3568	0.5805
Min. difference =	-0.2847			-0.2237
Max. difference =	0.2345			
Average difference =	0.0033			
Estimated SD of difference =	0.0862			



Probability of observed difference = 0.0060

ARTIFACT CLASSES

This chapter discusses a number of artifact types frequently found as grave inclusions on the Plateau. An attempt has been made to take into account both the emic and the etic perspective in assigning a relative value to various artifact classes. To this end, the discussion encompasses specific ethnographic accounts of the use and meaning of those artifact types for which information is available. In addition, it provides an etic model for the value attributed to different artifact types, based on considerations of raw material, labour investment, and context.

Attempts have recently been made to "objectively" measure the amount of wealth represented in an assemblage of grave goods. Randsborg (1974), for example, weighed the amounts of gold, silver, and bronze present in a series of Danish Bronze Age burials as a means of quantification. Mainfort (1985) attempted to estimate actual costs, as measured in beaver skins, of items sold at a Miami fur trade post dating to 1761 to calculate the amount of wealth present in historic period Native burials at the Fletcher site. Such an approach is not altogether out of the question for the historic period on the Plateau. Teit (1900:260-262), for example, provides a brief list of the relative values of trade goods in the Thompson area at the turn of the last century, and far more information is available in the Hudson's Bay Archives. Such accounts are, however, of only limited use when dealing with earlier periods and different regions due to the disruption of the early historic Native economy brought about by the influx of European goods, combined with a dramatic decrease in transport costs due to the horse and the presence of fur traders. Another problem is simply the incomplete nature of the information available in lists such as Teit's, which do not approach the variety of types of goods found in late prehistoric and protohistoric burials. In any case, no attempt will be made to calculate the amount of "actual" wealth in emic terms represented by various grave inclusions. In fact, it is held that such a scale is not necessarily preferable to one derived on more theoretical grounds.

Ethnographic documentation on the use, value, and meaning of material objects is often limited and too frequently tends to be inadequate for the purpose at hand. It is also recognised that it is sometimes desirable to be as free of the tyranny of ethnographic documentation as possible, and for the archaeological data to stand on their own (Wylie 1985). To this end, there exists a more general set of principles widely accepted in archaeology, at least implicitly, for assigning relative values to classes of material objects.

Binford's (1962) system of technomic, sociotechnic and ideotechnic artifact types is probably the first explicit formulation of these principles, and certainly remains the most widely known and utilised. Winters' (1968) system of Class I, II, and III artifact types represents a similar attempt to broadly classify artifacts in terms of their relative value. While there are differences between the two systems, the basic underlying principles are the same. The general idea behind both is that utilitarian items of common everyday usage tend to be assigned little real or symbolic value, while special objects, such as those involved in ceremonial activities, tend to be perceived as having a higher value.

The raw material of which an item is manufactured is seen as having a critical role in determining the item's value. Easily worked, abundant, locally available materials represent the lowest value category, which then proceeds logically in terms of increasing difficulty of access to the opposite extreme of very rare materials, often imported from great distances. Long distance trade in small-scale societies in general is often difficult and relatively dangerous (cf. Dalton 1975). Difficulty of access need not always be geographically defined; the use of certain classes of items or certain raw materials may be socially prescribed. That is, such items and/or materials may be restricted to certain groups within a society, and this may be accomplished through a variety of means ranging from social conventions and ideas about what

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is "proper", to active enforcement of a prerogative (i.e. sumptuary rules). This idea as it relates specifically to the Plateau is explored further below.

Besides or in addition to the worth of the raw material, the expenditure of labour on an item's manufacture is another factor to be considered when attempting to assign value. Classes of artifacts that require particularly laborious and/or highly skilled work are expected on average to have greater value than those that require less time and effort (keeping in mind the above discussion on socially defined difficulty of access). For example, a carved bone implement is expected to be of greater value than a plain one.

It is important to emphasise that the above discussion outlines a model that can be used to generate expectations for the treatment of different artifact classes. When there are glaring discrepancies in the "fit" of the model to the data, the particular context must be examined in greater detail, and an attempt must be made to bring additional considerations and lines of evidence to bear. One simple means of testing ideas concerning the relative value of different artifact classes is to examine their depositional context. Clearly items that were more liable to be lost or discarded in general middens were probably perceived by their users as having less intrinsic worth than those classes of items which are found exclusively (or nearly so—a gradient is to be expected here) in "special" depositional contexts such as burials (cf. Winters 1968), ritual hordes, temple caches, etc.. Expectations of what types of items should be more valued, then, can be tested by independent means, particularly in those cases in which a burial assemblage can be associated with an occupation site. In practice, firm associations of this type are unfortunately relatively rare. The method is still useful when applied at a more general scale, such as when comparing artifacts found in all roughly contemporaneous middens in an area to all burial sites in the same area and dating roughly to the same period.

Intensity of curation may be viewed as something of a confounding factor here, since it could be argued that items which required a great deal of time and effort to manufacture would never be casually discarded or lost unless worn or broken. Nephrite celts/adzes may belong in this category, for example. But by the same token, such artifact classes *are* expected to have greater real and symbolic value when found in ritual contexts such as burials. Of course, it must also be recognised that some items, such as celts/adzes, probably functioned in both the technomic and sociotechnic spheres.

Objects of ornamentation, such as beads, pendants, bracelets, and hair ornaments, operated principally in the sociotechnic sphere. That is, they were used as status display items. In view of the fact that the significance of grave inclusions representing body and clothing ornamentation has in the past frequently been dismissed by archaeologists as "mere decoration" (cf. Winters 1968; C. King 1990), a brief discussion might be of benefit at this point.

The idea that fashions in dress are strongly related to social status is hardly a new one in anthropology; as early as 1886 Herbert Spencer noted that changes in dress could be seen in response to changes in social organisation. Similarly, anthropologist Bernard Baker in 1957 noted that: "The style and quality of clothing for both men and women have been among the more obvious symbols of social class position in all societies" (cited in C. King 1990:11). That ornaments can function in an analogous manner was recognised by Spencer (cited in C. King 1990). There is in fact little that needs to be added to his argument today, and I simply repeat it verbatim: "A chief element in the conception of value, acquired by ornaments as they pass into a currency, is the *consciousness of labour expended either in making them or finding them*" (Spencer 1896:398) (emphasis mine). Body and clothing ornamentation is highly visible to other members of the community, and in small-scale societies, is immediately recognised by outsiders as well (cf. Strydom 1973:90).

Items of decoration, such as *Dentalium* and *Olivella* shells, are frequent burial inclusions on the Plateau, and were involved in long distance trade networks. Native copper ornaments and fine polished nephrite celts or adzes would be relatively difficult both to acquire and to process. Other prestige items include bone and antler carvings, tubular pipes, and stone, antler, and whalebone clubs. Again, these items would be highly visible and not readily available to all who might desire them. Some represent a significant input of labour, while others incorporate exotic materials. There is some evidence for sumptuary rules regulating and limiting the use of such items. Hayden (1993) further suggests that many of these items were part of a regional, Plateau-wide elite exchange system or interaction sphere (after Caldwell 1964).

These items meet the requirements of what Dalton (1975) has referred to as "primitive valuables". Primitive valuables are generally not used for commercial transactions, i.e. they do not function as money, although their acquisition can require payment in non-prestige goods. Rather they are "... the means of

acquiring superior political, military, judicial, and religious roles in the form of Big Man status, prerogatives, power, and an entourage of followers" (Dalton 1975:98). The suggestion that some classes of artifacts functioned as primitive valuables on the Plateau is certainly not a new one (Hayden 1993; Richards and Rousseau 1987); I do, however, explore the relationship in more detail than has been previously attempted. The remainder of this section provides both emic and etic accounts of specific artifact classes as they potentially relate to socioeconomic status. It is not meant to be exhaustive, but rather to illustrate some examples of what sorts of material culture were involved in the wealth and prestige spheres and why.

Sociotechnic Items

Burial Shrouds, Clothing, and Insignia

The most common late prehistoric burial types on the Plateau are pit inhumations and, in certain geomorphologically suitable areas, talus slope burials. The body is almost invariably flexed and deposited on the side, often wrapped in mats, blankets, or animal skins. This latter feature potentially offers information on status, since it has been widely noted for the ethnographic period (Ray 1932; Teit 1900, 1906, 1909, 1930) that the poor would be wrapped only in mats, while the rich would be wrapped in fine blankets or skin robes. A similar dichotomy has been noted regarding clothing, especially among the Lillooet, but also among other groups, where the poor are often referred to as "scantily clad", while the wealthy possessed fine fitted buckskin clothing with many ornaments attached (Nastich 1954; Ray 1932; Romanoff 1992; Ross 1969; Teit 1900, 1909, 1928; see also Hayden 1990c for a discussion of this topic from a cross-cultural perspective). Where preservation is exceptionally good, such evidence might be expected to survive and can be correlated with other lines of evidence.

Ray (1939:21), summarising the available information, notes that distinctive insignia were assumed by the chiefs of the Umatilla, Kalispel, Sanpoil, Sinkaietk, Shuswap, and Lillooet. Ruby and Brown (1972:14), in a summary of early ethnohistoric sources regarding the Cayuse (who during the early historic period shared many similarities with the neighbouring Umatilla), note that chiefs wore wolfskin headdresses adorned with bear-claws and eagle feathers. The Sanpoil chiefs' "badge of office" was an headdress with buckskin pendants covered with eagle feathers (Ray 1932:111). At Okanagan Falls (occupied at the time by the Sinkaietk) in 1811, fur trader Alexander Ross (1969:313-14) observed on a pole in front of a chief's lodge what he called a "chief's banner", consisting of the skin of a white wolf painted and decorated with *higua* or dentalia shells, along with bear claws and elk teeth. Among the Wishram, only chiefs, shamans, and war leaders owned wolf skins, which, before the introduction of firearms, were difficult and dangerous to acquire (Spier and Sapir 1930:182). Wishram chiefs wore two eagle feathers in their hair together with strips of skin covered with dentalia, "... in order that people might readily identify them" (Curtis 1911a:93).

It is apparent that the majority of these special chiefly insignia would not survive in the archaeological record. The use of more durable materials such as dentalia and elk teeth in this context is noteworthy. While there is little evidence to suggest that these materials were restricted solely to chiefly use, the fact that they were seen as appropriate for such use provides an indication of the value placed on them. Furthermore, the mere fact that special insignia of rank were used at all is important, and presents the possibility that other items not specifically mentioned in the ethnographies could be similarly restricted in use. The point is that items of material culture were involved in display and in the differentiation of certain social positions and statuses.

Marine Shells

A number of species of marine shells were imported into the Plateau for use as ornamentation either as beads or pendants. By far the most common genera are *Dentalium* and *Olivella*. These are invariably used as beads on necklaces, bracelets, earrings, and, in the case of dentalia, also as nose pieces. Also fairly common are abalone (*Haliotis*) shell pendants, and shell disc beads. Rarer shells, largely restricted to the Columbia Plateau, include *Aletes* and *Glycymeris*, also used as beads. In all, nearly 20 separate species of marine shell have been identified in the archaeological record from the late prehistoric period on the Plateau (Erickson 1990). Little information is available on whether manufacture of the finished shell items took place on the coast or in the interior. Indeed, with the most common shells—*Dentalium* and *Olivella*—minimal modification is required in any case. All marine shell artifacts invariably, with one or two possible exceptions, functioned as ornamental or, less commonly, as ceremonial objects (Erickson 1990). Freshwater shells available from the Columbia and Fraser were apparently only

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rarely used in this capacity. As a first approximation, then, all marine shell species are expected to have functioned in the display of wealth and prestige on the Plateau.

The earliest marine shells from the Columbia Plateau are *Olivella*. They are found with burials at Marmes Rockshelter (45-FR-50) dating to before 8000 B.P. (Rice 1969). And *Olivella* dominates the Columbia Plateau for the next 6000 to 7000 years (Erickson 1990). *Dentalium*, so much more visible in the ethnohistoric and ethnographic literature, does not appear until ca. 3000 to 2000 B.P., and even then it is very rare. Its first occurrence is in south-central British Columbia, at the Lochnore site (EdRk 7). *Dentalium* becomes progressively more common after 2000 B.P., but it never replaces *Olivella*.

The use of *Dentalium* in the Pacific Northwest has long been a subject of interest. A number of researchers (Barton 1990; Clark 1963; Erickson 1990; Weld 1963) have provided summaries of references to the shell in the early historical literature, and these need not be repeated in detail here. The availability of the shell in British Columbia is highly localised along limited stretches of the west coast of Vancouver Island; such areas were highly valued and strictly under the control and explicit ownership of Nuu-chah-nulth chiefs (Drucker 1951). From here *Dentalium* was very widely traded up and down the coast as well as into the interior, where it was, by most ethnohistoric and ethnographic accounts, held to be extremely valuable (Erickson 1990; Lamb 1960; Spier and Sapir 1930; Ross 1969; Teit 1900; Thwaites 1904-05). In some areas of California, Oregon, and Washington, the use of *Dentalium* closely approached that of a currency in early historic times; possibly it served this function in the late prehistoric period as well (Clark 1963; Weld 1963). Predictably, value seems to have increased with distance from the coast. Early historic sources (cited in Clark 1963; Ruby and Brown 1976; Weld 1963) relate that *Dentalium* was assigned a standardised value, this being 40 shells to a fathom, which would purchase a slave. The fewer shells needed to make a fathom, the greater their value. Long complete shells were more valuable than smaller ones or cut beads (Clark 1963). Considerable value could also be added to the shell by applying fine decorative incisions (Spier & Sapir 1930), which would then often be rubbed with red ochre (Weld 1963). Erickson (1990) notes that, while incised dentalia shells are widespread on the Plateau, they are relatively rare, and seem to occur only after ca. 1000 B.P.

Dentalium, besides being used for beads, was frequently used for both ear and nose ornaments. There is evidence that in at least some Plateau groups, nose and/or ear ornaments were associated with wealth and status. Spier and Sapir (1930) make the most explicit connection, noting that among the Wishram children of both sexes had their ears pierced with as many as five holes, the number giving prestige. (This, incidentally, provides excellent evidence of ascribed status, as does the practice of cranial modification, since both were carried out only during infancy.) Curtis (1911a:9) adds that a feast would be held in honour of the occasion, supporting the connection to wealthy families. A similar situation could be found among some Coast Salish groups around Puget Sound (Elmendorf 1960:207). The Wishram also pierced the nasal septum and inserted long dentalia shells; anyone lacking these ornaments "looked like a slave" (Curtis 1911a:93). Among the Sanpoil (Ray 1932) and Sinkaietk (Cline *et al.* 1938), on the other hand, the ears of both sexes were pierced but apparently with no status connotations. A few wealthy individuals among the Sinkaietk did, however, pierce the nasal septum and wear a "shell" through it (Cline *et al.* 1938:49). Nastich (1954:64) states that the nose and ears of Lillooet infants were pierced when they were only one week old. Teit (1900:321) notes that, among the Thompson, nose and ear perforations were generally made about the time of puberty or after the ceremonial training, but were being made during infancy by the turn of this century. Finally, Teit (1930:236) states that nosepins of shell and bone were worn by a few people of both sexes among the Okanagan. Neither Nastich nor Teit, however, discuss the status implications of the practice. I would suggest that it is likely that piercing of the ear and nasal septum also took place in the wealth and prestige spheres in these groups.

More recently, Barton (1990) has examined the taxonomy of the shell itself as well as its procurement and the context of its early trade. While the occurrence of *Dentalium* in interior sites has often been used as evidence of long-distance trade contacts with coastal peoples, Barton (1990) notes that Euroamerican traders very quickly became heavily involved in the shell's trade as middlemen. This would argue for some caution when interpreting the significance of the presence of dentalia in protohistoric (contact on the coast preceding the interior on the order of some 50 years) and early historic contexts. It is also likely that in the late prehistoric period strategically positioned native groups took upon themselves the same role as middlemen (cf. Ross 1969; Teit 1909). During the ethnographic period, the Chilcoltin were aggressive traders, and apparently controlled the movement of *Dentalium* into the interior of British Columbia, from whence it was actually traded down the Fraser and so back to the coast (Teit 1900). The

Wishram would be excellent candidates for a similar position on the Columbia Plateau, as they were widely noted as traders and were in control of the main access corridor from the coast to the interior.

Dentalium is a very common item in Plateau burials, to the extent that, from the late prehistoric through to the early historic period, it is probably the single most common class of burial inclusion. This would argue that, while it may have still had wealth connotations, access to the shell, at least in some quantities, was not particularly restricted or symbolically powerful. In fact, if the use of the shell approached that of a general currency, it would be expected to be widely distributed throughout society. It may be that it was in the display of large quantities rather than simple presence/absence that *Dentalium* and other marine shells communicated above-average wealth and status. This statement may have to be modified somewhat to take into account the "value-added" incised forms of the shell, which are far more restricted in abundance and apparently in distribution as well. Also, Ray (1938:100) notes that, among the Lower Chinook, the shells of exceptional length maintained a very high market value even after the price of smaller shells had dropped rapidly due to the great numbers of them that became available through the fur trade.

Interestingly, Ray (1932:50) states that among the Sanpoil, clamshell disc beads were valued more highly than *Dentalium*, a double handful being equivalent to a large tanned buckskin or a horse. No other source that I am aware of proposes that clamshell beads were rated above *Dentalium* in value. No information is available concerning the value of the other species of marine shell relative either to *Dentalium* or to one another. Abalone may have been particularly valuable given its wealth and prestige associations on the Northwest Coast in ethnographic times and its relative scarcity on the Plateau.

Large scallop or pecten (*Pecten caurinus*) shells appear to be largely restricted to the Canadian Plateau, from burial sites near Lillooet and Chase (Sanger 1968a, b), but a number of specimens are also known from burial sites in the Middle Columbia, including Fish Hook Island (Combes 1968), Pot Holes (Crabtree 1957), and Wildcat Canyon (Dumond and Minor 1983). While they are usually pierced at the hinge, these shells, with the possible exception of those from Pot Holes, do not appear to have been used for ornamentation. Sanger (1970:101) reports finding a series of seven shells lying nested inside one another at the Mile 28 Ranch site. As noted by Sanger, this strongly recalls the scallop-shell rattles used ethnographically by the Coast Salish during the performance of family-owned cleansing rites (see Suttles 1983, 1987). It is likely, given the concentration of the shells at late prehistoric/protohistoric burial sites along the Fraser Canyon, that the coastal analogy holds in this case.

Bone and Tooth Ornamentation

Bear, cougar, and raptor claw cores, bear canines, and elk teeth were all perforated for use as ornamentation. Perforated elk tooth pendants are by far the most common of these materials found in Plateau burials. The teeth used consist almost exclusively of upper canines. A total of 223 elk teeth found during excavations by Collier *et al.* (1942) in the Upper Columbia, for example, included only a single incisor. It should also be noted that all but one of the teeth were found with burials rather than in occupation debris. The potential importance of this as an indicator of wealth and prestige, at least in terms of hunting success, should be obvious: each elk provides only two upper canines (the lower canines in the elk have become modified to resemble incisors). Burials containing more than 20 elk canines are not uncommon on the Plateau, and the grave of one adolescent female (Burial 25) from Whitestone Creek, 45-FE-24, a site in the Upper Columbia included 80 perforated canines, representing a minimum of 40 elk. The occurrence of such large numbers of teeth appears to be more prevalent in the protohistoric and early historic periods, and is likely related to the introduction of the horse and firearms, but graves including over 20 elk canines are also known from prehistoric contexts (e.g. Cache Creek [Pokotylo *et al.* 1987]). Incised decoration on any claw or tooth ornaments is relatively rare but may vary regionally; only eight of the 223 elk teeth mentioned above were decorated, while eight elk canines out of a total of 21 were decorated in a single burial at the Cache Creek site in British Columbia (Pokotylo *et al.* 1987). Interestingly, a number of burials at Old Umatilla contained, in addition to actual elk tooth pendants, imitation pendants carved from bone (Rice 1978a:65, Figure 47).

Turquoise

Turquoise ornaments are extremely rare on the Plateau; there are five or six specimens documented from the entire area, all of which are from burial contexts. Turquoise ornaments have been reported for one or two burials in The Dalles area, a burial near Vantage along the Middle Columbia (Brennan 1981), a burial in the Upper Columbia (Collier *et al.* 1942), and another in the Canadian

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Okanagan (Atkinson 1937; Caldwell 1954b). Turquoise as a raw material is certainly exotic to the Plateau, the closest known source being in Nevada, and it is from there that Collier *et al.* (1942:115) propose that the turquoise ornament found with a child burial (Burial 10) at 45-ST-47 in the Upper Columbia originated (see Chapter 6). While it is postulated that turquoise functioned as a high prestige material, the lack of adequate documentation for the few burials in which it is found make it impossible to even tentatively test this hypothesis. It is interesting to speculate on ties, even if minimal, to the Southwest, but the material identifications may be open to question, since there are a number of other more widely distributed minerals that, through their copper content, also have a blue-green colour similar to that of turquoise (see Weigand *et al.* 1977). Without access to the actual specimens for further analysis it is not possible to address this possibility.

Bone and Antler Combs

Elaborately carved bone and antler combs are occasionally found in Plateau burials. As far as I am aware, they have not been found outside of mortuary contexts. While they are referred to as "combs", this should not be understood in the modern usage of the term. Rather, these often elaborately carved objects functioned as hair ornaments, as can be seen in a number of antler carvings (discussed below). Examples of carved bone or antler combs are known from the following sites: Bell, Lytton, 45-ST-47, Pot Holes, Fish Hook Island, Berrian's Island, and Beek's Pasture (see Chapter 6). Where it can be determined, they appear to be found in burials containing higher than average numbers and types of grave inclusions. The emphasis on the head and especially the hair as a means of making status distinctions is a well-known and widespread phenomena.

Steatite

Steatite is not a widely distributed material on the Plateau, with known sources occurring in the Middle Fraser Canyon near Lytton (MacKay in Duff 1956; Sanger 1968a:131), near Cawston in the Canadian Similkameen (Atkinson 1952:11), on the Skagit River (Duff 1956), near Blewett's Pass west of Wenatchee in Central Washington (Butler 1959:19), and on the John Day River in northern Oregon (E. Strong 1960a; Butler 1959). Other sources may exist, but even so they are far more limited than the distribution of steatite artifacts. Therefore in many cases it can be thought of as an exotic material.

Steatite is a rare material in sites in the Dalles-Deschutes area (Strong *et al.* 1930:112), for example, and does not occur locally. The nearest source is probably the Blewett Pass area, west of Wenatchee (Butler 1959:19). Its frequent occurrence in elaborate cremation pits and its near absence in any other context together with the forms it takes—beads, zoomorphic stone rings, and carved tubular pipes—all indicate that the material itself was probably highly valued and reserved for use in the manufacture of prestige items. The iconography seen on some of the pipes in particular suggests imagery having significance beyond that of simple embellishment.

The tubular stone pipe is a relatively common artifact type found in late prehistoric burials on the Plateau. It is often made of steatite, sometimes ground and polished so thin that the glow of the embers inside the bowl would be visible through the stone. Ethnographically, Spier and Sapir (1930) note that smoking among the Wishram was a prerogative reserved solely for chiefs and shamans. Similarly, Teit (1906:250), with regard to the Lillooet, states the smoking was largely confined to elderly males (who would often be the heads of families and clans, i.e. "chiefs") and shamans. Ray (1932:167), in contrast, states that among the Sanpoil all men smoked. This may, however, refer to a later period in which tobacco became far more accessible through the fur trade. Even so, during the historic period tobacco remained a highly desired commodity (see Parker 1844), and would be given by the fur traders to chiefs periodically in order to maintain their support and friendship (see accounts in Ross 1969). The chiefs in turn would distribute the tobacco amongst their people, possibly gaining prestige in the process. Indeed, smoking in many small-scale societies cross-culturally can often be viewed best within a prestige context.

The early use of pipes on the Plateau probably occurred in a more ceremonial context than subsequently (cf. Spinden 1964:189; Teit 1900:349-350), although even today tobacco retains an important ceremonial character among many Native peoples. It has been suggested, for example, that tubular pipes were not necessarily solely used for smoking. In California tubular pipes were apparently often used as sucking tubes during shamanic performances (West 1934:155). In other cases they were used to blow smoke over the patient. The use of sucking tubes is a common practice in shamanism worldwide (the link between ritual and status on the Plateau is made in some detail later in this section). Some pipes on the Plateau are particularly elaborate, bearing zoomorphic and anthropomorphic figures, in some cases incised

and in others fully carved, probably representing guardian spirit power (e.g. Teit 1900:360; Smith 1899:157; E. Strong 1960a; Carlson 1983a). There are some clear connections between Middle Columbia rock art motifs and images seen on steatite pipes, probably relating to both guardian spirit power and possibly also to what may be territorial rock art (see discussion below). The "twins" motif known from rock art (McClure 1981; Keyser 1992) appears on a steatite pipe from the Leachman site cremation pit (E. Strong 1959a, b), and the "grinning face" image (discussed further below), found on at least two pipes, can be related to a painted petroglyph overlooking Wakemap Mound. The incised designs on some pipes are rubbed with red ochre. In at least one case dentalia inlay was added to an elaborately carved pipe (Crabtree 1957), while in another a series of four copper bands were added to the stem (Strong 1957a). Lead inlay on steatite elbow pipes becomes a common feature in the protohistoric and historic periods. While pipe fragments are occasionally found in occupation contexts, complete pipes are almost entirely limited to burials. Taken together, the available information strongly suggests the use of tubular pipes in ritual and prestige roles.

Duff (1956, 1975) has provided strong arguments linking the seated human-figure bowl complex of the Fraser River and Gulf of Georgia with shamanism. The majority of the figures, particularly those from the interior, are made of steatite, while others are made from locally available sandstones. Those bowls found on the Fraser River above Yale have all been from burial contexts (Duff 1956). The seated human figure bowls are stylistically similar over a large geographic region, encompassing the Kamloops area, the Mid-Fraser Canyon, the Fraser Valley, the Lower Mainland, the Gulf Islands, and southeastern Vancouver Island (Duff 1956, 1975). The complex imagery depicted on the bowls, involving skeletal imagery, representations of liminal animals, and visual punning, may be largely associated with the guardian spirit complex. Hill-Tout writes concerning a bowl found at Kamloops (Duff 1975:80, Figure 57; see also Smith 1900 and Chapter 6):

Said by the Indians to have been used in puberty ceremonies. The sitting figure is supposed to represent a woman giving birth to a child. The depression held the sacred water with which the shaman sprinkled the girl on her return from retirement in the woods (Hill-Tout cited in Duff 1975:80).

Boas (cited in Duff 1975) provides a similar account of the use of a steatite human figure bowl in the context of puberty ceremonies in the Yale area. If seated human figure bowls were indeed used by shamans for puberty ceremonies, I suggest that this involved primarily or even exclusively high status individuals. Alternatively, Carlson (1983b) suggests that the bowls were used by the shaman in the preparation of tobacco for ritual smoking (which itself may have occurred in an high status context). In any case it seems certain that seated human figure bowls are shamanic. The complex interrelationships between the guardian spirit quest, wealth, and status are discussed later in this chapter.

Other uses of steatite on the Plateau include manufacture into beads, large zoomorphic stone rings, zoomorphic bowls, spindle whorls, possible labrets and/or ear spools, and various forms of pendants, including three-dimensional zoomorphic figures (see illustrations in E. Strong 1960a; Seaman 1946; Bergen 1989; Borden 1983). Without exception all artifact types made of steatite appear to have functioned primarily as ritual and/or prestige objects (even when assuming an outwardly "utilitarian" form, as in the case of the spindle whorls). The Mid-Fraser Canyon may have been a centre for the manufacture and distribution of steatite artifacts in British Columbia (cf. Fladmark 1982). It is more difficult to postulate a similar centre for the Columbia Plateau, but The Dalles-Deschutes region would appear to be the most appropriate choice, despite the fact that steatite was not native to the region.

Stone and Antler Clubs

A variety of stone and antler clubs have been found on the Plateau. Relevant ethnographic information is limited, presumably because their use declined sharply after contact. The most common form of stone club is probably what has become known as the "slave-killer", so-named because it was supposed to have been used to dispatch slaves at the deaths of their owners, or as a gesture of disdain in the potlatch. But, as a number of researchers have pointed out (Peterson 1978:198; Gunther 1972:39-41, 60), there is little in the way of ethnographic support for either proposition. On the other hand, the identification does appear consistently in a number of different museum collections made at different times and by various collectors (Gunther 1972). The category "slave-killer", if these designations are anything to go by, actually includes a number of different types of club manufactured in a variety of different materials and in

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completely different forms. As Gunther (1972:60) suggests, it may be that some of the forms described as slave-killers did indeed function partly in that capacity, but that others did not.

The classic slave-killer club form (see illustrations in Galloway 1956:377-378, Plates 55 and 56; E. Strong 1960a:143, Figure 52; Smith 1907:418-420, Figures 179, 180, and 181) is typically made of some hard stone, such as basalt, and is somewhat curved, with two projections on the edge near the distal end. Often the tip of the weapon depicts a zoomorphic form. On the Plateau, the distribution of slave-killers is largely limited to the area around and to the south of The Dalles, continuing down to northern California.

Another type of stone club appears in the form of large pestle-shaped objects. One particular class of items that amateur collectors have labelled as "salmon packers" (supposedly used to push dried salmon into large bags—an unlikely function at best) are especially likely candidates for use in a more ceremonial function (cf. E. Strong 1959a:178). These objects are finely made and polished, and are frequently decorated (see illustrations in Smith 1910:46-49, Figures 30-35). Concentric rings often appear at the smaller end, similar to those sometimes found on mauls. An excellent example of a long basalt pestle club with concentric rings was found in a burial at the Juniper site (see Chapter 6), and is illustrated in Bergen (1959; see also Bergen 1989). Some clubs are manufactured of steatite, which, as argued above, appears to have functioned largely as a prestige material. Two large clubs with zoomorphic ends and one bearing two snakes carved in relief on its sides are illustrated in E. Strong (1959a:179, Figure 73). The snake motif is combined with three interlocking heads on another large club (over 27 inches in length), reportedly from the Yakima-Vantage area (Wingert 1952:Figures 34, 35, and 37). This form of club, as far as I am aware, has not been found on the Canadian Plateau, but is limited to the Middle Columbia region.

Wingert (1952) describes yet a third, cross-shaped form of stone club, referring to the presence of three pointed projections at one end. This appears as though it would make a particularly formidable weapon. Examples may be seen in Wingert (1952:Figure 42) and in Seaman (1946:119). A perforated paddle-shaped club form is known from a number of areas (see illustrations in Smith 1907:431, Figure 172 and E. Strong 1959a:146, Figure 54). An unusual "monolithic axe" form (E. Strong 1959a:147, Figure 56), found near Alderdale, Washington, appears completely out of place on the Plateau, being more typical of the Southeast, from whence it might conceivably have come by some circuitous route. A quite different type of monolithic axe with double bits was found near Yale, British Columbia (Smith 1907:366, Figure 149). Grabert (1968) describes a four-bladed monolithic axe found on the Middle Columbia as being very similar to the one illustrated in Smith. Additional stone club forms are illustrated and discussed in E. Strong (1959a:146, Figure 54) and Smith (1910:77-81, Figures 62-69).

A group of antler clubs shares a form very similar to that of the stone slave-killers. The antler clubs may have either one or two projections in the same position as seen on the stone clubs, and often are decorated with incised lines and/or a zoomorphic figure at the tip. These clubs, in contrast to the stone versions, have been found on the Canadian Plateau. Baker (1970:52, Figure 12) illustrates a specimen found at a disturbed burial site near Lillooet. Far more elaborate versions, in which the club's entire length is often carved with crest animals and inlaid with abalone, are known from the northern Northwest Coast, where they may have been both weapons and badges of office. There is probably some connection between the stone and antler forms of this club. Given its natural shape, it seems more likely that the antler version gave rise to the stone version rather than the other way around. Clubs of either type found in archaeological contexts on the Plateau are, as far as can be determined, entirely restricted to burials.

Copper

The initial appearance of metals in small-scale societies is almost invariably seen in a high status context (cf. Binford 1962; Bradley 1984; Darvill 1987; Fallers 1973; Randsborg 1982; Shennan 1982). Metals are often either used for ornamentation or made into prestigious copies of utilitarian items manufactured in more traditional materials such as stone or bone (Binford 1962). The difficulties usually involved in acquiring and working metals make them very well suited to this prestige role. Examples of this pattern are so numerous cross-culturally that they do not merit further comment here.

Copper has been found on the Plateau in secure pre-contact contexts (Chatters and Zweifel 1987; Dawson 1891; Hayden pers. comm., 1993; Richards & Rousseau 1987; Skinner and Copp 1986; Smith 1900; Stryd 1973) demonstrating that the use of native metal was known on the Plateau prehistorically. Despite this knowledge, however, surprisingly little use was made of the metal. It may be that it simply occurred in too small quantities in a workable form to be worth bothering with. Small nuggets of almost pure copper were cold hammered into flat sheets and then shaped, typically into pendants and tubular beads—with one or two possible exceptions, I am not aware of any instances on the Plateau in which native

copper was used for anything but ornamentation. It is assumed, based both on general and specific analogy together with the limited available contextual information on copper found archaeologically on the Plateau, that native copper was a high prestige material.

There are a number of known and suspected occurrences of native copper in archaeological sites on the Plateau. While most of the copper in The Dalles region cremation sites is undoubtedly of Euroamerican origin, there are a number of possible incidences of native copper. A copper "awl" from Congdon II (see Chapter 6) is unusual, since all other prehistoric copper seems to have been used for ornamental items such as beads and pendants. In light of this, I would suggest that the "awl" may have in fact functioned as a nose ornament inserted through the septum, as was done ethnographically with sharpened bone and large whole *Dentalium* shells (Cline *et al.* 1938; Curtis 1911a; Nastich 1954), or possibly as a pin for a high-prestige garment (elaborately carved bone pins found on the Northwest Coast likely also served this latter function [see Schulting 1994]). The Atlatl Valley site contained two copper beads in apparent association with two atlatl weights (E. Strong 1958); metallurgical analysis suggests that the copper may be native (E. Strong 1959a:36). The Leachman site cremation pit (see Chapter 6) contained a single copper piece that is described as being too thick for trade sheet copper (E. Strong 1959b). Bergt (1978) presents a limited trace element analysis using x-ray fluorescence on four specimens from burials at Old Umatilla, and suggests that they may be of native origin, but the analysis is inadequate in many respects, including first and foremost the absence of any native ore control samples. A copper armband in a burial from Fish Hook Island was analysed spectrochemically and found to be very pure, suggesting that it could be native copper (Combes 1968:32-33), although the excavator is equivocal about the specimen (see discussion of the site in Chapter 6). Finally, some of the copper artifacts found with burials in the Kamloops area (Smith 1900) may be prehistoric.

Copper artifacts from definite prehistoric contexts are usually very badly corroded and retain little indication of their original form. A notable exception involves the recent discovery of two well preserved copper pendants or ear ornaments from excavations at the Scowlitz site (DhR1 16), located at the confluence of the Harrison and Fraser Rivers (Coast Salish Halkomelem territory). The items were associated with a single adult male interred in a large burial mound. Human bone collagen has yielded a radiocarbon age estimate of approximately 1400 B.P. (Blake *et al.* 1993). This presents the distinct possibility that some burials containing well-preserved copper artifacts may be far earlier than is usually recognised. Copper pendants illustrated in Smith (1899, 1900), for example, appear almost identical in form to those from Scowlitz. While the existence of native copper is frequently acknowledged by researchers on the Plateau, in practice the presence of copper artifacts with a burial is often sufficient for it to be attributed to the protohistoric or historic period. The expense involved in radiocarbon dating and its destructive nature frequently means that dates are not run in these situations, thereby perpetuating the idea that the copper is Euroamerican in origin. It is suggested here that the occurrence of native copper may be underestimated, thereby precluding a full evaluation of its context.

That having been said, there is no doubt that the vast majority of copper recovered archaeologically is derived from post-contact Euroamerican trade (Stapp 1984). The earliest smelted metals were probably introduced some time before actual Euroamerican contact through the beachcombing of material from shipwrecks (Rickard 1939). Thus, iron was found in the Ozette village site on the Olympic Peninsula in late prehistoric levels dating from 300 to 500 B.P. (Wessen 1990:416).

During this initial period both copper and iron were considered very valuable, so much so that among the Lower Chinook one slave would be given in return for a two-inch-wide copper armband (Boas 1894 cited in Ruby and Brown 1976:21). It is interesting to compare this value with that seen less than a century later, when it took ten sheets of copper and a fathom's length of tubular copper beads to purchase a slave among the Lillooet (Teit 1906:233).

Once more direct Euroamerican trade with the groups of the Northwest Coast commenced, most copper was obtained in the form of sheeting, subsequently worked into the desired items. Other forms were acquired either partially or completely manufactured. Euroamerican traders quickly took advantage of the initial Native demand for the metal among the Northwest Coast groups, often stripping the copper plates from the hulls of their own ships, to the extent that the market for more raw metal was quickly glutted along most of the coast (Wike 1951). However, the metal may have retained much of its symbolic significance as a wealth commodity, as is suggested by its occurrence almost solely in burial contexts, at least on the Plateau. Stapp (1984) suggests that the groups of the Lower Columbia hoarded much of the copper that came their way, only slowly passing it on up the river into the interior, thereby maintaining its high value. Brass and copper kettles were also popular trade items, and to judge from their frequent occurrence hung on

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poles around historic graves in the interior of British Columbia, they may have shared some of the wealth associations of the pure ornamental forms.

In both the prehistoric and the protohistoric periods it seems that, not surprisingly, the value of a copper ornament increased with its size. This simple equation has obvious theoretical support, in that a greater quantity of an exotic material will represent greater wealth. It has been suggested, for example, that copper tubular beads, the most common form of copper ornament, at least in the protohistoric period, copy the shape and function of dentalia shells (Stapp 1984), the value of which was also based almost entirely upon length. Copper pendants, another common artifact type in the protohistoric and historic periods, may have been modelled on pre-contact copper and/or shell pendants. One of Harlan I. Smith's (1900:441) Nicola-Thompson informants thought that copper pendants (see Smith 1899:151, Figures 87-89 and 1900:425, Figures 365 and 366) were worn on the chests of chiefs' daughters.

Copper swords were reportedly a valuable trade commodity along the Lower Columbia, although there is some debate over who was manufacturing them (compare Ray 1938 to Ruby and Brown 1976). These were apparently preferred over iron swords despite the former's inability to hold an edge, an eloquent illustration that the primary demand for the metal originated in the wealth and prestige spheres. Teit's (1906:204) Lillooet informants explicitly support this interpretation: "It is said that in ancient days copper knives were sometimes used, but they were considered more for their value (because scarce) than for their utility". Native groups along the Oregon coast were in possession of "copper swords" and "iron battleaxes" by 1792 (Ruby and Brown 1976:56). Lewis and Clark in 1805-06 described and sketched two large copper swords with fishtailed handles from a village on the Lower Columbia near Vancouver, Washington (Jones 1972:116; see also Ray 1938:61). Ruby and Brown (1976) illustrate a very similar copper sword found in an unspecified Chinook burial site on the Lower Columbia River. They add that in 1793 the Chinooks would trade a sea otter pelt for such a sword. A copper sword described and illustrated in Jones (1972:116-118), found in a cremation burial on an islet near the Bonneville Dam, may refer to the same specimen, or it may be another example. Two swords of the same form, one of copper and the other of iron, were found in the forest near Sweet Home, Oregon, apparently not in a burial context (Jones 1972:114-117). An identical copper sword was found in a burial at the Juniper site opposite the mouth of the John Day River (Bergen 1959, 1989). Finally, Cole (1958) noted a "large number" of sheet copper swords, each approximately three feet long, during the burial disinterment project on Upper Memaloose Island in the Long Narrows. During the same project, Cole observed an individual burial on nearby Grave Island to contain a copper breastplate, two copper swords, and two copper bracelets.

At least four copper clubs have been found on the Plateau, three of which are known to have been in burial contexts. James Teit was given a copper "war-club" reportedly found in a grave at Spuzzum, British Columbia (Smith 1899:150, Figure 82). The grip and base have been flanged though pounding, and both sides bear an incised design showing a simple face near the tip with long lines extending down from below the mouth to the handle. An almost identical copper club was found by Bergen (illustrated in Bergen 1959; see also Bergen 1989) in an adult (probable male) burial from the Juniper site. This same burial also contained the large copper sword mentioned above. Barlee (1969a) reports a copper "slave killer" club from a talus burial site in the Canadian Similkameen Valley referred to locally as the Brigade Stopping Place, near Snehumption Creek's confluence with the Similkameen River. No illustration is provided of this artifact, apparently now in the hands of a private collector, and so it is not possible to compare it in more detail to the previous two examples. Finally, Caldwell (1954b) recovered what he referred to as a copper war club during excavations at a housepit village overlooking Sawmill Creek near Kelowna. Again, no illustration or description is provided.

Both their overall shape and specific design elements strongly link the two copper clubs for which descriptions and illustrations are available with whalebone clubs (discussed in more detail below). The same motif, a simple face near the tip of the blade with a line extending down towards the handle, is found on numerous whalebone clubs (see illustrations in Boas 1907, including Figures 165e, 166a, g, 167c, and 168c, d, h, and i) collected before the turn of the eighteenth century from various Nuu-chah-nulth groups on the west coast of Vancouver Island. (A stylistically very similar face also appears on the wooden handle of an iron knife from a late prehistoric context at Ozette [see Wessen 1990:417, Figure 5].) This clearly suggests the transference of an image of power from one high status material to another, although in this case whalebone clubs also retained their high status position. The specificity of the image could suggest a rich, extra-regional iconography shared by the elite over a vast area.

Whalebone Clubs

Whalebone clubs, characteristic of the Northwest Coast, and particularly the west side of Vancouver Island, also occur on the Plateau. Details concerning the distribution of whalebone clubs in the interior are relatively poorly known. The Dalles-Deschutes region has produced both the greatest number of clubs and the greatest stylistic diversity, but clubs have also been found in the Willamette Valley, at the mouth of the John Day River, at Keller Ferry (45-LI-27) on the Upper Columbia, near the northeastern Washington town of Republic (Sprague 1971b), near the city of Kelowna in the central Okanagan Valley, at Fountain (EeRl 19) near Lillooet, and in the Kamloops-Chase area. A number of clubs are known from this last area. The majority appear to be associated with burials, but context is poor for many of the specimens.

In The Dalles region, whalebone clubs are known largely or possibly only from elaborate cremation burials. Some appear to show direct stylistic affinity with the Northwest Coast whalebone clubs of southern Vancouver Island, where they clearly operated as high status objects (see below). W. Strong *et al.* (1930:Plate 9l) illustrate a fragment of the handle of a whalebone club from either Site 15 or 21 on Miller's Island that appears to follow Northwest Coast design principles. Steward (1927:259, Plate 3a-c) illustrates fragments of three additional whalebone clubs from the two aforementioned sites, at least one of which (Plate 3a) demonstrates Northwest Coast influence. An unnamed site some ten miles below Miller's Island, on the Oregon side of the Columbia, presented nine cremation pits and several burials; the handle of a whalebone club from one of the cremations depicts a human head in profile surmounted by a bird headdress (Steward 1927:258, Figure 1). Boas (1907) illustrates the head of a club carved in the typical coastal style, but made of serpentine. It was found on Blalock Island opposite Umatilla. Two additional stone clubs that appear to copy Northwest Coast-style whalebone clubs are illustrated in E. Strong (1960a:146, Figure 54).

Downriver of The Dalles, towards the mouth of the Columbia, whalebone clubs seem to occur more frequently and display the clearest stylistic affinity to the Northwest Coast (see clubs illustrated in Boas 1907; see also Phebus 1978). Boas (1907) attributes the origin of this type of club to the Nuu-chah-nulth of western Vancouver Island, but in many respects it displays equal affinity with the Coast Salish artistic style. Duff (1956:111) has suggested a stylistic relationship between the seated human-figure bowl complex, which seems to be restricted to the Salish, and whalebone clubs. This could offer further support to the idea that the whalebone clubs themselves are as or more strongly associated with the Salish artistic tradition as with the Nuu-chah-nulth tradition. In either case, strong ties to the Northwest Coast are indicated in material culture associated with prestige. In this regard, it is interesting to note W. Strong *et al.*'s (1930:53) comment regarding their excavations on Miller's Island: "Bones of sea mammals decidedly predominate in the bone artifacts from the cremation pits". Although this statement is not expanded upon, it would seem that more than the whalebone clubs are being referred to.

Not all whalebone clubs are necessarily stylistically linked with coastal influences. Others clearly exhibit local stylistic traditions (cf. Ames 1991:940). A specimen found by a collector in The Dalles area depicts the "grinning face" motif, the possible significance of which is explored further below (see Screenings 1965 for a photograph of this club). A whalebone club from the Leachman site cremations has a design which also bears some resemblance to the "grinning face" motif, although this is far less clear than in the previous example. But in both specimens the carved heads are shown in full frontal view rather than in the profile view characteristic of Northwest Coast whalebone clubs. The head on the Leachman club shows what appears to be a topknot (see E. Strong 1959b for a photograph of this club). Another club similar to this one was apparently found at the mouth of the John Day River (E. Strong 1959b).

Curtis (1911a:89) states that whalebone clubs were used by a "class" of men who functioned as public assassins among the Wishram. The slaves of nobles were sometimes engaged in this activity, but while it is possible that they would be temporarily given the use of an elaborately carved club belonging to their owner, it is highly unlikely that slaves would typically be buried with such weapons. On the Northwest Coast, whalebone clubs operated both as actual weapons and as badges of office or status symbols (Arima and Dewhirst 1990:401); use of the weapon was limited to chiefs (Jewitt 1987; Drucker 1951). This is likely to have been true of the other club forms—in stone, antler, and copper—discussed earlier as well. The already high status associations of elaborately carved clubs on the Northwest Coast could only be intensified on the Plateau, where the material itself had to be imported from considerable distances, and probably symbolised a connection with what were viewed as the more powerful chiefs and clans of the Northwest Coast cultures.

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Utilitarian Objects

There is limited ethnographic information—really just isolated comments—on a small number of additional artifact types. Many of these are what would normally be considered utilitarian objects. As our earlier discussion indicated, however, sometimes, whether because of the incorporation of exotic materials or the expenditure of additional labour, such objects can assume a prestige role in addition to their other functions. And, in the absence of much ethnographic information, it is easier to approach this question from a more theoretical perspective. The following examples offer some cases in point, utilising both lines of evidence.

Nephrite Celts

Nephrite celts form a particularly important artifact class concerning which there is little ethnographic information. Nephrite as a material is highly localised on the Plateau, being concentrated mainly along the Middle Fraser Canyon, although other sources are reported for the Rogue River in southern Oregon (E. Strong 1960a), the lower reaches of the Nooksack River (Smith 1900), and the Upper Skagit River Valley (R. Meirendorf 1993, letter on file with author; R. Babcock, pers. comm. 1993). Occasionally, nephrite cobbles have also been found in the Upper Columbia, probably carried in by ice during glaciations (Hibbert 1985). The production of nephrite celts may have been a specialised activity at certain sites, especially in the Middle Fraser Canyon region between Hope and Lillooet where all stages of manufacture have been found. Evidence of on-site manufacture in the form of sawn nephrite cobbles has been reported from the Hope/Yale area (Hanson 1973; von Krogh 1976), Lytton (Smith 1899:145) and Texas Creek, near Lillooet (Sanger 1968b:4, 21). Unfinished celts also accompanied some of the burials at Chase (Sanger 1968a) and at Texas Creek (Sanger 1968b).

Nephrite is an extremely hard material. Intensive and laborious effort is required to saw a suitable piece from a nephrite boulder and then grind and polish it to its final form, so much so that Hayden (Hayden and Ryder 1991) has suggested that the presence of celts may be a fair indicator of slave labour. The finished tool was widely traded up and down the Plateau and the Northwest Coast from its origin in the Middle Fraser Canyon, and without doubt was highly prized for its usefulness in woodworking. But typically only small broken or damaged nephrite tools are found in occupation contexts, and even this occurs far more frequently on the Northwest Coast than on the Plateau. There may be a bias in recovery contexts on the Plateau. If utilitarian, nephrite adzes would generally be damaged, lost, or discarded during use away from village contexts, and so would not be found in village deposits (cf. Hodder and Lane 1982). But the available evidence argues against this. I am aware of no nephrite adzes/celts from isolated, non-burial contexts on the Plateau; at least a few examples might be expected to have turned up if they were commonly used in this way. Many, however, are found in burial contexts.

Celts found in burials on the Plateau range greatly in size; some are far larger (the largest being longer than 30 cm) than would seem optimum for actual use in woodworking; certainly they tend to be larger than those found in midden contexts. Larger celts are expected, of course, to have greater prestige value than smaller ones (cf. Hodder and Lane 1980; see also Gero 1989). Almost without exception the large celts found in burials are finely polished over their entire surface. Teit (1906:234), with regards to the Lillooet, states that “jade” celts were sometimes used as club heads in warfare. And among the Thompson, Teit (1900:320) states that “jadeite adzes” were used by boys during their spirit quests to peck holes in boulders. Given the exotic nature of the material and the labour required to work it, nephrite celts were undoubtedly valuable items, and, if purely utilitarian, would be expected to be highly curated. Their removal from circulation, then, makes little sense except in their role as prestige objects (cf. Earle 1982). Furthermore, while some celts occur in what appear to be “poor” graves, they seem to be more commonly found in burials with above average wealth. Thus it seems likely that nephrite celts, and particularly large specimens, functioned at least partly as symbols of prestige and wealth, and as media of exchange (Hayden 1993; Fladmark 1982). Some variation in the use of, and value attributed to, nephrite celts can also be expected between different regions of the Plateau, particularly as one moves further away from its sources. To my knowledge this has yet to be addressed.

Atlatl Weights

The presence of atlatl weights in assemblages on the Columbia Plateau is generally accepted now and has been for a number of decades, although it did create some controversy prior to the 1960's (Butler and Osborne 1959; Duff 1956; Strong 1958, 1960a, 1966). A number of problems were brought forward in E. Strong (1958: 1) it makes little sense in terms of performance to have a weight on a throwing board, 2)

many of the so-called atlatl weights weigh up to 10 ounces, thought to be too heavy to be practical, 3) the weights often occur in unmatched pairs, which again would not seem to yield an obvious functional explanation, 4) many specimens exhibit signs of battering on the base, difficult to reconcile with their postulated use as weights, and 5) the shape of the base often does not appear to facilitate attachment to a board. Since first brought forward, most of these objections have been satisfactorily dealt with. Finally, although it is not commonly cited, Astorian fur trader Robert Stuart's 1812 journal (Spaulding 1953:41) clearly describes the use of the throwing board in historic times for hunting sea mammals on the Oregon coast near the mouth of the Columbia River, although the use of weights in conjunction with the board is not mentioned.

In 1956, Wilson Duff tentatively identified ten objects from the Lower Fraser River as atlatl weights. This article provided the impetus for Butler and Osborne's (1959) important study of 104 similar objects, most of them from the vicinity of The Dalles. Three general types of weights, designated I, II and III, were identified. I would like to focus here briefly on Types I and III. Type I weights are of interest because of the material used in their manufacture. The majority are of lead ore, commonly called galena, although examples in other rock types also exist. Butler and Osborne (1959) report 13 complete and three fragmentary galena atlatl weights, all of which were located in the Dalles-Deschutes area as defined by W. Strong *et al.* (1930). Those found subsequently by Bergen (1989) at the Congdon site, also near The Dalles, may be added to this total. Undoubtedly many more examples exist in similar private collections. No sources of galena are known in the vicinity of The Dalles, the nearest sources being located along the western slopes of the Cascades (Butler and Osborne 1959:216). E. Strong (1958) notes that galena weights have reportedly occasionally been found as far east as the shores of the Coeur d'Alène River in northwestern Idaho. The unusual appearance and properties of the material, together with its scarcity, could impart prestige associations. To the north, Dawson (cited in Smith 1899:159) reported finding galena beads or pendants at Lillooet on the Canadian Plateau.

Type III weights are the most common in the collection assembled by Butler and Osborne (1959). Many are beautiful, symmetrical, finely finished objects, made of hard stone clearly selected for its colour and patterning. Some include a series of parallel longitudinal grooves that serve no function relating to the attachment of the stone to the board. In short, many display craftsmanship far in excess of that required to produce a functional implement. Furthermore, some of the weights, particularly those described by Duff (1956) from the Lower Fraser Valley, are fully carved zoomorphic images. Atlatl weights of all types appear to be known largely from burial contexts. Taken together, this information at least suggests the possibility that some atlatl weights or objects that appear similar in form may have been partly involved in the prestige sphere, rather than being purely utilitarian (see also Hall 1977). But, as an artifact class, they occur too infrequently—and even then often in poor archaeological contexts—to make any firm conclusions in this regard.

Projectile Points and Knives

While most projectile points and knives can be viewed as strictly utilitarian equipment, a small proportion appear to exhibit characteristics more typical of prestige objects. Such points are exceptionally finely made, often being so thin and delicate that they seem impractical for actual use either as projectiles or as knives, and they are typically made of high quality exotic lithic materials.

The use of some projectile points and knives as prestige items appears to have been most prevalent along parts of the Lower Columbia, especially in The Dalles-Deschutes region. The majority of projectile points found in large cremation and non-cremation burial sites along the Middle Columbia seem to have been exceptionally well-made, and are often of gem quality lithic material, which, although available locally, is still relatively rare. The highly distinctive type known as the "Columbia River dagger point" provides one example of what was probably at least partly a prestige item.

Roughly 10 percent of the knives and points at sites in the Dalles-Deschutes region are made of obsidian (W. Strong *et al.* 1930), most likely originating from central Oregon. Obsidian bifaces are frequently of unusual size, up to 18 cm or even larger, but very thin in cross-section, making them impractical for use. Further up the Columbia River obsidian becomes even rarer and, when, it does occur, tends to be in the form of large, finely flaked bifaces (see sections on Pot Holes and Wahluke sites in Chapter 6). Most likely such objects functioned as prestige items on the Plateau, as they did in California (Rust 1905) and the Great Basin (E. Strong 1969), where they are commonly known as "wealth blades" by amateur collectors, and are generally found in caches and in burials (see also Cressman 1933 on southwestern Oregon). Spier (1930:76), for example, refers to the "exaggerated" value placed by the

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Lower Klamath groups of Oregon on these obsidian blades as symbols of wealth. Pavesic (1985) suggests that large "turkey-tail" points and cache blades found with burials in western Idaho, the eastern edge of the Plateau, were prestige items manufactured by specialists specifically for burial with the dead. They are invariably of excellent workmanship in high-quality lithic materials, of larger than average size, and show no signs of use-wear (see also Gero 1989).

More obviously non-utilitarian are a group of chipped stone objects sometimes called eccentrics. Examples of this rather eclectic group of objects are rare but widespread throughout the Plateau. The forms are sometimes recognisably zoomorphic, and sometimes more abstract. Interpretation of these items is difficult. With one possible exception (Atkinson [1937] states that an unusually shaped chipped agate piece belonged to an Okanagan chief and was sacred), there is no ethnographic information on their use, and the scarcity of examples from secure contexts makes any evaluation along these lines tenuous. A few have been found in burial contexts on the Canadian Plateau, but others have been found in middens. While they are provisionally viewed as prestige items, there is in any case very little that can be said about them given their low frequency of occurrence and often poor context.

Mauls and Pestles

Spinden (1964:185), with reference to the Nez Percé, notes that the time involved in manufacturing pestles made them valuable property, sometimes handed down for generations. It is possible that he was referring to mauls rather than pestles, since the former are more often finely shaped. Mauls are also sometimes elaborately carved into zoomorphic forms. It may be questioned why so much effort would be put into making such fine symmetrical tools when appropriately shaped river cobbles were so abundant along the shores of the Columbia and Fraser Rivers. And indeed simpler mauls and pestles are also found, far more frequently in fact (e.g. Grabert 1970:49). Large well-made pestles sometimes grade into a form that might be better described as stone clubs, as discussed earlier.

Digging Stick Handles

Antler digging stick handles may have also been of considerable value to their owners. Cressman (1960:70) states that digging sticks were specially made for specific girls and kept as important personal possessions for life. Certainly they are found more often in burial contexts than in any other (although see Stryd 1983 for examples found in housepits), and they are often elaborately decorated (e.g. Sanger 1968a:111, 173, Plate VIII). The digging stick itself, while representing a relatively simple technology, was nevertheless an indispensable tool used in what was the second most important subsistence activity (in terms of caloric bulk) in many Plateau groups. Women, who were traditionally responsible for the majority of plant gathering, gained considerable status and became desirable as wives in proportion to their success at this activity (see Marshall 1991 specifically regarding the Nez Percé). While it is probably true that in the ethnographic period most or all adult women would own a digging stick, there is some suggestion that the handles on the majority of them would be of wood (Cole and Lockner 1989:417; Teit 1909:514; Nancy Turner, pers. comm. 1993); thus those with antler handles, a harder material to work, may have been of greater value and hence higher prestige (cf. Hayden 1993). In addition, antler digging stick handles would often be embellished with incised designs which may have been involved in advertising greater ability and prestige (cf. Sanger 1968a). The available evidence is very incomplete and thus the interpretation of this artifact class must remain tentative.

Tsagiglálal: The "Grinning Face" Motif

The "grinning face" motif, found on a series of small bone and antler carvings in Late Period cremations, is an important image in the lower Middle Columbia, and specifically in The Dalles-Deschutes region. The few known complete figures exhibit what appears to be tailored clothing with geometric designs below the waist. Ribs and navels are portrayed on all of the carvings complete enough to observe these details. The essence of the image, however, is in the head. Facial features are practically identical, with large, roughly almond-shaped, concentrically-ringed eyes leading to the nose, and a grinning mouth, sometimes showing teeth, and tongue. Elaborate hair styles and/or headdresses are often emphasised on the figures, and many are pierced at the sides of the head as if for earrings. The majority of the heads appear to exhibit marked cranial modification.

It may be that the use of elaborate hair styles can be linked to high status in many societies cross-culturally. McGuire (1992b) also implies this idea in his discussion of Hohokam graves with hairpins, which he found to have over twice the wealth of graves lacking hairpins. C. King (1990) suggests

something similar in his analysis of Chumash burial practices. The portrayal of ribs on all of the complete antler grinning face carvings may link the image to shamanic power through the use of skeletal imagery (cf. Furst 1977), while the depiction of cranial deformation, elaborate clothing, elaborate hair styles/headaddresses, and ear ornamentation strongly suggest, as argued in this chapter, a connection with elite members of society. All of this is in addition to and independent of the contextual evidence provided by the occurrence of these carvings in cremations containing many other artifact types best interpreted as prestige items (see Chapter 6).

There are other examples of the image in different media as well. A steatite pipe from one of the B. Stewart site single cremations near Celilo Falls clearly depicts the image (Butler 1957, 1959), as does another steatite pipe found at Horsethief Lake (Burgoyne 1966) (what used to be Colowesh Bottom before the completion of The Dalles Dam—see Chapter 6). The grinning face image also appears on an elaborately decorated stone mortar, found at either Site 22 or Site 19 on Miller's Island (Heizer 1942, using W. Strong *et al.*'s 1930 site designations) (see Chapter 6). Additional examples of portable stone sculpture that do not appear to have made their way into the anthropological literature may be found in Wingert (1952:Figures 6, 26, and possibly 7), in the photo archives of the Oregon Historical Society, and in the Vancouver, Washington Museum. Finally, a previously mentioned whalebone club from The Dalles area bears the grinning face image. It seems probable that most of these examples can be best interpreted in an high status context.

As has been noted by a number of researchers (Butler 1957; McClure 1979; E. Strong 1959a, 1960a; Keyser 1992), these highly distinctive figures bear a close resemblance not only to one another, but to the famous painted petroglyph of Tsagiglálal (45-KL-58). The Tsagiglálal image is not an isolated occurrence: additional stylistically very similar petroglyphs are known. One of these occurs near the original figure, and another (site designation 45-KL-86) near the present John Day Dam (McClure 1979). Loring and Loring (1982:13, Figure 1a) illustrate a Tsagiglálal-like petroglyph found on a boulder near Spearfish in Clark County. A number of other petroglyphs on both sides of the Columbia in the vicinity of The Dalles depict human faces with features similar to those of Tsagiglálal, even though the overall effect is slightly different (see illustrations in Loring and Loring 1982). Further abroad, Gerity (1964) describes but unfortunately does not illustrate what he identifies as a Tsagiglálal pictograph near an elaborate cremation pit in the Mt. Hood area of Wasco County, Oregon (see Chapter 6).

The overall style of the carved human figure has antecedents going back at least some 1000 years at Wakemap Mound, but the grinning face motif itself may be an eighteenth century phenomenon (Butler 1957, 1965; McClure 1979). This estimate is based solely on the context of portable antler and bone carvings depicting the image, which often occur in cremation pits also containing fragments of what is presumably Euroamerican trade copper. Beyond doubt the origin of the "grinning face" motif lies in the vicinity of The Dalles, where it is most highly concentrated and linked to the image of Tsagiglálal (McClure 1979). The motif also occurs elsewhere, however. On Sauvies Island, downriver from The Dalles, the Tsagiglálal image is found carved in relief on a small boulder (see Peterson 1978:82, Figure 15). A cremation pit on Badger Creek in Wasco County, Oregon contained the largely calcined fragments of two antler carvings bearing the motif (Gerity 1964). E. Strong (1960b) illustrates an example of the "grinning face" motif found at Summer Lake, Oregon. The most distant example known may be a bone carving of the image found near the confluence of the Williamson and Sprague Rivers at Klamath Lake in southern Oregon (Howe 1968:125, Figure 98). The image does not appear to be found a comparable distance to the north.

The interpretation of Tsagiglálal, and, by extension, the grinning face image in general, can be approached from a number of directions. But these all seem to converge to one explanation. "Tsagiglálal" translates as "She Who Watches", or, in Butler's (1957:162) more elucidating version: "She Who Watches All Who Are Coming and Going". This title alone strongly implies the territorial significance of the figure, strengthened by its location overlooking Wakemap Mound and the major fisheries of the Long Narrows, by all accounts the most productive aboriginal fishery in western North America (see Chapter 5). Thus the image may have served in part as a declaration of rights to, and control over, the surrounding fisheries. Indeed, the entire stretch of river encompassing many of the most important fisheries was, before being flooded by The Dalles Dam, known as Petroglyph Canyon, due to the large number of elaborate painted and pecked images found there. Rock art along the entire Columbia River Gorge is found mainly high on cliffs near good fishing spots and occasionally further from the river on trails to the spots (Seaman 1946; E. Strong 1960a:104; W. Strong *et al.* 1930:134; Bergen 1989; see also Cain 1950), supporting the hypothesis that the images were being used at least partly to identify ownership of important fishing stations.

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Lundy (1974, 1977, 1978, 1979) presents a similar argument with reference to the petroglyphs of the Middle Fraser Canyon near Lillooet. She suggests that rock art is "... closely connected to salmon fishing on the Middle Fraser, perhaps as station markers, perhaps as seasonal indicators" (Lundy 1979:67-68), or perhaps, I would add, as both. This last suggestion stems from the observation that many petroglyphs on boulders along the shores of the Fraser River appear only during the low water summer months when the salmon are running. W. Strong (1945) made similar observations regarding the emergence of petroglyphs on the Long Narrows during the salmon runs before the inundation caused by the completion of The Dalles Dam.

Rock art on the Plateau in general has usually been interpreted as relating to the guardian spirit quest (Keyser 1992; York *et al.* 1993). There is little doubt that at least some rock art served this function. But if the images discussed above were involved primarily in the quest for spirit power, traditionally seen as a solitary and very personal quest, it is difficult to account for their presence in some of the most public and visible locations on the river. It is suggested therefore that these elaborate displays can best be interpreted as visual displays of ownership or access restriction to important resource extraction locations, i.e., as a form of territorial behaviour (cf. Dyson-Hudson and Smith 1978:22). Annie York, a Thompson elder, relates that one use of rock art was as territorial markers, marking boundaries and also acting to actively protect important resource areas from trespassers (York *et al.* 1993:247).

Associated oral traditions collected around the turn of the last century relate that Tsagiglálal portrays a female chief who ruled the Wishram in the past, before being transformed by Coyote (Curtis 1911a:145-146). An interesting possible connection emerges between this tradition and one mentioned in E. Strong (1960a:50): "Wakemap... is a corruption of the Chinook word *wuq'Emap* which means ogress or old woman. Legend says that *wuq'Emap* was an ogress full of sharp stones who led amorous men to a painful death until Coyote with five long pestles succeeded in slaying her". This recalls an aspect of Coyote familiar in the myth cycle of the neighbouring Shoshone: "Coyote's conduct is often associated with his glandular powers. His phallus impregnates. It titillates. It whips into conformity those who are ungracious. Any assessment of Shoshonean phallic art is in some fashion associated with Coyote. His penis is likened to a pestle, stone hard and capable of fracturing the teeth of the most powerful woman - Vulva Woman - the Tooth-Mother herself" (Pavesic and Studebaker 1993:53). The connection between Tsagiglálal and the Tooth-Mother is clear in this context, provided that the Wakemap ogress can be equated with Tsagiglálal, which seems at the least a reasonable proposal. And there may be connections even further abroad. Particular tall standing rocks in the south-central interior of British Columbia are even today known by the Lillooet and Thompson as "Coyote's Rock" or, depending on who is telling the tale, "Coyote's Penis" (cf. Teit 1917:19). James Teit (cited in Duff 1975) relates a Thompson myth concerning an old woman who developed a cannibalistic hunger to eat her own people. When confronted by Coyote and three other culture heroes, she also attempted to kill them "... with her privates, which bite and are poisonous, like the head of a rattlesnake" (Duff 1975:57).

An alternative account, obtained in an interview with a Wishram woman in 1958 (Burke Museum n.d.), identifies Tsagiglálal as the image of a death-cult guardian spirit created during the eighteenth century in response to the impact of introduced European disease. W. Strong (1945) developed this idea most fully, suggesting that the antler carvings and Tsagiglálal are part of an historic nativistic religious movement known as the Ghost Cult. But, as others have pointed out (e.g., Butler 1957), there is a well documented artistic tradition incorporating skeletal imagery on both the Northwest Coast and the Plateau, extending back thousands of years.

Yet another myth identifies Tsagiglálal as a kind of guardian spirit over salmon, assuring their annual return (Burke Museum n.d.; W. Strong 1945). Ostapkowicz (1993) suggests that the elite, through their control over and manipulation of the image, were able to in a sense manipulate the guardian spirit, and thus were perceived as controlling the return of the salmon, thereby legitimising their privileged access. These various accounts are not necessarily mutually exclusive; rather, they may be complementary.

The various depictions of the "grinning face" image are remarkable for their stylistic consistency, and likely represent emblematic imagery identifying a particular group (after Wiessner 1983). But the image is far too numerous and widespread to identify only a single family or lineage; it is more likely that it represents an iconography widely shared by the elite of different lineages and ethnolinguistic groups. The maintenance of such a supra-local identity among the elite is not unexpected. It is also reflected in the fact that, according to various ethnographic sources throughout the Plateau (Spier and Sapir 1930; Nastich 1954; Curtis 1911b), and indeed in societies throughout the world, the elite are far more likely to marry outside of the local group than are other members of the community (see Blau [1977] for an insightful discussion of

this phenomenon from a more theoretical perspective). These ties are, of course, more likely to be between families of comparable socioeconomic and sociopolitical standing (refer to Chapter 5 for more detail supporting this position). They contribute to processes by which the elite acquire and maintain privileged access to extra-local resources, including exotic prestige items. The elite emphasise their privileged position by symbolically (i.e. through the use of images with a specific iconographic content) alluding to their connection to one of the richest resource procurement locations on the Plateau, an area also associated with the highest degree of sociocultural complexity.

An antler carving of a human figure found in the grave of a child near Tampico in the Yakima Valley (Smith 1904, 1910) presents another example of how art may be related to high status on the Plateau. The lower body of the Tampico figure shows what appears to be tailored clothing, presumably buckskin, with distinctive incised designs that seem to suggest series of fringes. The upper body displays the incised rib motif common in the art of both the Plateau and of the Northwest Coast. Armbands or tattoos are also represented. The face is simply executed, with almond-shaped eyes, a straight bridge ending in two drilled nostril holes, and a close-lipped grinning mouth. The real emphasis of the figure seems to be in the hair and headdress. Part of the top of the figure is missing, but what remains depicts a very elaborate series of vertical and horizontal incised lines, a series of joined triangles superimposed on concentric arcs, and wavy vertical lines alternating with additional horizontal and vertical lines at the top. The lines may represent strings of dentalia shells, either on a headdress or suspended from the hair itself. Two ovals similar in form to typical abalone shell or copper ornaments appear at the lower end of this pattern. Writing at the turn of the century, Smith interpreted the costume of the figure with its elaborate "feather" headdress as a product of Plains influence. However, from a contemporary perspective, while some of the iconography may be influenced by contact with the Plains, the image is nevertheless to be understood within the context of Plateau culture. Furthermore, while the depiction of feathers is often stereotypically seen as denoting Plains influence, feathers were important symbols among many North American Native groups, including those of the Plateau (cf. Cline *et al.* 1938; Ray 1938; Teit 1900:357). Osborne *et al.* (1961:299) also question Smith's attribution of the Tampico figure to Plains influence, suggesting instead a relationship to the Columbia River "ghost cult" (cf. W. Strong 1945; see also Carlson 1983a).

Writing in 1904, Smith found the figure's closest stylistic parallels in a series of petroglyphs depicting human heads and figures with "feather headdresses" found at Sentinel Bluffs in Washington, as well as in an antler quill flattener from South Dakota (the affinity of the latter is seen by the present author as somewhat dubious). Excavations some two decades later in the Dalles-Deschutes area (W. Strong *et al.* 1930) revealed examples of bone and slate carvings which are, despite their very incomplete state, remarkably similar to the Tampico figure (Stewart 1927:Plate IIa, b, and c). They show parts of headdresses with nearly identical patterns of zig-zag lines and arcs with intervening vertical hatching as seen in the Tampico figure. The three, along with many other carved bone fragments bearing the "grinning face" motif, discussed above, were found in large multiple cremation pits on Miller's Island at the confluence of the Deschutes River with the Columbia. Another carving very similar to the Tampico figure was found by a collector at the mouth of the John Day River (E. Strong 1960a:121, Figure 40). This carving, made of steatite, is complete, and clearly depicts the same tailored clothing below the waist as seen in the Tampico figure; the incised designs on the waist and legs are nearly identical, though simplified on the John Day specimen. Also present is the grinning mouth and elaborate hair/headdress. Finally, Carlson [1983a] makes a connection between the Tampico carving and a number of anthropomorphic antler carvings found on the Northwest Coast.

The John Day carving does not, according to E. Strong (1960a:124), conform to the Columbia River art style. Presumably, then, neither does the Tampico figure. This interpretation may be called into question, however. Granted that the treatment of the face and head departs somewhat from that seen in the classic "grinning face" image, but the two complete carvings from the Leachman site (see Chapter 6) show a very similar treatment of the body below the waist, including the basic elements identified for the Tampico and John Day figures. The simple presence of a number of figures of the Tampico type argues that the style, while not identical with the "grinning face" motif, is nevertheless not an isolated occurrence but rather represents an alternative iconography, possibly with slightly different ideological or regional content and referents.

Thus the significance of the figure relative to the interpretation being developed here can be seen in terms of its stylistic similarities to both other small-scale carvings and to the petroglyphs and pictographs of the area. It is argued that these similarities can best be viewed in a context of high status emblematic

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imagery involving recognition of the position of individuals and their relationship *vis à vis* important resources in the form of owned fishing locations or other important sites. A number of features point to the association of these carvings with positions of high status. The wearing of buckskin clothing has already been argued (see above) to be limited mainly to the elite of Plateau society; the abundant shell and possibly copper ornamentation portrayed lends support to this interpretation. The right to wear elaborate headdresses, such as indicated on the Tampico figure, was often the prerogative of high status males, particularly chiefs. Finally, there is the context of the Miller's Island figures in elaborate cremation burials containing many other items most easily interpreted as wealth and prestige items. That the Tampico burial may itself be considered a high status burial is supported by a number of lines of evidence: 1) the form of the facility itself (and hence the effort involved in creating it) is more elaborate than those typically seen in the area (Smith 1910); 2) the presence of long incised dentalia shells to which high value was attributed by Lower and Middle Columbia groups (Spier and Sapir 1930); and 3) the possible presence of occipital flattening, since such treatment in at least the lower Middle Columbia area was ethnographically considered essential in the upper classes. Cranial modification, when the practice can be linked with high status, is also an excellent indicator of ascription, since it can only be applied in the early years of life.

Status and the Guardian Spirit Complex

The guardian spirit complex was by all accounts very important and pervasive on the Plateau (Cline *et al.* 1938; Curtis 1911a, b; Marshall 1991; Ray 1932, 1939; Spinden 1964; W. Strong 1945; Teit 1900, 1906, 1909; York *et al.* 1993; Walker 1968). Its relevance to this work stems from the fact that many ethnographic accounts suggest that a significant amount of the "decoration" on many different types of items can be referred to guardian spirit power (Boas in Teit 1900; Carlson 1983a; Ray 1939). This brings us to the realm of art and its role in Plateau culture.

Art in general in small-scale societies is rarely purely "decorative" but is almost always imbued with religious or mythic meaning (cf. Clarke *et al.* 1985; Anderson 1989), which in turn is often strongly correlated with wealth and prestige. This relationship, it is argued, held for the Plateau. W. Strong (1945) has made one of the earliest and most explicit connections between art and power on the Plateau, in the form of the guardian spirit complex (see also Crabtree 1957, Sanger 1968a, and Carlson 1983a, 1993). The human figure in Plateau art typically exhibits a number of recurrent features: the depiction of ribs, malar lines (possibly related to tattoos, which Teit [1900, 1906] has also related directly to guardian spirit powers), and, often, the presence of an elaborate headdress or hair style. The last often includes the depiction of ear and hair ornaments, including combs. The use of skeletal imagery can be linked with the shamanic vision (cf. Duff 1956; see also Furst 1977 for a cross-cultural discussion of the use of skeletal imagery in the shamanic vision). In some cases, as discussed in the section on Tsagiglálal and the "grinning face" image, there seems to be a very clear emblematic (Wiessner 1983, 1990) aspect involved in the depiction of human figures. Furthermore, Teit (1930:194-195) specifically links the carving of small animal and human figures in stone with guardian spirit representations among the Columbia Plateau Salish. And Carlson (1983a:195) goes so far as to suggest that "All zoomorphic or anthropomorphic pendants should represent spirit powers of some sort".

Other, essentially unmodified items such as eagle feathers, bird beaks, raptor and bear claw cores, and bear baculae were likely also spirit power representations in many instances. While this might suggest to some that such items had little to do with wealth and status, functioning rather in the religious sphere (cf. Skinner & Copp 1986), it is argued here that a strong correlation existed between guardian spirit power, wealth, and status in many Plateau groups. Indeed, this situation would be expected given my earlier discussion concerning the lack of separation of religious and economic spheres commonly seen in small-scale societies (and many larger-scale as well). Guardian spirit power was thought to be responsible in large part for one's achievements and successes (Curtis 1911a, b; Nastich 1954; Romanoff 1992a; Spinden 1964; Walker 1968; see also Elmendorf 1977 and Suttles 1987 regarding the Coast Salish). Strong gambling power, for example, would lead to success in that activity and so to wealth (Maranda 1984); thus beaver tooth dice and lahal sticks (usually made of decorated wood but occasionally of bone) operated in this sphere.

Numerous other specific examples can be cited. The simple designs sometimes present on digging stick handles have been said to represent spirit powers conferring ability in the acquisition of root resources (Marshall 1991; Sanger 1968a), which were among many Plateau groups the most important economic resource after salmon. Antler tine clubs used in warfare were also said to be incised with representations of the owner's power (Cline *et al.* 1938). Teit (1930:283) states: "It seems that adolescents of some families

in all the tribes used scratchers, paint scratchers, drinking tubes, and whistles, as among the Thompson, while those of other families did not use them". The objects mentioned are all made of bone and usually bear finely incised abstract designs. They also occur as grave inclusions, possibly more often than realised, since they may be occasionally misidentified as utilitarian objects. Specific information is available linking all of these items to the quest for spirit power. During their training, for example, Thompson youths were not allowed to drink except through a special drinking tube; they could not even touch their heads, but must use a special bone object (a "head-scratcher") for this purpose (Teit 1900:313-318). The fact that the use of these items was limited to only certain families suggests that not all adolescents underwent the training for spirit power, and indeed this seems to be the case. It is argued that training for power occurred more frequently within a high status context; this in turn suggests that those individuals buried with these items were members of high status families (although once again, especially in prehistoric contexts, it is important to test this assumption against other lines of evidence rather than accepting it as given—it is only part of a model constructed using limited ethnographic data, the purpose of which is to generate expectations, not complacency).

The purpose behind the discussion of these specific examples is to suggest that "simple" incised designs on items, including even those usually considered to be purely utilitarian, may be of considerable significance through their relation to the guardian spirit complex (cf. Stryd 1983) and hence to socioeconomic status. This last connection will now be discussed in more detail.

Spinden (1964:247), in his ethnographic study of the Nez Perce at the turn of the century, states: "Those who were unsuccessful in obtaining a guardian spirit were regarded as unfortunate, and seldom rose to posts of honor and influence". The same idea is expressed by Farrand (1921:245): "Boys who did not go into the mountains to secure helpers were thought to be of no account" (see also Walker 1968). And apparently many Nez Percé youth *did* fail to acquire spirit power (Farrand 1921:247). Referring to the Yakima, Curtis (1911b:10) states: "Many failed altogether to obtain the pity of the spirits". Spier and Sapir (1930:238) write concerning the Wishram: "Success in life was contingent upon acquiring some power from the spirits, yet some never acquired any". Ray (1932:26, 182-185), once again emphasising the egalitarian nature of the Sanpoil in particular and Plateau culture in general, states that most Sanpoil men acquired at least one guardian spirit power. Those (males) who did not, however, were held to be of no account. Ray estimates that one out of ten men failed in the quest, while only 20 to 30% of women, for whom the endeavor was apparently less essential, succeeded. But while most men acquired at least one spirit, some acquired many more than this; in fact a famous Sanpoil shaman possessed six guardian spirit powers. Thus, despite Ray's interpretation, it appears that a very unequal distribution of spirit power still existed, even among the Sanpoil. The idea that individuals acquired varying numbers of guardian spirits, from none to one to many, is echoed by Curtis (1911b:82) for the Columbia Plateau Salish in general, and by Teit (1900:320) for the Thompson.

Hill-Tout (cited in Teit 1906:295) states that, among the Lower Lillooet "... only those youths who had a desire to excel in any particular thing underwent the regular *kwa-za'ntcut*, the ordinary youth possessing no personal totem [guardian spirit]". Certain specialist occupations required particularly strong spirit power for success; these positions included chief, shaman, warrior, hunter, gambler, and foot-racer (Curtis 1911a, b; Ray 1932; Romanoff 1992a:474; Spier and Sapir 1930; Spinden 1964; Teit 1900:317-318; York *et al.* 1993; Walker 1968). With the possible exception of the last, concerning which no information is available, these can all be regarded as high status occupations. It should be noted that the position of "hunter" does not refer simply to an individual skilled at tracking and killing game, but to a leader of communal hunting activities. Even everyday subsistence activities such as fishing and root-digging were greatly enhanced by strong guardian spirit power (Marshall 1991; Ray 1938; Spier and Sapir 1930; Walker 1968).

Social perceptions of proper behaviour were such that one would be unlikely to assume the trappings of guardian spirit power one did not possess. Spinden (1964) states that among the Nez Percé it was a "sin" to pretend to have powers beyond one's capabilities, and that individuals who dared this could be killed by the mis-represented spirit power. Cline *et al.* (1938:47) state that, among the Sinkaietk (Southern Okanogan), certain emblems were restricted to strong old men with power: "... if an old man with strong power saw such a cap worn by a young man who lacked the privilege, he would ask his power to kill the pretender". They provide another example: "The wearing of feathers was also connected with power, in that an individual without the proper power could not wear feathers without suffering loss of prosperity or well-being" (1938:48). Similar restrictions to wearing certain items, particularly eagle feathers or other "unusual dress or ornament", were noted by Teit for the Thompson (1900:357, 361). The display of these

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items was equivalent to claiming the power represented and so could be considered as a challenge to a shaman. It is interesting to note that among both the Sinkaietk and the Thompson specific eagle eyries were considered important property, individually owned and inherited in the male line.

Finally, there are indications that in at least some groups guardian spirit power could be inherited (Ackerman 1982:102; Miller 1988:157; Ray 1932:169, 1939:88; Spinden 1964:256; Teit 1900:354, 1909:605; York *et al.* 1993:227; Walker 1968:17), a situation somewhat at odds with the emphasis on the individualistic and egalitarian nature of the spirit quest as it is often portrayed (Ray 1939). In one of the more explicit formulations of this pattern, Walker (1968:17) writes: "Chiefship of either type and the corresponding supernatural assistants seem to have been semihereditary at all levels of aboriginal Nez Percé social organisation". The occurrence of objects strongly linked with the spirit quest in burials of pre-pubescent children further suggests some form of inheritance of power (cf. Sanger 1968a:136). I certainly do not mean to imply that the spirit quest did not occur—it certainly did—nor to belittle its significance to the individual, but simply to point out that it can, at another level, also be perceived as a vehicle to maintain spiritual power largely within certain high status families, much in the same way that early Medieval Christian clergy tended to be drawn from the upper strata of European society. Nastich (1954) states that wealthy Lillooet families consciously tried to preserve wealth and status for their children by training them from a very early age to acquire strong spirit powers, and later in life by arranging marriages. Failure to obtain a spirit despite the proper training was the fault of the individual: "His would be the life of the undistinguished many who eked out an ordinary existence" (Nastich 1954:84). Again, this statement implies that only a privileged few attained guardian spirit power.

Training, often long and arduous, thus played an important part in the guardian spirit quest (Curtis 1911a, b; Maranda 1984; Nastich 1954; Romanoff 1992a:473-474; Spier and Sapir 1930:239; Swanson 1973:361; Teit 1930:283; Tyhurst 1992:391; Walker 1968:18), and the training received in the "better" (words such as "decent" and "clean" are also often used in this context [York *et al.* 1993:228]) families was held to be superior to that received in the poor (Cline *et al.* 1938:94; Nastich 1954; York *et al.* 1993). In part this may have been because it was costly both in terms of time and of resources (Teit 1900:318, 1930:283; see also Jenness 1955 and Suttles 1987 regarding the Coast Salish, and Owens-Baird 1993 for a cross-cultural perspective), so that not all families could afford the same degree of preparation. Proper training is also often described by informants as conferring a kind of moral superiority that is largely responsible for one's success (Cline *et al.* 1938; Nastich 1954; York *et al.* 1993; see also Suttles 1987 for the most detailed investigation of this topic as regards the Coast Salish).

It is likely that the more desirable, socioeconomically important guardian spirit powers were perceived as requiring the most extensive training to acquire (cf. Romanoff 1992:474). It is not difficult to then imagine a scenario in which the feeling of psychological preparedness achieved through better training would play an appreciable role in the acquisition of a more powerful spirit during fasting and other trials undergone in this period. In another context, Werner (1981) makes an important distinction between absolute inequality and "inequality of opportunity"; it is the latter that seems to apply to the spirit quest on the Plateau.

The guardian spirit complex also presents, then, a means of justifying and perpetuating existing socioeconomic inequalities. The emerging elite attempt to justify their claims to resource ownership and/or control by virtue of their privileged knowledge (Hayden 1992b:545). In his discussion of Thompson rock art, or "writing", Richard Daly (York *et al.* 1993:227) writes: "A certain level of meaning is communicated by the symbols of an oral culture to all members, but fully elaborated meaning is restricted socially to only certain members, certain families, or certain experts." The social elite derive their authority partly from the control of access to this esoteric information.

The justification of privileges is, of course, a very typical function for "religious" (using a broad meaning of the term) institutions in small-scale societies, as well as in larger-scale societies. Referring specifically to Formative Mesoamerica but also meant to apply in a broader context, Drennan (1976:348) states: "One of the most important types of message that is apt to receive sanctification concerns social conventions dealing with economic matters". There are intriguing similarities between the guardian spirit complex of the Plateau and the secret societies of the Northwest Coast, where the noble/commoner dichotomy is paralleled in ceremonial life by the initiated/uninitiated dichotomy (see Ruyle 1973). This is not to repeat the error of assuming that the guardian spirit complex represents some kind of diluted borrowing from the Northwest Coast, but simply to add support to the proposition that supernatural power is cross-culturally often used to bolster and naturalise social inequalities based on very real differential access to resources.

Trade Networks

At this point it would be of benefit to expand briefly on the relationship between trade and status touched upon in Chapter 2. The linking of trade in luxury items with socioeconomic status justifies the analytical importance placed on exotica and strengthens the interpretations made concerning status both in overall mortuary assemblages and in particular burials. Certainly long distance exchange networks in small-scale societies, and even in state-level societies lacking effective means for bulk transport (e.g. Maya, Aztec), tend to focus overwhelmingly on prestige items. Prestige items become essential both as visible material indicators of status and as a means of maintaining a network of social relations and the allegiance of a group of supporters (Bender 1985; Earle 1977; Brumfiel and Earle 1987; Brumfiel and Fox 1994). Participation in such a network itself provides prestige (cf. Jackson 1991); clearly the distant origins of exotica are recognised by all members of the community, and serve as a constant reminder that differential access to such goods exists. As Paynter and McGuire (1991:7) state, acquiring the accoutrements of power is tantamount to having power. Bishop (1983, 1987) takes the position that hereditary rank first developed through exchange in luxury commodities (see also Pearson 1990; Renfrew 1975; Spencer 1994; Redmond 1994). This relationship between chiefly exchange of prestige items and political power has been explored in some detail in Polynesian chiefdoms (Earle 1977; Peebles and Kus 1977).

Exchange on the Plateau may be interpreted within the same framework. Inter-group trade on the Plateau was not always simply carried out between individuals at will. It was necessary to maintain "trading friends" in other villages through whom trade would be conducted (Cline *et al.* 1938; Cressman 1960; see also Jackson 1991 for a cross-cultural perspective on this phenomenon). Furthermore, trade often appears to have been dominated or even monopolised by the elite. For example, Spier and Sapir (1930:225) note that only higher class individuals such as chiefs and important shamans of the Lower Columbia Chinook came to trade with their Wishram counterparts at The Dalles. Cline *et al.* (1938:74) state that a chief of the Sinkaietk around A.D. 1800 would frequently conduct trading expeditions across the Cascades to obtain highly valued marine shells. Ross (1969:313) in 1811 mentions that an Okanagan chief (also Sinkaietk—in fact, possibly the same individual referred to by Cline *et al.*) travelled many times to the coast to trade for dentalia and other "trinkets". Fraser's (Lamb 1960:63) account of what was probably a Thompson trading party on the Fraser River in 1808 emphasises the rich dress and ornamentation of the mounted group, suggesting that these men were also of high status. Finally, Teit (1909:576) explicitly states that among some Shuswap groups the upper classes maintained special trading privileges. This was possibly most pronounced among the Canyon Shuswap, whose elite, taking advantage of their intermediate geographic position, regulated trade between other Shuswap groups to the east and the Chilcoltin to the west.

An interesting parallel to the Native trading partner system may be seen in the relationship between early fur traders and Natives. The fur traders tended to consider a single high-ranking individual, usually a chief, as their link to the rest of the community, or even to a number of communities, thus greatly enhancing the power and prestige of the individual so chosen. This situation was at least partly responsible for the rise to prominence of Chief Nicola (or Nicholas, after whom the Nicola Valley is named), who came to be recognised as chief of a large portion of the Nicola and Okanagan Valleys in the nineteenth century (Wyatt 1972).

It seems likely that the above ethnographic glimpses have relevance to much of the Plateau—that they are not more abundant is probably due to the fact that this type of information was not consistently recorded. The acquisition of the horse undoubtedly made long distance trade easier along certain corridors, but a possible concomitant increase in aggression, especially on the Canadian Plateau, may have made travel little safer (cf. Anastasio 1985:114). In any case, archaeological evidence shows that trade in many of the same prestige items extends back far into prehistory (cf. Richards and Rousseau 1987). Tracing the specific origins of exotica, such as native copper, various marine shells, steatite, nephrite, and obsidian, would allow far more detailed statements to be made concerning prehistoric patterns of trade, including an evaluation of possible changes through time in trade networks. One possible example of such a change involves the shift in emphasis from *Olivella* in the middle prehistoric on the Columbia Plateau to *Dentalium* in the late prehistoric (Erickson 1990; Pavesic and Studebaker 1993:23). The major sources of *Olivella* are far to the south of the best sources for *Dentalium* (Erickson 1990). Sourcing information would obviously be very useful in terms of identifying connections between different areas, but unfortunately relatively little research of this type has been conducted, particularly as regards materials other than obsidian.

There is also some evidence, although slight and inconclusive, of much wider-reaching trade networks. Links to the Southwest are suggested by the possible presence of turquoise at several sites on the

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Plateau, cloud blower and nostril pipes, a maize kernel in a prehistoric dry cave site, and a possible copper bell from a site at The Dalles. Links to the Eastern Woodlands and Southeast may be indicated by a copper awl (E. Strong 1960a), tobacco, and monolithic axes (see also Mitchell 1971 and Fladmark 1982). But even if verified, these links would remain sporadic, and unlikely to have had much affect on local developments. They do, however, indicate the possible extent of trade networks, and the types of exotic prestige materials that travelled along them.

CHAPTER 5

PLATEAU ETHNOGRAPHY THE CASE FOR SOCIAL COMPLEXITY

The use of ethnography and ethnographic analogy at some level in archaeology is unavoidable (Wylie 1985; Yellen 1977). Such use, however, need not be uncritical. Ethnography can provide a tool to enhance the development of realistic inferences and the construction of historically appropriate models (cf. Hofman 1986). It is with this intent that the following section is presented. Researchers on the Plateau are fortunate to have fairly extensive ethnohistoric and ethnographic writings on many of the area's Native cultures upon which to draw. The interiors of Washington and British Columbia were largely by-passed during the Maritime Fur Trade period of the eighteenth century; indeed, the Lytton-Lillooet area of British Columbia did not see a significant white presence until gold was discovered in the Fraser Canyon in the early 1860's. Thus much of traditional Native lifeways were essentially intact (though not unaffected by processes such as introduced disease—see below) or at least remembered up to the turn of the last century, by which time ethnographers like James A. Teit were already collecting their data. At the same time, access to Euroamerican trade goods escalated dramatically in the early nineteenth century. British and American fur trade companies began setting up a network of small trading posts or "forts" in the first decade of the nineteenth century. The first post within Salish territory on the Canadian Plateau was that built at Kamloops in 1812 (Akrigg and Akrigg 1975). Further north at McLeod Lake an even earlier post was established by Simon Fraser in 1805, and just west of the Rockies, north of Windermere Lake, David Thompson built Kootenay House in 1807 (Akrigg and Akrigg 1975). In the interior of what became Washington, Spokane House and what became to be known as Fort Okanogan were both established in 1811 (Akrigg and Akrigg 1975; Bouchard and Kennedy 1979). Further to the east, both Kalispell House and Salish House had already been established by David Thompson in 1809 (Akrigg and Akrigg 1975).

The missionary period began in the 1830's (Anastasio 1985; Curtis 1911a, b; Walker 1968), but the early influence of Christianity is difficult to assess. Missionaries first appeared among the Spokan, for example, in 1838, but their presence was intermittent for a number of years after this, and thus their influence was limited (Bouchard and Kennedy 1979; Parker 1844). During this early period it is likely that the natives adopted only those aspects of Christianity that appealed to them or that conferred an advantage in trade relationships with Euroamericans (cf. Walker 1968). The most obvious physical consequence of the adoption of Christianity as it relates to burial practices was the change to extended burials in wooden coffins. This is a defining characteristic of historic period burials (Sprague 1967), and as such will not be dealt with here.

Of course, there were considerable indirect effects on aboriginal society long before direct contact. The most significant of these involved introduced disease, the horse, and firearms. Given the problems involved in accurately estimating pre-contact aboriginal populations, it is difficult to address the effects of the earliest incidences of exposure to Euroamerican-introduced diseases (cf. Boyd 1985), and these effects may have been very early indeed—Campbell (1989) suggests, based on material evidence of abrupt settlement attrition, that the Columbia Plateau experienced population decline even in the first quarter of the sixteenth century. These effects seem in some cases to have been severe, particularly in those groups in more direct contact with the coast. It is estimated, for example, that up to one-third or even more of the population of the Wishram had succumbed to disease by the time first direct contact was made by the Lewis and Clark expedition in 1805-06 (see Spier and Sapir 1930). Even if such figures are only approximately accurate, one can postulate significant changes in the societies affected. As has been convincingly argued for Northwest Coast groups such as the Kwagiulth (see for example Ruyle 1973), the status system under these conditions may open up, as individuals and families compete more directly for social positions that previously tended to be inherited. The simultaneous introduction of vast new sources of wealth through the fur trade would have further encouraged this unsettled state (cf. Cannon 1989).

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The horse was introduced via Great Basin Shoshonean-speakers probably sometime in the early eighteenth century (Haines 1970). The adoption of the horse in some cases, though not in all, no doubt dramatically affected the societies involved, enabling them to forage, trade, and raid far more extensively than would have ever been practicable before. Of direct relevance here, the horse also quickly became a very important indicator of wealth and prestige, as it was on the Plains (Anastasio 1985; Dawson 1891; Gibbs 1877; Haines 1970; Ray 1939; Secoy 1953; Teit 1900, 1928, 1930). Further effects would have been felt by the introduction of new types and sources of wealth, and slightly later and more dramatically by firearms. During the late eighteenth century the fur trade was in full swing; in many cases coastal groups acted as middlemen (and in fact jealously guarded this position) between the Euroamerican traders and the fur-supplying groups of the interior. Thus when Simon Fraser in 1808 descended the river today bearing his name, he found Natives far into the interior already in possession of large numbers of Euroamerican goods (Lamb 1960); this despite the fact that most of them had never before set eyes upon a European. A similar situation applies to the journey of Lewis and Clark on the Columbia River in 1805-06 (Thwaites 1904-05).

But, on the negative side, early ethnohistoric and ethnographic accounts leave much to be desired in terms of detail and completeness of coverage. One gets the impression, for example, that informants were almost invariably from families of relatively high social standing—something of a problem when the goal is to compare subgroups within a single society. This is often emphasised in archival photographs which overwhelmingly portray Plateau subjects in elaborate buckskin clothing and associated regalia (Tepper [1987] has compiled a collection of Teit's photographs). The accounts of Teit (1900, 1906, 1909) and others (Nastich 1954; Romanoff 1992a) make it clear that not everyone had access to such clothing (see Chapter 4), but such individuals are rarely visible either in the photographs or in the literature.

Despite these problems, the presence of ethnohistoric and ethnographic accounts is a very definite asset for the archaeological study of mortuary remains. The use of ethnography in this work will be threefold: 1) to provide an independent measure of social complexity or socioeconomic differentiation, and the "social distances" seen within various Plateau groups, 2) to document the range of recorded burial practices, and 3) to gain insight into the assigned relative value of artifact types, as well as any emic perceptions relating to spiritual significance, age and gender specificity, and so on.

A review of the ethnohistoric and ethnographic literature provides a general basis for inferring the nature of sociopolitical organisation in different Plateau groups at or just prior to contact. Information is often available on the bases of status and prestige, and particularly on the nature of the chieftaincy. The relative richness of different areas in terms of availability of important resources (i.e. salmon, roots, and ungulates for the most part) is another important variable, as it is argued that it is the nature of the resource base that largely determines the expression of status differences. A thorough treatment of this topic is beyond the scope of the present work. A related topic on which at least limited data is often available involves the degree to which various resources are considered to be "owned" and access to them controlled. Together, this information enables the formulation of a set of expectations regarding the relative complexity of the mortuary behaviour of different groups. Thus the ethnographic data serve as an independent line of inference of the conclusions reached through the mortuary data.

Since different mortuary regimes will often be reserved for different segments of society (Binford 1971), it is extremely important to be aware of the range of burial practices for particular ethnographic groups. The basic premise is that greater variability in mortuary practices is directly correlated with increased social complexity. It is expected that archaeological evidence will reveal much of this variability, but perhaps not all of it (especially at the socioeconomically poorer end of the spectrum, where grave preservation and visibility often tend to be lower), nor its significance. On the other hand, the archaeological record may demonstrate disposal practices not documented in the ethnographic literature, especially for the prehistoric period. It has been noted that, in small communities, death is a relatively rare event. Thus any given ethnographer is likely to obtain only a very limited glimpse of mortuary behaviour and not the full range. As far back as 1930, Griffin (cited in Hofman 1986:38) observed that ethnographic sources offer information on only a small percentage of the burials which took place and are often most concerned with the more important members of society as these are more likely to involve the entire community and thus to be worthy of note to the outsider. Furthermore, by its very nature the goal of early ethnography was to record the norms of a given society. Under these circumstances, the ethnographer is likely to emphasise what he or she perceives, with the aid of *selected* informants, to be the dominant, distinguishing features of a society, including its normative burial practices. The actual variability may be

downplayed or missed altogether. The sensitivity of the topic also contributes to limiting ethnographic knowledge of burial practices.

Finally, limited ethnographic information is available concerning the use of and value attributed to various specific artifact classes. Using this, it may be possible to achieve a rough scale of relative values for goods of both native and European origin (see Chapters 3 and 4). It must, of course, be recognised that value is a fluid concept, one which will change dramatically both through time and over space in response to supply and demand. Such fluctuations were clearly occurring at a very rapid rate in the protohistoric and early historic periods (see Cannon 1989 for an excellent cross-cultural discussion of this phenomenon and how it can effect mortuary remains), and great caution must be exercised in the use of such standards during this period. These fluctuations themselves, and more particularly a society's response to them, can also be a matter of interest, one which will be explored to some extent. It may also be possible in some instances to get some idea of the significance of artifact types in terms of spiritual and ritual meaning, gender and age specificity, and so on. In practice little information of this kind exists—the concepts involved, the language difficulties, and the personal nature of the Plateau guardian spirit complex often make it difficult for ethnographers to deal with such issues. Furthermore, ethnographers frequently display only limited interest in detailing aspects of material culture.

The main body of this section describes selected aspects of a number of specific Plateau ethnolinguistic groups. Not all groups are discussed. The criteria for inclusion are, first of all, the availability of relevant ethnohistoric and/or ethnographic data, and, secondly, the relationship of the group to the core study area as outlined in Chapter 3. Use of the commonly applied term "tribe", despite its application in modern contexts (e.g. the Confederated Colville Tribes), is avoided here because of its implications regarding a specific social and political structure, one which probably did not exist on the Plateau prehistorically. The specific term "band" does, on the other hand, refer to a sociopolitical structure which did exist, and as such it is used when appropriate. Larger social units commonly referred to as tribes (e.g. the Shuswap), are here called ethnolinguistic groups, or simply "groups" or "peoples". The discussion of each "group", then, focuses on their sociopolitical organisation and their mortuary practices. A more detailed summary of ethnohistorically and ethnographically known mortuary practices on the Plateau may be found in Sprague (1967), and so only brief descriptions are provided here. A discussion of the ethnographic information available on specific artifact classes commonly seen as mortuary inclusions on the Plateau was presented in Chapter 4. Locations of groups mentioned in the text are shown in Figure 5.1.

The Columbia Plateau

The Wishram

The Dalles-Deschutes region of the Lower Columbia boundary was by all accounts the most culturally complex area on the Plateau. Both archaeological (Strong *et al.* 1930; E. Strong 1959a, b; Butler 1957, 1959, 1963, 1965; Caldwell 1956) and ethnographic (Curtis 1911a; Spier & Sapir 1930) data support this. Warren (1968) and others have stated that the "cultural climax" seen at The Dalles was completely atypical of Plateau culture as a whole, and that it should be treated separately. Despite its unique characteristics, I believe that the groups inhabiting The Dalles can be recognised as participants in the general Plateau culture pattern. In any case, a discussion of The Dalles is included here, partly in order to represent one extreme of social complexity for subsequent comparison to other areas of the Plateau.

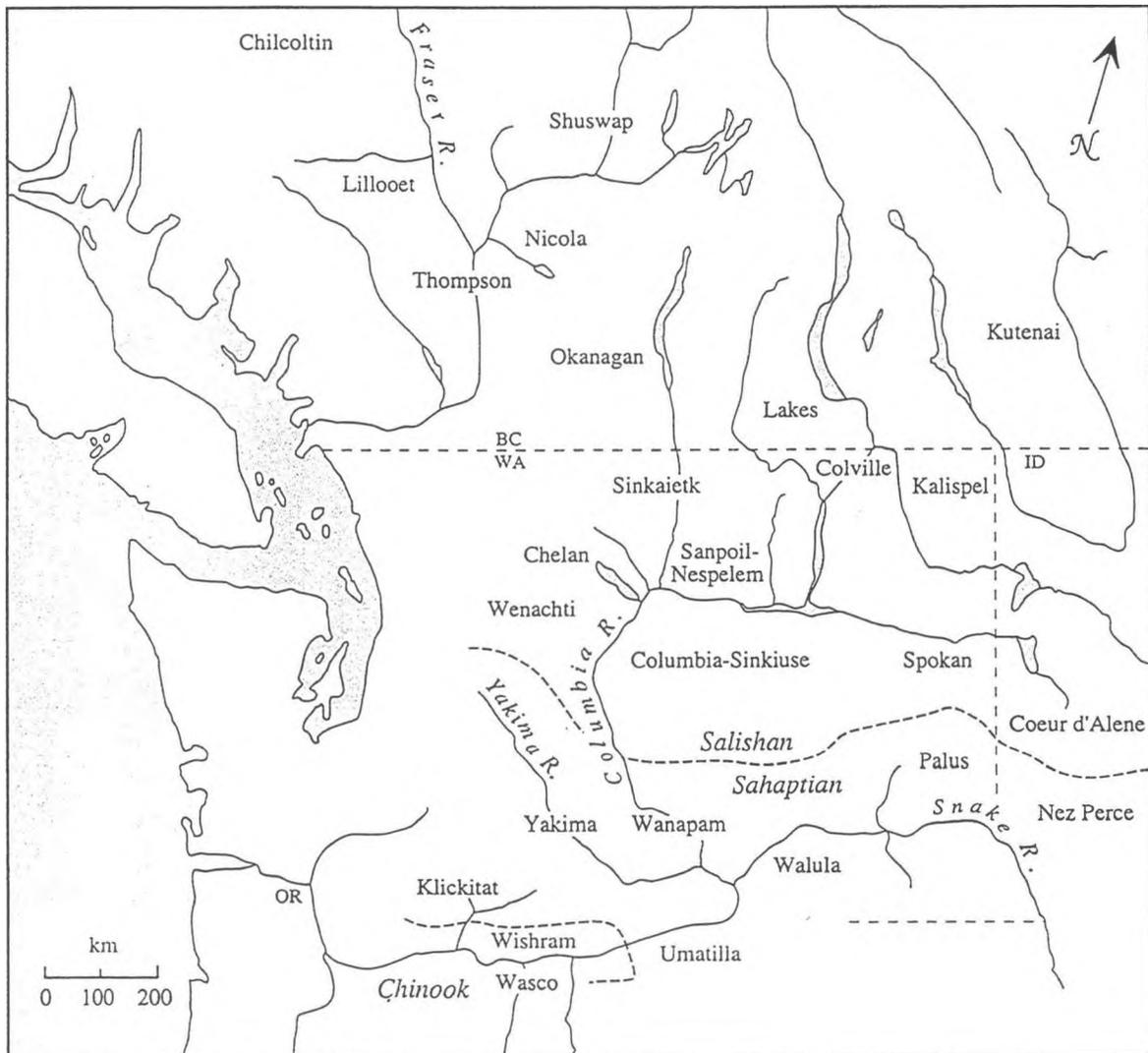
Ethnographically The Dalles area was occupied by the Chinookan-speaking Wishram (much of what is recounted in the following paragraphs likely applies equally to the Wasco of the south bank of the Columbia at The Dalles). There has been, however, some debate over which ethnolinguistic group occupied the area in prehistory and even in the protohistoric period. Some Plateau scholars have suggested that the area was occupied by Salish-speaking people as late as ca. A.D. 1750 (W. Strong *et al.* 1930; Teit 1928:96-100; Spier and Sapir 1930). Others have strongly denied that any firm evidence exists for such a proposal (Suttles and Elmendorf in Thomison 1987; Rigsby 1965; Pettigrew 1977). This debate may have little affect on the present analysis, since presumably the resource base was the same and a similarly complex social organisation can be postulated regardless of which language group was in residence. As documented in the next chapter, archaeological evidence, while not necessarily demonstrating either cultural continuity or discontinuity (at least not at the level of analysis possible here), does indicate the presence of considerable complexity in the area through thousands of years of prehistory.

Ethnographically, the Wishram were practically unique on the Plateau in that class feeling was strongly marked, the people recognising three classes in addition to slaves (Spier & Sapir 1930:211). The

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first class was composed of the chiefs, who were for the most part strictly hereditary, and their families (see also Curtis 1911a:87). The power of the chief was both real and considerable. The second class included a variety of other families of good standing, including those of war chiefs and shamans. The final class was comprised of the poor, who owned no slaves and little of anything else. Slaves were considered to be outside of the social system altogether.

Figure 5.1: Map of Plateau Showing Locations of Ethnographic Groups



From these accounts it would appear that the Wishram fit the description of a stratified society. As Curtis (1911a:87) states: "... the individual could scarcely aspire to enter circles above that in which he was born". The emphasis on ascribed status is further apparent from the practices of cranial deformation and ear piercing. Cranial deformation was regarded as essential in the upper classes (Kane 1968:124), and of course could only be done in infancy. The ears of both sexes were pierced when only a few years old. Up to five holes were made in each ear for the suspension of valued dentalia beads and other ornaments. The number of holes gave prestige, but extra holes would never be added later in life (Spier and Sapir 1930); thus only ascribed status could be indicated in this way. Membership in the social classes primarily, though not solely, represented gradations of wealth (Spier & Sapir 1930:211). Lesser chiefs, in fact, were simply the heads of wealthy families (Curtis 1911a:87). Attempts were made to arrange marriages, sometimes from infancy, between families of high rank from other villages (Curtis 1911a:89; Spier and Sapir 1930:217). Marriages were legitimised through gift exchange of approximately equal value (although more seems to have been given in bridewealth than was generally returned), with the value of the gifts conferring status to the union (Spier and Sapir 1930:217-218; see also Parker 1844:197). Polygyny was common among the upper classes, with wealthy men having as many as eight wives (Curtis 1911a:89; Spier and Sapir 1930: 218).

Wealth and prestige were measured in, among other things, slaves (Curtis 1911a:88; Spier & Sapir 1930). Not all households owned slaves; the wealthiest might own ten or so (Curtis 1911a:88). Both male and female slaves performed a number of useful economic and prestige-related activities, ranging from fishing to root digging to paddling the canoes of nobles (Curtis 1911a:87-88; Parker 1844:256). Slavery was hereditary, although, apparently contradicting this, slaves were encouraged to flatten the heads of their children (Curtis 1911a:88; Spier and Sapir [1930], on the other hand, seem to deny that this privilege was ever conferred upon the children of slaves). The keeping of slaves on a large scale may be seen as one indicator of social complexity, and is certainly not expected among egalitarian societies. In early historic times, significant numbers of slaves were bought and sold at The Dalles; in fact, Euroamerican traders even became involved in the lucrative trade. Whether, as Ray (1939) suggests, this pattern represents only a relatively recent one, influenced by the Northwest Coast via the Lower Columbia, remains to be seen. However, it seems unlikely based on the archaeological evidence for considerable complexity, to be discussed in Chapter 6.

The Wishram were apparently only rarely involved in intergroup hostilities (Spier and Sapir 1930:229). Slaves were purchased rather than acquired directly. When there was need for hostilities, the Wishram again relied on their great wealth, purchasing the services of Klickitat warriors, who acted as mercenaries for the highest bidder (Curtis 1911a:94, 1911b:38). The Wishram did have among themselves a class of men who acted as public assassins—sometimes slaves would act in this capacity for their owners (see Ruyle 1973 for a discussion of the similar uses to which slaves were put among the Nuu-chah-nulth of western Vancouver Island). It should be noted that Spier and Sapir (1930) do not mention the use of Klickitat mercenaries, although the possible existence of hired assassins could be implied in their discussion of blood retribution in cases of murder. Serious disputes between village members were brought before chiefs, whose decisions were final and implicitly obeyed. Chiefs did not deign to judge in cases involving the lower classes, but the "middle classes" were considered to be under their protection and cases involving them required the chiefs' attention (Spier and Sapir 1930:215).

The pre-eminent position of The Dalles was due both to its excellence for salmon fishing and its importance as a trading centre, probably the most active such centre, in terms of volume, on the entire Plateau if not in the whole of western North America (Anastasio 1985; Curtis 1911a; Ross 1969; Spier and Sapir 1930; Wood 1972). Gambling was another major activity at The Dalles, such that Butler (1957:160) refers to Wishram (frequently used as the name of the main Wishram village) as a "... gambling mecca and slave trading center second to none in the area".

The constrained rapids of the Long Narrows undoubtedly provided the most productive salmon runs on the Columbia Plateau. The best fishing stations, however, were limited and strictly family or individually owned and inherited (Curtis 1911a:95; Spier and Sapir 1930:175; E. Strong 1960a:45). Seaman (1946:74) relates a myth in which the Plateau culture hero Coyote built a race below Celilo Falls to give the poor people a place to fish, since "... all the good fishing places along the main stream were owned by the rich people". Wealthy families could apparently purchase rights in the fishing stations of others as well (Curtis 1911a:95). While The Dalles was known for the number of people of different groups that congregated there, those actually wishing to make use of the rich fisheries paid for the privilege (Curtis 1911a:95); others had to trade for the food they needed. Rock art is found mainly high on cliffs near good

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fishing spots and occasionally further from the river on trails to the spots (E. Strong 1960a:104; Bergen 1989); possibly indicating that the images were being used at least partly to identify ownership of important fishing stations. This idea was expanded upon in some detail in Chapter 4.

Interestingly, Spier and Sapir (1930:185) state that acorn storage pits, consisting of pot-holes in boulders along the river bank, were also individually owned. They add that acorns required extensive preparation to render them fit for consumption (see T. Jackson [1991] for a description of acorn preparation among California Native groups), and were not considered a staple but rather a "leisure" food. This suggests that acorns may have been a high status food, possibly distributed at feasts.

The strategic position of the Wishram furthermore gave them control over river traffic moving in both directions, securing their position as middlemen (Curtis 1911a; Ross 1969; Spier and Sapir 1930). The Wishram themselves reportedly never felt the need to travel outside of their territory to conduct trade, since all groups came to them (Spier and Sapir 1930:224). Trade, even among the Wishram, was not open to everyone; rather, it was carried out through a system of inter-village "trading partners" (Cressman 1960) that may have been largely restricted to members of the elite, including chiefs and important shamans (cf. Spier and Sapir 1930:225). Containers of standard size were used to hold powdered dried salmon, as well as dried huckleberries, hazelnuts, and acorns. It is likely that this standardisation resulted from their frequent use as measures in the extensive trade that occurred at The Dalles (Spier and Sapir 1930:178, 185). A modified form of the language spoken by the Wishram—Chinook—became the trade jargon used over much of western North America (Ruby and Brown 1976).

The early nineteenth century upriver excursions of the American and British fur traders, bypassing the Wishram and neighbouring Sahaptian-speaking Wayampam, were greatly resented, making the Long Narrows one of the most dangerous parts of the journey (Ross 1956, 1969; see also accounts in Ruby and Brown 1976). Alexander Ross (1956:90-91) recounts that in the early nineteenth century the chiefs of the villages controlling The Dalles repeatedly accosted the traders and demanded payment in exchange for an undisturbed passage—they even tried to institute a permanent tribute system.

Lewis and Clark reached Wishram in October of 1805; at that time a village of 21 substantial plank houses (Thwaites 1904-05). Curtis (1911a:92) states that from four to six families typically occupied each house, with each family consisting of from 10 to 15 people. This would make the village a large one indeed, possibly holding over 1000 people, and presumably this does not include slaves. Even this was in the "off" season; during the summer thousands more camped in the area in mat lodges (Ross 1956, 1969). Spier and Sapir (1930:164-171) place the permanent population at Wishram village at about 400, although they record the presence of a number of almost equally large villages within a short distance of one another (they are also dealing with a later time, following the effects of further population loss through introduced disease). The door planks of a chief's house were carved and painted with animal representations (Curtis 1911a:91), most likely related to guardian spirit power and/or crest imagery as opposed to simple decoration. House planks themselves were sometimes individually owned and considered valuable property (E. Strong 1959a:87).

The Wishram, and the Chinookan-speaking peoples in general, were subjected to massive population decline from an early date. Demographic changes due to the effects of introduced disease may have first been felt as early as the sixteenth century (Campbell 1989), but it was the devastating smallpox and malaria epidemics of the late eighteenth and early to mid-nineteenth centuries that reduced the Wishram to a fraction of their former population. Malaria alone is estimated to have been responsible for an 87 percent population decline among the Lower Columbia River Chinookan and Kalapuyan peoples between 1830 and 1840 (Boyd 1992). Dobyns (1992) has reasonably argued that large Native North American trade centres were particularly susceptible to pandemic disease, and suffered a far higher mortality than nontraders. It is difficult with the data at hand to relate the effects of early population decline among the Wishram to sociopolitical organisation (and indeed this applies to all Plateau groups to some degree).

The burial practices of the Wishram as recorded by Spier and Sapir (1930) are representative of what were then relatively recent times. The dead were placed in family owned burial vaults or houses on islands, such as the Upper and Lower Memalooses ("*memaloose*" meaning "dead" or "death" in Chinook), in the Columbia. The vaults were made of boards and pieces of canoes, and considerable labour went into their construction (see accounts of Lewis and Clark in Thwaites 1904-05). Lewis (1905:171) writes: "Carved wooden images were frequently set up around the vaults, and the planks were often carved and painted to represent men or various animals". As with those found on house fronts, it is likely that these images represent spirit power and/or crest symbols (I would argue that there often exists an area of overlap

between the two). In fact, the decorated housefront planks themselves were sometimes deposited at the graves of their owners (Spier and Sapir 1930). The existing photographs (see for example Seaman 1946) of the collapsed remnants of these burial sheds do not give a good impression of how they must have appeared originally. Most or all of the carved pieces were likely stolen by Euroamericans at a very early date. As far as I have been able to find, only one photograph (Oregon Historical Society, OHSI 4227) retains carved images, those of four human faces on a plank forming the lintel of a mortuary vault on "Memaloose Island". Canoe fragments integrated into or placed near the mortuary houses were sometimes also elaborately carved (see Spier and Sapir 1930:299, Plate 13). The wood that was used in construction was itself a valued commodity in the largely treeless environment of the region. Lewis and Clark noted the presence of 13 such "sepulchres" on Lower Memaloose Island in 1805 (Thwaites 1904-05); the use of these islands continued up into the 1880's and even later in some cases (E. Strong 1959a:82; Cole 1958). Interestingly, despite the abundant archaeological evidence for late prehistoric, protohistoric and even early historic period cremations to be discussed in Chapter 6, Spier and Sapir's (1930:271) informants insisted that cremation was never practised by the Wishram or any neighbouring group.

During ethnographic times there was a marked distinction in the accompanying mortuary treatment accorded to chiefs. Their funerals were far more elaborate; horses and sometimes slaves would be killed to honour the deceased and to emphasise their wealth (Curtis 1911a:99; Spier and Sapir 1930:212, 271). Before the region was flooded, the bones of horses could be found strewn over Memaloose and Grave Islands (Cole 1958). (A large disinterment project removed as estimated 3000 individuals from these two islands, together with many elaborate grave inclusions [Cole 1958].) Much additional property of the deceased "...was distributed among his relatives and other chiefs as remembrances" (Spier & Sapir 1930:271). A year or less after death, the deceased's bones would be wrapped in a new skin and a feast held (Curtis 1911a:99).

The Umatilla

Little ethnographic information referring specifically to the Sahaptian-speaking Umatilla is available. Burial sheds similar to those already described for the Wishram were probably used. Lewis and Clark (Thwaites 1904-05) provide a detailed description of a shed on Blalock Island. Other members of the expedition (cited in Sprague 1967:171), however, provide accounts of burials not occurring in sheds. In these accounts, most or all of the deceased's property was interred in the grave, and a canoe was split and set up around the grave. This presents the possibility that one form of burial or the other may have been reserved for a high status social group. Fur trader Ross Cox (1957:77) in 1812 observed a burial site which Sprague (1967:172) believes must have been within Umatilla territory. Cox describes nine shallow excavations, covered with sloping pine and cedar boards, containing large numbers of bodies in various states of decomposition. All were carefully wrapped in mats and skins. Offerings, including robes, cloth, kettles, "trinkets", wooden bowls, and basketry, were suspended on poles. Finally, Cox (1957:77) observed: "Several of the boards are carved and painted with rude representation of men, bears, wolves, and animals unknown". This could suggest that the Umatilla had something along the lines of clan organisation, since it is typically clan crest figures that are thus depicted on graves.

The Nez Percé

The Nez Percé were the largest and most powerful Sahaptian-speaking group on the Plateau. While they are somewhat peripheral in terms of the study area as defined here, the availability of considerable ethnographic information and its relevance to neighbouring groups justifies at least a brief description. The sociopolitical organisation and material culture of the Nez Percé is sufficiently similar to that of neighbouring Sahaptian and Salish groups to give the discussion more general relevance. The main ethnographic source for the Nez Percé is Herbert Spinden (1964), who wrote at the turn of the last century, and it is his work that forms the basis of much of the following discussion.

Each Nez Percé band maintained at least one important permanent village, as well as a number of temporary fishing camps. Ownership of fishing locations was invested in the village as a whole. The band was the basis of sociopolitical organisation, each one recognising at least one chief (see also Curtis 1911a). During the ethnographic period chiefs were elected, but in practice the office was loosely hereditary, and a son would often succeed his father. The power of the chief, which Spinden (1964:242) states was considerable within the band, depended largely on the size of the following he was able to retain. Support was gathered through a combination of one's personal qualities (such as skill in war and in oratory) and the use of one's own resources together with those of kin ties to amass food and wealth for distribution to

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followers (Walker 1968:16). Polygamy was reportedly common and was directly dependent on wealth (Farrand 1921:246; see also Curtis 1911a). Marriage involved the exchange of gifts of approximately equal value (Curtis 1911a:50), thus encouraging the alliance of socioeconomic equals.

As might be expected given their location on the eastern periphery of the Plateau, the Nez Percé were one of the groups strongly influenced by Plains culture during the protohistoric period. I am not aware of any studies addressing the intensity of this connection in prehistory, but with the introduction of the horse, sometime in the early eighteenth century (Haines 1970), most of the Nez Percé certainly adopted the Plains way of life to a large extent (Spinden 1964:183; Walker 1968). Horses became the main avenue to acquiring wealth and prestige, and chiefs and other leading men frequently owned large herds (Anastasio 1985). In addition, the position of the Nez Percé on both the hostile eastern and southern peripheries of the Plateau meant that warfare was developed to a far greater extent among them than any other Columbia Plateau group during the historic period. Prowess in war thus came to be an highly desirable quality in the leaders chosen. This pattern may differ substantially from that of the pre-horse era (Walker 1968:14).

Cemeteries among the Nez Percé were placed near enough to village sites for graves to be visible from them, usually on the first terrace above a river. Ground inhumation and talus burials were used (Curtis 1911a; Spinden 1964; Sprague 1959). In 1806, Lewis and Clark (Thwaites 1904-05) observed the use of burial sheds formed of boards and sometimes pieces of canoes. Sprague (1967:159, 166, 173) distinguishes these from the more formal mortuary structures used by the Wishram, calling them instead "low-lying sheds". Lewis and Clark (Thwaites 1904-05) and Curtis (1911a) note that horses were sometimes killed near the grave. Farrand (1921:246) adds that the killing of horses occurred especially when the deceased was a chief. Considerable property would be both buried with the deceased and given away at the funerary feast held some months (Spinden 1964:246) or up to a year later, when the family had gathered sufficient food (Farrand 1921:246).

The Spokane and Coeur d'Alène

Immediately to the north of the Nez Percé were the Salish-speaking Spokane and Coeur d'Alène. The sociopolitical organisation of both groups was very similar. The main sociopolitical unit was the band, which could be comprised of either a single village, or a number of small villages, one of which would be recognised as the principal village (Teit 1930:150). Each of these local bands had its own chief; once again this position can be described as loosely hereditary (Curtis 1911b). Among at least the Spokane the position was, in addition to lineage, based largely on wealth (Ruby and Brown 1970:13). After the introduction of the horse, the organisation of both groups changed rapidly, moving, as did that of the Nez Percé, towards more of a tribal chiefdom, with larger divisions comprised of many local bands (Ruby and Brown 1970; Teit 1930). The Coeur d'Alène, located to the east of the Spokane, were especially influenced by Plains culture in the historic period, and presumably in the protohistoric period as well. When circumstances called for concerted action, both the Spokane and the Coeur d'Alène could act as tribal units under the leadership of a single chief (Teit 1930). Among the Coeur d'Alène, slaves were either taken as captives in war or purchased from other groups. Slaves were few, however, and well treated—there is no evidence that they performed a useful economic function (other than that provided by the sale of war captives back to their own people), nor would they be killed upon the death of their owners. Polygamy was practised among those of the Spokane who could afford it (Curtis 1911b:74; Ruby and Brown 1970:12) and probably by the Coeur d'Alène as well.

Burial among the Spokane and the Coeur d'Alène took place in sandy terraces and dunes, or talus slopes (Curtis 1911b; Teit 1930). Teit (1930) notes that, among the Coeur d'Alène, very few goods were ever placed in graves, although informants state that "long ago" some items were interred with the deceased and blankets hung on poles around the grave (see also Curtis 1911b:76). Canoe fragments were occasionally hauled over the grave, and plain poles painted red might be erected. Fires were also sometimes built over graves. As is typical with ethnographic information of this sort, Teit does not specify the conditions under which these "sometimes" practices would occur. There is the potential for these behaviours to be related to status differences. Two practices can be explicitly linked with status differences. Referring specifically to the Coeur d'Alène, Teit (1930) states that at burial the wealthy were wrapped in a good skin robe, while the poor would be wrapped only in mats. If someone died at a distance from the village, only rarely would an effort be made to return the body for burial in the family cemetery; such treatment was reserved for the bodies of chiefs and "prominent men". The Coeur d'Alène were said to have had no custom of taking up the bones of the deceased and re-wrapping them before reinterment (Teit 1930).

Spokane graves around the turn of the nineteenth century were marked by horse hides, buffalo robes, weapons, kettles, and ornaments (Ruby and Brown 1970:30). During the historic period, log house structures were built for the dead, sometimes containing up to five or six bodies. A photograph of one such structure can be seen in Ruby and Brown (1970, following page 76).

The Yakima

The Yakima Valley is relatively poorly known both ethnographically and archaeologically. During the protohistoric period, many of the observations made concerning the Nez Percé are applicable to the Yakima. The Sahaptian-speaking Yakima are commonly divided into the Lower Yakima, or the Yakima proper, and the Upper Yakima, or the Kittitas. Chieftaincy was probably originally loosely hereditary in both (see Curtis 1911b:9). Curtis (1911b:14) states: "Pride of birth is still noticeable, and formerly a chief's son usually married the daughter of another chief...". The last part of the quote implies that marriages were arranged and exogamous, at least in the chiefly lineages. As in the Plains-influenced eastern Plateau groups, emphasis in the chieftaincy may have shifted to proven leadership ability as intergroup hostilities increased in the protohistoric and early historic periods. This increase in hostilities encouraged the Yakima to adopt a tribal organisation. Archaeological survey demonstrates that defensive stoneworks were built in certain strategic locations during the historic period (Smith 1910; W. Smith 1977). In 1814, fur trader Alexander Ross (cited in Anastasio 1985:158) noted a large gathering in Yakima territory, observing that the tents of the chiefs were placed in the middle of the encampment. This placement may have served a defensive function.

Horses were integrated into Yakima society at a relatively early date, and came to play an important role in the prestige system (Anastasio 1985). It seems that the acquisition of the horse may have shifted the power structure on the Plateau. Groups such as the Yakima with an extensive territory comprised largely of rolling plateaus with ample rangeland may have been at an advantage in this regard. Their increased mobility, together with access to firearms, would enable them to greatly expand their sphere of influence and trading capabilities, thereby taking advantage of the opportunities created by the new Euroamerican trade.

During the ethnographic period, then, the Yakima as a whole probably attained greater power than they had in the prehistoric period. Strong ties were forged with the Wishram, although it is difficult to say whether or not these may have also existed earlier. In the nineteenth century, the Yakima insisted on permission to use their territory; such permission, if granted, would always be for a specific purpose and for a limited duration (Ray 1939:17). Scouts were even posted at strategic locations to monitor entry and behaviour in lands claimed by the Yakima (Ray 1939:17). Slaves were taken as captives in war as well as purchased, and were held to be very valuable—Curtis (1911b:14) states that it required five horses to purchase one slave, and that this referred to a time when horses were still relatively rare.

Little ethnographic information on the burial practices of the Yakima is available. Undoubtedly the Yakima, like their neighbours, practised inhumation in terraces and sandy knolls as well as talus slope burial. In 1811, Ross (1969:144), after passing the confluence of the Yakima, noted a series of burial places on small eminences, always with a few small sticks marking the place. There is no ethnohistoric or ethnographic evidence that the Yakima used either mortuary sheds of the type seen among the Wishram, Umatilla, or the "low-lying sheds" of the Nez Percé. Curtis (1911b:9) states that canoe burial was common among the Yakima, and there is archaeological evidence for cremation (Smith 1910).

Harlan I. Smith (1910:148) stated regarding the Yakima Valley: "Compared with other branches of the Plateau culture area it must be considered inferior in complexity [reference here is to material culture] to its northern neighbour of the southern interior of British Columbia and also to the adjacent branch near The Dalles to the south". He further notes that Lewis and Clark found the culture to be of a relatively simple and undeveloped sort. These statements could be taken to imply that the Yakima were less organisationally complex than many other western Plateau groups. However, the information available is really too sparse to decide the issue.

The Columbia and Wenatchi

The Columbia (or *Sinkiuse*) and the Wenatchi are often referred to together as the Middle Columbia Salish. Relatively little information is available on these two groups. Their social organisation largely parallels what has already been observed regarding Sahaptian-speaking groups on the Columbia Plateau outside of The Dalles. Chieftaincy in some bands was hereditary, but in the majority it was also based in part on the pre-eminence of an individual in wealth, war, and other personal abilities

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(Teit 1928). The Columbia and Wenatchi were the principal traders of the Salish people in the west Columbia Plateau, travelling to The Dalles and thence to minor trading centres located at the mouth of the Okanogan and at the mouth of the Snake (Teit 1928). The people were known for their abundant ornamentation, principally marine shell beads, tubular copper beads, bracelets, and pendants, and tooth and claw core necklaces. Some individuals were tattooed (Teit 1928). Teit (1928:120) writes: "... there appears to have been a good deal of difference in wealth between different families, more so than in the tribes to the east and north. Some had great quantities of skins, clothes, and horses; while others were very poor". The horse quickly became important in this region, such that by the 1830's large herds existed. Wealth was measured largely by the number of horses one owned. The chiefs and other leading men gathered large herds, while other members of the community had few animals. One chief in the 1830s is said to have owned a herd of between 500 and 1000 horses (Teit 1928).

Teit (1928) records that the Columbia and Wenatchi practised interment in sandy terraces near the village or, when available, in talus slopes. Cremation is not mentioned for either group. Graves were lined with mats, bark, and slabs of stone, when these were convenient. Reportedly, nearly all interments would be covered with a stone cairn and marked by a small pole. (Elsewhere, Teit states that stone slabs would be placed around a grave only when convenient. This is not consistent with our expectations given the energy expenditure model outlined in Chapter 2. Whether this ethnographic information was available or not, however, a stone-lined facility would not be interpreted as indicative of higher status unless supported by some other dimension of mortuary variability, such as a greater frequency and/or richness of grave inclusions.) Teit (1928) further notes that canoes were also sometimes placed over the graves, although he does not expand on the circumstances in which this would be likely to occur. Finally, it is noted that some articles, mainly pipes and ornaments, were placed in the grave, while others were hung on grave poles (Teit 1928:127).

The Sanpoil-Nespelem

Verne Ray did most of his ethnographic work among the Interior Salish-speaking Sanpoil-Nespelem. These groups epitomised the pacifist and egalitarian traits that he saw as central to the original Plateau way of life, prompting such statements as: "Class distinctions were unthinkable" and "Nor did wealth carry with it an advance in status" (Ray 1932:25-26). Even if Ray was largely accurate in his depiction of these two groups, which is questionable, there is little basis on which to generalise from them to the rest of the Plateau. For one thing, the relative egalitarianism of the Sanpoil-Nespelem may have been largely a result of their environmental circumstances. Ray (1932:114) refers to the comparative poverty of the Sanpoil as the reason they were largely spared raids by other groups (although Ruby and Brown [1970:15] state that the neighbouring Spokane did frequently raid the Sanpoil). The Sanpoil-Nespelem may have also participated less fully in the new wealth brought by the fur trade. Other Okanogan groups apparently felt the Sanpoil to be particularly impoverished—in clothing, horses, guns and food—(see ethnohistoric accounts in Bouchard and Kennedy 1979), but this may have been a bias on their parts.

Ray's own data give somewhat conflicting impressions regarding the structure of Sanpoil society and the inequalities that existed. The basic sociopolitical unit was the village/band, each with its own chief. Ray, seemingly at great pains to emphasise the equality of Sanpoil social and political institutions, writes: "When a new chief was selected any man was eligible", selection being made by "... popular vote on the basis of moral character alone" (1932:25). Yet later in the same work Ray (1932:110) explicitly describes the chieftaincy as hereditary in principle and often in practice. It was only when more than one individual was eligible (brothers having more or less equal claim to the position) that a "popular vote" was resorted to. In fact, Ray (1932:69) describes not only the position of village/band chief as hereditary, but he also describes the prestigious position of Salmon Chief as "nominally hereditary", with a son frequently taking over the position from his father. Other positions conferring high prestige were that of hunting chief, gambler, and shaman. Polygamy was practised extensively (Ray 1932:142) in what I refer to as these high status positions. While Ray denies that chiefs were wealthier than any other village member, the prevalence of polygamy among chiefs and others in prestigious positions strongly implies that these individuals were indeed above average in wealth.

The village chief wore special insignia indicating his position—a headdress with buckskin pendants covered with eagle feathers, but the status of a chief's family was held not to be different from that of other families (Ray 1932:111). Yet Ray (1932:137-139) also states that prestigious families arranged marriages for their children, and that there was "... some tendency for the sons of chiefs, shamans and others of achievement to marry daughters of men of like standing". And since reciprocal gifts formed a

part of the marriage contract, "... families of like economic status were more often united than those of markedly different resources" (Ray 1932:139). Thus despite Ray's insistence on the Sanpoil's egalitarianism and lack of wealth, we find in his own data evidence that a differential distribution of both prestige and wealth did exist, and moreover that the two appear to have been correlated.

Burial took place in terraces or hillsides near the village. The burial of a chief or shaman was, according to Ray's informants, identical to that of others. Children were also accorded the same treatment in death as other members of society. But then Ray (1932:150) also states that the poor were wrapped only in mats, while others (i.e. the wealthy) were wrapped in both deer skins and tule mats. Presumably such minor distinctions did not figure as significant in Ray's scheme. Goods were placed with the body, and the grave was frequently marked with cedar sticks (Ray 1932:151). Reportedly, horses were never killed as part of the funerary rites, but were inherited, usually by a surviving brother (Ray 1932:152). There apparently were no special family burial places, which argues against any significant sustained socioeconomic ascendancy for certain families. However, archaeological data from within traditional Sanpoil territory discussed in Chapter 6 documents the presence of significant inequalities in non-perishable wealth interred with the dead.

The Colville (Shwayip)

There is less information available on the Colville, or *Shwayip*, than on their immediate neighbours to the southwest, the Sanpoil. But besides the potential biases in Ray's Sanpoil data, its applicability to the situation among the Colville is highly questionable since it was the latter that controlled the fishery at Kettle Falls. Too often the Colville are lumped together with surrounding groups (Chance and Chance 1985). Kettle Falls, or Ithkoyape, was the most important salmon fishing location on the Columbia Plateau after The Dalles (Hewes 1947:109; Ray 1932:62). As with other major fishing locations on the Plateau, Kettle Falls was also an important trading centre (Teit 1930:250); in fact, Anastasio (1985:154) refers to it as the most important meeting place of the southern Salish. Kettle Falls itself marked the boundary between the Lakes and the Colville people. It was held by the latter group, but apparently also shared with the Lakes to some extent (Curtis 1911b:64).

The Colville occupied a very small territory. This, together with the heavily wooded terrain, resulted in their being little affected by the introduction of the horse compared to neighbouring Salish groups. They were undoubtedly indirectly affected, however, by the shift in power relations over the entire Plateau. Chieftaincy among the Shwayip was largely hereditary. Again, something akin to chiefly, or perhaps more accurately Big Man, status could be also achieved through feasting and the distribution of wealth to a group of supporters. John Work, writing in the 1920s, noted a clear relationship between wealth and the chieftaincy (cited in Chance and Chance 1925). Paul Kane (1968:216), who visited Kettle Falls in 1846, stated that the Colville were governed by two chiefs, the "Chief of the Earth" and the "Chief of the Waters" (later commonly referred to as the Salmon Chief), both of whom exercised great power and influence. Among the Lakes, chieftainship is also described as having been generally hereditary (Bouchard and Kennedy 1985). A study of sporadic early Jesuit records (1838-1841 and later) suggests that chiefly families married outside of their local group more frequently than other families (Chance and Chance 1985).

Many Plateau scholars have emphasised the accessibility of the Kettle Falls fishery to anyone wanting to use it (see especially Jorgensen 1980:130 and Ray 1939). This is in turn used as support for an egalitarian view of Plateau society. There are a number of problems with such a view. The fishery was no doubt to some degree open to most of the surrounding groups. But this was probably not solely due to the egalitarian and generous nature of its inhabitants. The salmon runs at Kettle Falls were so productive—second only to The Dalles on the Columbia Plateau—and yet so limited in duration that the Shwayip alone could not possibly utilise even a small fraction of the available fish. Therefore they stood nothing to lose by making the fishery accessible to other groups. By doing so they may have defused potential hostilities (cf. Cannon 1992:518 regarding a similar situation for the Fraser River Lillooet on the Canadian Plateau), earned reciprocal rights to resources in other territories, and facilitated trade in their territory, over which they retained a greater degree of control than would otherwise have been the case. Their success in achieving these goals is attested to by their role as arbitrators in disputes rather than as participants and by the degree to which they were sedentary traders. Anastasio (1985:155) states: "... they [the Colville] are not reported as being raided, although nearby groups raided each other" (again this scenario displays striking similarities to that described by Cannon [1992] for the Fraser River Lillooet). Teit (1930:255) notes: "The

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Colville did no carrying or hardly any. Their country was small and the surrounding tribes all came to them”.

It is also important to note that the fishery was probably not indiscriminately open to literally anyone. Permission was required to fish (Kane 1968:217), and many of the individuals in the groups using the resource would have had kinship ties with the Colville. Furthermore, as Chance *et al.* (1977) note, the Kettle Falls fishery was limited in the number of good fishing sites available. The best sites would, then, most likely be monopolised by those individuals and families with the appropriate standing in the community. According to Paul Kane (1968:217), the salmon chief of the Colville placed his large fish basket a month before anyone else was allowed to. Kane (1968:219) writes: “After the expiration of one month, the Salmon Chief abandons his exclusive privilege, as the fish are then getting thin and poor, and allows all who wish it to take them”. The salmon chief distributed the salmon thus taken equally among *his* people (presumably limited to only the Colville), likely gaining reciprocal exchange privileges as well as prestige in the process.

The Colville population at Kettle Falls appears to have declined drastically after about 1785 due to introduced diseases (Chance *et al.* 1977). The Colville and Lakes were further decimated by smallpox around 1800 and again in 1832 (Teit 1930:212). It is possible that these rapid demographic changes may have affected the ability of the Colville to assert their claim to the fishery effectively, so that the situation observed ethnographically may not be entirely applicable in prehistory. Furthermore, population decline among the Colville may have been more rapid than that of neighbouring groups (Leeds *et al.* 1985). On the other hand, as shall be seen in Chapter 6, there is little evidence for a more elaborate material culture and social organisation (such as that seen at The Dalles) in the vicinity of Kettle Falls prehistorically.

Root resources were also very important to the Colville, probably second only to salmon. Council members of the modern Colville Confederated Tribes remarked that root digging areas were sometimes so exclusive that they were recognised as belonging to individual families (Galm *et al.* 1981:23). It is likely, need it be said, that areas thus owned were among the most productive. More frequently, however, grounds were held in common by the band and would be shared with neighbouring bands through permission. Chance and Chance (1985) also note individual ownership of houses and house sites.

Very little ethnographic information concerning specifically Colville burial practices is available. Presumably that which has been said regarding other Okanagan groups applies to them as well.

The Sinkaietk

The Salish-speaking Southern Okanagan or Sinkaietk occupied an important territory bordering the Southern and Northern Plateaus (or the Columbia and the Canadian). The Sinkaietk were heavily involved in trade between southern and northern Salishan groups. In addition, they held a major fishing and trading location at the confluence of the Okanagan and the Columbia Rivers (Cline *et al.* 1938:75; Teit 1930).

The chieftaincy in each Sinkaietk village/band was hereditary and based largely on wealth. The position conferred real material benefits and privileges. Alexander Ross (1969:318) writes: “All the chiefs and other great men have invariably a plurality of wives”. Cline *et al.* (1938:87-94) state that the chief’s mat lodge would be the first to be built and the largest. The best food was reserved for the chief and his family, and the chief also controlled the village’s food surplus to distribute in times of need. Thus the wealthy among the Sinkaietk “... are respected and residence in their proximity is desirable, for practical reasons. In case of famine and extreme conditions, the wealthy assist the poor” (Cline *et al.* 1938:87). Cline *et al.* (1938:98) report that the Sinkaietk never kept or traded in slaves. On the other hand, Ross (1969:345), who was in charge of Fort Okanagan for a number of years beginning in 1811, states that the people there did occasionally keep slaves.

In an intriguing statement, unique on the Plateau as far as I am aware, one of Cline *et al.*’s (1938:56) informants related that chiefs commissioned the manufacture of weapons from those most adept and subsequently retained control over them, only loaning them out to those who needed them. However, Cline *et al.* remark on the potential bias of the informant, who was himself a chief.

The Okanagan River salmon runs were an important resource for the Sinkaietk. Locations suitable for the construction of weirs, the main means of taking fish, were limited, and permission was needed from the chief before construction could begin. The extent to which the weirs were then owned is not clear, although Cline *et al.* (1938) state that the associated traps were said to be communal. Platforms built to take suckers were privately owned, although they could be used by others with permission.

Burial among the Sinkaietk took place in talus slopes or wherever the body could be covered with rocks (Cline *et al.* 1938:127). The grave would be lined with tule mats, and the body flexed and wrapped in a buffalo robe, if the deceased owned one, or deer hide. Personal belongings and "power objects" were placed on the body and/or destroyed over the grave. Some of Cline *et al.*'s informants denied that valuables would be interred with the body, although this practice is mentioned by Curtis (1911b) and Ross (1969:346). Ross (1969:346) further states that a small pile of wood would be placed over the grave, with suspended goods "... indicating the quality of the deceased". Horse hides were sometimes placed over the grave as well. Additional property would sometimes be given away at the funeral feast (Cline *et al.* 1938:128).

The Canadian Plateau

The Okanagan/Similkameen

The Canadian Okanagan have much in common with the Southern Okanogan of the Columbia Plateau. Although grouped here together with the Okanagan, it should be noted that the Similkameen Valley in late prehistoric and early protohistoric times was occupied, as was the Nicola Valley, by an isolated Athapaskan-speaking group (Teit 1900). The timing of this group's arrival in the south-central interior of British Columbia from the north has been debated (see Wyatt 1972), but may have occurred only within the last 600 years or so. During the early historic period, and probably due at least in part to their acquisition of the horse, the Okanagan expanded their territory to encompass the Similkameen Valley. In general, in contrast to the situation in the Nicola Valley, the process of replacement seems to have been accomplished peacefully through intermarriage and Okanagan cultural and linguistic dominance and assimilation. Since what follows is based solely on ethnohistoric and ethnographic accounts, it applies equally to the "Similkameen", who were during this period both culturally and linguistically Okanagan.

As with the Yakima, the introduction of the horse may have shifted the balance of power to groups like the Okanagan (Teit 1930:250), who may have been somewhat marginalised previously. One of the advantages that would accrue to them would be the shift in emphasis to upland trade routes rather than valley bottoms; as Teit (1930:252) writes: "Following the introduction of the horse, trade conditions changed rather suddenly, and the old routes became of minor importance". In addition, as elsewhere on the Plateau, the herds of horses quickly became a measure of wealth as well.

In a pattern that should by now be familiar, Teit (1930:262) refers to two classes of chiefs among the Okanagan divisions: hereditary chiefs and those who achieved the title of chief through their distributions of wealth and through their abilities in war and oratory (see also Bouchard and Kennedy 1985 regarding the Lakes division of the Okanagan). The children of both kinds of chiefs were said to have had "... a certain prominence because of their ancestry and training..." (Teit 1930:263). Hudson (1990:70-71) states that chieftaincy among the Okanagan was loosely hereditary, with chiefs drawn from high status families. According to Hudson (1990:72), the Okanagan did not exhibit rigorous class stratification but families were still socially differentiated and ranked, the prestige of the family depending largely on its size and the strength of its kinship ties. The Okanagan kept slaves but generally only a few, most often young women taken captive in war (Teit 1930:277). R. Atkinson, the first curator of the Penticton City Museum, offers an interesting statement regarding the Okanagan near Penticton. He (1937:5) writes that larger housepits were "... the abode of people of importance, chiefs etc. who were polygamous [sic] and owning as many as six wives". (It should be noted that Atkinson does not specify his source, although it seems that he had many contacts among the local Native community.)

Important salmon fishing stations were located at Shuswap Falls and at Okanagan Falls (Hudson 1990:58; Teit 1930:247). The Canadian Okanagan also travelled down to Kettle Falls each year to share in the plentiful runs there, being closely related to the Colville. As among the Colville, access and distribution of salmon was controlled by a salmon chief. There is no mention of privately owned fishing stations among the Canadian Okanagan, possibly because of the lesser abundance and therefore reduced importance of salmon resources, and the lack of suitably localised procurement stations.

Given the lesser abundance of salmon, hunting played a correspondingly greater role in Okanagan subsistence. While hunting territories were held in common by bands, snares, deer fences and deer traps were private property (Teit 1930:277). Deer fences are relatively permanent structures, and thus it could be that their placement in a small valley would effectively mark ownership of that valley, or at least control of its deer resources.

As characteristic of most of the Plateau, two forms of burial dominated in the Okanagan/Similkameen: interment in sandy terraces or hills, and talus slopes. Talus burial was quite

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common where suitable slopes were available, with a slender pole frequently marking the head of the grave (Teit 1930:288). Cairns were built over shallow graves, while deeper graves were marked by stone circles. Occasionally a canoe would be placed over the grave. Grave effigies were sometimes erected in the Similkameen and the lower Okanagan Valleys (Ostapkowicz 1992; Teit 1930:289). Bodies were placed in the graves in flexed positions, wrapped in matting or occasionally in skin robes. Reportedly cremation was never used (Teit 1930:289), although possible archaeological examples have been found (see Chapter 6).

The Thompson (Nlha7kápmx)

The Middle Fraser Canyon region between Lytton and Lillooet in many respects represents the apogee of cultural complexity on the Canadian Plateau, much as The Dalles does for the Columbia Plateau. The similarity can be largely attributed to their position on the most productive stretches of the main salmon rivers of their respective areas. The Middle Fraser Canyon provides many excellent fishing stations and, possibly even more importantly, the hot dry winds of the Canyon greatly facilitate the drying of large quantities of fish for storage. Ethnographically the canyon was occupied by two ethnolinguistic groups: the lower stretches of the canyon, bordering Coast Salish territory, were held by the Lower Thompson people, while the upper part was held by the Upper Lillooet. Both of these groups, together with the Canyon Shuswap, appear to exhibit the most complex social organisation known for the south-central interior of British Columbia. The Thompson, or *Nlha7kápmx*, are often discussed as two groups, the Lower Thompson and the Upper Thompson (Teit 1900). The Lower Thompson inhabited the transitional area between the Coast and Interior Salish, sharing many cultural traits with their downriver neighbours, the Coast Salish Stó:l6., while the Upper Thompson inhabited the more arid eastern part of the territory.

The Thompson sociopolitical system was based on semi-autonomous village bands each under a theoretically non-hereditary chief. In practice, however, the chieftaincy tended to be at least loosely hereditary (Teit 1900:289). Status was also influenced by wealth: "The rank of each person was determined by his wealth and his personal qualities" (Teit 1900:289). Prestige was acquired through the distribution of wealth at feasts (Teit 1900). The Thompson, especially the Lower division, maintained strong slavery institutions during the ethnographic period (Ray 1939).

Teit (1900:325) provides the following information regarding the arrangement of marriages:

There were formerly no restrictions regarding marriage, owing to the fact that there were no hereditary ranks and classes. There seems, however, to have been an inclination, on the part of those who were wealthier, more successful, or more industrious, and so more distinguished, than others, to marry their children to other wealthy people.

A similar practice existed among the Lillooet (Nastich 1954). Clearly this represents an attempt by the wealthy elite to maintain and enhance their privileged position. Gifts were given by the bridegroom to the parents of the bride; normally there was no return exchange, except among some of the wealthy (Teit 1900:322). Also relating wealth to marriage, Teit (1900:326) also notes that the practice of polygyny "... flourished, very many men having from two to four wives, sometimes all sisters, and not a few having as many as seven or eight; yet there were a large number of men who had only one wife. For a man to have several wives was indicative of wealth".

Certain salmon fishing stations were individually owned, as were deer fences and also eagle eyries. All three were inherited by all male children, with the eldest son retaining a degree of priority (Teit 1900). As among the Lillooet, discussed below, hunting was considered a particularly prestigious occupation.

The Thompson buried their dead tied in a flexed position in the sandy soil of river terraces and knolls overlooking or otherwise near a village (Teit 1900). Occasionally the grave would be lined with birch bark; frequently it would be marked with a small stone cairn. The graves of the wealthy had conical mat or skin structures erected over them (Teit 1900:329). The deceased's property would be both placed with the body and hung on poles or trees nearby (Teit 1900:328). If the deceased owned dogs and/or horses, some were killed and their skins hung on frames placed over or beside the grave (early historic photographs from the Fraser Canyon show horse hides hung beside graves [see Ostapkowicz 1992]). Slaves would also sometimes be killed and buried beneath their owners (Teit 1900:328). The bones of the deceased of wealthier families would be exhumed one to two years after death and wrapped in new blankets before being reinterred; this was accompanied by a feast (Teit 1900:330, 336). The poor, on the other hand, were not buried at all, but simply covered over with sticks and bark (Teit 1900:330).

A passage in Teit suggests that the graves of infants and young children might be expected to be spatially segregated from those of older children and adults:

If a young child were buried close to some old grave, its mother would have no more children. Consequently a young child was always buried some distance away from old graves (Teit 1900:330).

This presents an interesting mechanism to help account for the separation of infants from the adult mortuary space seen in some of the Plateau burial sites discussed in Chapter 6. Indeed, this is an excellent example of how emic and etic interpretations may be complementary.

Burial grounds in the Lytton area during the earlier part of the nineteenth century became quite elaborate. Canoes would often be placed over graves; and over some, large carved wooden effigies were erected. In 1808, Simon Fraser observed such effigies among the Lower Thompson together with large carved cedar chests covered with marine shells (Lamb 1960). These chests were the repositories for multiple individuals, and may have been family or clan tombs. The similarity in the features of the effigies erected at large gravesites to one another could suggest that a group identity was being consciously emphasised (Ostapkowicz 1992). Teit notes that each group of families had its own burial ground, "... which was carefully chosen in a conspicuous place" (Teit 1900:330). Teit's emphasis on a "group of families" strongly implies a suprafamilial corporate aspect to Thompson cemeteries. The carved wooden figures themselves, like the horse and dog skins hung at the gravesite, are clearly related to status display; Teit's (1900:330) informants stated that they were erected to "... let the people know who was buried there, and that the dead had living relatives who were above the common people as to wealth, and able always to renew the clothes of the figure". The renewal of a figure's clothing was accompanied by a large mortuary feast for the participants and witnesses, and thus involved a quite considerable expense beyond the reach of the common people (Ostapkowicz 1992). It has clear antecedents in the practice of rewrapping the bones of the dead in new blankets, noted above.

The Lillooet (Stl' átl'imx)

Ethnographically the Lillooet or *Stl' átl'imx* (this term refers specifically to the Upper Lillooet, concerning whom most of the following information relates) represent one of the most culturally complex groups on the Plateau. Considerable ethnographic research has taken place among the Lillooet during the latter half of this century, so that the group can be discussed in some detail. The Lillooet sociopolitical system has been described as intermediate between ranked and stratified (Romanoff 1992a:494). The basic sociopolitical unit during the ethnographic period was the band, composed of two to three villages, and recognising the leadership of one main chief (Nastich 1954:23). Chieftaincy was largely hereditary, and the position involved considerable influence and prestige (Nastich 1954; Romanoff 1992a; Teit 1906:254). Inheritance was validated by strong spirit acquisition and by feasting (Romanoff 1992a:495). Men of great influence and generous wealth could also be called "chief", even if not in the hereditary line (Nastich 1954; Romanoff 1992a; Teit 1906:255).

It is likely that what Nastich refers to as a "band" is what Teit (1906) denotes very specifically by the term "clan", attributing the development to coastal influences. The Lillooet clan consisted of a number of families that in some cases extended beyond the village (Teit 1906:254; see also Romanoff 1992a:475, 1992b:224). Each clan kept one hereditary chief, even when it spread over a number of villages (Teit 1906:254). What Teit (1906) refers to as clan "totems" were sometimes carved and/or painted on the tops of housepit ladders. As detailed below, clan images were also used in other contexts.

The Six-Mile/Bridge River fishery was the single most productive aboriginal fishery on the Middle and Upper Fraser River (Kennedy and Bouchard 1992; Romanoff 1992b), and probably on the entire Canadian Plateau. Simon Fraser in 1808 observed a huge gathering of some 1000 people at Six-Mile (Lamb 1960). In spite of the abundance of salmon, good fishing stations were limited and unevenly distributed, and the Lillooet wealth and prestige system was based largely on this differential access to fisheries (Kennedy and Bouchard 1992; Romanoff 1992b). An important distinction can be made between the public sockeye fishery, generally open to all, and the privately owned spring salmon fishing stations (Kennedy and Bouchard 1992; Romanoff 1992a, b). The spring salmon resource was by far the more important of the two, and the best spring rocks were individually or family owned and inherited (Kennedy and Bouchard 1992; Nastich 1954:35; Romanoff 1992a). Thus when Teit (1906:256) states only that ownership of fishing sites was invested in the clan, he is likely referring mainly to sockeye salmon sites.

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He further notes that the Lower Lillooet erected carved and/or painted poles representing clan "totems" at fishing locations.

Hunters among the Lillooet enjoyed high prestige, possibly due to their ability to provide highly desired meat and dressed skins for potlatches (Romanoff 1992a). Tyhurst (1992:399) suggests that, as with the Shuswap discussed below, hunting territories prior to or just at Euroamerican contact may have been owned by families and inherited within them. Kennedy and Bouchard (in Romanoff 1992a:502) also record that among the Lower Lillooet hunting territories were in the past owned. Even during ethnographic times, when common use of resources and a sharing ethic is widely emphasised for the Plateau, permission to trespass for any type of resource extraction was usually required, and seems to have been given only in instances where reciprocal resource use or kin ties existed (Tyhurst 1992:400).

While prestige was acquired through the distribution of food and other articles throughout the Plateau, the Lillooet perhaps exaggerated this principle to a degree not seen elsewhere. Thus Romanoff (1992a:477) states: "Hostile giving was a way of asserting dominance". Competitive potlatches were held between chiefs (Teit 1906:258). The Lillooet seem to have been particularly conscious of the influence of wealth in their social organisation. Many dichotomies in Lillooet society refer to rich versus poor individuals and families. Those households considered wealthy were large and kept a number of slaves. Such households would include a fringe of poor relatives who provided services in exchange for food and protection (Nastich 1954:23; Romanoff 1992b:248). Nastich (1954) states that wealthy Lillooet families attempted to maintain and increase the wealth and standing of their children by arranging good marriages. Teit (1906:269), on the other hand, denies that there were any restrictions on marriages between members of different classes.

Warfare may have been more highly developed and more frequent on the Canadian Plateau at contact than to the south (Ray 1939). In 1808, Simon Fraser noted a large, palisaded village near the modern town of Lillooet (Lamb 1960:82), an observation later supported by Teit's (1906) informants. While the Lillooet rarely initiated raids against other groups, except in retaliation (and even then rarely), their rich salmon stores made them a tempting target for Shuswap and Chilcoltin attacks (Cannon 1992; Teit 1906). To some extent the Lillooet appear to have attempted to defuse potential hostilities through a strategy of widely trading their surplus salmon (Cannon 1992). Slaves were kept by the Lillooet over the short term in relatively large numbers compared to the rest of the Canadian Plateau (Cannon 1992:516; Nastich 1954; Teit 1906:221), but for the most part the Lillooet facilitated trade in slaves rather than keeping them for themselves (Cannon 1992:516).

The Lillooet were great traders, with access via a number of routes both to the Lower Fraser and directly to the coast (Teit 1906). Although not developed to the extent seen at The Dalles, Lillooet (referring to the modern town) served as a major trading and meeting place. It has been interpreted as the hub of a large trading territory, a gateway community, by Hayden *et al.* (1985). Fountain, or "The Fountain", located some eight kilometres upriver from Lillooet, was known as another major trading centre (Teit 1906, 1909). The Lillooet locality in general may have attained particular importance as the interior end of a trade corridor extending over the Coast Mountains to Harrison Lake and hence down the Lower Fraser to the coast. Supporting this, recent excavations at the Scowlitz site (DhRI 16) at the confluence of the Harrison and the Fraser Rivers have found mortuary evidence for considerable complexity and marked inequality, as well as interior connections in the form of native copper and projectile point styles.

Burial practices among the Lillooet appear to have undergone rapid changes during the protohistoric and early historic periods. The oldest practices still followed the general prehistoric Plateau pattern of single flexed interments in sandy terraces or hills (Teit 1906:270). A canoe would sometimes be drawn up over the grave or burned on the grave (Nastich 1954:68), and slaves were said to sometimes have been killed and buried with their owners (Teit 1906:270). The use of burial boxes and monumental sculpture appears by at least the turn of the nineteenth century, especially among the Lower Lillooet. The sides of the burial boxes were often carved, and some had four posts rising from the corners, carved with the clan figure of the deceased (Teit 1906:272). Freestanding mortuary figures were also used, again sometimes displaying the inherited privileges of the deceased and/or those of his or her family (see Ostapkowicz 1992).

The mortuary feast, held a year or more after a death, played an important role in validating and maintaining the status of a family. The bones of the deceased would usually be gathered up at this time and rewrapped in new blankets or robes before being reinterred (Nastich 1954:67-68; Teit 1906:270). The scale of the ceremony, including whether it took place at all, depended on the wealth of the deceased's family. An effort was made to return the remains of those who died away from their villages for burial. This may

have been more likely to occur within high status families, although specific information to this effect is lacking.

The Shuswap (Secwepemc)

The extensive region to the north of the Thompson, Okanagan, and Lillooet is the traditional territory of the Shuswap or *Secwepemc* people. The majority of their territory extended north and east from Kamloops, but it was the western divisions, and especially the Canyon Shuswap, that had the highest population concentration, were the wealthiest, and had the most complex social organisation (Teit 1909). Kamloops and Green Lake seem to have been important locations, serving as centres for trade and social interaction among the Shuswap themselves (Teit 1909:536, 1930:250).

Shuswap sociopolitical organisation differed significantly between the divisions of the west and those of the rest of the territory. But in all of the divisions, the chieftaincy was considered fairly strictly hereditary in the male line (Teit 1909:569, 576). The band itself was focused around one primary village, but might include a number of smaller camps as well. In the southern and eastern divisions, each band had its own hereditary chief. Also recognised as "chiefs", though differentiated from the hereditary line, were those who achieved prominence through personal abilities, oratory skills, and especially wealth, which was used in feasting (Teit 1909:569). Chieftaincy, even when hereditary, reportedly had no special privileges associated with it, but gave considerable prestige and influence. The positions of war chief and hunting chief also conferred prestige, but these were not necessarily hereditary.

Both fishing stations and hunting territories were in theory held in common by all Shuswap people (Teit 1909:572). In practice each band controlled access to a nuclear territory which included its most important salmon fishing places and prime berrying grounds. Permission to use resources within these areas had to be acquired. Deer fences and eagle cliffs were individually owned inheritable property (Teit 1909:573).

The western Shuswap refers to the bands of the two divisions, the Canyon and the Fraser River, occupying both sides of the Fraser River from above modern Lillooet to well above the confluence of the Chilcoltin River. These bands, especially the Canyon, exhibited considerably greater sociopolitical complexity than the Shuswap bands discussed above. The Canyon Shuswap recognised three classes, comprising nobles, commoners, and slaves (Teit 1909:576). (Employing the same scheme used by Spier and Sapir [1930] for the Wishram, another class, consisting of the hereditary chief's family, would be included.) As among the Coast Salish (Suttles 1987) the nobility may have frequently comprised up to one-half or even two-thirds of the community (Teit 1909:576). The nobility was organised into a clan or crest group system sharing similarities with that of the neighbouring Chilcoltin and Lillooet, possibly ultimately derived from the Coast (Teit 1909:576) in its details if not in concept. Chieftaincy was strictly hereditary, but rather than band chiefs as among the Shuswap elsewhere, these were clan chiefs. Thus villages could have more than one hereditary chief.

In contrast to the other divisions, the nobility among the western Shuswap did enjoy certain privileges. For one thing, hereditary membership in a crest group was not open to commoners, although dancing societies also existed in which all, other than slaves, could participate (Teit 1909:577). The nobility tended to marry within their own class, and polygamy was commonplace (Teit 1909:591-592), though presumably limited mainly to the wealthy upper classes. Large potlatches were frequently held by the western divisions, particularly the Canyon, who were considered the wealthiest Shuswap group by the Shuswap themselves (Teit 1909:470). The Canyon were also noted to be the greatest traders of the Shuswap, acting as middlemen in the lucrative trade between other Shuswap bands and the Chilcoltin, who had access via the Bella Coola Valley to the relatively greater wealth of the Northwest Coast. The Canyon Shuswap guarded their strategic position jealously, not permitting the above mentioned groups to trade with one another directly (Teit 1909:535).

Among the western bands, all land and whatever grew on it belonged to the nobility of each band (Teit 1909:582). Ownership of fishing sites and trapping grounds, however, was invested in the various clans or crest groups. Clan chiefs collected rents for permission to use resources on lands they considered their own. Among some bands, each crest group had its own habitations and cemeteries on its own land; sometimes this would be within a village and other times it appears that a crest group would have its own village. In other bands, members of different crests lived in the same village and buried in the same cemetery, although they would still live in separate dwellings (Teit 1909:583). Among the Canyon Shuswap, crest representations (crests listed by Teit [1909:577] for the nobility include Grisly [sic] Bear,

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Raven, Wolf, Eagle, and Beaver) were erected at the main fishing places of family groups. Crest figures were also carved onto the tops of house ladders and erected at graves.

As stated above, the right to occupy certain fishing spots was hereditary, at least among the Canyon and Fraser River divisions (Dawson 1891:15; Teit 1909:582). The bands of these two divisions, being centred on the Fraser River, owned the best salmon fisheries. The rapids of the Chilcoltin River, held by the Canyon, were probably the most important fishery in all the Shuswap territory (Teit 1909:525). Prior to approximately 1800 some of the Shuswap may have also maintained hereditary family hunting territories (Dawson 1891:14; Mitchell cited in Tyhurst 1992:399). After this date, changes brought about by the introduction of the horse and the devastating effects of disease apparently collapsed the older system in favour of larger hunting territories held in common by larger social units.

The Shuswap as a whole appear to have been one of the more aggressive groups on the Canadian Plateau. Hostilities occurred both between Shuswap bands and, more commonly, with other groups (Teit 1909). Large palisaded forts complete with interior trenches, escape routes, and supplies for sieges were observed by Simon Fraser in 1808 (Lamb 1960). Teit (1909:540) notes that there were two such forts among the North Thompson division of the Shuswap about 1850. The Kamloops and nearby Savona bands of the Shuswap were reportedly particularly prone to aggressive raiding (Teit 1930:257). Raids were frequently conducted for the express purpose of revenge, but Cannon's (1992) analysis of the pattern of aggression on the Canadian Plateau indicates that economic motives were primary. The Canyon Shuswap, reminiscent of both the Lillooet and the Colville, mainly acted as arbitrators in the frequent conflicts between the Fraser River bands and the Chilcoltin.

Burials among all divisions of the Shuswap were generally made on terrace edges or hillsides near villages, and apparently never in caves or in talus slopes (Teit 1909:592), although archaeological data introduced in Chapter 6 indicates that at least talus slopes were indeed used prehistorically. According to Teit (1909:548, 554, 592) cremation was practised when a warrior died or was mortally wounded while on a raiding expedition. Poor people who had no "powerful relatives" were not buried, but simply deposited on the ground or piled over with mats and brush. Relatives tended to be buried together as much as possible. Many items owned by the deceased were interred with the body, though some were also hung on poles around the grave. These two methods of property disposal seem to have been universal on the Plateau. Horses, slaves, and dogs were sometimes also killed in honour of the dead (Teit 1909:592). The implication here is, of course, that this would only be done with those rich enough to afford such a sacrifice. Conical lodges of poles were sometimes erected over single graves and groups of graves of wealthy people (Teit 1909:593). Again among the wealthy, the bones of relatives were taken up every few years and reburied in new blankets or robes. While grave effigies such as those in use during the protohistoric and early historic among the Lower Thompson and Lillooet were apparently not used by the Shuswap, carved and painted crest figures were erected at graves by the western divisions, especially the Canyon.

Discussion

As should be apparent from the brief descriptions provided above, there are many similarities among the various Plateau groups. This may be related both to historical factors and to the fact that they shared a common subsistence base focused primarily on land mammal hunting, root resources, and the extensive storage of salmon, allowing semi-permanent winter village occupation over much of the area. The importance of this latter resource is reflected in the winter village settlement pattern, which is to a large extent focused along major river systems, especially near confluences with the major salmon rivers and streams (other local factors also enter into site location). It is also along river courses that village/band boundaries are most precisely defined (Anastasio 1985; Ray 1939). In many Plateau groups there is evidence for at least some degree of ownership of fishing locations at the family or lineage level. This generally does not seem to be the case with hunting and root gathering territories, which were more often used in common by a number of villages (Ray 1939). Even here, however, some Plateau groups recognised and upheld territorial boundaries more strongly than others. Examples of stricter territorial behaviour may be found for the Yakima, Thompson, Lillooet, and the Canyon and Fraser River divisions of the Shuswap. The limited information of this sort that is available suggests that some other groups may have also claimed ownership of their lands, or at least of the resources on them.

The resource base of the Plateau to a large extent did not exhibit the richness and diversity of the Northwest Coast, but many favoured locations, such as The Dalles, Kettle Falls, the Mid-Fraser Canyon, and others, still permitted large surplus stores of salmon to be taken for purposes of trade and reciprocal or possibly even competitive feasting (Romanoff 1992a:476-477). The surplus salmon could be dried,

allowing the formation of large semi-permanent winter villages characteristic of the Plateau. The degree to which salmon resources were depended upon obviously varied greatly from region to region. In some groups on the eastern Plateau, root gathering and hunting were probably both more important than salmon resources. Ames and Marshall (1980) in particular have argued that an increased emphasis on root resources on the Columbia Plateau was the major adaptation leading to the winter village pattern known ethnographically. In either case, storage was an important feature of Plateau society.

There are many common elements in the sociopolitical organisation of the Plateau groups discussed in this chapter. The village/band was the basic sociopolitical unit for most groups, at least before the introduction of the horse and firearms which led, particularly on the eastern Plateau, to a movement towards tribal organisation in the historic period. Leadership was relatively informal for the most part, being based on a combination of wealth and various personal abilities. Still, chieftaincy in the majority of Plateau groups may be characterised as "loosely hereditary", with other factors being prowess in war (again most developed during the protohistoric and early historic periods along the eastern periphery of the Plateau), oratory ability, and, often most importantly, wealth (Anastasio 1985; Ray 1939; Teit 1900, 1906, 1909, 1928, 1930). Personal status outside of the chieftaincy was also based on these same qualities. In most groups skill in hunting conferred a great deal of prestige, most likely because it provided highly desired materials for clothing, tools, and feasts. Other positions of high status included various specialists, such as war chief, salmon chief, hunting chief, and shaman. Thus, outside of the chieftaincy, status was largely achieved through one's abilities. At the same time, however, there is evidence that these qualities tended to remain with some consistency within certain families. This seems to have been accomplished in some cases by a combination of arranging marriages between families of roughly equivalent social and economic status, and by the superior "training" received in the "better" families (Cline *et al.* 1938; Ames and Marshall 1980; Marshall 1991; Nastich 1954; Spier & Sapir 1930; Teit 1900, 1906, 1909; see also Suttles 1987 regarding the Coast Salish). Whatever the mechanisms, the end result was that those born into families of high status gained that status, unless proving themselves unworthy through laziness or incompetence.

Within some Plateau groups, social organisation appears to have been somewhat more complex and social positions more rigid. Among the Wishram of The Dalles the chieftainship was for the most part strictly hereditary, and a distinct nobility as well as strong class divisions existed (Spier and Sapir 1930). A similar situation could be found among some western divisions of the Shuswap on the Canadian Plateau (most notably the Canyon Shuswap), as well as among the Fraser River branch of the Lillooet (Teit 1906, 1909). These groups have a number of things in common. First of all, they occupied the richest salmon fisheries of the Columbia and Fraser Rivers, respectively. This allowed the densest populations to develop (see Kroeber 1939), and encouraged near-permanent occupation of comparatively large villages. They were, in addition, strategically located to control important trade corridors between coastal and interior groups, and achieved great wealth through their production of dried salmon for trade and by acting as middlemen in the regional trade network. They were also less prone to hostilities than most of their neighbours, preferring to act as arbitrators in the exchange of captives, from which they again profited.

There is some argument as to the origin of these more stratified systems, with many researchers holding that the developments in these areas are recent introductions from their respective coastal neighbours (see especially Ray 1939 and Sarbescue 1955). Even if there was increased influence from both the Northwest Coast and the Plains with the historic period trade in Euroamerican goods, however, it is difficult to account for the production of large surpluses and complex socioeconomic organisation solely on this basis. The capacity to develop a stratified social organisation can be persuasively argued to be directly related to the economic system and subsistence base; the specific ways in which such organisation will be expressed may certainly be to a large extent influenced by nearby examples of such societies, particularly when close ties to these more complex societies are perceived as conferring or enhancing prestige. Thus if groups inhabiting areas such as The Dalles were atypical of the Plateau in terms of their developed sense of social class, this should be related first and foremost to their unusually rich salmon resources rather than to coastal influences. Coastal groups may have influenced its form, but probably had little effect on the underlying structure of the observed complex social, political, and economic organisation.

While occasionally acknowledging it as a factor, Ray consistently downplays the role of wealth in Plateau sociopolitical organisation: "Nowhere in the Plateau is chieftainship based upon wealth... nor directly correlated with wealth" (1939:19 and again: "In the Plateau wealth and rank are virtually absent" (1939:21). These statements are difficult to reconcile with numerous other ethnographic accounts (as well as Ray's own data) discussed in this chapter, in which wealth and status are definitely present, and are

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moderately to strongly correlated (Anastasio 1985; Cline *et al.* 1938; Curtis 1911a, b; Dawson 1891; Nastich 1954; Romanoff 1992a, b; Ruby and Brown 1970; Spier and Sapir 1930; Teit 1900, 1906, 1909, 1928; Walker 1968). Ray himself (1939:27) admits that: "On the western edge of the Columbia Plateau there is a certain awareness of class distinctions based upon descent", but then proceeds to explain this away as solely the result of recent coastal influences. He grudgingly admits to "... certain *vague* social distinctions..." (1939:27) (emphasis mine) of the Wishram of The Dalles, by all other accounts a highly stratified society made up of strictly hereditary chiefs, nobles, commoners, and slaves (Curtis 1911a; Spier and Sapir 1930; Cressman 1977). But one need not look only to the admittedly unique position of the Wishram. Ray found statements by early explorers and fur traders in the north-central Columbia Plateau, the supposed core of the egalitarian ethic, to be, as he termed it, "ambiguous" and could not reconcile them with his egalitarian framework (1939:26). Regarding the Southern Okanogan (Sinkaietk), for example, Alexander Ross (cited in Ray 1939:26), wrote: "... no man has a natural right to the obedience of another, except he be rich in horses and has many wives"; unless, in other words, he is a chief. Invariably, such evidence is explained away by Ray as "ambiguous", "atypical" or "recent"—in any case not characteristic of what he views as "true" Plateau society.

Such reasoning fails to explain why only certain groups develop social stratification. Simple geographic proximity is neither sufficient nor necessary for the diffusion of ideas and behaviours to take place. Where differential power and wealth are concerned, there must be a supporting infrastructure for such changes to be accepted. This has been recognised for many decades; as Steward (1938:246) states in his *Basin-Plateau Sociopolitical Groups*: "Basic patterns of organization and chieftainship obviously could not be borrowed unless conditions to support them were present". And on the Plateau, this infrastructure had been in place for possibly thousands of years. Thus it is also difficult to see the basis of Ray's belief that increased social stratification on the western Plateau must be a *recent* borrowing from the Coast, given the considerable evidence for complexity long being a feature of Northwest Coast societies together with extensive archaeological evidence for coast-interior trade throughout much of prehistory (cf. Richards and Rousseau 1987).

In most Plateau groups, wealth in general, and the chieftaincy in particular, carried certain privileges of varying exclusiveness. In some groups, the wealthy had larger houses, located in more advantageous parts of the village. They had the support of a group of followers, and in some areas owned numbers of slaves that contributed to the wealth and prestige of their owners. The wealthy by definition had access to the most and best foods, often through familial ownership or "stewardship" of resource extraction locations. As detailed in Chapter 4, the wealthy frequently wore better quality clothing and made greater use of expensive ornamentation. The acquisition of exotic ornaments among some groups appears to have been facilitated by the elite practice of dominating or completely controlling trade with outside groups. In some groups, the use of special insignia for certain social positions, such as shaman or chief, has been documented (see Chapter 4).

It was through wealth that a man could marry a number of wives, who in turn made a substantial contribution to the economic success of the family, through their plant food gathering and storage skills, and their essential labour in the preparation of salmon and deer meat for drying. Wealthy men, especially those who aspired to chiefly status of some kind, in addition to acquiring multiple wives, endeavoured to maintain the support of a group of followers through feasts and the distribution of gifts. This type of behaviour is characteristic of Big Man societies. The combination of heredity and wealth on which status and prestige were frequently predicated suggests that Plateau society was in general intermediate between an emphasis on acquired versus achieved status. It should be clear from what has already been said that placement on this scale was not the same for all Plateau groups.

There are clearly a number of possibilities in the mortuary regimes of the various Plateau groups discussed in this section that would allow for the expression of socioeconomic status differentiation. Such expression ranges from the ostentatious to the subtle. The non-interment of the lowest social classes may represent the most extreme form of mortuary differentiation in Plateau society. It is fairly clear that, in a context in which the ability to trace one's descent from a group of ancestors is important in terms of legitimising differential access to and control over resources, those who cannot do so will be disadvantaged.

The use of skin robes or woven mountain goat blankets as opposed to simple rush matting presents one example of a behaviour distinguishing the wealthy from the poor, one that is mentioned frequently in the ethnographic accounts discussed in this chapter, and includes even such nominally "egalitarian" groups as the Sanpoil (Ray 1932). The potential for this type of behaviour to reflect wealth and status is accentuated by the practice of rewrapping the remains of the deceased in new robes or blankets at intervals

of one or more years, with an accompanying mortuary feast. This was a common practice recorded ethnographically on the Canadian Plateau (Dawson 1891; Nastich 1954; Teit 1900, 1906, 1909), as well as among the Coast Salish Upper Stó:lō, where it was also limited to the wealthy (Barnett 1955; Duff 1952; Suttles 1987). The Wasco-Wishram of The Dalles appear to have had a similar practice (Curtis 1911a). Archaeologically, direct evidence of the wrapping of the dead in robes or blankets can persist under exceptional preservational conditions (e.g. Freeland, Canoe Creek—see Chapter 6; see also Schulting 1992). It may also be possible to infer the practice from secondary burials in which the long bones appear to have been purposefully bundled (e.g. the Tucannon site).

Grave offerings both in and around the grave offer another means of emphasising the status of the deceased and his or her social group. The sacrifice of one or more horses, dogs, or slaves perhaps represents one of the clearest messages concerning social status. This behaviour, especially involving horses, is documented for many Plateau groups. This should not be surprising, given the wealth and status associations that the animals quickly attained once introduced into Plateau culture. The sacrifice of slaves upon the death of important individuals is mentioned in the ethnographies for the Wishram on the Columbia Plateau (Spier and Sapir 1930), and the Thompson (Teit 1900), Lillooet (Teit 1906), and some divisions of the Shuswap (Teit 1909) on the Canadian Plateau. (Ross Cox [1957], a fur trader on the Columbia River during the second decade of the nineteenth century, observed the torture and execution of Plains war captives among Sahaptian groups, but this occurred in quite another context from that being discussed here.) Because the sacrifice would apparently often be made over the grave, or in another location entirely, evidence for the practice may be relatively difficult to detect archaeologically. Still, as discussed in Chapter 6, some human burials are clearly associated with dog skeletons (e.g. Nicola Valley), and horse remains are frequently found scattered over the burial islands of the Middle Columbia. And two sites on the Canadian Plateau (Skwaam Bay and Fountain) offer tentative evidence for the inclusion of slaves with primary burials.

With the exception of those offerings and animal hides hung around the grave, the above practices would only serve to show status during the ceremony itself, and in the living memories of the participants. Other aspects of mortuary behaviour remained more permanently visible. The destruction of a canoe over some graves, reported for many Plateau groups (and found archaeologically), represents an energy investment beyond that of a simple stone circle or wooden pole. The fact that it did not occur in all cases as part of the group's normative burial practices suggests that it may have been related to wealth and high status. The erection of wooden tent-like superstructures over graves of the wealthy is mentioned for the Shuswap. The historically documented burial sheds of the Wasco-Wishram on the Columbia Plateau, and the gravehouses of the Lower Thompson and Lillooet on the Canadian Plateau represent the most elaborate mortuary structures of their respective areas. All indications are that these structures were built and used by families or lineages, and it is highly likely that status display played a large role in their construction and maintenance. The commission and erection of grave effigies, documented for the Thompson, Lillooet, and, to a much lesser extent, the Okanagan/Similkameen, involves an even greater expenditure of wealth, the more so when the accompanying mortuary feasts and re-clothing ceremonies are taken into account. The conspicuous placement of these historic cemeteries and the effect of familial resemblance in the groups of figures at gravesites could imply an assertion of control to nearby resources (see Ostapkowicz 1992 for a thorough overview and discussion of Salish mortuary figures and the context of their use).

There is abundant ethnographic evidence, then, that status differences in the living community were reflected, more or less directly, in the mortuary behaviour of many groups on the Plateau. Some important aspects of funerary display and expenditure can not be expected to preserve in the archaeological record, but ethnographic accounts suggest that the degree of redundancy built into the display will still allow generally valid inferences to be made on the *relative* amount of wealth expended.

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PLATEAU BURIAL ASSEMBLAGES

This chapter presents detailed site descriptions and analysis. The emphasis is on assemblages containing at least ten undisturbed burials with secure grave associations, but many sites not meeting this criteria are also discussed in a qualitative fashion, particularly from the Canadian Plateau, for which there are far fewer assemblages meeting even this size criterion. While much of the information could have been summarised in table form, it was felt necessary to discuss aspects of each site that are not conducive to this kind of presentation. Discussion of sites proceeds roughly from the lower Middle Columbia northwards to the Fraser and Thompson areas of the Canadian Plateau. The locations of sites mentioned in the text are shown in Figures 6.1 and 6.2. Data on age, sex, and the number of artifact types found in individual burials at each of the sites for which at least some quantitative analysis is provided are listed in Appendix A (Tables A.1 and A.2).

The Lower Middle Columbia

The Dalles-Deschutes

Archaeological research in The Dalles-Deschutes region began in the 1920s (W. Strong *et al.* 1930), unfortunately without the benefit of the many advances in field techniques that have occurred since. Further excavations were undertaken in the 1950s (Butler 1957, 1959, 1963; Caldwell 1956), but by this time the entire area had been heavily looted by collectors. Direct radiocarbon dates on human bone or associated grave inclusions are, as far as I have been able to determine, totally nonexistent, making it difficult to deal with temporal change. The end result is that only a fairly qualitative overview of the mortuary data can be given for this important region. Some of the burials discussed below likely fall within the early to middle historic period of the area, ca. 1850 or even later, and are thus outside of the target populations of study as defined here. The rationale for including them here is simply that few more suitable data exist from the area.

Three basic disposal regimes are seen archaeologically in The Dalles-Deschutes region investigated by W. Strong *et al.* (1930): pit inhumation, talus slope burial, and cremation. Although the evidence is more difficult to detect archaeologically, the mortuary sheds noted by Lewis and Clark in 1805-06 may have prehistoric precedents as well. (As detailed further in the section on the Middle Columbia, some researchers have in fact proposed a relationship between the sheds and the cremation pits [Garth 1952], although this may be questioned [W. Strong *et al.* 1930:48].) Although there seems to be an aspect of chronological change in these disposal alternatives, there is evidence that all three overlapped for a unknown period of time (W. Strong *et al.* 1930:50).

During W. Strong *et al.*'s work, it was found that all talus burials were located in the vicinity of Spedis rather than on Miller's Island (see Figure 6.2). This distinction is not solely due to topography, as Miller's Island has suitable slopes. An estimated six talus burials were noted at Site 12 along the southern rim-rock slope in Spedis Valley, but were not systematically investigated by W. Strong *et al.* (1930). The slopes seem to have been in use in "very recent times", although this is not to say that they were not in use earlier.

Only five talus burials (Burials 5, 6, 7, 8, and 9) were actually excavated by W. Strong *et al.*; these were from what were labelled as four separate sites along the northern rim-rock slopes of the same small valley, behind the large village site of Wakemap Mound (see W. Strong *et al.* 1930:10, Figure 1). Three of these burials (7, 8, and 9) contained no artifacts, while one (Burial 6) had a flint point and a basalt knife, and one (Burial 5) had a flint point, a short dentalia bead, and five tubular copper beads.

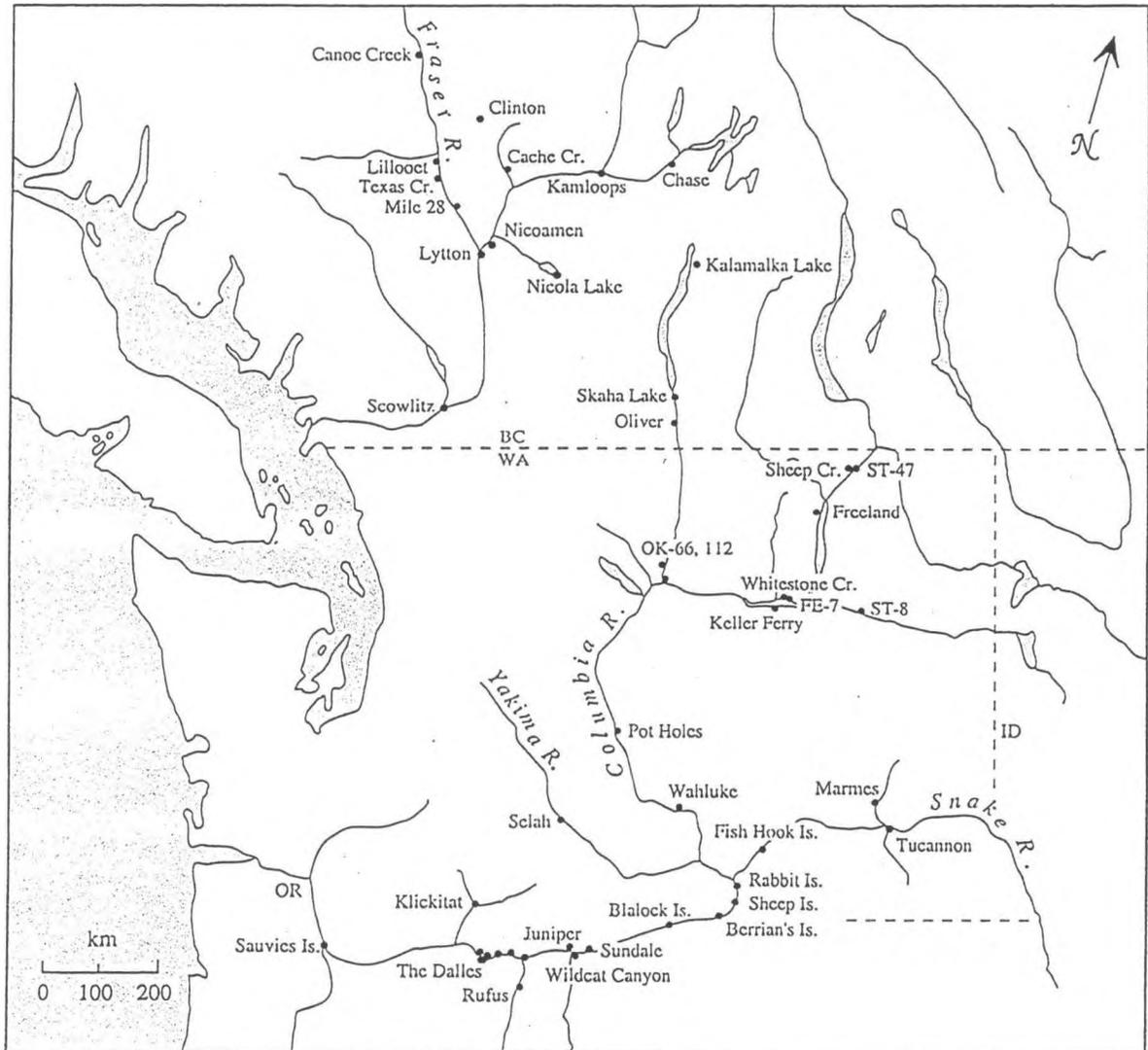
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W. Strong *et al.* certainly felt that socioeconomic status differences could be invoked to help account for the position of talus graves in the area:

Most of the graves observed in the slopes... were those of infants. This fact and their recency, coupled with the fact that the Wishram Indians are at the present time depositing part of their dead in the sheds on Upper Mcmaloose island, suggest that these rock-slide burials, at least, were for bodies not considered worthy the time and trouble of a burial on the island. The paucity of artifacts, the lack of elaboration, the scanty covering of the graves, and their comparative isolation (i.e., not in regular cemeteries) also suggests that such burials were for the inferior ranks of society or were at least exceptions to the regular practice of the Wishram. (W. Strong *et al.* 1930:44-45)

The above passage highlights a number of important points. Infants reportedly predominate in the talus slope burials, suggesting that they were likely being spatially segregated. But it is not clear, given the fact that most graves were not excavated, how this conclusion was reached.

Figure 6.1: Map of Plateau Showing Locations of Sites Discussed in Text



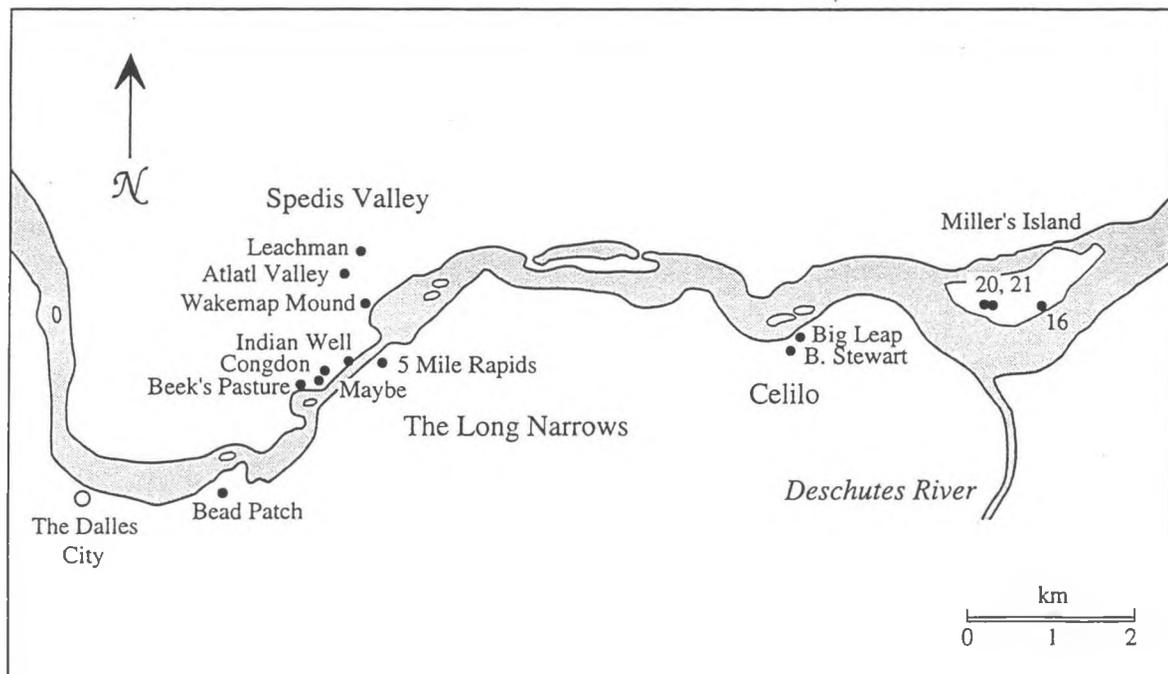
The same area was subsequently investigated by Caldwell, who excavated a total of ten talus or near-talus burials from the vicinity of W. Strong *et al.*'s Site 12 (Caldwell 1956:283). No age estimates are provided, partly due to very poor bone preservation, and so it is not possible to evaluate W. Strong *et al.*'s statements concerning the representation of infants. Of the ten burials, between three and five contained no artifacts (Burials 2, 3, 8, 9a, and 9b); the range being due to the uncertain association of some iron and tin scraps with Burials 9a and 9b. Many of the remaining burials do not exhibit the paucity of grave inclusions reported by W. Strong *et al.* Burials 1 and 5 in particular contained numerous Euroamerican trade items, including many glass beads, copper beads and pendants, several dentalia, an iron ring, a clay pipe, a steel file, and the mechanism of a cap or flintlock gun. Burials 6 and 7 contained fragments of china and glass in addition to modern cloth, making at least these burials very recent.

The simple form of the burial facility in comparison to the apparently contemporaneous elaborate mortuary sheds on nearby islands and the relative lack of grave inclusions both appear to associate talus burial with lower socioeconomic status. The addition of Caldwell's data obscures this picture somewhat, although the relative abundance and types of trade articles could suggest an even later date for this material, making comparisons to W. Strong *et al.*'s data of questionable validity. Of course, many different ethnolinguistic groups made seasonal use of The Dalles for fishing and for trade. It is also possible, then, that the talus burials represent the burial practices of another cultural group for which the mortuary sheds would be inaccessible.

A total of 19 pit graves from four sites were excavated by W. Strong *et al.* (1930). Four burials (Burials 1, 2, 3 and 4) were located in two caves (Sites 1 and 2) at the base of the same northern rim-rock slope that held the talus burials previously discussed. Only Burial 1 had a non-perishable artifact in direct association, this being a bone awl. Fragments of sticks, boards, and tule matting were also found in these burials. Site 16, located at the base of low cliffs on Miller's Island, provided evidence of seven burials. Two of these (Burials 11 and 15) contained no artifacts, one (Burial 10) a chert drill, one (Burial 14) a chert point, and the remaining three (Burials 12, 13, and 16) one or two notched sinkers. All of these burials are impoverished compared to those of the last site, discussed below.

Site 20 is located on the southwestern end of Miller's Island, out from the base of a talus slope and about 500 m behind the large housepit village of Site 18. Eight graves were recorded from this site, but these represent an unknown number of individuals, since with only two exceptions (Burials 23 and 24) they seem to have contained multiple individuals. Four of the burials are very similar to those that have been discussed thus far in terms of their grave inclusions; two adults (Burials 23 and 24) contained no artifacts,

Figure 6.2: Burial sites in The Dalles-Deschutes area



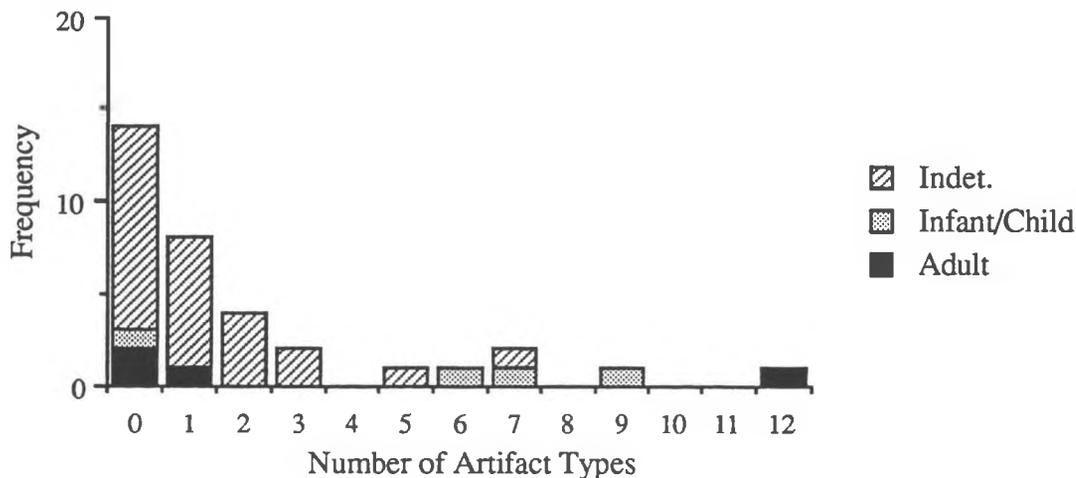
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while the other two (Burials 18 and 19) contained a polished stone sinker and a “flint” blade, respectively. The remaining four burials, all containing multiple individuals, present a far greater number and variety of items. Burial 17 contained the bodies of three or possibly four individuals—an adult, one or two children, and a neonate. Associated grave goods include bone harpoon parts, perforated bear claw cores, an incised sea mammal canine pendant, over 100 copper beads, a copper pendant, two copper rings, many glass beads, an iron bracelet, 25 dentalia beads, 36 *Olivella* beads, and three abalone shell pendants. Preservation at the remaining three multiple burials at the site, 20, 21, and 22, was very poor, such that W. Strong *et al.* (1930) do not even attempt to estimate the number of individuals represented. Burial 20 contained bronze buttons, numerous copper beads and pendants, “many” glass beads, dentalia beads, a “flint” point, and an iron axe. Burial 21 contained 120 copper beads and pendants, 100 glass beads, 40 dentalia beads, three clam shell disc beads, a single *Olivella* bead, and a number of “flint” points. Burial 22 again included a number of copper beads, buttons, and pendants, 100 glass beads, 16 dentalia beads, five clam shell disc beads, the fragments of an abalone pendant, and a lead sinker.

The unusual position of Burials 17, 20, 21, and 22 should be clear. Most other talus and pit burials in the study area contained either nothing (other than tule matting) or only one or two items. Moreover, these items were frequently utilitarian (bone awls, flint points and knives) rather than sociotechnic in nature, although Burial 5 and a number of the late burials reported by Caldwell contained sociotechnic items. Greater energy expenditure can also be seen in the form of the mortuary facility in the multiple burials of Site 20 on Miller’s Island (Burials 17, 20, 21, and 22). In these, the pit had been elaborately lined and covered with boards. W. Strong *et al.* (1930:45) note that, although a few other burials (such as Burials 3 and 7, as well as Caldwell’s Burial 1) also had evidence for the use of boards in the grave preparation, the effect was much less elaborate than that seen in Burials 17, 20, 21, and 22. Thus the coincidence of the two lines of evidence strengthens the interpretation of higher status initially suggested by the grave inclusions alone.

While it is questionable whether all of the burials date to the same time period, the preservation of organic materials in both talus and pit inhumations suggests no great difference in antiquity. Phoenix buttons in Burials 20 and 22 suggest a post-A.D. 1830 date (W. Strong *et al.* 1930) for at least part of Site 20. Many of the talus and pit burials investigated, including Burials 17, 20, and 21, retain evidence of wood, textiles, and basketry. All of this suggests that the majority of these burials date from the protohistoric to early historic period. Many of Caldwell’s burials, containing remnants of “modern” cloth and abundant trade items, seem even later. Grouping the burials from both reports (Caldwell 1956; W. Strong *et al.* 1930) for analysis provides a sample of $n = 34$ (Figure 6.3); this includes the four individuals of Burial 17 but not 20, 21, or 22, since the number of individuals in the latter are not even estimated. It

Figure 6.3: Artifact Diversity Distribution at The Dalles-Deschutes



also treats Burials 18 and 19 as if they were single interments, which may not be valid. Insufficient information is provided on age and sex (only a single skeleton is sexed) to permit even tentative statements regarding quantitative differences in treatment along biological lines. It was also necessary to "guesstimate" the number of artifact types associated with each of the four individuals in Burial 17. The majority of the artifact types were assumed to be associated with the adult, and the least with the infant.

Keeping in mind, then, the tentative nature of the quantitative analysis, the average number of artifact types in the 34 burials is 2.00. The average number of utilitarian types is 0.62, while the average number of sociotechnic types is 1.38. The coefficient of variation is, as might be expected, higher for sociotechnic types (0.67 vs. 0.53 for utilitarian types), reflecting the occurrence of many sociotechnic types with the four individuals of Burial 17 compared to the more homogeneous distribution of utilitarian artifact types. This provides some quantitative support for the more highly differentiated distribution of sociotechnic types over utilitarian types.

But it is the cremation pits that constitute by far the most elaborate form of mortuary treatment found in The Dalles-Deschutes area. Their investigation is, however, very frustrating. This can partly be attributed to the early date of the excavations; for example, W. Strong *et al.* (1930) do not provide any estimate of the number of individuals present (beyond "many"), nor do they present even a qualitative assessment of the age classes present in the excavated cremation pits. Thus it is not known whether all age groups are represented. To make matters worse, these pits were quite visible, and thus by the time of even the earliest excavations had already been subjected to considerable looting, which was to intensify in subsequent years. Despite this, sufficient evidence remained at the cremation sites discussed below to make apparent their unique status in terms of the quantity and variety of prestige items present.

W. Strong *et al.* (1930) were able to infer the elaborate cremation of many bodies in the ten pits of Site 15 and in the single pit of Site 21, both sites being located on Miller's Island. The Site 15 cremations had all been largely looted by collectors; nevertheless W. Strong *et al.* were able to find evidence for an impressive range of artifacts, including steatite and dentalia beads, decorated tubular stone pipe fragments, carved bone/antler fragments bearing the "grinning face" motif (see Chapter 4), whalebone club fragments, and projectile points. Half of a steatite spindle whorl (?) was found near one of the disturbed cremations.

The single cremation pit found at Site 21 is if anything even more impressive. A pit 3.0 m x 2.4 m revealed a layer of charred human bone fragments approximately 0.15 m thick. Fragments of basalt had been placed over the bones, which rested upon an apparently levelled soil floor. W. Strong *et al.* report that the burning had been so intense that "...it had melted the sand, and possibly some of the articles cremated, so that a sort of slag or matrix was formed enclosing bones and artifact fragments" (1930:25). Artifacts in the pit included bone awls, projectile points, a mortar and pestle, unidentifiable copper and iron fragments, bone gaming pieces, an estimated 13 bone "labrets" (more likely ear spools), bone/antler carvings bearing the "grinning face" motif, whalebone club fragments, animal claw cores, a tubular stone bead, a small stone decorated bowl, pieces of an estimated ten tubular stone pipes, and red ochre. Some of the pipes were made of steatite, while others were of a fine-grained micaceous sandstone.

A number of other elaborate burial sites, both cremation and non-cremation, are known from The Dalles-Deschutes region. As with the sites on Miller's Island, data are incomplete and provide only hints of the complexity that existed in this area. Several of these important sites are described in qualitative terms below. That more detailed information might still be available in the notes of amateur collectors is hinted at by the documentation accompanying the Bergen Collection, recently donated by Dr. (M.D.) H. Bergen to the Burke Museum at the University of Washington. Bergen's notes on a number of sites in the lower Middle Columbia area are invaluable, preserving individual grave associations and spatial relationships between burials. Access to this information enables a more detailed analysis of the sites discussed below.

Leachman

Colowesh Bottom, before being flooded by The Dalles Dam, was a large, flat sand and gravel plain located directly behind Wakemap Mound (45-KL-26). It was used extensively as a burial, cremation, and burial vault site (E. Strong 1959a, b, 1960a). Most of the sites on the plain had been looted even before the floodwaters covered the area, but one undisturbed large cremation pit, known as the Leachman site (45-KL-68), was discovered in the centre of the plain in the 1950s. Excavations revealed a pit approximately 18 feet in diameter and some five and a half feet deep, the top half of this being sterile wind-blown sand. Remnants of wood planks suggest that the pit was lined; it may have been a burial vault (E. Strong 1959b). The bottom layers contained sand, ash, and both burned and calcined bone. No estimate of the number of individuals represented is available, although the size of the pit suggests a considerable number.

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A wide range of artifacts were found, including a number of fine stone carvings, two stone "slave-killers", some 20 tubular pipes, two complete carved whalebone clubs, a large number of chipped stone artifacts, and several bone and antler carvings. The majority of these can only be considered as prestige items. The pipes were highly carved, and some of their iconography can be related to images seen on other ceremonial equipment as well as in petroglyphs. One pipe shares a very distinctive recurving bird beak motif with a small decorated stone mortar found at nearby Wakemap Mound, interpreted by Emory Strong (1960a) as a shaman's ritual bowl. Another has carved into the stem two human figures holding hands, in what is known as the "brothers", or "twins" motif (McClure 1981), seen in both petroglyphs and pictographs in the Vantage area, and yet another depicts an incised stylised bird that Strong calls almost an exact copy of one of the petroglyphs along the Long Narrows (E. Strong 1959a:27-29). Many of the small bone and antler carvings bear the distinctive "grinning face" motif (see illustrations in E. Strong 1959b; see also Chapter 4). The cremation pit appears to date to the late prehistoric rather than the protohistoric period; a single piece of copper was the only possible trade good found in the pit, and its thickness suggests that it may be native metal (E. Strong 1959b).

Congdon, 45-KL-41

The Congdon site (45-KL-41) is located near the lower centre of the Long Narrows (Figure 6.2; Figure B.1). It consists of a long, low mound (see Butler 1963:19-20, Figures 1 and 2) containing two major burial components, designated Congdon II and III, superimposed on an older village site, Congdon I (Butler 1959, 1963; E. Strong 1960a). Congdon II consists of a large cremation pit, noted as being especially rich in stone beads, carved stone amulets, steatite rings, and atlatl weights (Bergen 1989; Butler 1959; Butler and Osborne 1959; E. Strong 1960a). Some of the stone beads were geometrically incised (Butler 1959) and coated with red ochre (Weld 1959). Chipped obsidian crescents frequently referred to as "nose pieces" were also found (E. Strong 1960a). The pit seems to have been capped with a mound of basalt boulders. Skeletal preservation seems to have been practically non-existent in this component. Butler (1963), based on artifact typology, suggests a tentative date of 3500-3000 B.P. for Congdon II.

Butler (1963:16) describes Congdon III as "...a series of multiple mass burials which appeared to have been intrusive into one end of the Congdon II cap and which were of unknown antiquity". Based on crania, an MNI of 51 is reported by Garner (Appendix 1 in Butler 1963). With the exceptions of one child (cranium 28) and one infant (cranium 46), all the individuals were classified as either adolescent (four crania) or adult (45 crania). None of the crania exhibited cultural modification (Garner in Butler 1963). This is one of the few large older sites in The Dalles area in which bone preservation is relatively good. Based on the occurrence of similar atlatl weights with the burials, Congdon III could date to roughly the same period as Atlatl Valley, discussed below, where bone preservation was practically non-existent (Bergen 1989). Unfortunately, however, recovery was very poor at Congdon, with the single trained archaeologist present trying to salvage some information on the skeletal material while a group of collectors dug the site (Butler 1963). Still, even making allowances for this, it seems clear that infants and children are grossly underrepresented (2/51 or 3.9%; binomial $p = 3.2E-06$). Fewer artifacts, and of lesser quality, were found with this component, although it still includes many of the same types seen in Congdon II. In addition, bucket-shaped stone mortars were found inverted over five crania, and an antler-tine digging stick handle with incised geometric designs was also found (Butler 1959, 1963). Both Butler (1963) and E. Strong (1959a) mention a local account relating that the Congdon III burials were the remains of strangers who were victims of an epidemic. Butler's (1963:16) informants state that they may have been Great Basin Paiute. But the considerable antiquity of the assemblage makes it extremely unlikely that oral traditions or local histories could have any bearing on the ethnicity of the burials.

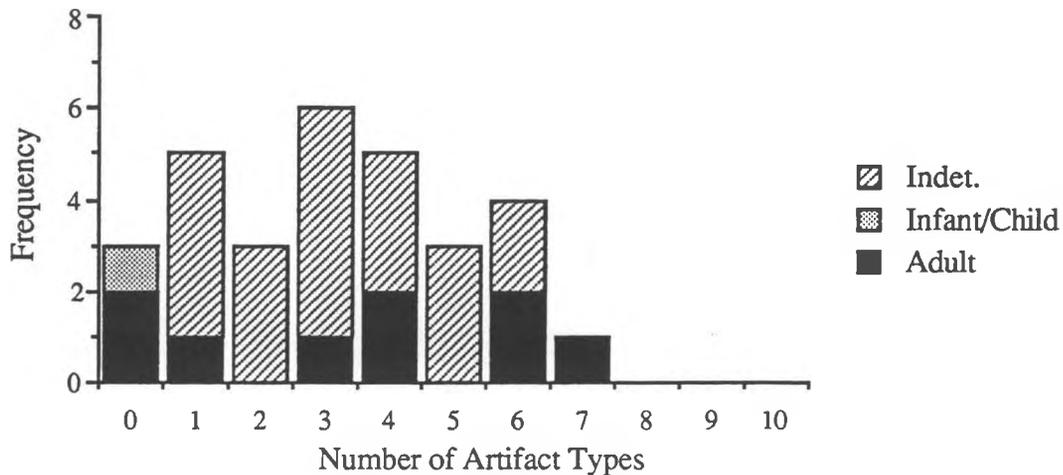
In 1960, after the work supervised by Butler, Bergen (1989) revisited the site and found undisturbed areas that had been overlooked, often below backdirt piles. He also dug deeper than Butler, finding intact burials below the level at which Butler and his crew stopped. In this way, Bergen recovered a total of 29 burials. In some cases the presence of a burial was inferred from the close grouping of artifacts typically limited to graves, but in most instances bone preservation was sufficient to at least make out the outline of the skeleton.

Preservation was apparently sufficient to provide age estimates for only ten out of the total of 29 individuals, nine adults and a single child (Bergen 1989). Unlike the remains reported by Butler, there is no evidence that subadults (1/10 or 10%) are underrepresented (binomial $p = 0.1493$); in addition, it is likely that there is a preservation bias against subadults. The remains of the child were found as part of a double burial with the remains of an adult, possibly female (Bergen 1989). Based largely on the overall size and

robusticity of the skeleton rather than specific morphological criteria, Bergen (1989) tentatively identified five of the adults as male and the remaining four as female. Based on this small sample size there is no evidence for differential representation or treatment by either age or sex.

The average number of artifact types found in the Congdon burials collected by Bergen is 3.17. Utilitarian artifact types ($\bar{X} = 2.17$) are somewhat more numerous than sociotechnic types ($\bar{X} = 1.00$).

Figure 6.4: Artifact Diversity Distribution at Congdon



Utilitarian artifacts recovered with the burials include stone knives, points, scrapers, drills, abraders, whetstones, choppers, atlatl weights, mortars, a maul or pestle, a bone awl, a bone needle, and a bone wedge. While a few bone objects were recovered, it is likely that the bone and shell artifact assemblages are underrepresented. Bergen (1989) interprets an unusual flat piece of bone approximately 18 cm long and 3.5 cm wide found with two atlatl weights in Burial 15 as a fragment of an atlatl, although this seems doubtful. Interestingly, the atlatl weights were usually found in pairs (Bergen 1989), often together with what Bergen calls a “chopper”. No explanation for this association is offered at this time, which is not statistically significant (based on the information provided) in any case. Sociotechnic artifacts include *Dentalium* and shell disc beads, a variety of stone beads, fragments of bone carvings, large zoomorphic stone carvings, red and white pigments, and small so-called “paint pots” (small, often decorated, mortars). A stone celt and a carved maul may also have functioned as prestige objects. Stone beads, made of steatite and sandstone or siltstone, were found in a variety of sizes and shapes, including large symmetrically contracting cylindrical beads up to 6.5 cm in length. A number of the stone knives and points are made of exotic materials such as obsidian and are exceptional in their length and manufacture—these might have functioned at least partly as prestige objects as well.

Artifact richness in the Congdon assemblage is relatively low. The assemblage is overwhelmingly dominated by a variety of stone points and stone beads. Furthermore, the artifacts are fairly evenly distributed amongst the burials (Figure 6.4). Sociotechnic types are particularly evenly distributed, with most having 0, 1, or 2 types, the only exception being Burial 3, which included 3 types.

The temporal integrity of the Congdon assemblage is certainly open to question. It is definitely wholly prehistoric. No Euroamerican trade items were found with any of the burials reported from this site, by Bergen or anyone else. An examination of photographs of the points in the Bergen collection (catalogued to individual burials) reveals a variety of point styles, including: Barbed Triangular with Expanding Stem, Rabbit Island Stemmed, Mahkin Shouldered Lanceolate, Elko Corner-Notched, Elko Eared, and Large Side-Notched (see Cole 1993 and Lohse 1985 for descriptions and illustrations of these point types). All of these types could be accommodated within the range of approximately 3500 to 2000 B.P. This fits well with the use of the atlatl as inferred from the presence of what are widely accepted as atlatl weights among the grave inclusions. It is also stratigraphically consistent with the proposed date of 3500 to 3000 B.P. suggested for Congdon II. At best, then, the assemblage can be used to characterise this broad period. The majority of the burials at the site may well fall within a shorter interval. It is recognised that differences in the numbers of types of grave inclusions in burials discussed here may partially reflect

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temporal factors, but, without a more exact projectile point typology than currently exists for the area and in the absence of radiocarbon dating it is simply not possible to address this possibility in any more satisfactory way.

Indian Well

The Indian Well (45-KL-42) site is located (or rather was located, before being covered by the waters of Lake Celilo) on a largely silted-in talus slope bordering the Long Narrows. At least two components are present: Indian Well I, representing a very early occupation (ca. 7500-8500 B.P.), and Indian Well II, the burial component (Butler 1959). There appears to be some confusion over this component: Butler (1959:13-14) describes Indian Well II as a cremation, while E. Strong (1959a, 1960a:58-60) interprets it as consisting primarily of talus burials, with only superficial evidence of burning in the form of charcoal and calcined bits of bone. The poor preservation of bone and disturbed context of the site (largely through its situation on a talus slope) make it unlikely that this issue can be resolved, but in either case there is some evidence for burning.

Indian Well II was saturated with large quantities of small disc-shaped felsite beads, likely numbering in the 100,000's (E. Strong 1959a, 1960a). Red ochre was also abundant, colouring the soil throughout the deposits (Butler 1959). Other artifacts included relatively crude stone points and knives, zoomorphic steatite rings similar to those from Congdon II, large sandstone and vesicular lava pipes of the type known as "cloud-blowers", and a single "nostril pipe". The last is apparently similar to pipes commonly found in the Great Basin as well as in the Southwest (E. Strong 1960a, 1969). There were also a few stone mortars and pestles, although fewer than typically encountered in sites in the area generally (E. Strong 1960a). Butler (1959:14), in addition to the numerous beads and other artifact types noted by E. Strong, mentions the presence of elbow pipes, atlatl weights, stone "gorgets", stone bowls, small nephrite celts, and an "incipient slave killer". It should be noted that the elbow pipes are prehistoric and bear no resemblance to the catlinite pipe of the historic period. Indian Well II, whether interpreted primarily as a cremation or talus burial site, may still be described as relatively elaborate in terms of its structure and the number and type of artifacts present, although perhaps less so than other burial sites in the area. Also, preservation of bone was very poor, which presents a bias in comparing the assemblage to those from other sites in the area in which bone and antler artifacts are preserved. Butler (1959:15) believes that the burial component may date to approximately 1900 to 1400 B.P., making it later than Congdon II, Big Leap, and Maybe (the last two mentioned sites to be discussed below).

Atlatl Valley

Another important site in the Long Narrows is the Atlatl Valley site, located just to the west of Wakemap Mound. Emory Strong (1959a:31) describes this site as an old burial ground, some 150 feet in diameter, that was "...the richest in artifacts of any place along the Columbia". As seems to be the prevailing pattern, a low mound of local basalt slabs was built up over the burials (see also Bergen 1989). Three main components seem to have been present, the first (here designated Atlatl Valley I) consisting of at least four (E. Strong 1959a) or five (E. Strong 1960a:55) cremation pits directly over the cap rock, making them the most recent burial form at the site; the pits had been looted but a few glass beads of an early type were noted, indicating a terminal date of about A.D. 1800 (E. Strong 1959a:36). Artifacts still attributable to the cremations after the looting included two atlatl weights and fragments of stone pipes. There is apparently at least one reference in the early historic literature commenting on the actual use of the throwing board in Oregon (Spaulding 1953:41). Thus it cannot be ruled out that atlatls were in use on the southern Plateau even at this late date. If this were the case, on the other hand, both more historical accounts and more archaeological evidence might reasonably be expected. Given the mixing involved in the aboriginal digging of cremation pits and the way in which the site was excavated, together with the presence of an older underlying burial component known to contain atlatl weights, it may be more likely that either the artifacts in question do not belong to this component or that they are not atlatl weights. A third possibility is that they are indeed early atlatl weights found by later inhabitants and incorporated into their material culture, although not as atlatl weights (cf. Hall 1977).

The next, non-cremation, component (Atlatl Valley II) occurred just beneath the cap rock and consisted of very poorly preserved skeletal material accompanied mainly by stone points and knives. The lowest level of burials (Atlatl Valley III), also non-cremation, varied from two to six feet in depth, with practically no skeletal preservation beyond the occasional fragment. E. Strong (1959a), based largely on the approximately 1000 knives found, estimates as many as 5000 burials for the non-cremation component of

the Atlatl Valley site. Based on an higher estimate of 1500 knives and the fact that most but not all burials included knives, Bergen (1989) suggests that over 2000 burials were present. Regardless of the actual number, the general impression is of a great many individuals present at this site.

There was apparently considerable mixing in the remains, though whether this was caused by initial multiple burials or subsequent disturbance by intrusive later burials is not clear, although E. Strong (1959a:34) favours the latter view. Artifacts include, as the name of the site implies, atlatl weights, knives, points, and various pigments. Stone beads also occur in smaller numbers, as do pestles, hand mauls, and zoomorphic stone mortars. There was no preservation of bone or shell artifacts. Provenienced by Strong (1959a:36) only to "... the lower deposits, beneath the cremations..." were several pieces of very corroded copper, including bead forms. Two copper beads were found in apparent association with two atlatl weights, one of stone and the other of galena (E. Strong 1958). Spectrographic and metallurgic analyses suggest that this copper is hand-wrought native metal (E. Strong 1959a:36).

Cole (1993), based on the frequency of temporally diagnostic projectile points in the Bergen Collection, places the majority of the Atlatl Valley assemblage in the Cayuse Phase of approximately 2000 to 150 B.P. He also recognises, however, that earlier phases are represented by, among others, the occurrence of 15 Cascade-type points, not seen later than about 4000 B.P. With a few exceptions, none of these points were found in identifiable burials, nor does Bergen provide much information on vertical provenience. Presumably these early point types are associated with the lowest burials of Atlatl Valley III.

Maybe

The Maybe site is located a short distance to the west of Congdon. The site was repeatedly dug by a number of amateur collectors over many years. Again, the site consisted of a low rock mound capping at least two components, a midden component (Maybe I) and an overlying cremation component (Maybe II). Most of the cremated bone was scattered, although concentrations of charcoal, bone, burned fibre, and artifacts were also present (McLeod 1958). The rather small amount of cremated bone suggested to the collectors who dug the site that the remains were secondary interments of partial cremations (McLeod 1958). Bergen (1989) visited the site in 1957 after much of it had already been destroyed. Bergen reports finding two intact burials and one partially disturbed burial, each underlying large, subsurface boulder cairns. The burials could be identified only by a powdery outline—no mention is made of cremation.

The so-called cremation component Maybe II contained stone knives, points, pestles, nephrite celts, and the occasional thick-walled sandstone tubular pipe. A lower layer (presumably still included in the Maybe II component?) included numerous large tubular stone beads made of green soapstone, as well as red ochre. Also mentioned, but not specified as to layer, are atlatl weights, heavy stone carvings including zoomorphic stone bowls and stone bowls with geometric designs, a maul with a bird effigy handle, and small, chipped stone crescents—possibly "nose pieces" (Seaman 1946; E. Strong 1959a, 1960a) or simply gorges (Butler 1959). The Maybe assemblage appears typologically very similar to that of Congdon II (Butler 1959; E. Strong 1959a).

Bergen (1989) distinguishes what he refers to as the Lower Maybe site, or Pipe Cove, from the Maybe site proper. Pipe Cove is located just east of the Maybe site, but remains clearly separated by a low bluff. Although little information is available on the context of the material, which was disturbed by previous collectors, the assemblage appears very similar to that of the adjacent Maybe site. It includes numerous well made projectile points and knives, mauls, pestles, zoomorphic "baboon head" stone carvings, stone pendants, tubular pipes, obsidian "nose-pieces", large steatite rings, and a variety of stone beads, including large ones up to 7.0 cm long. It is possible that the similarity of the two assemblages is simply because other published sources do not distinguish between the two sites, thereby including the Pipe Cove material with the Maybe assemblage.

Beek's Pasture

The Beek's Pasture site is also located on the north side of the Columbia River near the lower end of the Long Narrows. Both cremation and talus burials were present, with some of the latter also exhibiting evidence of burning (Bergen 1989). Just to the east of the site are a series of petroglyphs on a basalt outcrop extending out into the river (its position with regard to the river prior to the completion of The Dalles Dam is unclear) (Figure B.2). The site, as assessed by Bergen (1989) in 1961, comprised four cremation pits and 18 largely undisturbed talus burials. An additional estimated three to five talus burials had been disturbed by bull-dozer operations leading to the initial discovery of the site. Three components seem to be represented: prehistoric, protohistoric, and historic.

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Cremation Pit 1 (CP 1) measured approximately ten by six feet, and contained a layer of charcoal and calcined bone with a maximum thickness of 9-10 inches. It lacked the low boulder walls often seen in cremation pits in the area. Bergen estimates that the remains of six to eight individuals are represented. Artifacts were found scattered throughout the pit, and many appear to have been “killed”. Interestingly, all of the points, most very finely made, were found on the east side of the pit (Bergen 1989). The utilitarian artifact assemblage includes chipped stone points, knives, drills, shaft smoothers, small stone celts, a pestle, a maul, a bone awl, a bone needle (?), and unidentified fragments of worked bone. The sociotechnic assemblage includes both plain and decorated small stone mortars (“paint pots”) stained with red ochre, unidentified shell fragments (presumably *Dentalium* and/or *Olivella*?), copper fragments, complete and fragmented tubular pipes, and what may be part of a carved bone comb.

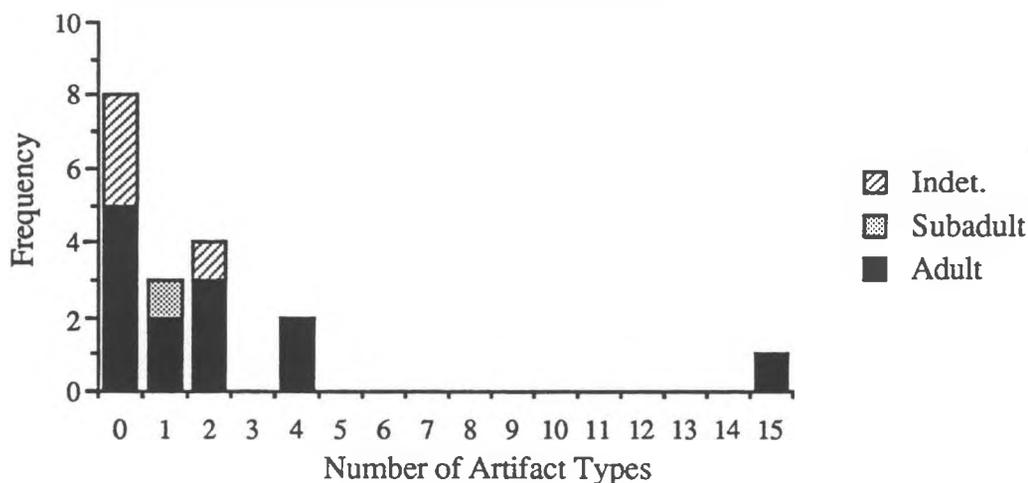
CP 2 was located within the talus slope. A pit measuring only five by three feet was formed by piling rock on the downslope side, and subsequently filled in to make a low mound. A few unburned bone fragments were found in this cremation; Bergen estimates the burning to be approximately 80% complete. An estimated three to five individuals are represented, including one large adult and two or three smaller individuals. The artifact assemblage includes chipped stone points, knives, drills, abraders, worked bone fragments, *Olivella* shells, a single *Dentalium* shell, a tubular pipe, a catlinite elbow pipe, a copper bead, copper buttons, and 15 to 20 iron bracelets. Presumably shell and bone artifacts are underrepresented here, as in the other cremations. No glass beads were found.

CP 3 was located near CP 2, and was of roughly the same dimensions. The burning in this case, however, was complete. The surviving bone fragments were consistent with the cremation of two adults (Bergen 1989). The artifact assemblage in CP 3 includes abundant marine shell—*Dentalium*, *Olivella*, and clam (?) shell beads, and unidentified shell pendants. Other artifacts are limited to bone beads and copper pendants.

The fourth cremation pit, CP 4, was closest in size to CP 1, and may have been even larger. Its contents had already been largely looted by the time Bergen arrived. Artifacts found in screening the backdirt included elk teeth, a bone bead, *Olivella* shells, a “metal pendant” (presumably copper), and “odd” obsidian pieces, concerning which no further information is provided.

Of the 18 talus burials investigated, Bergen (1989) provides rough age estimates for 14 individuals, including twelve adults, one adolescent, and one infant (Figure 6.5). This does suggest that subadults (1/14 or 7.1%) are significantly underrepresented (binomial $p = 0.0475$), but differential preservation may be a factor. Five of the adults are tentatively identified as male, and four as female. Two burials contained the

Figure 6.5: Artifact Diversity Distribution at Beek's Pasture



remains of more than a single individual. Burial 2 contained an estimated four or five individuals; because the grave inclusions could not be associated with specific individuals in this group, it was excluded from the calculations. Burial 9 contained two individuals, an old adult (9a), possibly female, and an infant (9b). The numerous shell beads found as grave inclusions appear to have been associated with both, and they are therefore retained in the calculations.

The locations of most or all of the burials were marked by low boulder cairns on the talus slope. Many of the graves were lined with cedar, some of which exhibited charring on the outside only, suggesting ceremonial burning of goods and/or food over the grave. The overwhelming majority of burials were flexed on the right side and oriented with the head to the west, or downriver.

The artifact assemblage for the talus burials includes, with the single exception of the catlinite pipe, all of the types present in the cremations, as well as bone points, antler digging stick handles, a nephrite celt, iron knife blades, stone beads, glass beads, copper and brass bangles and a copper bracelet.

By far the richest single burial is Burial 15, an adult, with a total of 16 artifact types, equally divided between utilitarian and sociotechnic types. Many Euroamerican trade goods are present, including copper beads, buttons, bangles, nine iron bracelets, and glass beads. This burial likely dates to the early nineteenth century and may be slightly later than the majority of the remaining burials. While Bergen includes it as a talus burial, Burial 15 exhibits heavy burning and thus could presumably also be classified as a partial cremation (Bergen's criteria for identification of one as opposed to the other are not made explicit). The next richest burials include only five artifact types.

The assemblages in all four cremations include Euroamerican trade items, the only possible exception being CP 1, which includes only copper fragments that potentially could be native, but are more likely Euroamerican in origin. The catlinite pipe found in CP 2 also likely dates to the protohistoric period. None of the cremations include glass beads, suggesting that they predate A.D. 1790. Four of the talus burials, Burials 1, 2, 12, and 15, contain Euroamerican trade items. Thus, the cremation and talus assemblages do not appear to differ significantly, and it may be supposed for the purposes of analysis that they are approximately contemporaneous.

The average number of artifact types for the three undisturbed cremations is 11.00; the number of utilitarian types ($\bar{X} = 5.00$) is slightly lower than the number of sociotechnic types ($\bar{X} = 6.00$). The average number of artifact types for the 18 talus burials is 2.06; again, utilitarian types ($\bar{X} = 0.94$) are slightly less well represented than sociotechnic types ($\bar{X} = 1.11$), although the difference is not significant. As a first approximation, it appears as though the cremations have a far higher average number of artifact types than the talus burials, as would be expected if the former represent a higher status form of burial and are roughly contemporaneous with the latter. The three cremations, however, represent, by Bergen's account, a total of approximately 13 individuals. Dividing this number by the total number of artifact types in the cremations yields an overall average of only 2.54 (utilitarian $\bar{X} = 1.15$; sociotechnic $\bar{X} = 1.38$), which is not significantly higher than the talus burial average of 2.06. But such an adjustment is not without its own problems. To illustrate the point, if individual grave good associations in the cremations could be determined, it is likely that the number of artifact types represented would increase substantially, simply as a result of the way in which this variable is calculated. *Dentalium*, for example, is counted as a single type when it occurs in a cremation. But if the shells were associated with each of the five individuals represented, then five types in total would be represented rather than one. While it is in fact impossible to calculate individual artifact associations in this way, the number of items of the same types present in the cremations make it highly likely that the results would again equal, if not exceed, the original difference between cremations as features and talus burials (i.e. $\bar{X} = 11.00$ vs. $\bar{X} = 2.06$). Thus this site provides some evidence in support of the hypothesis that cremations on average represent a high status form of burial.

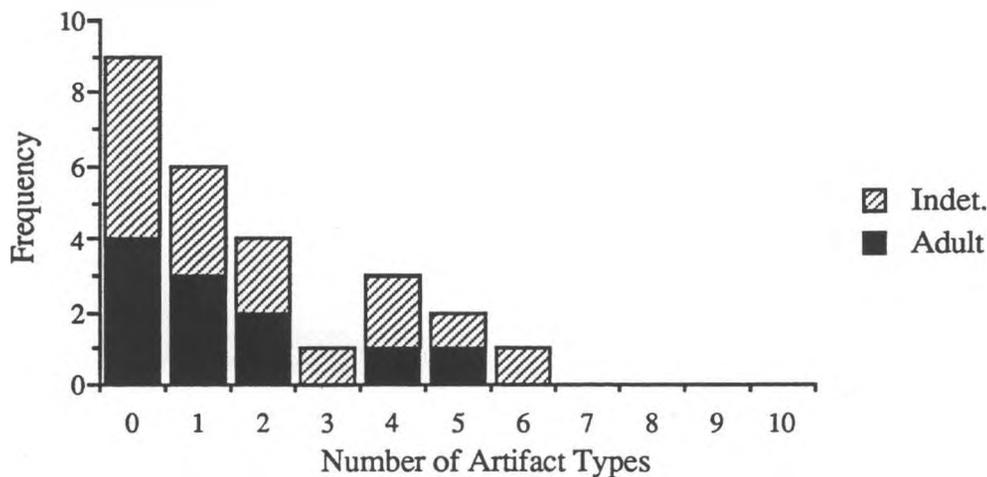
Sundale

The last site to be discussed from the north side of the Columbia River is Sundale (Site 17 in Bergen 1989). Sundale is located above the Long Narrows, some four miles upriver from Beek's Pasture. Garth (1952) reports looted historic wooden cist burials containing evidence of abundant Euroamerican trade material at Sundale, although whether these belong to the same site as that investigated by Bergen is unknown. Bergen (1989) lists 31 burials from the site, although some of these refer to composite collections from disturbed areas and not to individual burials. Bergen also notes that some of his "burials" may represent caches. Most of the burials at Sundale are from a single large talus slope a short distance

behind an occupation site on the banks of the Columbia (Figure B.3). The assemblage includes numerous Euroamerican trade goods, although it is likely, based on the occurrence of stone beads together with the absence of trade items in three burials, that a prehistoric component is also represented.

A total of 25 burials, all from the talus slopes, are considered sufficiently secure to be included in the present analysis. Bone preservation was poor in many of the burials, but it appears as though all of the 11 burials for which an estimate was possible were adult. It is probably not valid to place much emphasis on the significance of this because of the potential for differential preservation of immature bone at the site. The distribution of artifact types for the adults is consistent with that seen for the indeterminate group (Figure 6.6). All of the burials appear to have been flexed, and all of those for which orientation could be determined (ten) lay with their heads to the east. "Cedar" fragments were present in approximately half of the burials, and many exhibited signs of "ceremonial" burning. Only one, Burial 7, appeared burned enough to be classified by Bergen as a cremation.

Figure 6.6: Artifact Diversity Distribution at Sundale



The utilitarian artifact assemblage is limited, consisting of only chipped stone points, knives, scrapers, unmodified flakes, pestles, and bone awls. A greater variety of sociotechnic items is present, including *Dentalium*, *Olivella*, and clamshell beads, copper and brass beads, bracelets, bangles, and buttons, glass beads, and steatite pipes, beads, and carvings. Only Burials 9, 10, 11, 15, and 30 contained Euroamerican trade items. Without exception, burials with steatite beads and/or pipes do not contain trade goods, suggesting that they date to the late prehistoric period, and that two components may be present.

The average number of artifact types is 1.72. The number of utilitarian types ($\bar{X} = 0.64$) is somewhat lower than the number of sociotechnic types ($\bar{X} = 1.08$). Two burials warrant particular attention. Burial 17, of unknown age and sex, included three broken projectile points, a flake, 14 white river pebbles, some 40 small steatite beads and two small steatite carvings, one representing a bear and the other an unidentified quadruped. Burial 23, though disturbed and thus not included in quantitative analysis, is of interest because of its possible association with a galena atlatl weight. Both galena and the more common stone weights were also found at the Atlatl Valley, Congdon, and Maybe sites.

Bergen (1989) recounts a discussion with two amateurs who made considerable collections from this site after Bergen had left it. They dug a four foot-wide trench starting at the bottom of the talus and extending upslope, finding a layer of burials underlying those reported by Bergen. While burials in the upper layer frequently included numerous Euroamerican articles, those in the lower layer, completely unnoticeable from the surface, contained only aboriginal artifacts. Many of the lower burials exhibited considerable burning, leading the collectors to call them partial cremations. The assemblage from the lower layer included many small stone beads and a few larger ones, large stone rings, finely made points, "an odd finely worked stone knife", and the occasional pestle. Many of the lower burials, however, reportedly lacked artifacts of any kind. The density of burials in the section of the slope investigated led the collectors to estimate that the entire slope may have contained up to 200 burials (Bergen 1989).

Bead Patch

Turning to the south shore of the Columbia River, the Bead Patch site, located near the present city of The Dalles, Oregon, was again well-known to local collectors from a very early date. By 1946, reportedly over 1,000 lineal feet of stone beads had been removed from the site (Seaman 1946). Seaman (1946) notes the presence of steatite beads, pendants, tubular pipes, chipped stone "nose ornaments", atlatl weights, "salmon clubs", stone bowls, zoomorphic "paint pots", red ochre, and a large number of stone points. Many of the latter, including points of obsidian and agate, are up to six or seven inches long and exceptionally well made. Seaman does not report the presence of human bone, but the artifact inventory and the concentration of items make it highly probable, if not certain, that at least part of the site functioned primarily as a cemetery. The artifact inventory suggests affinity with Congdon.

Five Mile Locks

The Five Mile Locks site is also found on the south or Oregon side of the Long Narrows. Again the assemblage is comprised of a variety of prestige items, including a highly polished small zoomorphic bowl in the shape of an owl, a zoomorphic pestle or maul, a stone bird carving, geometrically decorated mortars, and a human figure holding a bowl with traces of red ochre. The latter bears some, if slight, resemblance to the seated human figure bowls of the Fraser River (E. Strong 1959a). A series of extremely finely made distinctive points known as "dagger points" were also found at this site (E. Strong 1960a). This site is presumably the same as the Five Mile Rapids site mentioned by Butler (1965:4) and attributed by him to the late protohistoric period.

Big Leap

The Big Leap site is located near Celilo Falls, on the south bank of the Columbia upriver from the Long Narrows. The site was found by collectors when it began eroding out of a broad, dune-covered gravel bar, revealing a series of five or six large cairns of river cobbles (Butler 1959). Apparently both burials and partial cremations were found in these cairns (Butler 1959:11), although whether together or separately is not stated. The degree of burning on some of the skeletons seems to have been slight; in other cases the small quantities of burned bone may indicate secondary interment of more fully cremated remains (Butler 1959; McLeod 1958). Estimates of 60-80 burials per cairn have been made by the collectors involved at the site (Butler 1959). The artifact assemblage is very similar to those already described for Maybe and Congdon II, suggesting a degree of temporal affinity between the three sites. Big Leap differs in having a greater variety of stone pipes, stone beads, pendants, and zoomorphic sculptures (Butler 1959). The Big Leap assemblage also contains examples of all three types of atlatl weights (E. Strong 1958:Figure 7) identified in Butler and Osborne (1959; see also Butler 1961).

B. Stewart

The B. Stewart cremation site partially overlies the Big Leap site, discussed above. A series of 12 five-foot square pits excavated into aeolian sands by Butler (1959, 1962) revealed two cremations features, each containing an estimated one or two individuals. All indications were that both pits represent primary cremation loci. Artifacts had apparently been placed with the bodies both before and after the burning. The assemblage from Cremation Pit 1 (CP 1) includes five projectile points, a large (18.5 cm) red and black banded lanceolate obsidian biface, a small serpentine celt, a whetstone, a wine-glass steatite pipe, two incised fragments of a steatite pipe bowl, an incised antler tine, a largely complete Nuu-chah-nulth-style whalebone club, and fragments of a copper bracelet. The assemblage from Cremation Pit 2 includes a projectile point, a large obsidian biface (9.7 cm), a whetstone, a tubular steatite pipe and the bowl fragment of another, a calcined antler carving, a fragment of a sculptured stone "palette", a large stone bowl stained with red ochre, an incised stone bead or pendant, and two charred fragments of presumably a single whalebone club (Butler 1959, 1962). Both the steatite pipe bowl fragment and the small antler carving depict the "grinning face" motif (Butler 1959, 1962; McClure 1979). The incisions on the pipe bowl had been rubbed with red ochre. Butler (1957, 1962, 1965) assigns the site to the Late Period (terminal prehistoric/protohistoric) in The Dalles local sequence, ca. A.D. 1750-1800. The striking similarity in the types of artifacts found as grave inclusions in the two cremations suggests the interesting possibility that they represent a set of objects seen as being associated with a specific, and clearly high, status position.

Rufus and Badger Creek

Two additional protohistoric cremation sites are located outside of The Dalles-Deschutes area, but

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display such close affinity to the sites discussed above that they are included here.

Rufus, Oregon is located on the Columbia approximately ten miles upriver of the Deschutes confluence. The site, excavated by E. Strong (1959c), comprised a single undisturbed cremation pit, some 20 feet in diameter and ringed with basalt cobbles. The rocks were clearly in place during the burning since many were heat shattered. The deposits, a mixture of calcined bone, charcoal, sand, and fire-cracked rock, extended down some 14 inches. Artifacts made of shell include 18 clamshell disc beads, three *Olivella* beads, six *Glycymeris* shells, and 15 fragments of abalone. The badly deteriorated condition of the shell items suggest that many more were originally present but were destroyed in the fire. Bone artifacts include awls, small carvings, beads, and gaming pieces. Three fragmentary bone carvings may depict the "grinning face" motif. Stone items found include four finely made slate clubs, a scoria mortar, a maul fragment, at least one tubular stone pipe bowl, two small nephrite adzes, and several shaft smoothers. The fragmented slate clubs appear to copy the general form of whalebone clubs, though they lack carved handles. Trade items were also relatively abundant, including two copper buttons, 22 bangles, four beads, and four wrought iron bracelets. No glass beads were found, possibly suggesting that the site predates A.D. 1790 (E. Strong 1959c), although this is a tentative criterion at best.

The second site, also in Oregon, occurs at a considerable distance away from the Columbia, specifically, 35 miles south of The Dalles. The site is located south of Mount Hood on Badger Creek some three miles west of the modern town of Tygh Valley. A single cremation pit was found at the base of a prominent and unusually shaped, almost anthropomorphic, pinnacle. The rock faces above the cremation were smeared with red ochre, apparently covering earlier geometric designs and what is described as a large Tsagiglalal-like image (Gerity 1964) (see Chapter 4). Numerous other pictographs occur in the immediate vicinity (Gerity 1964).

A surprising array of artifacts was found, especially when one considers that the site had already been dug by another collector many years earlier (Gerity 1964). The artifacts described below thus represent only what was missed at that time. Many smaller items apparently slipped between the boulders at the bottom of the pit and so escaped the effects of the intense heat as well as the activities of the previous collector. Utilitarian items include many projectile points, chipped knives, scrapers, a drill, numerous unmodified flakes, bone harpoon parts, awls, and needles. Many of the points were very finely made and should probably be classed as prestige items. These include over 60 gem-quality Columbia River "dagger points", and fragments of large finely worked agate and banded obsidian knives. Sociotechnic items in stone include stone beads, an incised tubular steatite pipe and the fragments of at least 12 other pipes of micaceous sandstone or siltstone, fragments of mica, fragments of a paint mortar, and several fragments of at least two large stone (possibly basalt), paddle-shaped clubs. Sociotechnic items in materials other than stone are undoubtedly underrepresented, but still include antler carvings, bone gaming pieces, bone beads, a possible whalebone club fragment, the carved handle of a miniature bone club, both whole and cut *Dentalium*, *Olivella* and *Glycymeris* beads, abalone pendants, and several copper pendants. Many of the bone and shell beads are finely incised. A number of carved antler fragments bear the unmistakable "grinning face" motif (see Gerity 1964: Figure 7).

High temperatures must have been reached by the cremation fire. Gerity (1964) describes all of the surviving bone as calcined and highly fragmented; obsidian artifacts "... in general had melted to a blob"; and agate and chert pieces were shattered and burned to a chalky white. The fragmentation of skeletal elements made it impossible to estimate the number of bodies represented, but Gerity (1964) infers that there must have been "a considerable number". The presence of charcoal and numerous fragments of burned pine could indicate a primary cremation. Gerity suggests, on the basis of the presence what is presumably Euroamerican trade copper but absence of trade beads, that the site dates to the late eighteenth century.

Little Klickitat River

Bergen (1989) provides information on a partially disturbed cremation pit from what I have called the Little Klickitat River site, located at the confluence of the Little Klickitat and the Klickitat River. There are a number of reasons for including a description of the site here. It represents some of the only available data from the region traditionally occupied by the Sahaptian-speaking Klickitat. This group, during ethnographic times, maintained close ties with the Wishram. Furthermore, the information presented below has never been published or made otherwise accessible in the literature.

The cremation pit consisted of a rectangular arrangement of boulders, measuring approximately six by eight feet, with the long axis oriented north-south. It is unique in that it preserves evidence of a wooden superstructure. Bergen (1989) reports three postholes, still containing fragments of burned wood,

immediately within the boulder walls: two in the corners of the north end and one in the southeast corner. Only the missing posthole from the southwest corner prevents the completion of a rectangular pattern paralleling that of the pit. This could suggest a scaffold-like arrangement on which the deceased was laid and then burned. Such a scenario gains some support from the fact that the amount of bone found in the pit was compatible with the cremation of a single adult individual (Bergen 1989). It should be noted that the cremation was partially disturbed prior to Bergen's arrival, although this consisted only of potholing the centre of the structure. Nevertheless, in the absence of more thorough documentation, I do not wish to place too much emphasis on the interpretation presented here.

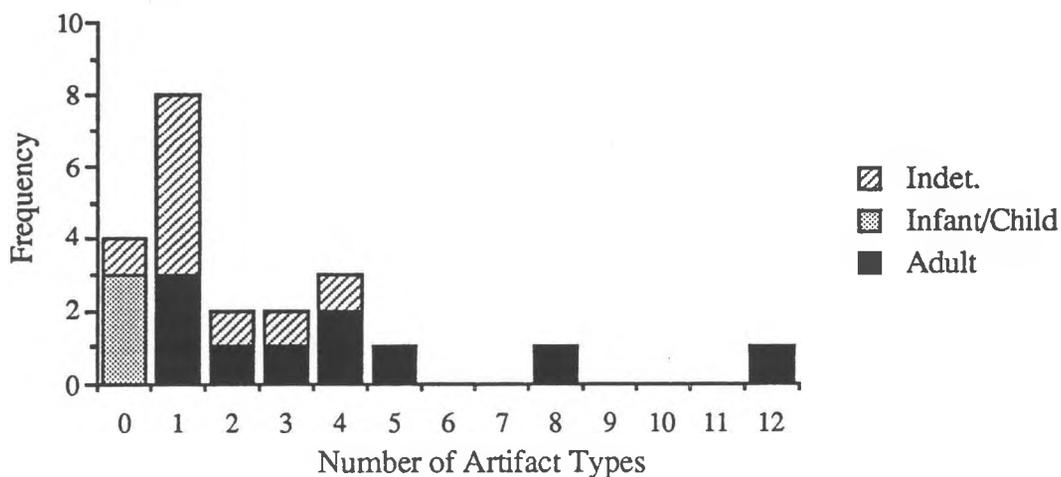
The artifact assemblage found in the cremation pit includes a small, elaborately incised stone bowl coated with red ochre, carved stone bowl fragments, a steatite ring, *Dentalium*, "turquoise" pendants, possible pipe fragments, possible fragments of a "slave killer" stone club, red ochre, chipped stone projectile points, knives, and drills, a shaft smoother, a pestle fragment, and unidentified worked bone. The extent of the burning suggests that any additional shell, bone, or antler artifacts that might have been present were destroyed. As noted above, it is likely that only a single adult is represented in this cremation. The richness of artifact types (13) and the kinds of prestige objects represented suggest that this individual was of high status.

Juniper

Some 60 miles upriver from The Dalles, on the north side of the Columbia River, directly opposite the mouth of the John Day River, is a site informally known as the Juniper site (Bergen 1989: Site 8 in Bergen's system). Bergen's activities at this site revealed a number of talus burials and inhumations, as well as at least one multiple cremation pit (Figure B.4). The assemblage includes numerous copper and brass artifacts, a few iron tinklers, a Hudson's Bay trade axe, and glass beads, together with a variety of traditional Native-manufactured items, dating the majority of the site to the protohistoric or early historic period. It is possible that a late prehistoric component (none of the points in the burials discussed here suggest that any period earlier than the Cayuse Phase, ca. 2000-150 B.P. is represented) is also present. Thus, the temporal integrity of the assemblage leaves much to be desired; this should be kept in mind throughout the following discussion.

Bergen lists 29 burials from the Juniper site. A number of these were partially disturbed through the activities of earlier collectors and are not considered here. Talus burials, inhumations, and partial cremations are all represented at the site, as are both single and multiple burials. Of the undisturbed single graves, 16 are talus burials and six are inhumations. The average number of artifact types for both burial

Figure 6.7: Artifact Diversity Distribution at Juniper



types combined ($n = 22$) is 2.50. Very few utilitarian items were found ($\bar{X} = 0.41$), compared to sociotechnic items ($\bar{X} = 2.09$). This appears to be typical of protohistoric and historic burial assemblages. Preservation of human bone at the site was inconsistent. A rough age can be obtained from Bergen's notes for 13 of the 22 more or less undisturbed burials. These include the remains of one infant, two children, and 10 adults. Subadult representation of the aged burials is thus 23.1% (3/13), which, given the sample size, does not differ significantly from Weiss's 30% minimum (binomial $p = 0.4206$). However, none of the three subadults were associated with any grave inclusions, while all of the tentatively identified adults included at least one artifact type (Figure 6.7). The difference in the number of artifact types between the two age groups is significant at the .10 level ($t = 1.94, p = 0.0779$). A few other individuals also lacked grave inclusions but Bergen provides no information on their age.

Burial 15, a multiple burial pit, exhibits quite a different age distribution compared to that seen in the single burials. Situated in a low mound also containing disturbed cremation pits, it contained the non-cremated remains of an estimated eight individuals, including two adults, five children, and one infant. The floors, walls and top of the pit were lined with cedar planks. The burial dates to the historic period, and included among the grave offerings are copper kettles, iron fragments, brass rings, a Hudson's Bay axe, and numerous trade beads. Articles of probable aboriginal origin include bear and elk tooth pendants, shell pendants, *Olivella* beads, and a stone elbow pipe. Burial 15 may reflect the result of an epidemic.

There is no evidence to suggest that one burial form is associated with higher status than the other, or that they represent substantially different time periods. Some of both the talus and the inhumation graves contained abundant Euroamerican trade items. While the average number of artifact types is somewhat lower for the talus burials ($\bar{X} = 2.31$) compared to the inhumations ($\bar{X} = 3.00$), the difference does not approach statistical significance ($p > 0.30$). The richest single burial from the site is Burial 8, a talus burial, with 12 artifact types, many of which are Euroamerican trade items and all of which are classed as sociotechnic. The second richest burial is Burial 23, an inhumation, with eight artifact types, many of which again are Euroamerican trade items. The single undisturbed cremation pit (Burial 20), even though undoubtedly comprising multiple individuals, contains fewer sociotechnic artifact types (7) than do the single individuals of either Burial 8 or 23. It is not possible to compare absolute numbers of artifacts as these are not provided, but it is unlikely, taking into account the difference in number of individuals represented, that Burial 20 exceeds either of Burials 8 or 23 in this regard.

Utilitarian items from the Juniper site include stone knives, points, drills, scrapers, adzes, abraders, net sinkers, shaft smoothers, mauls, pestles, hammerstones, bone awls, and digging stick handles. A great variety of decorative items were found. Marine shells include *Dentalium*, *Olivella*, *Aletes*, and *Haliotis* beads and pendants, and shell disc beads. Euroamerican trade items include copper beads, bangles, and rings, brass buttons, thimbles, and bracelets, iron tinklers, tubes, rings, and a fishhook, Hudson's Bay trade axes, and glass beads. Two unusual trade items are an incised copper club and a large copper sword-like object. The Hudson's Bay axes were likely objects of considerable prestige rather than purely utilitarian. The remaining sociotechnic items include bear and elk tooth pendants, bone beads, carved bone, stone beads and other stone ornaments, and carved stone. Also from this site is a large "salmon packer", which most likely functioned as a club or ceremonial object.

Burial 8 is unusual and warrants a detailed description. Located at the outer edge of the talus slope comprising the majority of the site, it contained the remains of a large adult (thus probably male) flexed on its right side. Two of the most interesting artifacts from this site were found in this burial (see Bergen 1959 for illustrations). The first of these is a copper war club, measuring 15 3/4 inches long by 3 3/4 inches wide at its widest point. A face is incised on each side, one grinning and the other frowning, and a series of incised lines continue down from the faces towards the handle. An almost identical copper club was found by Teit in a burial at Spuzzum on the Thompson River (Smith 1899:150, Figure 82). The second object is a large copper "spear" or sword, measuring 43 1/4" long by 3 7/8" at its widest. It has a narrow handgrip approximately in the middle, and one end divides into two "tails". It almost certainly functioned as a prestige object. Historical accounts provide references to the use of copper war clubs and swords by groups along the Lower Columbia during the last decade of the eighteenth century (Ruby and Brown 1976). Ruby and Brown (1976) illustrate a copper sword from a burial site on the Lower Columbia; in both its form and size (44 1/2" long) it is nearly identical to the one found in Burial 8 (see discussion in Chapter 4).

Other artifacts found in Burial 8 include cut dentalia beads, clamshell beads and/or pendants, copper bangles, a brass or copper ring, iron rings, an iron tube, a Hudson's Bay trade axe, a large number of glass beads, and abundant red ochre. The large quantity of Euroamerican trade goods obviously indicates an early

historic or possible protohistoric burial. All of the trade beads were blue, the earliest variety to arrive on the Columbia. Thus the burial could still predate 1805. The types of items, especially the unusual club and sword, suggests an individual of high status. This is further supported by the presence of horse bones scattered over and among the rocks containing the burial. Given the inferred relatively early date, the sacrifice of a horse would have had even greater symbolic significance regarding wealth and status than it had later in the full historic period (see accounts in Chapter 5).

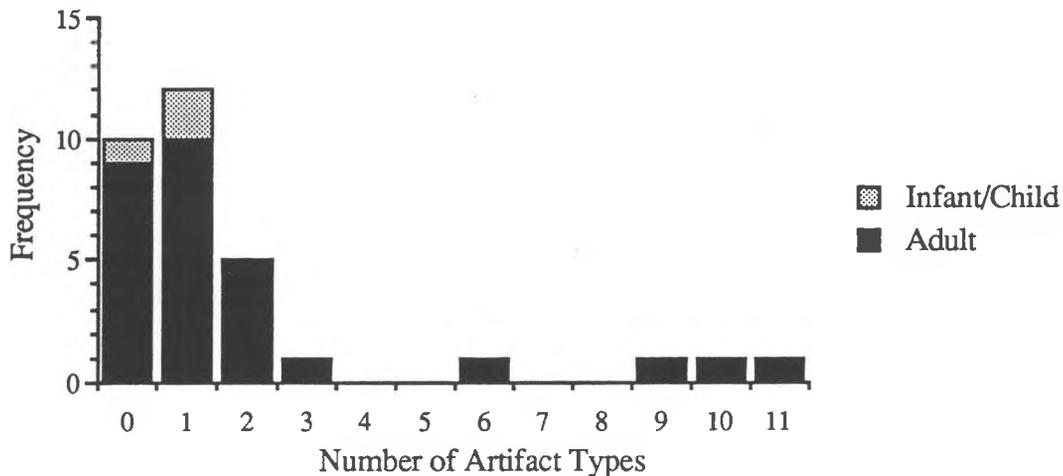
The remains of Burial 10, a child, were severely burned and scattered among the rocks of a talus burial at the foot of the slope. This burial may have originally included artifacts that were destroyed in the fire. The absence of any mention of charcoal or ash suggests that the burial may be secondary. Burials 11 (an infant) and 24 (child) present no evidence for burning and were undisturbed primary flexed graves.

Evidence for various degrees of burning was found in a number of the adult burials. Burials 16, 17, and 18 are single talus burials, the entire contents of which were compressed in a layer only three inches thick, composed of charcoal and small burned bone fragments. Only one or two dentalia shells were found in each grave. Bergen is uncertain whether these burials represent intentional cremations or exhibit heavy ceremonial burning. Burial 19 presents a disturbed non-talus grave again showing evidence of burning but not to the extent seen in a true cremation pit typical of the area. Numerous copper and glass beads were found in the backdirt. The burial presumably held a number of bodies. Burial 20 represents what Bergen calls a "true cremation pit" from the same mound that contained Burial 15. It measured some ten feet across, as defined by a surrounding rim of basalt boulders still 20 to 24 inches in height. The central portion of the pit had been previously disturbed. Excavation to bedrock revealed a layer of packed burned sand underlying a layer of charcoal, burned bone fragments, and burned artifacts, from two to six inches thick, and in places fused into a slag. Little or no unburned bone was observed, leading Bergen to infer that the cremation event involved the *in situ* burning of bone and artifacts rather than fleshed bodies. The majority of artifacts found were trade beads and copper bangles. A carved broken pestle, *Dentalium* and *Olivella* shell beads, a flake knife, a chipped stone drill, a broken stone pipe, and red ochre were also found. The assemblage suggests a protohistoric date.

Wildcat Canyon, 35-GM-9

The Wildcat Canyon site (35-GM-9), located on the south side of the Columbia River near the mouth of the John Day River, provides one of the larger and better documented late prehistoric burial collections on the Plateau. The majority of the burials were recovered from a definite bounded cemetery area, designated Area 3. At least 81 individuals from the site are represented, of which 63 could be assigned a rough age estimate. Of these, only 32 are here considered sufficiently undisturbed to make their artifact associations reasonably secure. The cemetery seems to have been in use for a relatively short period of time, on the order of perhaps a century or two (Dumond and Minor 1983). There are no items suggesting European contact in the assemblage.

Figure 6.8: Artifact Diversity Distribution at Wildcat Canyon



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The following summary information is taken from Dumond and Minor (1983:56, Table 3.2). The majority of the 58 burials for which burial type could be inferred were flexed or semi-flexed (32 or 55.2%). Skull burials account for most of the remainder (20 or 34.5%); one burial was characterised as semi-extended (1.7%), and five as reburials (8.6%). Body position could be determined in 49 instances, and was most commonly on the left side (35 or 71.4%); the right side position accounted for most of the remainder (8 or 16.3%), with backlying and sitting (?) positions being infrequent. Favoured orientation was with the head to the northeast or east (upstream) (31 or 72.1%), with all other orientations being roughly equally represented at approximately 5%. Neither body position nor orientation appear to be associated with socioeconomic status.

Dumond and Minor (1983:63) state that the artifact distributions provide no evidence of consistent association of any particular artifact class with either of the sexes or with any major age class. Further, they report no statistically significant difference either between the sexes or between adults and subadults in the proportion of burials accompanied by grave goods (chi-square = 0.0 and 1.38, respectively). My own examination of the distribution of grave inclusions (number of types, utilitarian types, and sociotechnic types) over age and sex classes using *t*-tests also indicates no significant associations based on these subordinate dimensions. Subadults do appear to have fewer grave inclusions than adults (Figure 6.8), but this difference is not statistically significant.

While the above information seems to indicate little differential treatment of infants and children, some interesting differences do emerge in the demographic profile at this site. As stated above, at least 81 individuals are represented in Area 3, of which 63 could be assigned an age. This is a sufficient sample size that, if all individuals who died were being buried in the cemetery, we could expect to see a roughly normal mortality profile for pre-industrial societies. This is not the case. Individuals age 15 and under are significantly underrepresented (binomial $p = 0.0078$), comprising only 15.9% (10/63) of the burial population (Dumond and Minor erroneously report this as 19% in their Table 3.3, page 57); this figure should be on the order of 30-70% based on model life tables for pre-industrial societies constructed by Weiss (1973:27). The majority of the expected deaths should take place in the 0-5 age class; only 6.3% (4/63) of deaths occurred during this age interval at Wildcat Canyon, with infants less than one year of age being completely absent. From Weiss' model life tables, somewhere between 10% and 40% mortality can be expected during this period of life alone; from these figures, one would expect from roughly six to 25 infants less than one year of age in the burial population at Wildcat Canyon. While their absence may conceivably reflect differential preservation, Dumond and Minor are confident, given the fair preservation of only slightly older infants, that there is a real behavioural pattern evident. This strongly suggests that infants in particular were being perceived differently from adults in the mortuary ritual, and were either often being buried elsewhere, or not being buried at all.

Estimations of sex are provided for 21 of the adult skeletons, in a ratio of nine males to 12 females (Dumond and Minor 1983). This does not depart significantly from what might be expected given an underlying 50:50 male:female ratio (binomial $p = .3318$). The identified sexed individuals cannot be statistically distinguished in terms of number of artifact types, number of utilitarian types, or number of sociotechnic types.

Burial 65, an adult of undetermined sex, was interred with a total of 503 grave items, including 21 projectile points, two flake knives, 378 flat shell beads, an estimated 15 perforated elk teeth, an incised antler tine, an antler needle, incised flat sections of bone, seven tubular stone beads, two decorated stone hemispheric beads, and a piece of graphite. The elk teeth are highly fragmented (this is accounted for by Dumond and Minor in the estimate of 15 whole teeth) and burned. The antler tine and many of the incised bone fragments are also burned, and many of the flat shell beads show signs of mild scorching. This burial is certainly exceptional: items in the burial with the next most abundant grave goods total only 54 (Burial 74, a skull burial, again an adult of unknown sex); furthermore, the majority of these items were utilitarian rather than sociotechnic as in Burial 65. In addition to its high absolute numbers, the grave inclusions in Burial 65 are also quite varied, representing the second highest number of artifact types in the assemblage after Burial 74 (11 compared to 14), and an equal number of sociotechnic types (5). Burial 65 and to a lesser extent Burial 74 may represent statuses unavailable to subadults at this location, although this is necessarily a very tentative statement based as it is on only two individuals.

A few additional burials also exhibit evidence of burning. In most cases this evidence is limited to grave inclusions rather than the skeleton itself. Signs of burning or scorching on some of the artifacts accompanying Burial 65 has already been mentioned. Offerings in other burials exhibiting similar signs include worked bone items in Burial 57, and dentalia in Burials 19 and 40. Burned human bone is found in

Burial 57 and Burial 63. This latter burial, that of an adult female, had no grave inclusions, suggesting that there is no unambiguous relationship between burning and the abundance of grave inclusions at this site.

Summary of Burial Forms and Status in The Dalles-Deschutes Region

The most marked contrast in disposal types in The Dalles-Deschutes region is between cremation on the one hand, and talus slope burial and pit inhumation on the other. The artifacts from the cremation pits, at least those reported, are clearly largely interpretable as high status wealth and prestige items. Such items include shell and stone beads and other ornaments, stone pipes and carvings, elaborate antler carvings, and stone and bone clubs. Many of the materials involved are exotic, perhaps the best example being the whalebone clubs frequently found in Late Period cremations in The Dalles area. During the protohistoric and historic periods, Euroamerican trade items are also abundant in cremations. The use of cremations seems to have been discontinued in the very early historic period (see Chapter 5); thus, while copper is abundant, glass beads are rarely present.

In addition to the many sociotechnic artifacts invariably associated with cremation pits, there is some cross-cultural evidence suggesting that cremation in general is often reserved for individuals of high social standing (e.g. Hodson 1977; McGuire 1992b; Teit in Sprague 1967), though this would only apply in those cultures where cremation was one of a number of disposal alternatives, and not the sole method. Given the largely treeless nature of the environment in The Dalles-Deschutes area (see Ross 1969 and Thwaites 1904-05), the labour involved in the collection of sufficient wood for cremation must have been considerable. Thus the cremation fires would also have been a very conspicuous statement about the resources of the group involved. The fires burned very hot and probably for a considerable length of time, such that artifacts were sometimes embedded in lumps of melted sand at cremation sites (Gerity 1964; W. Strong *et al.* 1930; see also Garth 1952 regarding a similar phenomenon in the Middle Columbia area).

The talus burials investigated by W. Strong *et al.* (1930) offer some archaeological corroboration for such a dichotomy in mortuary treatment. But given the existence of elaborate prehistoric cremation pits, and postulating a similar social structure, one may ask where the corresponding "impoverished" prehistoric talus and simple pit inhumations are located. Presumably there should be many more of these, given a pyramidal social structure. The talus and pit inhumations investigated by W. Strong *et al.* (1930) seem to date mainly to the protohistoric and early historic periods, and those investigated by Caldwell (1956) even later. The apparent absence of such burials in the prehistoric period may be due to poorer archaeological visibility and preservation biases. While preservation of wood and other plant remains is quite good in many of these burials, bone preservation is generally not. Talus burials are generally highly disturbed by rodents, and the skeleton itself is often crushed by the weight of the overlying rock. Lastly, the unstable nature of the talus slope environment greatly decreases the visibility of older burials.

Cremation in the Lower Columbia, and particularly The Dalles-Deschutes, exhibits considerable antiquity. Many of the large cremation pits contain no evidence of Euroamerican trade goods, while a number of others contain only very limited amounts of copper and iron. Butler (1959:19), based on stratigraphy and point styles, has suggested that cremation in the vicinity of The Dalles may have begun as early as 3500-3000 B.P. Congdon II, Maybe II, and Big Leap may date to this early period (Butler 1959:15). Later sites, with their elaborate bone, antler, and stone carvings, including the "grinning face" motif (see Chapter 4), are ascribed to the Late Columbia Valley Cremation Complex, ca. A.D. 1600 or slightly earlier to A.D. 1850 (Butler 1959:16). Thus there appears to be a considerable time-depth for the occurrence of elaborate cremations in The Dalles-Deschutes area. The nature of the evidence, however, leaves much to be desired. The sites named were all excavated with less than rigorous methods, and no radiocarbon dates are available.

Little information is available regarding the number of individuals typically found within a cremation pit in The Dalles-Deschutes region. The number of individuals seems to have varied from as few as one or two to "many". Elaborate single or at the most double cremations are known from the B. Stewart, Beek's Pasture, and Little Klickitat River sites. The number of individuals represented in other cremation pits at Beek's Pasture varies between four and eight (Bergen 1989). Beyond this, most excavators simply limit themselves to some statement regarding their impression of a "great many bodies" in each cremation pit. Since the size of these pits is generally not much greater than about 12 feet by 8 feet, which is comparable to the size of the larger pits at Beek's Pasture, it is unlikely that this refers to more than a maximum of 10 to 30 individuals per pit.

In most of the cremations, and in all of the large multiple cremation pits, the concentration of ash,

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charcoal, and burned bone appear to indicate primary cremation loci. It seems likely that the majority of the cremations in the region were of defleshed remains (Butler 1959; E. Strong 1960a:85). Excellent evidence for this is found at two sites, Sheep Island (45-BN-55) and Rabbit Island (45-BN-15), located further up the Columbia near its confluence with the Snake (these sites are discussed in detail later in this chapter). Here, Garth (1952:41-43) reported finding baked clay mud dauber wasp nests in cremation pits, some of which preserved the impressions of bones and others those of split planks. As recognised by Garth (1952), this implies a complex, multi-phase mortuary ritual probably incorporating the initial exposure of bodies in mortuary sheds, as seen in the early historic period, followed periodically by their collection and burning in large cremation pits. Property in the forms of goods, slaves, and, in the protohistoric period, horses could have been expended on both occasions. At least some of the pits appear to contain evidence of multiple burning events (cf. Butler 1963). It is tempting to relate the cremation pits and the hypothesised prehistoric burial sheds with lineages—certainly among the Wishram in the early historic period burial sheds were owned by families or groups of families (Spier & Sapir 1930)—but there is really no way to prove this with the available data, especially given the lack of even basic biological information on the mortuary populations involved. It does, however, seem to be a reasonable proposition. There also appear to be many examples of the secondary burial of cremated and charred remains, usually involving individuals (Caldwell 1956).

Most investigators provide no information on the range of ages represented by the osteological remains in cremations. From the fieldnotes of Dr. Bergen, who was fortunately far more observant than most collectors (or at least more committed to writing down his observations), the remains of infants and children in protohistoric and historic period multiple cremations were not infrequent. It is not possible to comment on the representation of subadults in earlier cremations. Nor, given the poor preservational conditions and mixing of elements and artifacts typical of cremation pits, it is usually possible to provide individual artifact associations. Thus the artifact data, such as it is, cannot be related to the primary population referents of age and sex. The possible disproportionate frequency of infant remains in talus slope burials noted by W. Strong *et al.* (1930) for Miller's Island could suggest that infants were being denied full access to the mortuary regime involving cremation. However, as noted earlier, it is not clear what evidence W. Strong *et al.* base this observation on, since the data they provide are minimal and inadequate to this conclusion. Furthermore, none of the evidence available in the material collected by Bergen (1989) supports the hypothesis that non-cremation forms of burial include a disproportionate number of subadult remains.

Cole (1958) provides some interesting and relevant observations on a large disinterment project on two historic burial islands made necessary by the completion of The Dalles Dam. The remains of an estimated 500 and 2500 individuals were removed, under Native observation, from Grave Island and Upper Memaloose Island, respectively. Artifact associations were numerous on both islands, and included many Euroamerican trade items. Grave Island (which also may have had a prehistoric component) was abandoned in 1894, while Memaloose Island continued to be used past 1934, with three milled lumber mortuary structures still standing. Native observers noted family burial boxes containing multiple individuals within the more recent buildings, in which the deceased were wrapped in hide robes. On Grave Island, the remains of infants were rare, while children and adolescents were well represented (estimated 30%). On Memaloose Island, the majority of the remains were of adults, with few infants, children, or adolescents (Cole 1958:13). This suggests that infants, at least during the historic period, were indeed largely buried elsewhere, as suggested by W. Strong *et al.* (1930) for earlier cremations. It is noteworthy that attainment of a certain age appears to be required in order to gain full access to even a "family" mortuary programme (see discussion in Chapter 2).

In addition to cremations, there are a number of large non-cremation sites containing multiple individuals together with relatively elaborate artifact assemblages. Estimates of 60-80 individuals per cairn were noted, for example, for the Big Leap site. Burning at this site seems to have been minimal and incidental. The use of the word "cairn" in this context, however, is misleading, as it likely refers to a low, boulder-capped mound containing many burials, for which it is neither necessary nor advisable to assume contemporaneity. These sites are similar to cremation sites in that only very rarely is it possible to associate grave inclusions with individuals. The human skeletal material is often found in a highly scattered state; this much is clear despite the haphazard way in which the majority of these sites were excavated. This may indicate secondary interment, or, alternatively, aboriginal disturbance through continued use of a spatially constrained area (see discussion of Old Umatilla in next section). That primary inhumations can also be recognised, however, is clear from the better fieldnotes of collectors such as Bergen

(1989). The generally very poor preservation of skeletal material typical of these sites further complicates the issue; it is even possible that many disintegrated primary interments are in fact represented, although this seems unlikely. The little information available on the chronology of these sites suggests that they encompass a broad time period. It seems likely that the earliest cremations of ca. 3500 B.P. were contemporaneous with inhumation burials. Inhumation also preceded cremation in The Dalles region, as evidenced by the frequent occurrence of what have been widely identified as disintegrated burials directly below early cremation components.

Emphasis throughout this long period, particularly with cremations, can be seen on groups rather than individuals. Both the treatment of the body and the artifact assemblages in the case of cremations are elaborate and suggestive of high status, but grave inclusions cannot be associated with specific individuals. This parallels historic Wasco-Wishram burial practices involving the use of mortuary sheds on *memaloose* islands in the Columbia, mentioned in Chapter 5. It is not clear, however, whether the distinctions between chiefs and others during the earlier phases of the mortuary ritual were preserved in the final disposal of the body in the mortuary shed. Rather, it seems that bodies once in the shed were treated indiscriminately. As noted below, location within the structure was apparently related primarily to the length of time the remains had been in the shed. Thus, the final archaeological result reflects the status of the family or lineage maintaining the structure rather than that of any specific individual deposited there. This can lead to reduced differentiation not only within but also between mortuary houses. It is in different forms of disposal that clear status differences can be expected to emerge. Individuals not participating at some minimum level in the corporate group will not have access to the mortuary sheds. Thus Curtis (1911a:99) notes, as I have mentioned elsewhere, that during ethnographic times slaves and others of the lowest class in Wishram society would be deposited in talus slopes at the base of bluffs, and Cole (1958) remarks on the absence of infant remains from historic mortuary sheds.

Their high visibility and surficial nature led to the disturbance of the majority of mortuary sheds on the Columbia River during the early historic period; in some cases whites purposely set fire to the structures (E. Strong 1960a), while in other cases they were apparently burned in interfamily rivalries (Spier and Sapir 1930). Lewis and Clark's 1806 descriptions of undisturbed burial sheds therefore assume some importance. One such structure on Blalock Island (45-BN-64) (Thwaites 1904-5, vol. 3:139-140) is described as being constructed of broad split planks and pieces of canoes, and measuring some 60 by 12 feet. The more recent dead, wrapped in skin robes, were placed at the west end of the structure, while at the east end was an arrangement of 21 skulls forming a circle on matting. Placed over and hung on poles around the vault were several fishing nets, baskets, wooden dishes, robes, skins, and various kinds of unspecified ornaments. The skeletons of several horses lay around the vault. Interestingly, the separation of skulls and postcranial elements, in this case to opposite ends of mass burial boxes, has remained a part of the funerary ceremony that is still practised by Middle Columbia Native peoples today, as has been observed in a number of burial relocation projects made necessary by looting and by flooding due to dam construction (Rice 1978b; Cole 1958).

This scenario displays intriguing parallels with early Neolithic Britain. I mention this rather unlikely connection because the interpretations of symbolic behaviour that have been made regarding distributions of human skeletal elements in long barrows may be of relevance in interpreting the Lower Columbia mortuary evidence. Specifically, Shanks and Tilley (1982; see also Bradley 1984) invoke a process in which the deceased individual is progressively transformed, both physically and symbolically, into the collective, undifferentiated ancestors. This idea of the transformation of the dead into ancestral beings is in fact at the core of the rituals surrounding death in many different societies (Metcalf and Huntington 1991). Often, as in the Neolithic barrows, this process involves the disarticulation, disassociation, and rearrangement of skeletal elements, akin to what was observed in the Blalock Island mortuary shed.

The Middle Columbia *Old Umatilla, 35-UM-35B*

In 1971 a large prehistoric burial site was discovered at Old Umatilla (35-UM-35B) and partially excavated by the Mid-Columbia Archaeological Society, yielding 130 graves holding the remains of some 144 individuals. Subsequent excavations were undertaken in 1975 by the University of Idaho, yielding 100 graves containing the remains of some 120 individuals (Rice 1978a). The combined total of 230 graves, representing an estimated 264 individuals, makes this site by far the largest prehistoric burial site on the Plateau in which individual artifact associations are preserved. The available analysis of the site is limited

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because of time constraints caused by the expeditious reburial of the human remains together with their associated artifacts (Rice 1978b). Despite this, important information was recovered, including data on age, sex, and pathologies (Lynch 1978).

The site is unusual and interesting in a number of respects. The total size of the cemetery was found to be approximately 60 by 90 feet, with the heaviest concentration of burials within an area of only 50 by 60 feet (Rice 1978a). This presents the impression of a very crowded cemetery, yet there seem to be no obvious topographical reason for such spatial circumscription of the site. As might be expected, this great concentration of burials led to considerable aboriginal disturbance, as evidenced by the high proportion of secondary burials and scattered human remains. For the purposes of the statistical analysis of grave associations, the sample was reduced to 105 individual primary and secondary burials. No multiple burials were included, since individual artifact associations could not be confidently made in these cases. A number of secondary burials and scattered human remains near the surface are inferred to indicate the presence of a burial shed or charnel house, although no structural evidence was found (Rice 1978a). Rice (1978a) postulates a strong Chinook influence towards the end of the burial sequence at the site, which may date to the late prehistoric/protohistoric period transition.

The site is also unusual in its clear association with a housepit village (35-UM-35), within the confines of which the cemetery was located. Some nine graves were intrusive into two housepits towards the edge of the cemetery (see Rice 1978a:41, Figure 27).

Some 77 graves (out of a total of some 230) were marked by stone cairns of varying size, ranging from only one or two boulders to a substantial cairn. There appears to be no correlation between graves marked by stone cairns and the occurrence of grave inclusions (compare Figures 27 and 34 in Rice 1978a). Nor does there appear to be a non-random spatial patterning with regards to the placement of burials with and without grave inclusions (see Rice 1978:52, Figure 34).

All burials at the site are inhumations. Table 3 in Rice (1978a:39) summarises data on burial form, position, and orientation. Seventy-six primary graves account for 41% of the total, with 109 secondary graves making up the remaining 59%. Orientation, where it could be determined, was primarily to the east (63 of 88 cases or 72%). As Rice (1978a) observes, this easterly orientation conflicts with Sprague's (1967) suggestion that prehistoric burials on the Plateau are generally oriented to the west, while historic burials are oriented to the east.

There is evidence for the significant underrepresentation of subadults. Lynch (1978) identifies 170 adults and only 23 (or 11.9%) subadults. This represents a statistically significant departure from Weiss' (1973) 30% minimum (binomial $p = 2.3E-9$). Neither differential preservation nor poor recovery appear to be contributing factors, and, as also argued by Lynch (1978:73), it is more likely that the majority of the remains of subadults were either buried elsewhere or were disposed of by some means other than inhumation. Only four subadult burials were judged sufficiently undisturbed for inclusion in the quantitative analysis. The group shows no significance difference in its artifact richness.

The site is particularly unusual in terms of its male:female representation. Lynch (1978) reports 87 females, 46 males, and 37 indeterminate adults. This difference is highly statistically significant (binomial $p = 0.0002$), with females outnumbering males by almost 2:1. Lynch (1978:74) suggests that this could reflect greater male participation in relatively risky activities outside of the vicinity of the community, such as hunting, trading, and warfare. This idea is similar to that proposed by Hofman (1986), discussed in some detail in Chapter 2. If this were the case, and assuming that occasionally the bodies of those who died away from the village would be returned for burial after a period of exposure, it might be expected that males would present an higher proportion of the secondary burials at the site. However, this is not the case (Table 6.1).

Table 6.1: Relationship Between Sex and Burial Form at Old Umatilla

<i>Sex</i>	<i>Burial Form</i>		<i>Totals</i>
	Primary	Secondary	
Female	32	43	75
Male	20	20	40
Totals	52	63	115

Chi-square = 0.566, $p = 0.4517$

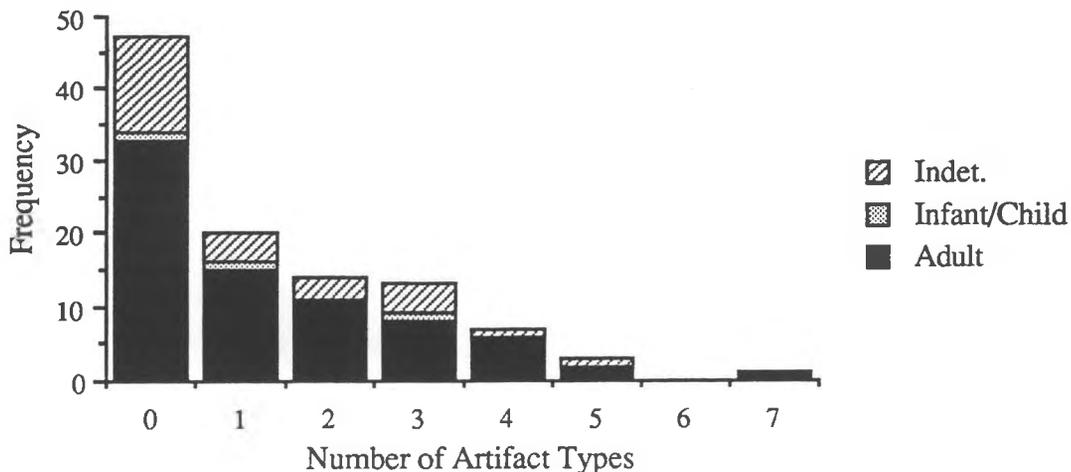
The high degree of aboriginal disturbance at this site may confound the results of the test for a relationship between sex and burial form, but presumably disturbance would be random with regards to sex, and so a pattern, if present, should remain. Thus the explanation must lie elsewhere. Given the extent of the excavations, it is unlikely that a significant part of the site was missed. Nevertheless, the possibility that males were often buried elsewhere remains. Males have slightly higher average artifact richness (male $\bar{X} = 1.62$; female $\bar{X} = 1.26$), including both utilitarian and sociotechnic types, but the differences do not reach statistical significance. Interestingly, there is a significant difference in grave inclusions between the primary and secondary group (disregarding sex). The average number of artifact types for the 61 primary burials is 1.62, while that for 41 secondary burials judged to be relatively undisturbed is 0.90 ($t = 2.33$; $p = 0.0217$). Possible reasons for this difference are discussed in Chapter 7.

Lynch (1978) notes the presence of 13 culturally modified crania in the total of 104 crania (37 males, 65 females and 2 infants) available for observation. Ten of these are adult females, two are adult males, and one is an unsexed infant. The difference in the proportions of female and male crania exhibiting cultural modification does not reach statistical significance (Fisher's $p = .2026$); despite this, Lynch (1978) suggests that the pattern may reflect female marriage into the group from the area further downriver (i.e. with the Chinookan-speaking Wasco-Wishram).

The artifact assemblage from Old Umatilla, given the very large number of burials recovered, is relatively simple in terms of richness and even more so in terms of diversity. Sociotechnic artifact types include *Dentalium*, *Haliotis*, shell disc beads, bone beads, elk tooth pendants, bear claw core pendants, bone whistles, carved bone, steatite beads, an effigy bowl and a "paint pot", "nose pieces", and war clubs. Evidence of copper was found in four burials: four copper rings were found in one burial, an undescribed copper fragment in another, and copper staining on human bone in the remaining two. Utilitarian artifact types include projectile points, stone knives and bifaces, scrapers, drills, gravers, utilised flakes, cores, a slate adze, choppers, abraders, shaft smoothers, atlatl weights, bola stones, pestles, mauls, mortars, grinding slabs, hammerstones, net sinkers, bone awls, harpoons, bone and antler wedges, digging stick handles, and beaver teeth.

None of the burials appear to be outstanding in terms of their associated wealth (Figure 6.9). Absolute numbers of items are not provided in Rice (1978) and greater inequality, particularly in *Dentalium* shell and elk tooth pendants, might be visible were this information available. The greatest artifact richness is found in Burial 142, an adult female associated with seven types, six of which are utilitarian. No burial has more than three sociotechnic types (Burial 80, a child, contains *Dentalium*, abalone, and carved bone). The only grave with a copper artifact (see below) considered sufficiently undisturbed for inclusion in the analysis was that of an adult female (Burial 192), which contained a total of four artifact types (the remaining three being utilitarian).

Figure 6.9: Artifact Diversity Distribution at Old Umatilla



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One of the more interesting burials is Burial 177, a young adult male, found with a stone club embedded in the left side of its cranium (Rice 1978a:50, Figure 33). Additional evidence of violence is seen in Burial 42, an adult female, in the form of a large point found embedded in a lumbar vertebra. A total of nine crania exhibited cranial fractures possibly due to interpersonal violence (Lynch 1978). Interestingly, only one of these was male.

Bergt (1978) analysed four copper artifacts from Old Umatilla using X-ray fluorescence. He interprets the results to indicate the possibility that the metal is of native origin, based primarily on relatively low silver counts. However, the study is inadequate in a number of respects (for example, no native ore samples were analysed, and only a very limited number of Euroamerican samples formed the control), and these results should be seen as highly tentative.

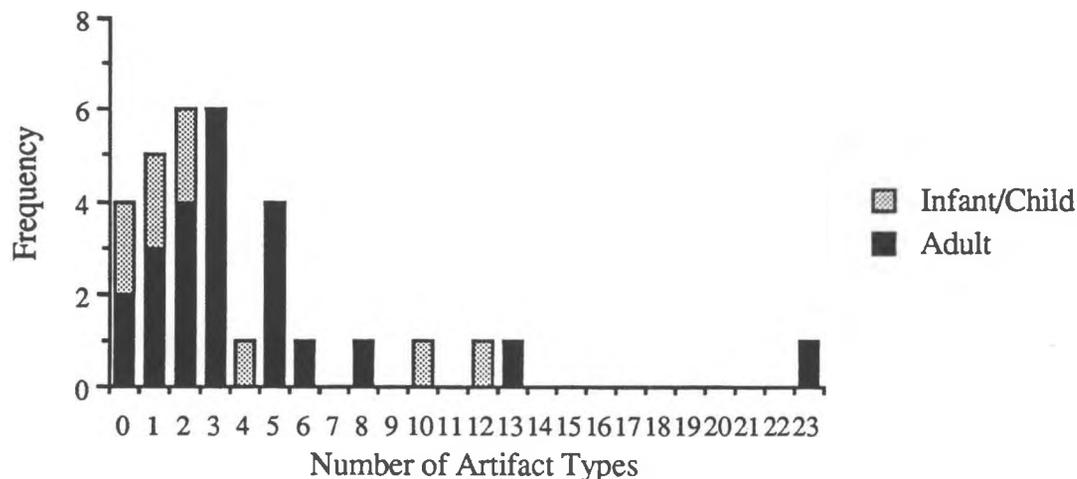
Dating of the site is based largely on projectile point typology. Most points from the site are large triangular forms with basal or corner notches. These have been assigned to the early Harder phase and the Quilomene Bar phase in the Lower Snake River and Vantage area sequences, respectively, and date from approximately 2500 to 700 B.P. (Rice 1978a). Rice (1978a) also infers the existence of a small, more recent component based on the possible presence of a Wishram-derived mortuary shed or charnel house.

Berrian's Island, 45-BN-3

Site 45-BN-3, located on Berrian's Island in the Columbia River near its great northward bend, provides another relatively large sample of burials (Osborne 1951, 1957). Unfortunately, the site experienced both considerable looting and natural disturbance through flooding before controlled excavations began. The remains of an estimated 57 individuals, many incomplete, were recovered from the site (Newman in Osborne 1957:207); of these only 33 are here considered sufficiently undisturbed for their artifact associations to be secure. Osborne (1951:130-131), based on trade buttons, places the assemblage within the period ca. A.D. 1750-1800. It appears that only a single burial complex is represented (Osborne 1951:226). Objects of copper and iron are fairly common; glass beads are present but not in large quantities. Preservation seems to have been very good, such that textiles and fragments of basketry are found with many of the burials.

Of the total 57 individuals from the site, 40 were classified by Newman (in Osborne 1957:207) as adults with the remaining 17 grouped together here as subadults (infant/child). Subadult representation at 29.8% is thus not significantly below the 30% minimum suggested by Weiss (1973). Considering only the 33 burials with secure artifact associations (Figure 6.10), the average number of artifact types in the adult group ($n = 24$) is 4.67 compared to 3.56 for the subadult group ($n = 9$); this difference is not statistically significant ($t = 0.569$; $p = 0.5734$). Differences in both the number of utilitarian ($\bar{X} = 1.58$ vs. 1.33) and sociotechnic ($\bar{X} = 3.08$ vs. 2.22) types again favour the adults but not significantly. One

Figure 6.10: Artifact Diversity Distribution at Berrian's Island



difference between adult and infant/child graves that is seen involves the presence of cedar plank cists; these were found to be common with adults but rare with infants and children (Osborne 1951). The tops of the planks were often charred, and in at least one case (Burial 25), it was possible to suggest the presence of a burned food offering of salmon (Osborne 1957:33).

Since the Berrian's Island site provides one of the larger data sets for which the sex of individuals skeletons is reported, it is worthwhile to investigate in some detail possible differences in treatment along these lines. Newman (in Osborne 1957:207) estimates sex for 37 individuals, in a ratio of 14 males to 23 females; this differs significantly at a .10 level from equal representation (binomial $p = 0.0939$), suggesting that some males were perhaps being buried in another part of the cemetery, at an entirely different location, or by a method that preserves less well in the archaeological record.

Cultural modification of the cranium was present in all of the adults to some degree (Newman in Osborne 1957). Fifty percent of the male crania exhibited only unintentional occipital flattening, or "cradleboard" flattening, while 91.7 percent of the female series exhibited clearly intentional modification. Pronounced modification was observed in six female crania but only one male cranium. It was not possible to correlate grave wealth with the presence or degree of cranial modification. Given that the site is protohistoric in age, this distribution could indicate that more females than males were originally from outside of the Berrian's Island area, specifically from downriver. This parallels what was hinted at in the Old Umatilla assemblage (recall that the difference was not statistically significant).

Only 22 sexed adults, nine males and 13 females, were considered sufficiently undisturbed to permit meaningful comparisons of artifact associations. In overall number of artifact types females average 5.08 while males average 4.89 ($t = 0.08$, $p = 0.9369$); in utilitarian types females average 1.62 compared to males 1.89 ($t = -0.35$, $p = 0.7280$); and in sociotechnic types females average 3.46 compared to males 3.00 ($t = 0.25$, $p = 0.8053$). None of these differences approach statistical significance at the .10 level given the low sample size and high variability within the two groups. But, as discussed further in Chapter 7, the fact that the female group exhibits an higher average number of sociotechnic types at all may be somewhat unusual compared to most other burial sites on the Plateau.

The artifact assemblage from Berrian's Island is the most diverse observed among the sites gathered together for this study. Utilitarian artifact types include stone knives, points, drills, scrapers, flakes, pestles, abraders, shaft smoothers, hammerstones, bone awls, antler wedges, bone fleshers, bone pins, antler digging stick handles, and unidentified worked bone and antler. Sociotechnic types include *Dentalium*, *Olivella*, *Glycymeris*, *Haliotis*, shell disc beads, juniper (*Juniperus occidentalis*) seed beads, copper beads and pendants, brass buttons, glass beads, iron bracelets and tubes, a silver pendant, bone beads, bone combs, carnivore canines, bear claw cores, bird beaks, raptor talons, bird beaks, bone whistles, beaver teeth, red ochre, stone beads and pendants, tubular stone pipes, a carved steatite spoon, incised stone "effigies" daubed with red ochre, "charmstones", and groundstone celts.

Chi-square tests were used to test for associations between sex and artifact types. Since the artifact assemblage is so varied, and since many of the types occur only once or twice, a reduced typology of 16 artifact types was used (for example, *Dentalium*, *Olivella*, *Glycymeris*, and *Haliotis* artifacts were combined into a generic "marine shell" type). No statistically significant association between sex and any artifact class is found at the .05 level, although one occurs at the .10 level. Iron ornaments, including bracelets and "tubes" (the latter are only presumed to be ornamental), occur in 5/19 female burials but in none of the 15 male burials (c^2 with continuity correction = 2.77, $p = 0.096$).

Stapp (1984) has suggested, albeit in an impressionistic sense, that the majority of copper artifacts at 45-BN-3 are found with female and subadult burials. Including disturbed burials (for which, it should be noted, both positive as well as negative associations may be uncertain), females do display a higher incidence of copper artifacts (8/21) when compared to males (2/15) in terms of presence/absence, but the difference is still not significant at a .10 level given the sample size (c^2 with continuity correction = 2.1, $p = 0.15$). Even so, this is a somewhat different pattern from that seen in most other areas of the Plateau, where the occurrence of copper artifacts is generally more evenly distributed between male and female adult burials, while there is a slight tendency for subadults in the protohistoric period throughout the Plateau as a whole to more frequently be interred with copper artifacts (see Chapter 7). Interestingly, in contrast to most other sites on the Plateau, most of the copper from 45-BN-3 was *not* found in burials (only 9/152 beads and 11/42 pendants came from graves), but in the general midden. This may suggest that copper here did not, for whatever reasons, have the same wealth and status connotations usually attributed to it on the Plateau. One might be tempted to relate this to a late date for the site, but the large amounts of chipped stone and bone tools that also occur in the graves suggest that the assemblage is fully protohistoric in date.

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Furthermore, even in early historic contexts the vast majority of copper beads and pendants are usually found in burials. A more concise explanation of this rather striking anomaly cannot be offered at this point.

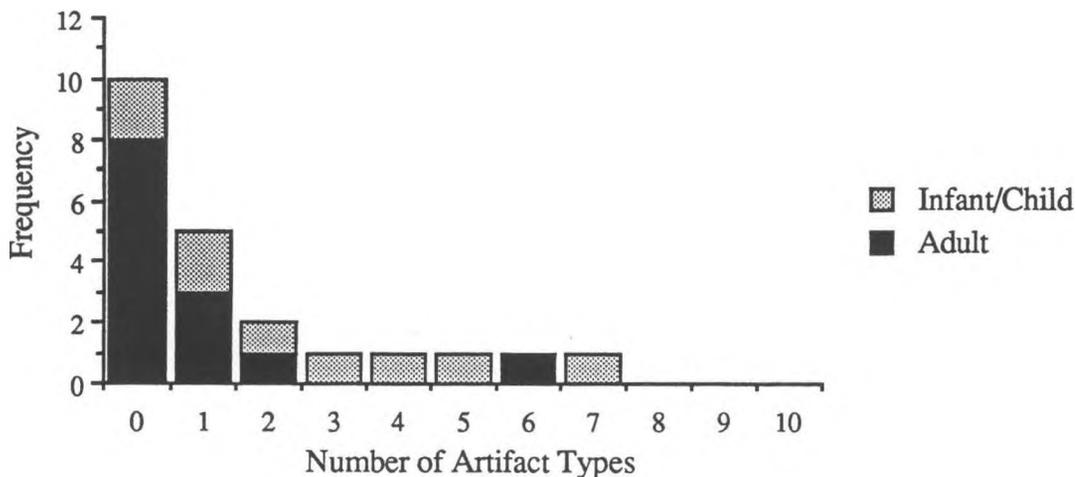
By far the richest burial at Berrian's Island is Burial 25. The grave of this individual, identified as an adult female, contained 23 artifact types, including many of the more elaborate types found in the assemblage. It is also noteworthy that this individual was buried with a steatite tubular pipe, one of only two such associations (i.e. a female with a pipe) found on the Plateau to my knowledge (see Chapter 7). The unusual associations of this burial were noted by Osborne (1957:33), who offered the following: "Perhaps burial 25 was a transvestite shaman...". I reserve judgement on this interpretation.

The Yakima Valley

Smith (1910) investigated 38 graves from two areas in the Yakima Valley: North Yakima and Ellensburg. Unfortunately, nearly one-third of even this small number had either been partially disturbed or entirely looted prior to Smith's arrival. To complicate matters further, few burials came from any one site; rather, small groups of graves were scattered over the landscape. Some of the burials are likely prehistoric, some protohistoric, with two or three dating to the full historic period. As a result of these problems, the following review of the Yakima area will be largely qualitative, although a tentative quantitative analysis is presented with a composite assemblage constructed from relatively undisturbed burials recovered by Smith (1910) and with a small assemblage from Selah (Bergen 1989).

Three burial types were recorded by Smith (1910) for the Yakima Valley: inhumation, talus, and cremation. The majority of the 27 inhumation/talus graves contained single individuals, though in total a minimum of some 38 individuals are represented. Disturbance through the activities of collectors as well as the nature of talus burials make it uncertain whether some of the burials were secondary. The practice of secondary burial is suggested by the incomplete nature of some apparently undisturbed graves, bleaching of elements, and charring of elements. There is no detectable correlation between any of these variables and the abundance of grave inclusions.

Figure 6.11: Artifact Diversity Distribution at Yakima Valley



The following information on age and sex of the Yakima Valley human remains is based both on Smith's (1910) original monograph and my own re-examination of the material curated at the American Museum of Natural History; in some cases Smith's identifications are made more precise, and in a few they are contradicted (see Schulting 1993b for details). Eleven of the 34 individuals were identified as subadults and 23 as adults (including three adolescents). Subadult representation is thus 32.4% (11/34). It cannot be said on this basis, however, that subadults were not being differentiated by location, since there are an insufficient number of burials from any one site, and there is no control over contemporaneity.

Subadult burials on average include a greater number of artifact types than adults (subadult \bar{X} = 2.56 vs. adult \bar{X} = 0.85) (Figure 6.11); the difference results from the higher number of sociotechnic types—invariably ornamental items such as *Dentalium* beads, shell pendants, and copper beads and pendants—found in subadult burials (\bar{X} = 2.33 vs. \bar{X} = 0.46). The difference is statistically significant in both overall number of types and number of sociotechnic types. Adults, on the other hand, contain a marginally greater average number of utilitarian artifact types (adult \bar{X} = 0.38 vs subadult \bar{X} = 0.22), but the difference does not approach statistical significance. Indeed, the Yakima artifact assemblage as a whole is almost entirely restricted to ornamental items, including *Dentalium*, *Olivella*, shell pendants, copper beads and pendants, and glass beads. Despite the exotic origin of all of these items, the overall effect is still one of impoverishment compared to other areas of the Lower and Middle Columbia. It is also noteworthy that the graves containing these objects appear largely protohistoric and early historic. There is little indication of the presence of richly furnished, entirely prehistoric graves such as are found in the surrounding area.

Sex was not provided for any of Smith's (1910) Yakima material, although it was implied for the adult individual of Burial 32a by its association with a newborn infant. The assignment (as female) turned out to be mistaken in any case (Schulting 1993b). The sex of 14 individuals (none from the cremations) could be estimated, comprising six males and eight females (Schulting 1993b). The majority of these were either disturbed or had no grave associations. Thus it is not possible to investigate potential differences in treatment along this dimension.

One-half of the 20 largely undisturbed burials contained no grave inclusions. Those that did generally contained relatively few items. The most notable exceptions are Graves 1, 10 and 43, all of which include fairly abundant Euroamerican trade items, mostly copper beads and pendants, together with *Dentalium* and other shell ornaments. Charring of both skeletal elements and grave inclusions is apparent in two of the talus burials (Grave 1 and an unnumbered grave). An additional six graves contained charred cedar or charcoal, but with no evidence for burning of either the skeleton or any of the grave inclusions. It is possible that Grave 1 represents secondary interment of partially cremated remains. The degree of disturbance commonly associated with talus burials, however, renders this conclusion tentative.

One of the most interesting burials from the Yakima area is that of a child, designated Burial 25, excavated by Smith (1904, 1910) near the town of Tampico. A stone cairn some eight feet in diameter marked the location of the grave on what Smith refers to as a volcanic ash dome. Large angular basalt slabs not found in the surrounding matrix were encountered through to a depth of three feet, at which point a stone slab cist was found containing the burial. Here, the single primary interment of a child of approximately six years of age was found flexed on its left side with the head oriented west. The skull may have been artificially shaped through occipital pressure (Smith 1910:161). Grave inclusions consisted of 18 *Dentalium* shells, ten of which were incised, and an antler carving of a human figure in elaborate costume (see Chapter 4).

Smith (1910) also investigated a total of nine cremation pits from the Yakima Valley. All were found within a relatively confined area on a terrace above the mouth of the Naches River. Four of the talus burials discussed above (Graves 1, 2, 10, and 11) were located relatively nearby, from one-half to one mile above the Naches River mouth. The degree of burning in the "cremations" seems to have varied, but it no case does Smith (1910) state that the bones were more than charred.

Grave 16, despite being a relatively large pit (13 x 14 ft. outside diameter; 5 x 7 ft. inside diameter) reportedly contained only the charred remains of a 10 year old child with no grave inclusions. Grave 13, "resembling a small underground house" (Smith 1910:157), may have also contained only the remains of a single cremated child; again no mention is made of grave inclusions. The remaining cremation pits appear to have all contained the remains of multiple individuals. Graves 17 and 21 are estimated to have each held the remains of four individuals, including both adults and children. Grave 14 contained the remains of six or seven individuals. Grave 15, interpreted by Smith (1910:158) as a communal or family repository, included the remains of a minimum 12 individuals. Grave 18 is described as similar to Grave 15, except that it may contain fewer individuals. No information whatsoever is provided concerning Graves 19 and 20, except that they are "identical" to the other cremation features (which are in fact quite varied). Neither seems to have contained any grave inclusions.

Unlike those in The Dalles area, the Yakima cremations contain relatively few artifacts. Differential preservation does not seem to be a factor accounting for the discrepancy, since shell and bone are preserved, if not particularly well. The only artifact types occurring in the cremations are *Dentalium*, *Olivella*, abalone, unidentified shell ornaments, copper, iron, and a single beaver tooth fragment.

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Dentalium shells were reported as being particularly abundant in Grave 15, and included finely incised segments. Several fragments of shell ornaments were found, as well as a single piece of copper. Two incised *Dentalium* shells were also found in Grave 18. Grave 17 contained three shell ornaments and two *Dentalium* shells, and again, a single piece of copper.

Extrapolating from Smith's somewhat sparse data, a minimum of some 38 individuals is suggested for the cremations, ranging from only single individuals in Graves 13 and 16, to 12 individuals in Grave 15. Large quantities of charcoal and ash in most of the cremations suggests that they represent primary loci. Intrusive non-cremation burials seem to have been added into the cremation pits of Graves 14 and 15, and may represent an attempt at appropriation of the presumably higher status cremation loci.

Interpretation of the Yakima Valley material is greatly hampered by the nature of the sample. Smith (1910) did not discern any differences in the three different burial types that would suggest a time sequence. All burial types include some graves with Euroamerican articles, with the possible exception of the cremation circles. Single pieces of copper were found in two of these, and there is the possibility that these are native in origin. Some of the talus slope burials may be more recent than any of the other burial forms, and there is some indication that these contain a greater number of grave inclusions. Both child and adult remains are found in all types of graves, and neither number nor type of artifact inclusions in the two age groups can be interpreted as significantly different given the problems with the sample.

The average number of types of grave inclusions associated with the seven cremation features for which data are provided is slightly, though insignificantly, greater than that calculated for the undisturbed inhumation and talus graves ($\bar{X} = 2.00$ compared to 1.55). Substituting the estimated number of individuals represented ($n = 38$) for the number of cremations ($k = 7$) reverses this relationship ($\bar{X} = 0.37$ compared to 1.55). The same results are seen with sociotechnic artifact types. Utilitarian types are infrequent in both cremated and non-cremated burial forms, though they are more common in the latter no matter how the cremation average is calculated. It might be argued, despite the minimal presence of copper, that the cremations are late prehistoric and that the protohistoric/early historic inhumation/talus burials should be removed from the calculations. This considerably lessens the gap between the inhumation/talus and the cremation individuals in terms of combined artifact types ($\bar{X} = 0.37$ compared to 0.63) and reverses it once again in sociotechnic types ($\bar{X} = 0.34$ compared to 0.25). In any case, all of these differences remain statistically insignificant given the high variances involved. Thus, despite theoretical expectations, there appears to be little independent support in this case for the hypothesis that cremation burials represent a higher status mortuary treatment. Of course, only cremation data from one small part of the Yakima Valley have been considered here, and the sample is inadequate in many other respects as well.

Selah

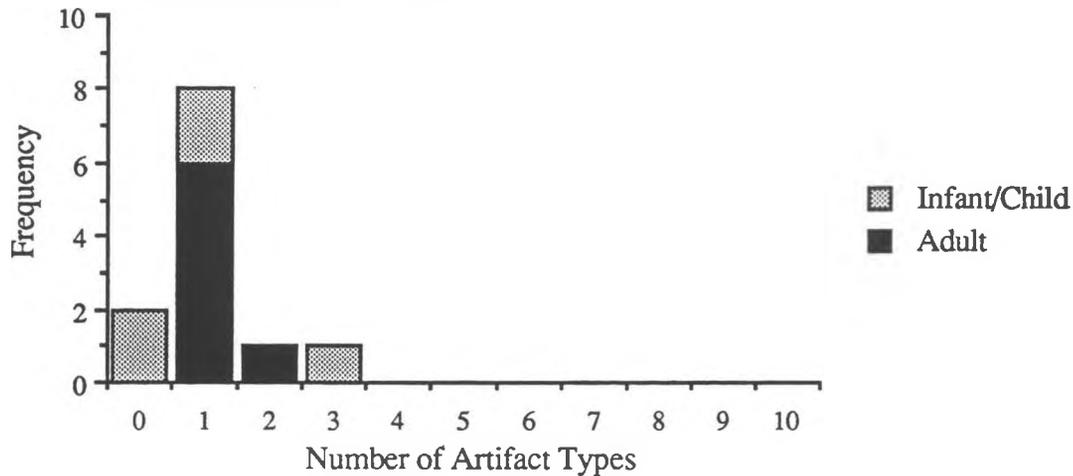
Bergen (1989) investigated three clusters of cairn burials at the foot of a talus slope near Selah (Figure B.5)). Investigation of 12 cairns, some in each group, showed they were similar in construction and contents. Ten individuals, including seven adults and two children, were flexed. Orientation varied, but favoured the west. Burning was evident in only one case. The other two cairns contained no remains and are inferred to be infant graves. Adults and sub adults show a similar artifact distribution (Figure 6:12).

The artifact assemblage is relatively impoverished, and includes only projectile points, unidentified shell beads, shell pendants, *Dentalium*, one copper pendant (?), a number of stone beads, and an incised steatite tubular pipe. Shell pendants were found with six of the 12 individuals, and constitute the most common artifact class (although not in absolute numbers). Bergen suggests that the single piece of copper found may be native. Regardless, the assemblage as a whole most likely dates to the late prehistoric/early protohistoric period. The Selah assemblage is noteworthy for the relative lack of inequality in the distribution of grave inclusions. With the exception of the two possible infants, all individuals include at least one artifact type, the most common being a shell pendant. Only two individuals include more than one artifact type. Burial 8, a child, had dentalia beads, a square piece of copper, and an incised steatite tubular pipe, while Burial 10 had a collection of numerous shell and stone beads. This is one of the very few cases in which a pipe was found with a subadult on the Plateau (see Chapter 7). It should be noted that Bergen (1989) states that it could be either a "small child or a very young adult".

Sheep Island, 45-BN-55

Sheep Island (45-BN-55) is located approximately 13 miles downriver from the modern town of Wallula, Washington. The site was excavated by Garth (1952) and subsequently by Osborne *et al.* (1961). Garth's excavations revealed two cremation pits and ten pit inhumations, nine of which predated the

Figure 6.12: Artifact Diversity Distribution at Yakima, Selah



cremations. Osborne *et al.*'s work resulted in the addition of 16 burials for a combined sample of 25 (the remaining burial recovered by Garth dates to the historic period and will not be discussed here). In order to distinguish the two contributing collections I will label the burials as G1 to G10 and O1 to O17 (the designation Burial O5 was not used) for Garth and Osborne, respectively. Garth (1952) excavated two cremation pits on Sheep Island. Cremation Pit 1 (CP 1) is described as a shallow depression 6 to 8 ft. across and a foot or less deep. The pit was surrounded with a wide circular ring of stones some 14 ft. in diameter with an inner diameter of only 6 ft; two additional rings of rock were found, one at the 10-inch level and another at the 18-inch level. The upper face of one stone on the southwest side of the middle ring was painted with red ochre; this is interesting in light of the dominant orientation of the pit burials at the site, which was also to the southwest. Calcined human bone occurred throughout the sequence, and suggested to Garth (1952:40) that at least three separate cremation events took place. The heat of the fires was sufficiently intense to fuse the sand into a slag containing bones and artifacts.

CP 2, located only 10 ft. to the east of CP 1, was very similar, except that the feature was rectangular. The outer diameter of the topmost stone ring was 15.5 ft., with an additional one or possibly two rings underneath (Garth 1952:40). Garth's description becomes somewhat confusing at this point, as he mentions an highly compacted "occupation floor" surrounding the cremation pits, but then seems to imply that "cremation floor" is an equivalent term. Since the occupation floor (outside of the cremation pits) contained fragments of calcined bone, it may be presumed, as indeed Garth himself does (1952:40), that the actual cremation events took place over a larger area than that delimited by the pit and ring features, with the remains being swept up and deposited into the pits and then surrounded by stone rings. Garth states (1952:41) that some of the best finds came from the occupation floor; elsewhere he attributes these same finds to the cremations. It is assumed here that artifacts found on the so-called "occupation floor" are associated with the cremation events.

A relatively limited artifact inventory is associated with the cremation pits. The assemblage seems to have been dominated by basalt (?) projectile points and knives. Typologically the points are identical to those recovered with the underlying burials, indicating no great period of time separating the two mortuary regimes. Ten pestle fragments, at least two of which could be fitted together, came from CP 1. All were undecorated but finely finished. Other utilitarian items include a sandstone abrader, unidentified worked bone and antler fragments, a bone flesher, a number of bone points, and bear baculae awls. Sociotechnic objects include 14 cut *Dentalium* beads, two *Olivella* beads, three *Glycymeris* beads, an incised slate pendant, an incised sandstone bead, a sandstone ring, a perforated elk tooth, 12 bird bone beads, a bone gaming piece, two flat incised bone pendants, and red ochre. It is likely that shell and bone objects are underrepresented due to the heat of the cremation fires. Two fragmentary tubular steatite pipes were also found, as well as a bowl fragment of a micaceous sandstone pipe decorated with three incised lines.

Garth provides no indication of how many individuals may have been involved, or of the possible

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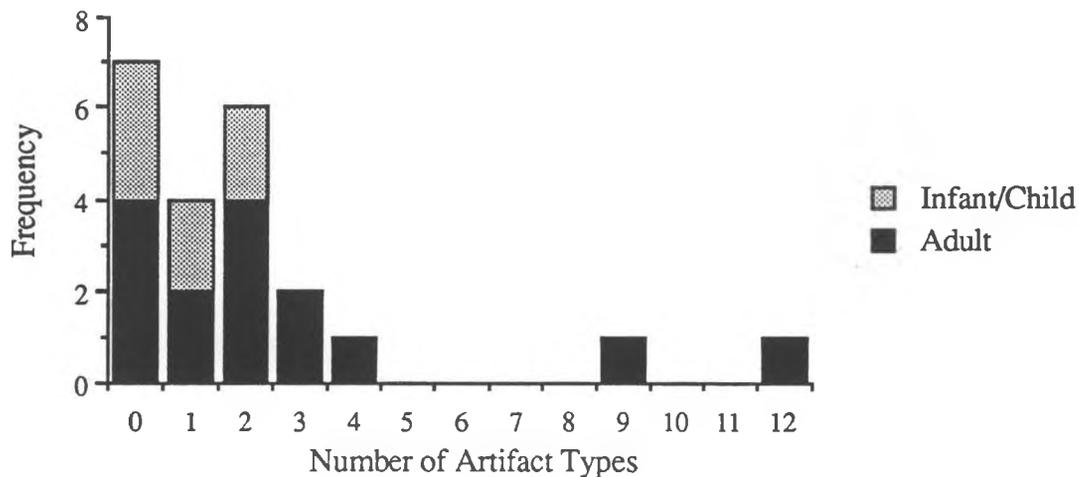
range of ages represented in the cremation pits. Evidence for repeated cremation events and the size of the pits indicates that many individuals are likely represented. Garth (1952:41) notes that some of the human skeletal elements were covered with a thin coating of red ochre, inferring that this must have occurred after the bodies had been exposed. This does not necessarily follow, since the ochre could have come into contact with the bones after the soft tissue decayed, as is commonly seen elsewhere on the Plateau. However, another line of evidence strongly supports surface exposure prior to cremation. A number of fragments of mud dauber wasp nests were found in the cremation pits, "... some showing the imprint of split planks or the curvature of bones on which they had been attached in the depository sheds or exposure platforms" (Garth 1952:41). The nests had clearly been caught in the fire, since they were baked to a "pottery-like consistency".

After reviewing the evidence, Garth (1952:45) suggests that Middle Columbia cremation pits are the result of the intentional firing of mortuary sheds, such as used by the Wishram historically. Apparently these sheds were in fact erected over shallow pits (Spier and Sapir 1930:271) and rocks would be placed around their bases to support their plank walls. Osborne *et al.* (1961), while supporting this idea in principle, find the available evidence insufficient to decide the issue.

Turning now to the inhumation component, the combined assemblage (Garth 1952; Osborne *et al.* 1961) of 25 individuals is comprised of 18 adults, two children, and five infants. It seems strange that the two children were identified by Garth, while Osborne *et al.* identified the five infants. The criteria used for age identifications are not provided in either report. In any case, the infants and children are combined into a subadult group of seven individuals for the purposes of this analysis (Figure 6.13). The nine burials included from Garth's (1952) report were all found underneath the "occupation floor" associated with the cremations discussed above. Only one burial recovered by Osborne *et al.* (1961) is said to have come from beneath a cremation level. Presumably the others date to roughly the same period, but simply occurred outside of the cremation area.

All individuals but one lay either semi-flexed or flexed on the back or side. The exception, an infant (Burial O12), lay extended on its back. Body orientation in the majority of burials ranged between west and south/southwest. Only three individuals were outside of this range. There seem to be no significant correlations between body position and orientation and any other variables tested (age, sex, number of artifact types in association).

Figure 6.13: Artifact Diversity Distribution at Sheep Island



Subadult representation at 28.0% is not significantly lower than Weiss' suggested minimum of 30%. The adult and subadult groups do not differ significantly in frequency of combined artifact types ($t = 1.41$, $p = 0.17$) or in sociotechnic types ($t = 0.33$, $p = 0.74$), but they do differ at a .10 level in terms of utilitarian inclusions ($t = 1.77$, $p = 0.09$). The majority of the shell ornaments, consisting of *Dentalium*

and abalone pendants, in the assemblage were found with subadults. Both types also occurred in adult burials: two *Dentalium* with a male (Burial O15), a shell pendant with another male (Burial G7), and a shell pendant with a female (Burial G4). Interestingly, the two burials (Burials G10 and O7, both adult males) with the most varied grave inclusions at the site contained neither shell ornaments, nor indeed ornaments of any kind.

Eleven of the adults are identified as male while five are identified as female, with the remaining two adults being of indeterminate sex. Most, though not all, of the crania of both sexes for which the observation was possible displayed fronto-occipital deformation. The predominance of males (11/16 or 68.8%) in the assemblage approaches statistical significance at the .10 level (binomial $p = .1051$). Two burials (Burials O2 and O3) at the site had been looted, reducing the number of sexed individuals with secure grave associations to ten males and four females. There is no statistical evidence for different treatment of the sexes in terms of their grave inclusions. However, the two burials (Burials G10 and O7) with the most varied associations are both male. Overall the artifact assemblage found with the Sheep Island burials appears impoverished relative to other sites in the area. Sociotechnic items are particularly poorly represented, including *Dentalium*, abalone ornaments, bone gaming pieces, a bone whistle, steatite and sandstone tubular pipes, and a very large decorated pestle. With the exception of the shell items, all of the remaining sociotechnic types occur only with two adult male individuals (Burials G10 and O7). Evidence of burning is found with at least three of the burials in the form of overlying charcoal and charred cedar planks. There is no correlation between the evidence of burning and the quantity of grave inclusions.

Burial G10 contained the largest and most varied inclusions in the Sheep Island assemblage. Included in the total of 55 artifacts are some 30 stone points and knives, utilised flakes, two abraders, a shouldered maul, six bone points, an antler wedge and a bone wedge, a notched bird bone (whistle?), a large decorated "pestle-like" object, two bone gaming pieces, and five tubular stone pipes. Garth (1952:49) notes that some of the points and knives are exceptionally well made, one having a thickness under 5 mm. One of the points is of the type commonly referred to as a Columbia River "dagger point", usually made of gem quality stone and most commonly found in elaborate Late Period cremation sites in The Dalles area. Four of the pipes are made of steatite, while the fifth is made of sandstone, and is decorated. The large "pestle-like" object is of some interest. It measures approximately 40 cm in length, and one end is decorated in small concentric steps. Garth (1952:49) notes its resemblance to what local collectors in the Columbia River area refer to as a "salmon packer" and interprets it as a ceremonial object. Such an interpretation may be plausible in this case (see also discussion of this artifact class in Chapter 4).

The burial with the next most varied associations, Burial O7, contained four projectile points, a biface, a scraper, two bone points, a bone needle, three antler wedges, bone harpoon fragments, and a steatite tubular pipe fragment. The emphasis is clearly on utilitarian implements rather than sociotechnic items. In terms of absolute numbers of items, Burial O7 is surpassed by Burial O14, an infant; provided that one counts each of the latter's 48 *Dentalium* beads as a separate item (from their positions, the beads were actually clearly used for two bracelets and a necklace).

Evidence for violence is seen in Burial O17, an adult male, in which a projectile point was found embedded in a vertebrae. This point was not included in the artifact totals, but other points in the burial were. It is possible that all were shot into the body rather than being intentional grave inclusions. This does not substantially affect the conclusions presented here, since the only grave inclusions were the stone points and a single bone point.

Based on projectile point styles and the complete absence of Euroamerican trade articles, both cremations and inhumations date to the late prehistoric period. It also seems clear from the typological similarities and close stratigraphic association that no great period of time separates the two forms. Nor do there appear to be any substantial differences in the artifact assemblages of the two groups. Most of the artifact types found in the cremations are also found in the burials. The small differences that do appear in this regard (such as the absence of *Glycymeris* in the burials, for example) are probably attributable to sampling error.

The juxtaposition of cremation pits and pit inhumations at Sheep Island is interesting. Unfortunately, as was the case with most of the sites in The Dalles-Deschutes region, it is difficult, if not impossible, to directly compare the two mortuary regimes in any quantifiable sense, at least not with the available data. Without an indication of how many individuals are represented in the cremations, it is impossible to compare their artifact associations with those of the burials. The differential preservation of bone and shell artifacts in cremations and inhumations further complicates attempts at direct comparison. This being said, it is felt that the effort is still worthwhile. From Garth's report, the two cremation pits

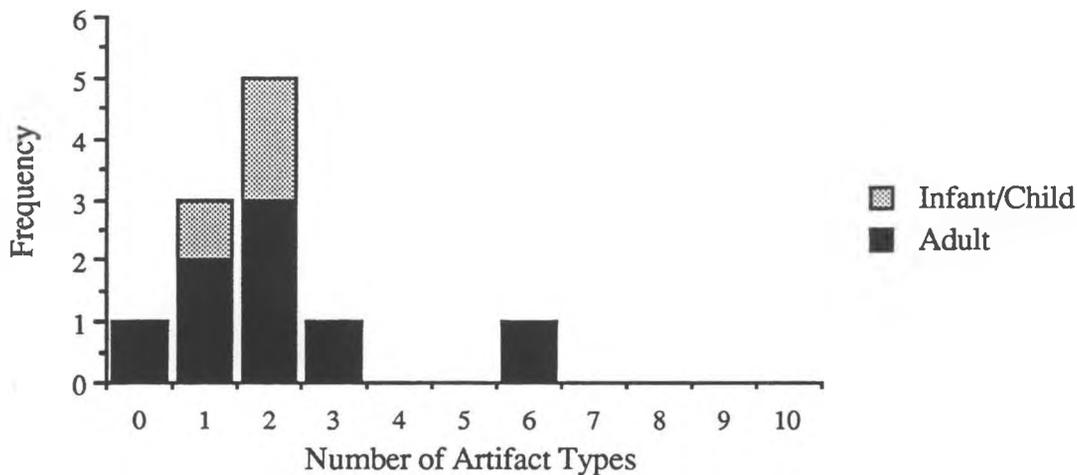
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yielded a total of 20 artifact types, including eight utilitarian types and 12 sociotechnic types. (It is likely that utilitarian types, particularly stone tools, are underreported, but this may be of little consequence for the analysis of socioeconomic status.) This total must be divided not only between the two cremation pits, but also between the different cremation events represented in each pit, as well as the unknown number of individuals represented in each event. Even taking into account the effects of artifact type redundancy (discussed in Chapter 3), it seems unlikely that the cremations would significantly surpass the average number of artifact types found in the pit inhumations.

Rabbit Island, 45-BN-15

Rabbit Island (45-BN-15) is located approximately three miles downriver of the Columbia and Snake River confluence. Excavations were carried out by Crabtree in 1951 and 1952 and reported in his 1957 M.A. thesis. The site was exclusively a cemetery, with no evidence of habitation, although there is evidence for extensive habitation elsewhere on the island (Garth 1952:43). Two burial components were identified, termed by Crabtree Rabbit Island I and II. Rabbit Island I is comprised of nine burials containing 11 individuals, while Rabbit Island II is comprised of ten burials containing 15 individuals. A significant temporal separation exists, based solely on typological differences, since no radiocarbon dates are available from the site. In addition to the burial components, Garth (1952) also reports a single cremation pit from Rabbit Island (mistakenly identified as 45-WW-15; Garth also reports the island as lying only one mile south (downriver) of the Snake River confluence, compared to Crabtree's three miles—despite these discrepancies, it is clear that the same island is being referred to).

Figure 6.14: Artifact Diversity Distribution at Rabbit Island I



Rabbit Island I is assumed on typological grounds (i.e. the presence of "Rabbit Island Stemmed" projectile points) to date within the range 3500-1500 B.P. (Crabtree 1957:63). Sprague (1967:134), citing more recent work on point typologies by Nelson and Daugherty (see also Lohse 1985), has subsequently suggested a date of ca. 3000 B.P., making Rabbit Island I one of the earliest known burial assemblages on the Plateau after Marmes Rockshelter (45-FR-50). It thus assumes some importance in outlining the development of mortuary practices and in potentially providing evidence of changes in socioeconomic organisation (see Chapter 7). The nine burials of Rabbit Island I contain 11 individuals, including seven adults, one adolescent, one child, and two infants. Four of the adults were identified by Crabtree as male, two as female, and one as indeterminate. Combining the adults with the adolescent, and the child with the infants, subadult representation is 27.3% (3/11), providing no indication of a significant departure from Weiss' 30% minimum estimate. One of the things that partially distinguishes this component from the later Rabbit Island II is that all of the burials in Rabbit Island I are in an extended position (although three individuals in Rabbit Island II are also extended). This in itself is quite unusual on the Plateau, where burials are overwhelmingly in flexed or semi-flexed position until historic times, when Christian-style

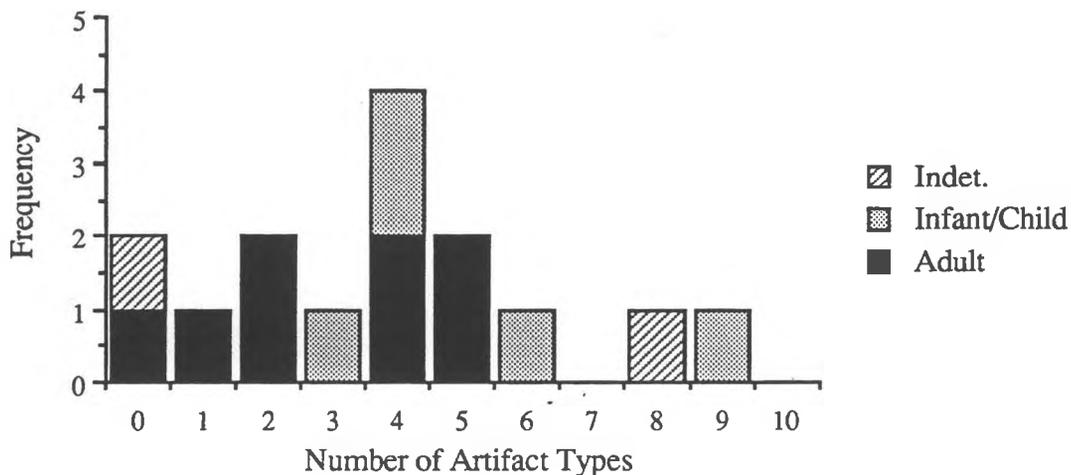
burial is adopted. Occasionally infants and children will be found in an extended position, but in Rabbit Island I all age groups are extended, including the seven adults present. The orientation of the Rabbit Island I burials is also far more homogeneous; all are northeast or north/northeast. Of course, it is probably just these differences that went into defining the two components in the first place. The diagnostic Rabbit Island Stemmed points themselves are found in only six of the 11 individuals assigned to the component.

The artifact assemblage in Rabbit Island I can be considered impoverished compared to that of Rabbit Island II, especially as regards the richness of sociotechnic items. This in itself may prove to be a potentially useful measure of differentiation and inequality. Only three or possibly four types of sociotechnic items are recognised for the earlier component: shell disc beads, a single bone comb, red ochre, and an incised slate object. Utilitarian items are more diverse, including points, knives, drills, unworked flakes, choppers, pestles, antler wedges, bone awls, and worked river mussel shell.

Subjectively, none of the individuals in the Rabbit Island I component stand out in terms of the richness of their grave inclusions. Crabtree (1957:8) also states that neither sex nor age group received preferential treatment; this is confirmed here (Figure 6.14). Burial 9-51, a middle adult male, has the most diverse inclusions with six types, but five of these are simple utilitarian types (stemmed points, a chopper, flake blades, unworked flakes, and antler wedges) while the single sociotechnic type is an incised slate object. The greatest differences are seen in the quantity of shell disc beads. These are presumably of marine origin (probably clam), since Crabtree (1957:43) explicitly states that all shell beads from the site were manufactured from marine species. Five of the eleven individuals had shell disc beads (Burials 11-51, 4-52, 6-52, 7-52, and 13-52); the greatest quantity, 1216 beads, were found with the infant of Burial 13-52. The others all contained substantially fewer than this, ranging from 52 beads in Burial 7-52 to only one in Burial 6-52. Based on their other associations, there is little else to attribute high status to these burials. Still, the beads themselves would seem to constitute a significant investment, one not available to everyone buried at the site.

Burial 10-52, an adult female, provides dramatic evidence of violence even at this relatively early period on the Plateau: a Rabbit Island Stemmed point was found embedded in the first lumbar vertebrae. This was, incidentally, not included in the calculation of the number of grave inclusions for this burial, which consisted of two pestles and red ochre. Crabtree (1957) notes that the cranium may exhibit fronto-lambdoidal deformation, presenting the possibility that this individual was not native to the area but was from further down the Columbia River where such deformation is more frequently seen.

Figure 6.15: Artifact Diversity Distribution at Rabbit Island II



Rabbit Island II consists of ten primary burials containing 15 individuals. These include eight adults, three children, two infants, and two of undetermined age. Males and females are equally represented with four each. Regarding body position, three individuals were extended, two flexed, and eight semi-flexed. The remaining interment was disturbed and body position could not be determined. This component

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includes a far greater variety of sociotechnic items than seen in Rabbit Island I. There are a number of species of marine shell represented: *Dentalium*, *Olivella*, *Glycymeris*, *Aletes*, *Haliotis*, and shell disc beads. Also found were steatite beads, perforated stone discs, tubular pipes, nephrite celts, red ochre, beaver incisor gaming pieces, tooth and claw pendants, bird beaks, bone tubes, and incised bone objects.

There is no evidence for subadult underrepresentation (5/13 or 38.5% of the aged individuals). The subadult average of 5.20 artifact types is nearly twice that of the adult average of 2.88. The difference is statistically significant at the .10 level even given the small sample size ($t = 1.96, p = 0.08$). The richest burial is also that of a child (Figure 6.15). However, a multiple burial containing five of the eight identified adults renders this result essentially meaningless; seven artifact types were found associated with the feature (discussed further below) that could not be assigned to specific individuals. When these are added (simply distributed as evenly as possible amongst the five adults) the difference becomes considerably less and statistically insignificant ($t = 1.27, p = 0.23$).

Both age groups include sociotechnic as well as utilitarian items. The difference in utilitarian grave inclusions between adults and subadults is not significant. Subadults do average significantly more sociotechnic artifact types than adults ($t = 2.14, p = 0.056$). This difference remains statistically valid at the .10 level even when the adult multiple burial is taken into account ($t = 2.07, p = 0.063$), since only a single possibly sociotechnic item, a large nephrite celt, was among the artifacts that could not be assigned to a particular individual. The sociotechnic items found in subadult graves include mainly shell beads, but also an abalone pendant, gaming pieces, steatite beads, a bone tube, raptor claw pendants, and *Merganser* beaks. The number of sociotechnic types ranges from two to five in subadult graves. All subadult graves but one, an infant (Burial 7-51), also include at least one utilitarian artifact type.

The single tubular (?) steatite pipe from the site was found with Burial 1-52, an adult female. This is only the second occurrence of a female with a pipe observed in the entire sample collected here (see Chapter 7). The grave of this individual also contained six cut dentalia beads, a tooth pendant, a perforated stone disc, and an incised slate object. Among the adults, only Burial 8-52 had an equal number of artifact types. However, a number of the adult burials contained a far greater absolute number of items, invariably in the form of shell beads of one kind or another. The four female individuals averaged 3.75 artifact types compared to only 2.0 for the four males, but the difference is insignificant given the sample size ($t = 1.4, p = 0.21$). It would probably become even less if the unknown associations of the multiple pit burial could be taken into account, since three of the adults are identified as male and only two as female. Separating artifact types into utilitarian and sociotechnic types shows a greater difference in the latter category (female utilitarian $\bar{X} = 1.75$, male utilitarian $\bar{X} = 1.25$; female sociotechnic $\bar{X} = 2.00$, male sociotechnic $\bar{X} = 0.75$), but these are even less significant than for overall types.

Possibly the most interesting aspect of this site is the multiple burial designated Feature 1. This pit contained the remains of six individuals, designated Burials 1a-51 to 5-51. The five individuals for which an estimate of age is provided are all adults; three are male and two are female. The bodies appear to have been arranged into a circle, although head orientation is not consistent. The torso, right arm, and skull of Burial 5-51 were apparently "missing"; Crabtree mentions no indications of disturbance to account for this. While it is conceivable that this accurately reflects the condition of the body at inhumation, it may be equally likely that the aboriginal excavation of the burial pit disturbed an earlier interment. With the exception of Burial 1a, for which no age estimate is provided, all of the burials are associated with grave inclusions, both utilitarian and sociotechnic items. The average number of types is only 1.8; this is substantially lower than that seen in either the remaining adults at the site ($n = 3; \bar{X} = 4.67$) or in the remaining burials as a whole ($\bar{X} = 5.33$). There are, however, a number of artifacts that were associated with the feature as a whole and could not be assigned to specific individuals. These include three side-notched points, three knives, a scraper, 28 unmodified flakes, a large nephrite celt, a nephrite chisel, a bone point, and a beaver mandible.

With the preponderance of projectile points and knives it is tempting to interpret the deaths of these individuals as homicides, but Crabtree mentions no evidence of violence on the skeletons. The other artifact inclusions, such as the large celt and the *Olivella* beads associated with Burial 3-51, might also argue against such an interpretation. When these general feature associations are taken into account, there is no evidence for the burials of this feature being impoverished relative to the remaining burials in the component. But it still seems probable that the burial represents an unusual event. Crabtree's excavations indicate that the burials in the cemetery, or at least the part investigated, were neither closely packed nor extensive. This suggests that the group making use of the site was not large. It is very unlikely, then, that five adults, three of which were specifically identified as young adults, would die of natural causes at

the same time.

There are, as far as I am aware, no similar features involving human burials anywhere on the Plateau. A feature with intriguing parallels is found, however, at the Wildcat Canyon site (35-GM-9) discussed earlier, located approximately 200 km downriver from Rabbit Island. Feature 42 at Wildcat consisted of a circular pit containing six dog burials; at least three of these were placed in a circle running counterclockwise around the circumference of the pit. Another dog was placed in the centre of the circle. The dogs were clearly sacrificed; two were found with point fragments embedded in the thorax, at least one dog had been decapitated, and all apparently had had their backs broken (Cole and Cressman 1962:21). The relationship of this feature to the cemetery at Wildcat is not known. Its resemblance to Feature 1 at Rabbit Island consists in the placement of multiple bodies around the circumference of a large circular pit with an additional centrally placed body. It is, of course, entirely possible that the proposed similarities are exaggerated or entirely fortuitous. But if they are not, it could perhaps suggest a sacrificial origin for the Rabbit Island II multiple burial. A more detailed examination of the human skeletal remains from Feature 1 could help resolve this issue.

A single cremation pit was found to the east of the burials excavated by Crabtree (Garth 1952). The pit was apparently very similar to those previously described for Sheep Island, some ten miles further downriver. It was surrounded by an indefinite stone ring measuring approximately 16 feet across. Upon excavation, the pit proved to be rectangular (like Cremation Pit 2 at Sheep Island), measuring 7.5 ft. long by 4.42 ft. wide and 1.67 ft. deep. It had been disturbed, presumably by local collectors, so that the only intact deposits occurred sporadically near the bottom of the feature. This makes it impossible to compare with the inhumations from the island. Garth (1952) reports that mixed with the scattered bone were pieces of charcoal, fragments of two charred baskets, charred willow rods twined together, and fragments of cordage. The only other artifact found was the tip of an antler wedge. The intrusive non-cremation burial of a child, covered with red ochre and a charred plank, was also found at the southwest corner of the pit. The recovery of a baked mud dauber nest suggests that, as at Sheep Island, the remains had been exposed prior to cremation. There is nothing at this site, however, to suggest a direct connection between the cremation and the burials recovered by Crabtree. It is highly probable that both burial components predate the cremation pit by a significant length of time.

Fish Hook Island, 45-FR-42

Fish Hook Island (45-FR-42), located some 13 miles downriver from the confluence of the Snake and the Columbia, was investigated in the 1960s by John D. Combes prior to the area being flooded by the construction of the Ice Harbour Dam (Combes 1968). Prior to this the Columbia Archaeological Society had partially excavated the site.

Early "excavations" by the Columbia Archaeological Society recovered 26 burials from Fish Hook Island. What little information is available from these excavations has been summarised by Sprague (1967). Both a protohistoric/early historic and a later historic component are present, distinguished largely on the basis of body position—the former semi-flexed or flexed and the latter fully extended (Sprague 1967:116, 117). Only the protohistoric/early historic component, consisting of 18 burials surrounded by cedar stakes or cists, will be considered here. All but one of these burials were semi-flexed, the exception being fully flexed. Sixteen burials were placed on the back while two lay on the left side. Orientation was generally to the north (13/18 or 72.2%). Only seven of this group contained historic artifacts (7/18 or 38.9%), which were limited to iron blades and bracelets (Sprague 1967:117). The apparent absence of copper artifacts is interesting, since during this period copper is typically found in large quantities. Perhaps by the early historic period in this area iron had assumed the prestige connotations usually attributed to copper. Alternatively, in some areas iron rather than copper might have been adopted very early by the elite as the preferred metal. Whatever the explanation, the Fish Hook Island situation presents interesting parallels with the Berrian's Island protohistoric/early historic assemblage discussed previously.

Subsequent excavations by Combes (1968) on Fish Hook Island yielded the remains of 23 individuals, and form the basis of the following analysis. The study of this assemblage is made particularly difficult by the likelihood that two distinct components are represented, with ten of the burials being late prehistoric and the remaining 13 protohistoric in date. Combes (1968) assigned the burials to one of these two periods based on artifact associations and burial facility, apparently relying more on the latter, since all of the graves designated "transitional" (protohistoric) are associated with charred cedar cists, while those assigned to the late prehistoric lack such cists. Many of the cist burials also had surface stone cairns marking their locations. Unfortunately no radiocarbon dates were obtained from the site. While the

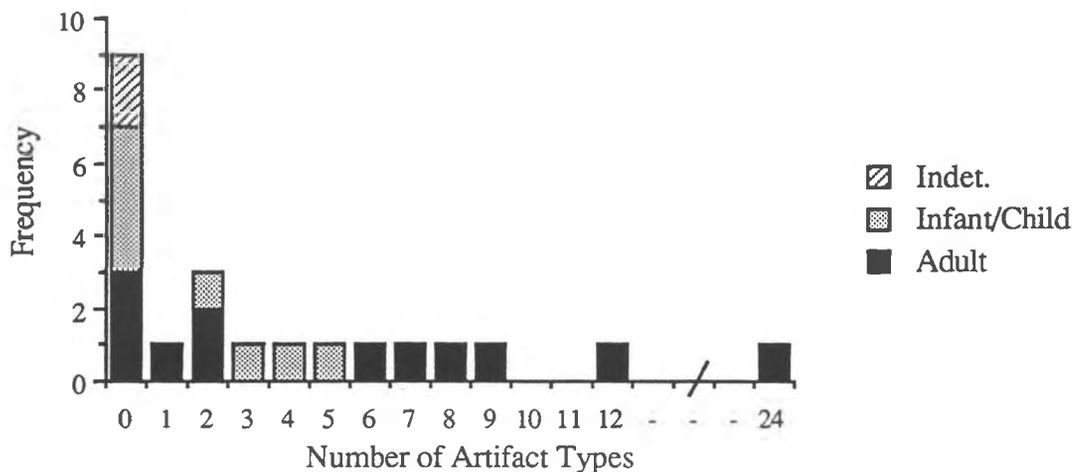
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two lines of evidence—artifacts and grave facility—partially support one another and do most likely indicate the presence of two components, it is also possible that the differences in treatment reflect status within a relatively contemporaneous mortuary population. In contrast to the group of early historic burials collected by the Columbia Archaeological Society, none of the “transitional” component burials identified by Combes (1968) contained any iron artifacts. The only possible Euroamerican trade items were four copper pendants and a copper armband.

Some of the copper from the site may be of native origin. Combes (1968:32-33) states: “A copper armband, found with burial 3... was analyzed spectrochemically” and “... from the results... it was quite possible that it was made from native copper”. But contradicting himself, Combes (1968:125) later states that the same copper armband “... was probably of European origin”. Combes places Burial 3 in the protohistoric group. If the copper is in fact native, it calls into question the separation of the late prehistoric and protohistoric components made by Combes. On the other hand, there is little evidence elsewhere on the Plateau that would indicate that cedar cist burial would be used solely for high status individuals; rather, it seems to have been more of a normative practice in certain areas at particular times (although the possibility merits further research). The following analysis will attempt to take both possibilities into account, since treating the burials as a single group substantially increases the sample size and is useful for some purposes.

Twenty-one of the 23 excavated burials could be assigned to basic adult/subadult age groups. Of these 21 individuals, 13 were assigned to the adult group and eight to the subadult (infant/child) group. Subadult representation at 38.1% is within Weiss’ range, providing no evidence for their separation from the adult mortuary space. Dividing the sample into its two components does not significantly alter these results; three of nine aged prehistoric burials (33.3%) and five of the 12 aged protohistoric burials (41.7%) are subadults.

Figure 6.16: Artifact Diversity Distribution at Fish Hook Island



The overall average number of artifact types for both time periods and both age groups ($n = 23$, including the two burials for which no age estimate was given) is 3.78; for utilitarian artifact types it is 2.17; and for sociotechnic types it is 1.61. Treating the assemblage as a single component yields the following results for the analysis of adult ($n = 13$) and subadult ($n = 8$) age groups: number of artifact types (adults $\bar{X} = 5.69$; subadults $\bar{X} = 1.75$; $t = 1.54$, $p = 0.14$); utilitarian types (adults $\bar{X} = 3.38$; subadults $\bar{X} = 0.75$; $t = 1.83$, $p = 0.08$); and sociotechnic types (adults $\bar{X} = 2.31$; subadults $\bar{X} = 1.00$; $t = 0.99$, $p = 0.34$). At a .10 level, the only statistically significant difference between the age groups is seen in the occurrence of utilitarian artifacts, which are more frequent in adult burials. The difference in overall number of types, despite appearing quite large (5.69 compared to 1.75), fails to reach the .10 significance level because of the extremely high variance in the adult group. This in turn can be related to the presence of a small number of very rich adult burials, discussed further below (see also Figure 6.16).

Sex was reported for too few of the burials to make any meaningful quantitative statements concerning differences along these lines. However, some qualitative statements can be made. Of the 13 adults, three individuals were identified as male and three as female. Two of the males (Burials 3 and 13a) are the two richest burials at the site, while the third (Burial 20) is among the poorest, having no grave inclusions. Of the three females, one (Burial 22) can be considered moderately rich in terms of its grave inclusions, while the other two (Burials 6 and 13b) are roughly average.

Burial 3, an adult male, is by far the richest interment at the site, with a total of 25 artifact types as defined here. This includes both utilitarian items such as points, knives, scrapers, drills, antler wedges, bone harpoon parts, a net gauge, pestle, chopper, maul, shaft smoothers, bone awls, and beaver incisor chisels, and, more importantly, sociotechnic items such as *Dentalium* and *Olivella* beads, elk tooth pendants, two carved bone or antler combs, an incised bone tube, pigments, two ground stone celts, calcite crystals, an abalone dish, a "jade" pendant, and a copper armband and pendant. At least one of the "utilitarian" flaked stone knives may be better considered a prestige item; it is very finely made and measures 18.3 cm in length. These items represent a considerable concentration of wealth. The wide range of exotic materials may indicate privileged access to a number of different areas through trade contacts (see Chapters 4 and 5).

A number of other burials display idiosyncrasies that are worth noting. Burial 11, an adult, appears to have been a secondary interment; the remains were found disarticulated with the skull reversed on the neck. No grave inclusions accompanied the burial, thus it would not seem that the effort of secondary burial was associated with high status in this case. More likely it can be related to circumstances and/or location of death. Combes states that the adult male of Burial 20 had been forced into a pit obviously too small; again there were no artifacts in association. Burials 13a and 13b, an adult male and female respectively, were found in side by side in identical flexed positions in a single grave. Burial 13a, the second richest at the site, contains 12 types of artifacts, including two tubular stone pipes, three ground stone celts, *Olivella* beads, a stone club, and a copper pendant, as well as a number of utilitarian items. Burial 13b was associated with six types of artifacts, but five of these were simple utilitarian items. The single sociotechnic artifact type consisted of locally available elk tooth pendants. Combes notes that the artifacts were clearly spatially separated in the double grave, so that the individual associations are secure. In this particular case, the male appears to exhibit higher status than the female.

As noted above, all of the supposedly protohistoric burials were associated with charred cedar cists. This clearly indicates burning as part of the mortuary ritual (evidence for this is fairly widespread over the Plateau as a whole). Despite this, in only one instance did Combes (1968) note any signs of burning in the grave contents. The skeletal elements of Burial 9, an individual of unknown sex and age, were described as all partially burned and somewhat scattered. No grave inclusions accompanied the body. The abundance of wealth and prestige items in some other burials at the site suggests that, if indeed Burial 9 does represent a partial cremation, there were no high status connotations involved with the practice. But Combes does not clearly describe the extent and degree of the burning; the burial was associated with a charred cist, and it is possible that the burning of the bones may have been unintentional—perhaps the body was placed in a particularly shallow grave when the above-ground portion of the cist was fired.

Tucannon, 45-CO-1B

The Tucannon site (45-CO-1B) is located at the confluence of the Tucannon and Snake Rivers in southeastern Washington. Investigated by Iverson (1977), the site showed evidence of 134 burials, of which 129 were looted by the time the researchers arrived, leaving a total of only five undisturbed burials. One of these consists of the remains of a disarticulated child (i.e. a secondary burial). A number of incised *Dentalium* and plain *Olivella* shells had been placed deeply inside the eye orbits and up into the nasal passages (Iverson 1977:69, Figures 48 and 49). The fact that the dentalia were complete and incised is of interest, since Spier and Sapir (1930) state that among the Wishram these were the most valuable shells. The disarticulation and placement of the shells deep inside the orbits both suggest that the remains were completely skeletonised when the event took place. This burial suggests relatively elaborate postmortem treatment of the dead, and, in this case, specifically of a child.

Marmes Rockshelter, 45-FR-50

Marmes Rockshelter (45-FR-50), located at the confluence of the Palouse with the Snake River in southeastern Washington, is an important site in that it contains some of the earliest human remains found to date in the Pacific Northwest. The earliest human remains from the site were found in levels dating from

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10,000 to 9,000 B.P. (Rice 1972:153). The charred bone fragments of at least five individuals, including two adults and three juveniles, were found in a "cremation hearth complex" that seems to be contemporaneous with the charred remains of another three individuals, including two adults and one juvenile, found in deeply stratified alluvial deposits just outside the shelter (Rice 1972:152). Krantz's (1969:52) suggestion of cannibalism has not found wide acceptance (Rice 1972:154-155); Rice (1972:156) proposes instead that cremation may have been a common practice in the southern Plateau and Great Basin at this time period, citing evidence from two additional sites in Montana and Utah.

In addition to the cremation complex, Rice (1969) reports the recovery of evidence for 22 burials from Marmes Rockshelter. While no marine shells were found in association with the early cremation feature, *Olivella* beads were found with subsequent burials throughout much of a long sequence extending from ca. 8000 to 1000 B.P. An infant dating to ca. 7700 B.P. (Fryxell 1962:16-17) was found with five projectile points. The scattered remains of two adults, both apparently associated with *Olivella*, were found in levels dating to between 7000 and 6600 B.P. (Rice 1969), but Sprague (1967:108) suggests these may not represent intentional burials. But in any case, *Olivella* beads were common grave inclusions, being found with many of the burials (Rice 1969). Other grave inclusions present throughout most of the post-8000 B.P. sequence include red ochre and projectile points; also represented in lower frequencies are bifaces, drills, scrapers, atlatl weights, bone awls, animal tooth pendants, and bone pendants.

The occurrence of *Olivella* in the early levels at Marmes is particularly interesting. The considerable distance to the coast could indicate well established long distance trade networks even at ca. 8000 B.P. The importance of this site here, then, lies in its ability to provide information on the development of trade in exotic materials and their use in mortuary contexts. This relationship is explored further in Chapter 7.

Wahluke, 45-GR-306

The site of Wahluke (45-GR-306) is located on the west bank of the Columbia River in Grant County. It consists of the remains of some 30 housepit depressions and a nearby, possibly associated, cemetery. Both the housepits and the burials were investigated by Herbert W. Krieger of the Smithsonian Institution in 1926 and 1927. While extensive collections were made, only very brief preliminary reports have been made available (Krieger 1927, 1928a, 1928b) and these repeat one another almost verbatim. An inquiry sent by the author to the National Museum of Natural History, Smithsonian Institution elicited the response that "... among the accession records and Krieger's papers there are no detailed field notes, catalogs or maps related to the work at the Wahluke site.... If originally there was more information, it was misplaced long ago" (letter dated November 5, 1991, on file with author). Thus little information is available on the Wahluke burials; despite this, Krieger's meagre reports do contain important data on what was obviously a major habitation and cemetery site with evidence of complex mortuary treatment. For this reason the information that is available is summarised below.

The majority of the Wahluke burials excavated by Krieger were described by him as cremations. They were usually three or more feet below the surface when undisturbed, with a layer of flat stones invariably placed in an oblong or circular ring as a "protective cover" (1928a:9, see also 1928b:197, Figure 194). The cremations were apparently arranged in irregular rows along the river beach terrace upstream from the village proper (Krieger had no reservations concerning the contemporaneity of the village and the cemetery). Krieger reports that many of the skeletons were only charred, and that sections of driftwood logs were found intact in some of the graves. This implies primary cremation, possibly of fleshed bodies. No evidence was noted for the use of mortuary sheds such as were used at The Dalles and on the lower part of the Middle Columbia.

In some graves the skeletal remains were found in a state suggesting secondary burial of multiple individuals. Krieger hypothesised that such burials had been initially exposed on burial islands before being gathered together for "... the ceremonial cremation burial in the village cemetery" (1928a:10). These multiple secondary cremations were "... accompanied by veritable storehouses of burial offerings" (1928a:10). Individual cremations, on the other hand, were usually primary, the body being flexed and lain on the side. Incineration was reportedly "... so complete as to prevent the recovery of any one entire skeleton" (Krieger 1928a:10). Material collected resulted in the reconstruction of eight "skulls" in the laboratory back at the Smithsonian; since it is not stated otherwise, it may be assumed that these all belonged to adults or at least adolescents. All crania exhibited some degree of fronto-occipital deformation. No information is supplied on the relative quantity and richness of grave inclusions found in the individual as compared to the multiple cremations.

A large and varied artifact assemblage was recovered from Wahluke, supplemented by information Krieger was able to obtain from local collectors, many of whom had in their possession extensive collections from the area. Again, Krieger provides lists of artifacts with hardly any accompanying provenience data. Since both the cemetery and the housepit depressions were partially excavated, some of the artifacts may be associated with the latter rather than with the burials. Material was also surface collected from disturbed portions of the cemetery, but this most likely would have been originally associated with the burial component, since Krieger does not mention habitation debris at the cemetery.

Preservation, whether because of charring involved with cremation or the climate, or both, was apparently excellent at the site. Normally perishable materials reported for Wahluke include abundant hemp cordage, cedar bark basketry and matting, tule matting, various woven grasses, elderberry whistles, birch-bark rolls, ash bow staves, porcupine quills, eagle and hawk feathers, and abundant textiles woven from mountain goat, dog, and human hair. The identifications of some of these materials, such as the dog-hair fibres, may be questionable (Schulting 1994). Finally, numerous food and medicinal plants were reportedly also found, including kinnikinnick (*Valeriana edulis*). Given the remarkable richness of faunal and floral remains and the specificity of their identification, especially at such an early date, it seems probable that Krieger embellished his identifications with data acquired through ethnographic sources. The detail reported by Krieger is even more remarkable in that the assemblage appears to be almost entirely prehistoric in date.

Simple utilitarian artifacts made of stone include numerous chipped points, knives, scrapers, drills, undecorated stone bowls, pestles, mauls, hammerstones, net sinkers, shaft smoothers, abraders, and small nephrite adzes and chisels. Bone and antler technology is well represented, including points, harpoon parts, fleshers, weaving implements, flakers, wedges, awls, needles, digging stick handles, and mountain goat horn spoons. The variety of sociotechnic artifacts is even more impressive, including steatite beads, pendants, ear ornaments, spindle whorls and pipes, argillite beads, large polished nephrite celts, schist pendants and beads, mammal and bird tooth and claw pendants, beaver tooth dice and bone gaming pieces, incised bone beads, drinking tubes and whistles, perforated salmon vertebrae beads, *Dentalium*, *Olivella*, *Haliotis*, and *Glycymeris* beads and pendants, and copper tubular beads, pendants, bangles, and bracelets. A number of complete incised *Dentalium* shells were also found in the Wahluke graves (Krieger 1928b:137, Figure 162). Again, one must wonder to what degree Krieger exaggerated his findings at this site, or supplemented them with material found by local collectors, a number of whom are mentioned in his acknowledgements.

Some of the projectile points and knives were of exceptional quality and probably functioned as display items rather than purely utilitarian objects. The single obsidian artifact (no obsidian debitage was found) consisted of a diamond-shaped, eight-inch long mottled black and red knife found in a burial; it can be interpreted as an high prestige ceremonial object with a certain amount of confidence, as Krieger does (1928a:13).

The apparent abundance and variety of copper ornaments is highly unusual, to say the least, if we accept Krieger's statement that the metal is all of native origin (1928a:13). Unfortunately, only a single copper artifact is actually included in a photograph (1928a:7, Plate 5); this appears to depict a native copper ore nugget, which had apparently been worn as a pendant, since a portion of the hemp fibre cordage used to suspend it was recovered *in situ* among the offerings in Grave 1, one of the rare burials for which an association was actually reported. Krieger describes the remaining ornaments as "... hammered and rolled from nuggets of native copper brought from the Cascades or obtained by barter from the coast tribes" (1928a:13), although elsewhere in the same article he attributes the origin of the copper to the interior of British Columbia (1928a:12). Some of the bone and tooth beads found in the cremations were copper stained.

Not all the burials at the site were cremations; a child's grave located on the elevated rim of a housepit depression and several uncremated burials were also found in the cemetery but outside of the cremation row(s) (1928a:10). Krieger writes: "The significance of these uncremated burials is not clear" (1928a:10). Unfortunately there is no information on the relative frequency of cremated and uncremated burials, the age/sex characteristics of the burials, or possible differences in grave inclusions. The two forms of burial might belong to different time periods, but the inclusion of both in what seems to have been a fairly well defined cemetery would seem to argue against this interpretation. Nor does it seem likely that an age difference can be invoked, with cremation reserved for adults or vice versa. From the earlier quote it is clear that Krieger did consider the issue of the co-occurrence of the two burial forms, and had the explanation been such an obvious one he certainly would have made use of it himself.

Thus it is possible that status differences may account for the presence of the different burial

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forms. Cremation is, on the basis of the energy expenditure model (Tainter 1975, 1978), likely to be a higher status form of burial than simple inhumation, particularly in areas where wood is rare and requires considerable effort to gather. By the same argument, secondary cremation should be associated with higher status than primary cremation, all other things being equal. More detailed data on the biological characteristics of the burials and their associated grave inclusions would enable the testing of this hypothesis; unfortunately this information no longer seems to exist. But even the little that can be gleaned from Krieger's accounts seems to offer some support for this interpretation. As was noted above, it was the multiple secondary cremations that elicited Krieger's comment on the "veritable storehouses of burial offerings". The spatial separation of the cremation rows and the peripheral non-cremation interments is also suggestive but could be, in the absence of more detailed information, accounted for equally well by invoking either temporal or status differences. There seems to be a direct positive relationship between the potential importance of a site and the likelihood that it is either largely destroyed or poorly documented, or both.

The dating of either the Wahluke cemetery or the housepits is, as might be expected given the paucity of available information, highly problematic. Despite what seem to have been fairly extensive excavations over two field seasons (1926, 1927), no indications of Euroamerican trade items were found (accepting for the moment that all of the copper is indeed native). One possible protohistoric/historic period item may be a catlinite elbow pipe. The pipe is similar to ones made on the Plains and undoubtedly originated there, since catlinite does not occur in the Pacific Northwest. In one report (1928a:12), Krieger mentions the pipe and attributes it to Wahluke; in a separate report (1927:198, Figure 196) he shows a catlinite pipe with lead inlay around the mouthpiece but proveniences it only to the Columbia River Valley. If both references are indeed to the same pipe, then a minimal protohistoric component at the site may be indicated. The complete absence of horse and bison remains in the otherwise extensive faunal assemblage (1928a:15-16) supports, albeit from negative evidence, a largely prehistoric use of the site. Only two points could be associated with specific graves at Wahluke from Krieger's reports. One of these is a red jasper "mule-ear" knife (Grave 3, 1928a:8, Plate 2) widely distributed throughout region during the late prehistoric period; the other is a finely made, narrow corner-notched agate point (Grave 4, 1928a:9, Plate 2), also attributable to the late prehistoric. The most common types of projectile points from Wahluke (1928a:9, 23, 24, Plates 2 and 3) are typical of the late prehistoric period on the Columbia Plateau. No points or other artifacts diagnostic of earlier periods are illustrated in any of Krieger's reports, although this is not to say that none were found, since the reports include only minimal artifact descriptions and photographic plates. In summary, the Wahluke burial assemblage seems to date predominantly to the late prehistoric period/early protohistoric of ca. 1000-150 B.P.; without more detailed information on individual grave associations it is impossible to speculate on the contemporaneity of the burials, i.e. on whether or not an earlier component is represented.

Pot Holes, 45-GR-131

The Pot Holes burial site is located on the east bank of the Columbia River, some two to three miles south of Trinidad, Washington. The site appears to have been a large and important one, but unfortunately it was largely destroyed by local collectors before any systematic recovery was attempted. Dr. F. S. Hall of the Washington State Museum (Burke Memorial Washington State Museum) conducted what can only be called partially controlled excavations in 1920 and 1921, at Pot Holes and a number of other nearby sites. The majority of Hall's crew consisted of overly enthusiastic local collectors, which may help explain what happened to the excavation notes and artifacts recovered from the 1920 season, concerning which no information is apparently available: approximately 77 burials were recovered in the two seasons, but artifacts currently curated at the Burke Museum are associated only with the 28 burials of the 1921 season (Stapp 1984:13). Crabtree (1957) provides a summary of some of the information available from Hall's earlier excavations (see also Greengo 1986). There is some confusion as to the number of burials recovered from the site. Hall's notes apparently state that six out of 27 graves lacked goods, while the Burke Museum's catalogue states that seven out of 35 graves lacked artifact inclusions. I assume that the majority of the information to be discussed below relates to the 28 burials recovered in the 1921 season as noted by Stapp (1984). Stapp (1984:13) notes that some individual burial/artifact associations are preserved in Hall's notes, but that Crabtree chose to only summarise the artifact assemblage as a whole rather than avail himself of this data. My own brief re-examination of the Pot Holes collection, including both artifacts and notes, as it is currently curated in the Burke Museum, suggests that while artifact associations are available for some of the burials, the number of discrepancies between the fieldnotes and the catalogued

artifacts makes the use of this information highly problematic with any but a very few burials (see also Brennan 1981).

All of the burials recovered from the Pot Holes site for which information is available were what Crabtree (1957) refers to as partial cremations. There is no information available on either age or sex of the remains. All seem to have been single interments, or at least it is not stated otherwise. A photograph of one burial from the site reproduced in Crabtree (1957) suggests single primary interment. However, there are no indications of burning evident in the photograph, which also shows preservation of plant fibre cordage. This could suggest that even partial burning was not universal at the site. In fact, Crabtree (1957) does not mention that any of the bone or shell artifacts in the assemblage exhibit signs of burning. My re-examination revealed evidence of burning, but only on relatively few artifacts. Possibly "partial cremation" here refers in some cases only to ritual burning of property over shallow or unfilled graves. Hall's accession notes (Brennan 1981) unequivocally record evidence of burning for only four burials (Burials 24, 64, 73, and 74). In Burial 73, in addition to the burned human remains, associated glass trade beads were melted, and bone beads and faunal remains were burnt. In Burial 64, which included a copper headband (discussed below), burnt shell, ash, and charred bones were all noted. Given the state of the site records, it is not possible to comment on the status of this "cremated" group relative to the remaining burials.

The site yielded an elaborate artifact assemblage (some of the items discussed below are illustrated in Crabtree [1957]). The utilitarian items recovered from the site include projectile points, knives, scrapers, drills, unmodified flakes, bone points, awls, harpoon barbs, antler tine flakers, antler wedges, and antler digging stick handles. Some of the "knives" are unusually large and finely made, and may have functioned as prestige rather than utilitarian items.

Sociotechnic items include *Dentalium*, *Olivella*, and *Aletes* beads, abalone pendants, copper beads and pendants, iron, glass beads, mica, red ochre, tubular steatite pipes, carved mauls, nephrite celts, carved and incised slate anthropomorphic figures, bone gaming pieces, bone and/or antler combs and other carvings, bone whistles, tooth pendants, carved antler tines, and a canid skull (referred to by Hall as "coyote?"). Preservation seems to have been excellent at this site, with abundant evidence for fragile organics surviving even the excavation techniques of Hall's crew. One of the nine steatite pipes recovered has an elaborate zoomorphically carved mouthpiece with cut dentalia shell inlay. An owl is carved onto the bowl of another pipe, and a number of others are decorated with incised lines. Some of the incised slate figurines are rubbed with red ochre (Crabtree 1957). Hall's accession notes (Brennan 1981) refer to fragments of "small totemic figures" with Burial 62, which is also noteworthy for its variety of grave inclusions. Bone and/or antler combs seem to be particularly plentiful in burial sites in this area, and a number of them were found at other nearby sites also investigated by Hall and his crew. Three combs from the Pot Holes site illustrated in Crabtree (1957:84, Plate XXIV) certainly do not appear to have been "combs" in the functional sense, but rather hair ornaments (see Chapter 4).

Marine shell ornaments are abundant in the Pot Holes assemblage, although there are some minor discrepancies between the totals reported in Crabtree (1957) and the inventory of Hall's not infrequently inconsistent accession notes compiled by Brennan (1981). Crabtree (1957) reports a minimum of 2280 *Dentalium* shell artifacts, with 1565 whole unaltered shells occurring in 11 graves. One burial had 19 evenly matched pairs of *Dentalium* strung on fibre cordage placed across the brow of an adult skeleton. Four graves contained all of the 632 cut *Dentalium* beads. Crabtree (1957) reports at least 83 *Dentalium* incised with various different patterns; Brennan (1981) documents only 65 carved shells, all found in one grave, Burial 10. Crabtree (1957) states that all of the 57 *Olivella* beads from the site were found with a single burial. This is difficult to reconcile with Brennan's (1981) inventory, in which three burials containing some 154 *Olivella* shells and shell fragments are noted. Crabtree (1957) reports that all of the 18 unmodified *Aletes* shells were found in a single grave—this is partially corroborated in Brennan (1981), who records 15 shells with Burial 10. Crabtree's (1957) reported total of 53 pieces of abalone fairly closely matches the 21 complete pendants and some 35 fragments noted in Brennan's (1981) inventory. Lastly, *Pecten* shells were reportedly found with two burials (Brennan 1981).

Euroamerican trade items include 21 copper pendants, 13 tubular beads, two bands or rings, two headbands, three iron fragments, an iron spear point (?), some 300 small blue and white glass beads, a two piaster coin, and a small silver "Turkish" coin (Crabtree 1957; Brennan 1981). Metallurgical analysis of a subsample of six specimens confirms a Euroamerican origin for at least some, and probably all, of the copper at the site (Crabtree 1957). Copper artifacts were reportedly found with 13 of the 28 burials that contained artifacts (this again does not match other figures Crabtree provides elsewhere regarding the number of burials with and without artifact associations). The most unusual copper item is an headband bent to

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conform to the shape of the adult cranium of Burial 64 on which it lay. Twelve copper fragments, apparently from another similar headband, were found with Burial 3 (Brennan 1981).

The presence of Euroamerican trade copper and early glass bead forms in an assemblage otherwise dominated by aboriginal items indicates a transitional early protohistoric date for the Pot Holes site, although an earlier entirely prehistoric component may also be, and likely is, present. Indeed, the absence of glass beads in all but two of 77 burials suggests only a minimal late protohistoric/early historic component.

Summary of Burial Forms and Status in the Middle Columbia Region

The Middle Columbia comprises a large region, and its mortuary practices exhibit considerable variability. As with The Dalles-Deschutes region, three burial forms are represented archaeologically: cremation, inhumation, and talus burial. Cremations in the Middle Columbia area, however, appear for the most part to be considerably less elaborate than those found further downriver. A possible exception is the Wahluke site (Krieger 1927, 1928a, 1928b), where cremations may have contained many prestige items, but the site is too poorly reported to permit any firm conclusions.

With the possible exception of Wahluke, cremations in this area do not appear to exhibit significantly greater grave wealth than other burial forms. Nor can inhumations and talus burials be differentiated in this regard. A number of assemblages from the Middle Columbia region appear relatively impoverished. Old Umatilla, in particular, given its large sample size, has an extremely limited artifact assemblage. The Yakima sites, including the Selah talus burials, also contain relatively few artifact types. The Yakima cremations bear very little resemblance to the rich cremations of The Dalles-Deschutes region. The number of individuals found in cremation pits investigated by Smith (1910) varied from one to as many as 12 or more in one case. Yet artifact assemblages in all were largely restricted to *Dentalium* beads, abalone ornaments, and the occasional copper fragment. A number of cremations contained no artifacts, a situation not encountered in The Dalles-Deschutes region. As mentioned in The Dalles-Deschutes summary section, a number of disturbed cremations at Sheep Island (Garth 1952) provide evidence for multiple cremation events and for prior surface exposure.

Berrian's Island presents as exception to the above trend, presenting an extremely varied artifact assemblage, including many prestige items. The site is protohistoric; thus it may be that there was a considerable increase in the wealth available to the groups along this stretch of the Columbia River as a result of the acquisition of the horse and the effects of the fur trade. This may also hold true of the Yakima Valley (see ethnographic accounts presented in Chapter 5 and discussion in Chapter 7), although archaeological evidence for increased richness and diversity of material culture is far less evident there. Further upriver, both Wahluke and Pot Holes exhibit far more elaborate artifact assemblages. But it is difficult to quantify the comparison due to the poor reporting of these sites.

Possible downriver connections to what were historically Chinookan-speaking peoples, specifically the Wasco-Wishram, may be indicated in a number of cases. Rice (1978a) argues for the presence of a Wishram-style mortuary shed at the late prehistoric Old Umatilla site, based on the concentration of scattered human remains within a very circumscribed area. Further evidence from this site appears in the form of the greater proportion of female crania exhibiting cultural modification more typical of the Chinook (Lynch 1978). Nearby, the protohistoric Berrian's Island site presents similar evidence for the upriver movement of women (Newman in Osborne 1957). A single female from Rabbit Island I, dated ca. 3000 B.P., also exhibits fronto-lambdoidal deformation (Crabtree 1957), and may extend this practice considerably back in time. The securing of marriage alliances with the wealthy occupants of the Long Narrows would have provided a definite asset to an Umatilla family (or any upriver group), presumably giving them, if the marriage was between elites, trading privileges and access to its great fisheries. While this scenario seems reasonable, it should be emphasised that the currently available evidence supporting it is highly tentative.

The Upper Columbia

The (American) Okanogan, 45-OK-66 and OK-112

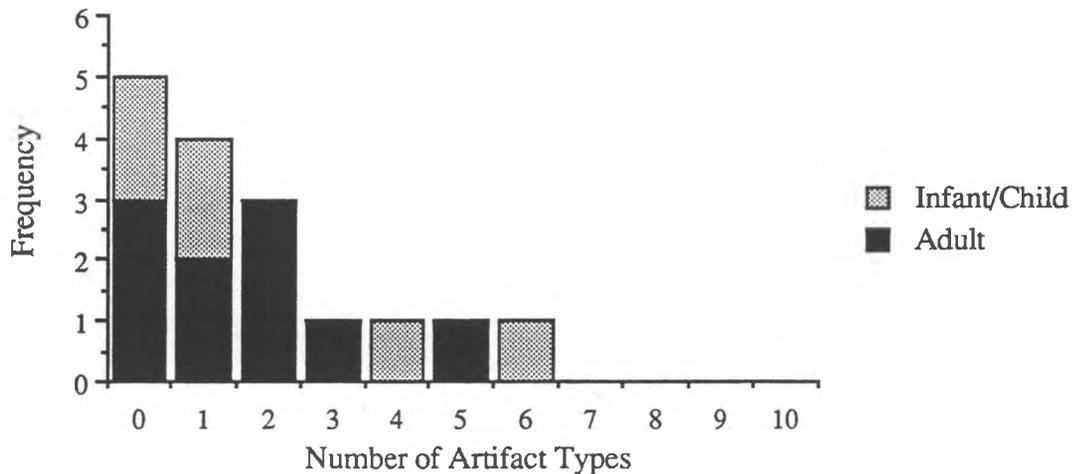
Grabert (1968, 1970) investigated a series of burial and habitation sites in the Okanogan area. Two sites, 45-OK-66 and 45-OK-112, yielded the largest numbers of burials, 13 and eight, respectively. Most of the burial sites investigated by Grabert had been exposed to prior looting, and these two are no exception. Nine of the burials from OK-66 and seven of those from OK-112, for a combined total of 16

burials, were sufficiently undisturbed to permit the recording of artifact associations with some confidence.

Site 45-OK-66 is located along the south slope of a dune paralleling the Columbia River, some 400 metres from the mouth of the Okanogan River (Grabert 1968). Grabert (1968) believes that burial site OK-66 may be contemporaneous with the housepit village of 45-OK-52, some 300 metres downstream. The village site OK-52 also yielded disturbed human remains (six burials), at least some, and possibly all, of which seem to have been protohistoric and/or early historic in date. These were apparently intrusive in and around the earlier housepits (Grabert 1968:140). Site 45-OK-112 is located on an alluvial fan at the mouth of Chiliwist Canyon on the Okanogan River, approximately 12 miles upstream from OK-66.

All of the burials at OK-66 for which the observation could be made were oriented parallel to the Columbia. Burials 66-12 and 66-13 had clearly defined cedar cists together with stone cairns (Grabert 1968). Further traces of wood suggestive of cists were found with Burials 66-1, 4, 9, 10, and 11. Numerous bits of charred wood and charcoal found with these burials suggest what Grabert (1968:138) refers to as "... the common Plateau practice of burning off the uppermost ends of cyst planks after the burial had been partially covered with earth". Burials 112-5b and 9 were also enclosed by cedar cists. Burial 5a was associated with a subsurface curved rock wall in addition to a surface cairn.

Figure 6.17: Artifact Diversity Distribution at OK-66 and OK-112



Grabert (1968:138), based on the very low number of Euroamerican trade items, places the OK-66 assemblage as slightly predating the turn of the nineteenth century. The OK-112 assemblage appears very similar, and thus probably dates from roughly the same time period. On the other hand, Grabert (1968:143) believes that two burial periods are present at OK-112 based on the clear stratification of burials. If so, they do not differ greatly either in number or types of grave inclusions, and so for the purpose of this analysis they are considered, together with the undisturbed burials of OK-66, as a single group.

Artifact types from the combined sites include *Dentalium*, abalone, and copper ornaments, red and yellow ochre, a tubular pipe, bone beads, bone gaming pieces, projectile points, large bifaces, scrapers, a graver, flakes, an antler point, an antler wedge, a bone flesher, and a whetstone. With the exception of the abalone and copper ornaments, and the points, scrapers, and flakes, all types occur only once. The size, craftsmanship, and placement of the two large bifaces behind the head of Burial OK-66 suggests that they did not serve a simple utilitarian function and may have been ceremonial (see Grabert 1968:Plates 22 and 40f, i). The copper ornament found with the adult female Burial 66-9 is not illustrated, but the pair found with the infant Burial 112-6 are (Grabert 1968:Plate 40c). They form spirals descending from a central loop, and bear some resemblance to two spiral copper ornaments found in a grave at the main burial place at Lyton, British Columbia (Smith 1899:150, Figure 84) (this form is also seen on the Northwest Coast).

The composite sample of 16 individuals includes the remains of ten adults, two children, and four infants. Four males and four females are reported for site OK-66, but this includes one child (66-7) sexed as male. Given the difficulty of assessing the sex of immature remains even with modern techniques, this should be seen as suspect, and indeed could call into question all of the other estimations of sex as well

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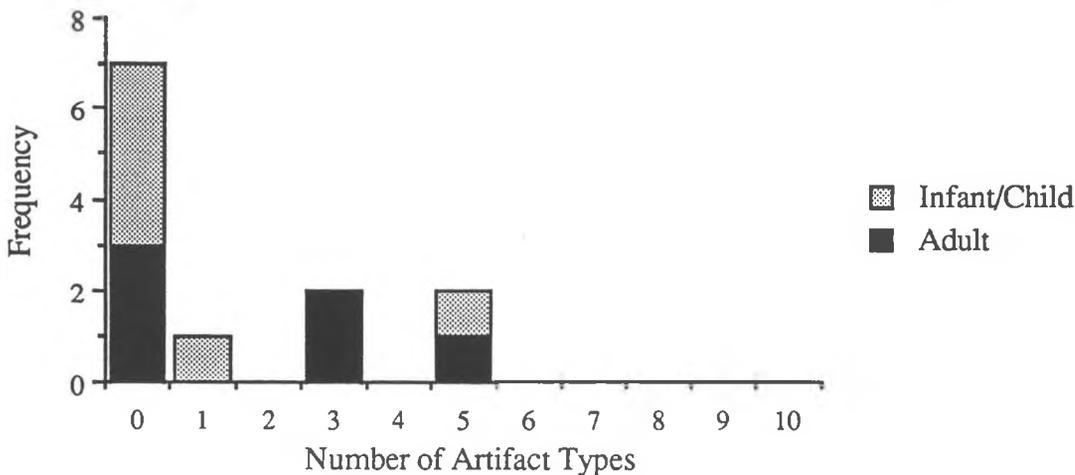
(Grabert also records the sex of an infant in a disturbed burial [66-2] as female). Sex was not reported for any of the OK-112 individuals. There is no indication of differential treatment along the dimensions of either age or sex (although too few sexed burials occur to make this observation meaningful in any case). The average number of artifact types found in adult graves is 1.60 compared to 2.00 in subadult graves (infants and children combined). It should be noted that not all grave inclusions appear to have been reported by Grabert (1968) for Burial 66-4, an adult male. The presence of only four additional types with this burial would negate the small (statistically insignificant) difference that does appear between the adult and subadult averages. Figure 6.17 shows the distribution of artifact classes among age groups

One of the more unusual features at OK-66 is that six of the burials had either one or both hands missing. Grabert (1968:140) emphasises: "It was not merely a matter of missing bones; rather all trace of the hand or hands had vanished". Both hands were missing from Burials 66-4, 9, and 10; the left hand was absent in Burial 6, and the right from Burials 66-7 and 12. There is no discernible pattern involving either age or sex. Grabert (1968:140) cites a personal communication from David Sanger to the effect that "... a similar practice has been observed in burials in south-central British Columbia". I am not aware of the sites that Sanger might be referring to. In any case, I suspect that the explanation lies in factors other than the intentional "post-mortem ceremonial amputation" posited by Grabert. For one thing, Burials 66-7 and 10 were disturbed. As Grabert (1968:141) notes on the very next page, Burial 66-7 was in fact missing much of its right side, the same side from which it is noted that no trace of the hand remains! Other bones besides the hands were also absent in some of the apparently less disturbed burials: Burial 66-9 was missing some of its ribs in addition to both hands, and Burial 66-6 was missing its sternum. An examination of the skeletal remains for evidence of cut-marks would help to resolve this issue.

Keller Ferry, 45LI-27

This designation (Sprague and Mulinski 1980) was given to Collier *et al.*'s Site 2 situated on the south bank of the Columbia opposite the Sanpoil. Twelve individuals from 11 burials were excavated from sand along the riverbank. Stone circles and/or cedar planks marked 6 graves. Two female and one male adult, three adolescents, five children, and one infant (Collier *et al.* 1942) were recovered based on Mulinski's (n.d.) age estimates. Burial 13 contained the remains of a child (13a) and an adult female (13b). Subadults, at 50% (6/12), are relatively high. Adults do not differ from subadults in artifact richness or grave lot value (number of types: adult $\bar{X}=1.00$; utilitarian $\bar{X}=1.33$ and 0.50 ; sociotechnic $\bar{X}=0.50$ and 0.50).

Figure 6.18: Artifact Diversity Distribution at Keller Ferry



The artifact assemblage, with one important exception, is relatively simple, including projectile points, stone knives, graters, unworked flakes, pestles, a maul, a hammerstone, a bone awl, dentalia beads, abalone pendants, a copper bead and a copper fragment, and a whalebone club. Seven individuals lack artifact associations of any kind. While no burials at Keller Ferry are outstanding in terms of their artifact richness, the most elaborate inclusions are found with Burial 12, a child, and include a "cache of unworked flints", a projectile point, a copper bead, five dentalia beads, and a carved whalebone club. The whalebone

club, as discussed in Chapter 4, is likely an important object indicative of high prestige. Its association with a child, as far as I am aware the only known example of such an association on the Plateau, is therefore interesting. It is also worth noting that Burial 12 is one of the five graves at the site lacking either a stone circle or cedar planks. Here, as elsewhere in the Upper Columbia, there appears to be no correlation between grave elaboration and grave inclusions. The temporal integrity of the site is difficult to ascertain. A protohistoric component is suggested by the two occurrences of copper. Overall, the impression is again that of a transitional late prehistoric/protohistoric assemblage.

Whitestone Creek, 45-FE-24

Collier *et al.*'s (1942) Site 24 (45-FE-24), referred to here as Whitestone Creek, provides a total of 38 individuals, including ten infants, five children, two adolescents, and 21 adults. Three graves hold double interments, in two cases an infant and a child, and in one case an infant and an adult of unknown sex. The site is within the area traditionally occupied by the Sanpoil division of the Okanagan Interior Salish. The Whitestone Creek cemetery/village midden site may in fact correlate with Ray's (1932) Site 16, the largest winter village of the Sanpoil (Collier *et al.* 1942:127). The overall artifact assemblage appears to be mainly protohistoric/early historic in date, with copper artifacts found in 11 burials, glass beads in seven, and iron objects in four. The glass trade beads are the most temporally sensitive artifacts in the assemblage. The vast majority of the total of 8548 beads found with burials are of the blue and white variety that represent the earliest forms seen on the Plateau—these colours were noted by Lewis and Clark in the first decade of the nineteenth century (Thwaites 1904-05). A few green, red, coral, and black beads of roughly the same shape are also present. These date slightly later (Pullen 1970). All of the beads were of a size suitable for use as necklaces or were found in positions directly indicating their use as necklaces (Collier *et al.* 1942:105). The use of beads for necklaces precedes their use as decoration sewn onto clothing (Sprague cited in Pullen 1970). Thus, while Collier *et al.* (1942:26) place the site as post-1820, all of the bead types could be accommodated within the period 1810-1820.

The site plan provided by Collier *et al.* for the Whitestone Creek site indicates a non-random distribution of burials (Figure B.6). While the assemblage will be treated as a single analytical unit, the clustering of burials at datum stake D should be kept in mind, since this group contains the majority of the burials lacking grave inclusions at the site, as well as an unusual burial with grave inclusions (discussed below). On the other hand, neither preservation nor burial practices seem to differ between the two areas, with both having cedar plank cists and/or stone circles associated with most of the burials. At least two possible interpretations come to mind: 1) area D is a spatially segregated area that was peripheral to the remainder of the burial site and was used mainly for individuals of lower socioeconomic standing, or 2) a significant temporal difference is involved, so that most of area D represents an earlier time period. Even radiocarbon dating is unlikely to have the necessary resolution to differentiate these burials into distinguishable time periods. Removing those stake D burials lacking grave inclusions as well as one unusual burial with grave inclusions reduces the Whitestone Creek sample to 28 individuals.

Only four broad unsexed age categories—infant, child, adolescent and adult—could be addressed, since finer age distinctions were not made and sex was not reported for any of the burials in published form. Additional information has since been made available through Thomas J. Mulinski's (n.d.) re-analysis of what skeletal material is available from Collier *et al.*'s collection. Nevertheless, for most purposes it is necessary to collapse even the four age classes into two in order to have sufficient sample sizes in the subgroups for statistical tests. At Whitestone Creek, the infant/child group comprises 16/38 (42%) of the total assemblage and thus there is no evidence for its being underrepresented. No statistically significant differences in treatment of subadults are indicated in either body position or orientation.

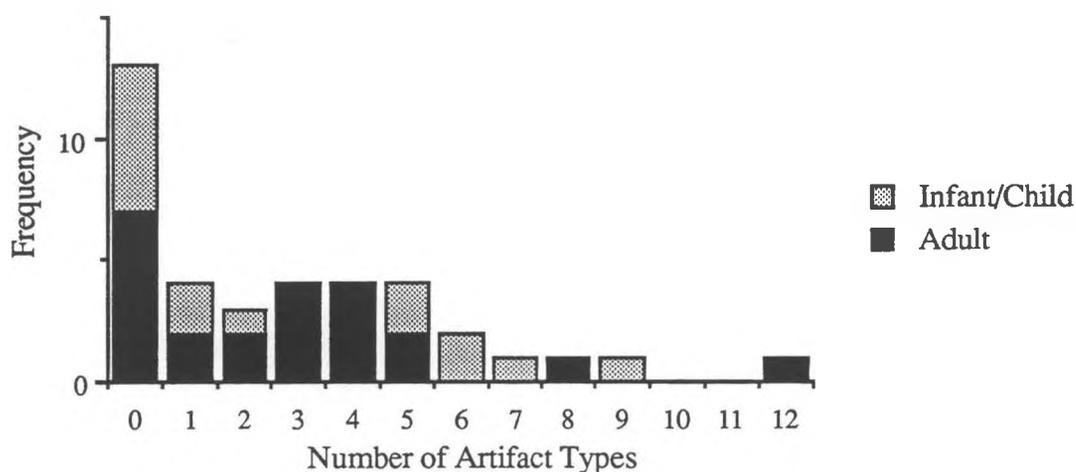
Mulinski provides estimates of sex for 21 of the 23 adolescents/adults present in the assemblage, including seven males and 14 females. This ratio, 2:1 in favour of females, represents a significant (.10 level) departure from the expected 1:1 ratio (binomial $p = .0946$). There are no significant differences in number of artifact types between the sexes, but Whitestone Creek does provide one of the few instances in which a statistically significant association was found between sex and artifact type. Three of the seven males are found with projectile points, compared to none of the 14 females (Fisher's $p = 0.0472$). Discussion and interpretation of this is left for the next chapter, in which artifact type associations with age and sex are examined more thoroughly.

The Whitestone Creek assemblage reflects a mixing of traditional and Euroamerican items. Utilitarian artifact types include projectile points, knives, scrapers, mauls, notched sinkers, hammerstones, bone points, bone awls, needles, digging stick handles, and beaver teeth. Objects assumed to function more

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in the sociotechnic sphere include *Dentalium* and *Olivella* beads, abalone pendants, incised and plain bone beads, bear claw cores, elk teeth, copper beads and pendants, a copper bracelet, glass beads, woodpecker beaks, a dog skull, bear baculae, anthophyllite celts, and beaver tooth dice. Included as principally sociotechnic items are an iron sword blade and a musket barrel. Given the assumed status connotations of early metals, the few unidentified iron fragments present are also interpreted as sociotechnic items.

Figure 6.19: Artifact Diversity Distribution at Whitestone Creek



Many burials at Whitestone Creek contain abundant grave inclusions. This is especially true when the stake D cluster is removed. In absolute numbers, some of the burials contain the highest of all those cited in this study, due to the presence of thousands of trade beads. *Dentalium* is found in 16 graves, making it by far the most common artifact type, while copper beads occur in eight. The addition of other copper artifact types—pendants, bells, buttons, and bracelets—increases this total to 11. *Dentalium* and copper beads are strongly correlated with one another, almost certainly reflecting their use in composite necklaces and/or “copper rod armour”. In no instance does a copper item of any kind occur without *Dentalium* being present in the same grave. Glass beads, found in seven burials, are moderately correlated with both *Dentalium* and copper. They sometimes occur in large numbers (e.g. 6187 beads with Burial 21), but also singly (Burial 3). Interestingly *Olivella* beads, the second most common marine genus, are actually negatively correlated, though only weakly ($r = -0.508$), with *Dentalium*. The significance of this is not clear, but it may be that the two marine species were acquired through different trade networks maintained by different individuals or families. However, the five burials with *Olivella* beads (Burials 13, 19, 22, 23, and 30) do not cluster spatially (nor is this pattern seen more generally on the Plateau).

The “unusual” grave near stake D alluded to earlier is Burial 35. The burial is that of an adult male, flexed on the left side, and surrounded by cedar planks. The position and grave facility are typical for the site. What is unusual are its grave inclusions. These—including a projectile point, a graver, an end scraper, a knife, shaft smoothers, an antler wedge, bone points, awls, unidentified worked bone, and a bear baculum—are far more reminiscent of late prehistoric assemblages seen elsewhere along the Upper Columbia (e.g. Sheep Creek, 45-ST-46, discussed below), suggesting that it may date to this period rather than to the protohistoric period.

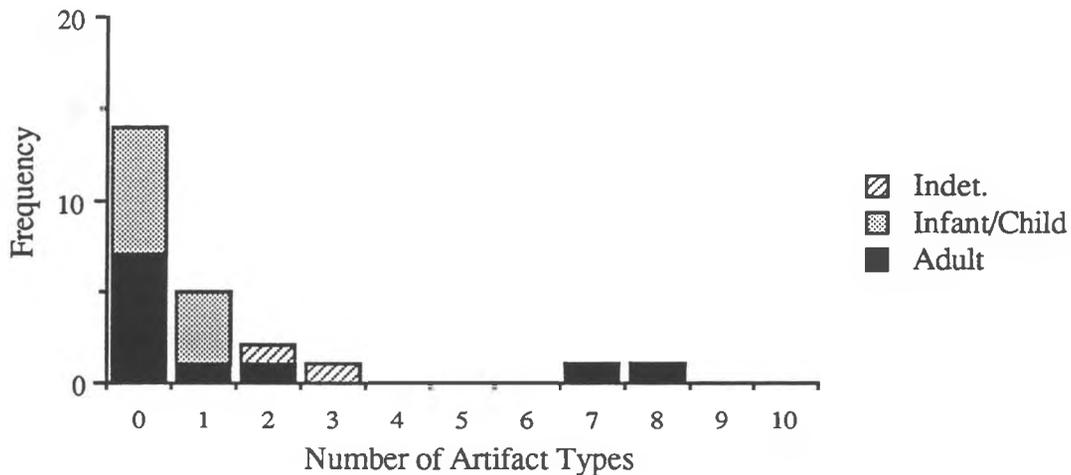
The average number of artifact types is 2.63 for the infant/child group and 2.86 for the adolescent/adult group. This becomes 3.26 for the infant/child group and 3.40 for the adult group if the stake D cluster is removed. In neither case is the difference between the two age groups statistically significant. The subadult group in fact displays a distribution of grave inclusions very similar to that of the adults (Figure 6.19). Infant and child burials were also treated separately and compared to each other and to adults without significant results. The combined infant/child group has, when trade beads are counted individually, a far higher average number of artifacts per burial than the adult group, on the order of 561 to 160 (or 691 to 232 if the stake D cluster is removed), but even these differences are not statistically

meaningful given the extremely high associated variances and the small sample sizes. The large values are caused by the presence of only one or two extremely rich graves, at least in terms of glass beads, in each group

45-FE-7

Site 45-FE-7 is located just across Whitestone Creek from site 45-FE-24. It extends along the north bank of the Columbia from the east side of Whitestone Creek to the beginning of a small talus slope (45-FE-5), also containing looted burials. Collier *et al.*'s sites 7A and 7B were consolidated by Chance (1967) into a single continuous site, 45-FE-7. Thus the burial numbers used by Mulinski (n.d.) and adopted here do not match those in Collier *et al.* (1942); they are the same for Site 7A, but the burials in 7B are numbered consecutively from the last burial in 7A rather than starting over with Burial 1 (thus burials 1 to 13 from Collier *et al.*'s site 7B become 10 to 22 from 45-FE-7). This results in a total of 22 graves containing 24 individuals, including ten adults (two males and five females), one adolescent, eight children, and three infants. Again there are discrepancies between identifications made in Collier *et al.* (1942) and the re-analysis by Mulinski. In all cases in which the skeletal material was saved and thus available for re-analysis, Mulinski's identifications are given priority. All graves were simple pit interments. While Collier *et al.* (1942) give the impression that each grave contained only a single individual, Mulinski notes one triple (Burial 1) and one double (Burial 11) interment. Both multiple interments lack grave inclusions, and so there is no problem with attempting to assign artifacts to specific individuals, and they are retained in the analysis.

Figure 6.20: Artifact Diversity Distribution at 45-FE-7



The utilitarian artifact assemblage from 45-FE-7 is extremely limited, including only scrapers, hammerstones, bone awls, and bone points. The sociotechnic group is more diverse, including *Dentalium*, *Olivella*, and shell disc beads, a shell pendant, elk tooth pendants, beaver tooth dice, a bone pendant, red ochre, glass beads, copper beads and pendants, a copper bracelet, and unidentified iron fragments.

There is no indication of subadult underrepresentation (11/24 or 45.8%). The adult/adolescent group contains on average more artifact types than the infant/child group ($\bar{X} = 1.64$ vs. $\bar{X} = 0.36$; utilitarian $\bar{X} = 0.18$ and 0.18 ; sociotechnic $\bar{X} = 1.45$ and 0.18), but not significantly so. In fact, the difference can be attributed to the presence of two relatively rich burials, Burial 3 and Burial 4, containing eight and seven artifact types, respectively (Figure 6.20). Burial 3 is an adolescent, while Burial 4 is an adult male. In terms of absolute number of artifacts, Burial 4 is by far the richer, containing a total of 521 items, including 454 dentalia beads. Burial 3 contains a total of only 20 items, and in this respect it is exceeded by Burial 20, an adult of unknown sex containing 50 glass beads, although the artifact richness in the latter is limited to the one type. The three males at the site, skewed by Burial 4, contain on

average more types than the five females ($\bar{X} = 2.33$ vs. $\bar{X} = 0.40$), but given the small sample and high variances involved this difference fails to reach statistical significance.

The occurrence of Euroamerican trade items places at least part of the assemblage in the protohistoric/early historic period. No details are provided concerning the colour or form of the glass beads, found in three burials, but Collier *et al.* (1942:104) state that most of the beads recovered from burials during the project as a whole were tubular with slightly rounded edges, and were either blue or white. These, as discussed elsewhere, are typically considered the earliest bead types found on the Plateau. This suggests that use of 45-FE-7 may overlap or be contemporaneous with that of 45-FE-24, although of course this is difficult to demonstrate. Some separation, presumably temporal rather than social or economic, is likely indicated by the observation that none of the graves from 45-FE-7 had stone circles or cedar planks, whereas these features, although not universal, were very common at 45-FE-24.

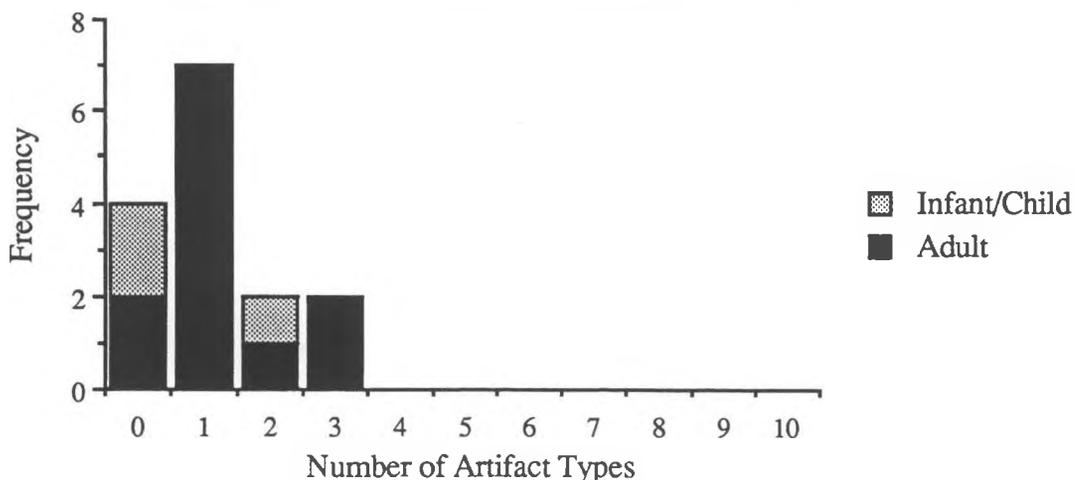
45-ST-8

Collier *et al.*'s (1942) site 8 (45-ST-8) is located in a large talus slope on the north bank of the Spokane River approximately eight miles above its confluence with the Columbia. An estimated 30 burials may have originally been present, but most had been disturbed by local collectors, and Collier *et al.* (1942) recovered only 12. Mulinski's (n.d.) re-analysis of the material provides a total of 15 individuals. Again, although not recognised by Collier *et al.*, there were two multiple interments, Burial 1 containing the presumably partial remains of one adult male and two adult females, and Burial 7 containing the remains of an adult female and an adolescent (?). Since a number of grave inclusions were found in Burial 1, the association of artifacts with specific individuals is problematic (although photographs may exist that would make this possible). This is less of a problem with Burial 7, in which only a single artifact, a worked bone fragment, was found.

The total of 15 individuals represented includes eleven adults (including two males and three females), one adolescent (?), and three children. Subadult representation is low (3/15 or 20%), but not significantly so given the sample size. There are no significant differences at the .10 level between adults and subadults in overall number of artifact types, number of utilitarian types, or number of sociotechnic types (Figure 6.21). Nor are any significant differences seen between males and females.

The artifact assemblage at ST-8 is relatively impoverished, consisting of a projectile point, a pestle, a bone awl, a bone "bodkin", a bone "arrow wrench", unidentified worked bone, *Olivella* beads, elk tooth pendants, a catlinite elbow pipe, red ochre, copper beads, and iron fragments. The copper beads, iron fragments, and catlinite pipe place at least part of the group into the protohistoric/early historic period. The absence of glass beads in an assemblage has been used on the Plateau as evidence of a relatively early protohistoric date, although this may be questionable. Nevertheless, the overall late prehistoric/protohistoric character of the assemblage is once again clear.

Figure 6.21: Artifact Diversity Distribution at 45-ST-8



Freeland, 45-FE-1

The Freeland site (45-FE-1) is located on an eroding bank above Lake Roosevelt near the Kettle Falls bridge. Sprague and Birkby (1970) excavated nine graves containing an estimated 17 individuals (mostly incomplete), while prior erosion produced the remains of an additional ten individuals out of context. Mulinski (in Chance *et al.* 1977) subsequently reported a single grave containing two individuals to bring the total from the site to an estimated 29 individuals. It is likely that many more have eroded out without being detected and that many graves remain (Sprague and Birkby 1970:16). All the material appears to date to the early historic period. Copper is especially common at the site, and an iron point was found with one burial and glass seed beads with another. Stapp's (1984) trace element analysis of protohistoric copper included samples from the Freeland site. As expected, the results indicate that the copper is Euroamerican in origin.

Demographically, the sample includes three adult males, seven adult females, one adult of indeterminate sex, six children, and 11 infants (Mulinski in Chance *et al.* 1977; Sprague & Birkby 1970). Out of a total of 29 individuals, then, 18 (62.1%) are the remains of infants and children. This is an extremely high proportion, although within the upper limits of the range (30-70%) proposed by Weiss (1973). It is also of interest to note that four of the ten excavated graves were double infant or infant/child burials, with the second individual usually only partially represented. Three of the ten graves contained double interments representing an adult with an infant. A natural interpretation for such an occurrence might be that the infant was buried along with its mother when she died, as no one would be able to look after it (cf. Teit 1900:329). Two of the adults in this case, however, were male. In contrast, there were no cases of two adults being buried together.

Most of the Freeland burials are either very incomplete or recovered out of context. Still, we again appear to see a protohistoric pattern of greater inclusion of infants and children within the adult mortuary space, similar to that seen at Whitestone Creek (45-FE-24). Sprague and Birkby state that the high proportion of subadults, shallow burial, the disturbed and crowded burial distribution, and the frequency of multiple interments all combine to strongly suggest that this site may have been an "...epidemic burial ground of greater extent than indicated by the excavations..." (1970:16).

Sprague and Birkby (1970) report two males and seven females. This represents a significant departure at the .10 level from a model assuming equal representation of the sexes (binomial $p = 0.0898$). The inclusion of an additional adult male found subsequently (Mulinski in Chance *et al.* 1977), however, renders this difference insignificant (binomial $p = 0.1719$). This argues eloquently for caution in the interpretation of even "statistically significant" results based on very small samples. The burials are too disturbed to permit an investigation of other dimensions of variability and sex.

The most common artifact type by far is the tubular copper bead. Copper beads and/or pendants were found in seven of the ten excavated graves, and evidence of copper staining on bone is found on 17 of the 29 individuals represented. Some graves contained no copper artifacts, yet the skeletons were copper stained. Even this figure likely underestimates the true proportion of burials interred with copper, since many skeletons are incomplete, some being represented by only two or three elements. *Dentalium* occurs with five of the ten excavated graves, ranging from two carved segments in Grave 7 (an old adult female) to 408 whole and segmented shells in Grave 8 (Burials 8A and 8B, a neonate and infant, respectively). The remaining artifact types include copper and brass bracelets, copper pendants, glass seed beads (all with Grave 8), shell disc beads, shell and bone pendants, a carved bone tube (interpreted by Sprague and Birkby as a gaming piece), and bear claw cores. The only possible utilitarian item found was an iron point with Grave 3. The near complete absence of aboriginal artifact types and materials would be unusual in a protohistoric site, suggesting, as Sprague and Birkby do (1970:15-16), an early historic date for the assemblage.

Grave inclusions were found with all the excavated graves except Grave 4, and even then the infant Burial 4B was copper stained, indicating that copper artifacts were present at one time. Burials at the Freeland site are far too disturbed to attempt any kind of quantitative analysis. The relative richness of the artifact assemblage associated with the burials may suggest that this site was a discrete burial ground reserved for the wealthier members of a village. Such an interpretation may receive further support from the fact that the preservation at the site was sufficient to show that at least five of the ten excavated burials (each designated grave seemed to contain one primary individual) had been wrapped in deerskin; Sprague and Birkby (1970:15) suggest that originally all the burials may have been wrapped in skins. As discussed in Chapter 4, such treatment was often reserved for the rich in many areas of the Plateau during the ethnographic period, including the Sanpoil-Nespelem (Ray 1932), with the poor being wrapped only in tule or bark mats. If such discrete burial places were used, however, one might expect them to have been

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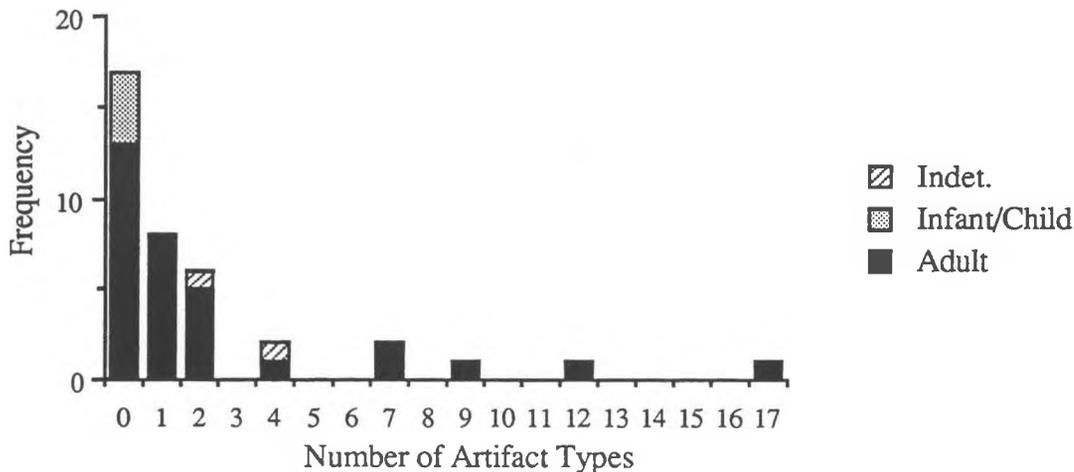
mentioned in the same ethnographies, and they are not. Lacking more information there is little that can be said beyond this that is not simply speculation.

Sheep Creek, 45-ST-46

Moving further up the Columbia, Collier *et al.*'s (1942) Site 46 (45-ST-46), referred to here as Sheep Creek, provides a sample of 38 single interments. Basic age classification can be provided for 36 individuals, with two remaining indeterminate. Combining data from Collier *et al.* and Mulinski, four children, one adolescent, and 31 adults are identified. The site falls into the territory traditionally attributed to the Lakes division of the Okanagan. While there are few diagnostic artifacts, the grave inclusions appear consistently late prehistoric (ca. 1000-200 B.P.) in age, with only a single copper item, a pendant, present in the assemblage. Stapp's (1984) trace element analysis suggests that this item is most likely of Euroamerican origin. Thus at least one burial could belong to the early protohistoric period, but it is in any case retained in the following calculations.

Unlike Whitestone Creek (45-FE-24), the distribution of burials at the late prehistoric Sheep Creek site does not exhibit any obvious spatial clustering, forming a more typical linear array along the river bank (Figure B.7). Also in sharp contrast to Whitestone Creek, Sheep Creek contains only 4/34 (12%) child burials (there were no infants), and none of these contained any grave inclusions (Figure 6.22). This indicates significantly lower subadult representation than expected given Weiss' 30% minimum (binomial $p = .0117$). The site map shows that the child burials appear to cluster in two loosely defined pairs. The pairs are themselves separated, one at the east end of the site and the other just west of the centre of the overall burial distribution. However, a comparison of the average distance between each burial and its nearest neighbour and the distance between each child burial and its nearest neighbour suggests that the impression of clustering does not significantly depart from random placement ($p = 0.2174$).

Figure 6.22: Artifact Diversity Distribution at Sheep Creek



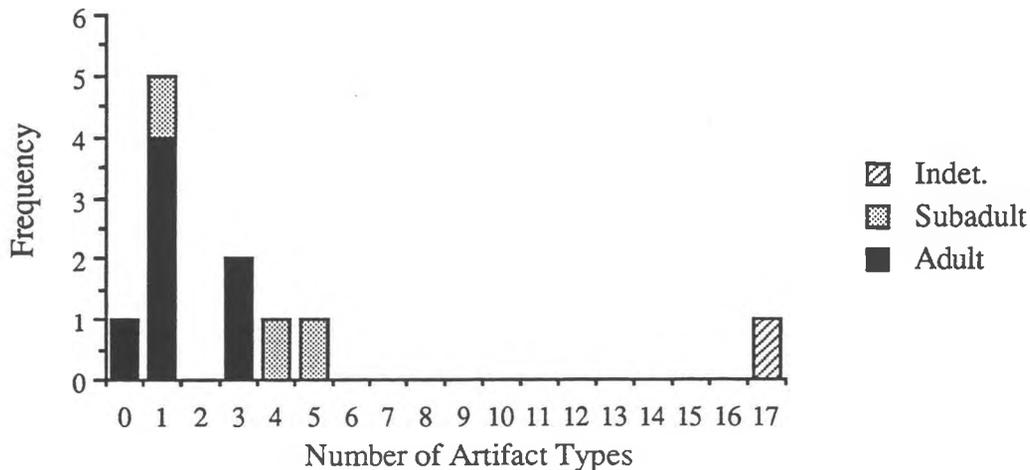
The utilitarian assemblage at Sheep Creek includes projectile points, knives, scrapers, graters, shaft smoothers, bone points, harpoon parts, awls, fleshers, antler flakers, antler wedges, beaver teeth, and digging stick handles. Rather unusual are what Collier *et al.* (1942) refer to as slate "needles" found in Burials 22 and 24. The absence of any perforation calls into question this identification—they may be awls or whetstones, or they may be intended as pendants since both are notched near one end as if for suspension (see Collier *et al.* 1942:163, Plate XVg and h). Sociotechnic objects include *Dentalium* beads, tubular stone pipes, an anthophyllite celt, bear baculae, a bear tooth, a shell pendant, a slate pendant, bone tubes, bone beads, and pigments. The only Euroamerican trade item is a copper pendant found with Burial 2 (identified by Stapp [1984] as Euroamerican in origin). By itself it does not significantly alter the overall late prehistoric nature of the assemblage. The copper pendant could have been one of the very earliest to have reached the Upper Columbia. In this case one would expect that it would be found in one of "richer"

burials. While Burial 2 does have an higher than average number of artifact types (5 compared to the site average of 2.13), all of these with the exception of the pendant itself are simple utilitarian items, thus its grave lot value (GLV) is relatively low. Alternatively, Burial 2 could be slightly more recent than the rest of the burials.

The average number of artifact types contained in Sheep Creek adult burials is 2.13 while the average number of total artifacts is 4.60. Given the extreme variability in the adult group, the differences in both the number of types of artifacts and the absolute number of artifacts between the child and adult age groups is not significant in statistical terms, this despite the fact that none of the four child burials contained any artifacts. The difference between the proportion of child and adult burials with any artifacts whatsoever is, however, significant at the .05 level ($t = 2.21$; $p = 0.034$). Although sex was not reported by Collier *et al.*, Mulinski's (n.d.) re-analysis of the Sheep Creek material provides estimates of sex for 18 individuals, comprising eight males and ten females. Sheep Creek presents the only assemblage in which significant differences between the sexes are seen in number of artifact types. Number of artifact types (male $\bar{X} = 5.38$, female $\bar{X} = 1.30$; $p = 0.0808$), number of utilitarian types (male $\bar{X} = 4.25$, female $\bar{X} = 1.20$; $p = 0.0972$), and number of sociotechnic types (male $\bar{X} = 1.13$, female $\bar{X} = 0.10$; $p = 0.0825$) are all significantly different at the .10 level. The observed difference would be more extreme were it not for Burial 17, an adolescent female, with a total of nine artifact types, including the only sociotechnic types found with any female. No other female has more than a single artifact type.

Burials 23 and 24 are by far the richest at the site, with 12 and 17 artifact types, respectively. Burial 23, a male, is the only grave associated with a cairn-like feature; in this case a circle of rocks some eight inches above the skull. Burial 24, a probable male, contains the only dentalia beads (six) and the only shell pendant found at Sheep Creek. Both burials include tubular pipes. The only other tubular pipe was found with Burial 7, an adult of unknown sex—beside the pipe, the only grave inclusion in this burial was a quartzite scraper.

Figure 6.23: Artifact Diversity Distribution at 45-ST-47



45-ST-47

Collier *et al.*'s Site 47 (45-ST-47) is located on an island across from Sheep Creek (45-ST-46). Collier *et al.* (1942) report ten individual primary interments, but Mulinski's (n.d.) re-analysis provides a total of eleven individuals, with Burial 5 being a double interment containing an adult male and an adult female. No special features are associated with any of the burials at this site.

Combining data from Collier *et al.* (1942) and Mulinski (letter on file), there are six adults (two males, one female, and two probable females), one adolescent, one child, and two infants. Subadult representation is 30.0% (3/10), not significantly below Weiss' minimum.

Utilitarian items in the assemblage include projectile points, a flaked stone knife, a graver, shaft smoothers, bone points, bone harpoon points, a bone "arrow wrench", and beaver teeth. This inventory is

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impoverished compared to the richness of sociotechnic items at the site, which include *Dentalium* beads, *Olivella* beads, shell pendants, copper beads and pendants, a copper bracelet, glass beads, a bone comb, a carved bone ornament, bird bone whistles, cougar claw cores, a turquoise pendant, and an anthophyllite celt. A "steel" knife found in Burial 1 is also interpreted here as a sociotechnic item. The celt, approximately 17 cm long, is the sole grave inclusion in the adult Burial 4. The turquoise pendant is rather unusual, though not unique ("turquoise" pendants have also been described from burials near The Dalles, the Middle Columbia, and the Canadian Okanagan—see Chapter 4).

Burial 1 is the richest at the site, with a total of over 790 individual items representing 17 artifact types, the majority of them sociotechnic. Unfortunately, it is the single burial from the site for which no age information is provided (Figure 6.23). By comparison, Burial 3, an adult male, includes 94 items representing three types of marine shell. Burial 10, a child, had five artifact types, including an undisclosed number, presumably quite high, of whole and segmented *Dentalium*, as well as the "turquoise" pendant.

Despite its close proximity to Sheep Creek ST-46, ST-47 displays a demographic and artifact distribution appearing far more similar to that of a protohistoric site such as Whitestone Creek. The assemblage, including copper beads, pendants, and bracelet, glass beads, and a "steel" knife, clearly indicates the presence of a protohistoric or early historic component. Collier *et al.* (1942) date the site to about 1810, but the grave inclusions with Burial 1 are as late as anything seen at Whitestone Creek, which Collier *et al.* suggest dates post-1820. Regardless, both sites likely date to the early nineteenth century. It is also important to note that the above Euroamerican trade items occur with only two of the burials at ST-47; the remaining eight contain only objects of aboriginal manufacture. Thus the temporal integrity of the assemblage may be questioned. As with Whitestone Creek, there is really no way to resolve this issue, and any interpretations made concerning ST-47 must be considered as essentially tentative.

Summary of Burial Forms and Status in the Upper Columbia

The entire area around the Whitestone-Columbia confluence, also referred to as Hellgate Flat, presents an intensively utilised landscape. It may be to some extent arbitrary to divide this landscape into separate and distinct sites. Site 45-FE-24 dominates both the burial sites and occupation middens in terms of size. But Collier *et al.* (1942) report three other campsites in the immediate vicinity (45-FE-11, FE-12, and FE-25), and, in addition to the two burial sites discussed above (45-FE-7 and FE-24), there are two talus burial sites, 45-FE-5 and FE-13, in slopes located at the east and west ends of Hellgate Flat, respectively. Collier *et al.* (1942) recovered two undisturbed burials with no grave inclusions from FE-5, and observed evidence for at least four looted graves. All but one of the burials at FE-13 had apparently been looted, the single undisturbed adolescent burial found contained six elk teeth and the remains of a large coiled basket.

Collier *et al.*'s (1942) investigation in the Upper Columbia reveal two general types of burial that have survived archaeologically: pit inhumations and talus slope burials. There is no indication that cremation ever took place (Collier *et al.* 1942:42), although more recently Chatters (1986) has found evidence for cremation at one site in the Okanogan area (45-OK-561). The relatively close proximity, both spatially and apparently temporally, of the two forms of burial—pit inhumation and talus burial—presents the opportunity to test the hypothesis that talus burials were associated with poorer, low status members of the community in the Upper Columbia region. With one or two exceptions, both artifact quantity and richness are low at the talus burial site 45-ST-8. A comparison of overall number of artifact types between ST-8 ($\bar{X} = 1.13$) and FE-24 (2.79) does result in a significant difference ($t = 2.09$, $p = .0415$), suggesting that the talus burials at ST-8 are indeed poorer on average than the pit inhumations at Whitestone Creek, 45-FE-24. But the picture is not that simple.

First of all, the exceptions at ST-8 are important. Burial 11, an adult, was buried with 198 copper beads, 14 *Olivella* beads, and an iron object. Because of the copper, a deer hide fragment was also preserved. This does not appear to indicate a poor individual. Burial 9, a child, included red ochre and 23 perforated elk canines. Six elk teeth were also found with the single undisturbed talus burial at 45-FE-13. Elk teeth, as discussed in Chapter 4, may have wealth connotations. While exceptions to the general trend can be anticipated, there seem to be too many here given the small number of talus burials excavated. More importantly, 45-ST-8 has basically an identical average number of artifact types as the non-talus (i.e. pit inhumation) burial site 45-FE-7 near Whitestone Creek ($\bar{X} = 1.13$). And Whitestone Creek (45-FE-24) thus also exceeds the immediately adjacent site FE-7 ($t = 2.37$, $p = .0210$) in average number of artifact types per individual.

The interpretation of the observed pattern is unclear given the difficulties in demonstrating

contemporaneity. While the presence of similar Euroamerican trade articles at all three sites suggests broad contemporaneity for their most recent use, the presence of an earlier component at one site but not the others (for example) could at least partially account for the observed differences. Furthermore, the protohistoric and early historic periods saw such dramatic increase in the availability of trade goods that a matter of a few years difference between the sites could result in marked changes in quantities of grave inclusions. This ties in with the discussion of possible responses to inflation presented in Chapter 2. A final possibility is that there actually were socioeconomic differences between the individuals buried at FE-24 and those at FE-7 and ST-8. This could suggest the use of spatial separation to emphasise status distinctions, although not simply along the lines of talus/non-talus burial forms. Even if space was being used in this fashion, there were many exceptions, most notably the stake D cluster at FE-24, which lacks any grave inclusions whatsoever. This suggests that meaningful socioeconomic inequalities may be distinguishable both within and between cemeteries within regions.

The Okanagan/Similkameen

The Canadian Okanagan/Similkameen area has received relatively little archaeological attention. This being the case, the following section provides only a brief qualitative review of the available evidence, such as it is. The information is considered worth relating as it constitutes the only data from this important area, forming the boundary between the Columbia Plateau and the Canadian Plateau. The two main sources for burial information in the Okanagan area are Atkinson (1937, 1952) and Caldwell (1954a, b). Both provide summary data on a number of burial sites from the Okanagan and Similkameen Valleys. Indeed it seems possible, given their nearly identical descriptions of sites, that Caldwell was either largely summarising or building upon Atkinson's earlier work, although this is not acknowledged. Additional information on burial sites in the Similkameen can be found in Barlee (1969a, b).

Atkinson (1952) estimates that over 40 graves were disturbed at a site above Osoyoos Lake, south of the town of Oliver, during the construction of a subdivision. Caldwell's (1954a) site CO-61, possibly a remnant of the site described by Atkinson, consists of a series of evenly spaced interments on a low gravel terrace above Osoyoos Lake. Caldwell (1954a:16) states that "all" (referring to an undisclosed number) bodies were found to be tightly flexed. (It is not entirely clear whether this statement is based on Caldwell's own excavations of a remnant of the site or the reports of, or discussions with, Atkinson.) Occasionally interments were enclosed in cedar plank cists. Grave inclusions reported by Caldwell include a single set of copper earrings, abalone ornaments, a series of large obsidian and chert blades, and abundant red ochre.

Site CO-47 (Atkinson's [1937] Site 3) presents a similar series of burials overlooking Skaha Lake (previously known as Dog Lake), near Penticton. Caldwell (1954a:16) states that at this site the "... physical remains were burned". Atkinson (1937, 1952) also mentions cedar-lined cists containing "charred" human remains from Skaha Lake, interpreting these as partial cremations. In other cases remains are described as "well burnt" (Atkinson 1937). All individuals investigated by Atkinson (1937) were oriented with their heads towards the lake. Atkinson (1937) also records instances of one burial overlying another, though in separate graves. Grave inclusions were reportedly abundant, including prestige items such as large nephrite celts, perforated elk teeth, *Dentalium*, serrated agate and obsidian points and/or eccentrics, and a "turquoise" pendant (Atkinson 1937; Caldwell 1954a, b). Other artifact types include fine agate points, whetstones, chipped knives and other stone implements, bone awls, wedges, barbed bone points, an incised digging stick handle, beaver teeth, red ochre, and bear tooth pendants (Atkinson 1937). In one burial, the skeletons of a beaver and a small dog were reportedly found; some of the bones in this burial were discoloured by copper salts (Atkinson 1937, 1952). Atkinson (1952:10) adds that this site produced many of the finest artifacts found in the southern Okanagan.

Just south of Skaha Lake, on the west side of Vaseaux Lake, five crania (out of an undisclosed number of burials disturbed during railway construction) were reportedly found showing cranial deformation (type not reported), which Atkinson (1952:9) interprets as evidence of a raiding party from the coast. At Gallagher Lake, near Oliver, Atkinson (1952) reports the presence of a series of seven graves covered with large cairns, all aligned along a rocky ridge. Shell ornaments and a metal dagger are noted as coming from these graves. Caldwell's site CO-84 consists of a group of stone cist burials near Hedley. Large flat slabs were arranged in a rectilinear form. The majority of these graves apparently produced no artifacts (Caldwell 1954a:17). Caldwell also reports a single cairn burial near Oroville, Washington, found to contain tubular copper beads strung on buckskin, a copper "plate", a large nephrite celt, and an undisclosed number of dentalia beads.

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Further north in the Okanagan Valley, Caldwell (1954b) defines what he refers to as the "Oyama" burial pattern, typified by a series of graves near Kalamalka Lake. These consist of simple shallow interments, often containing extensive grave inclusions. Artifacts listed include polished pestles, steatite pipes, and serpentine or nephrite celts (Caldwell 1954b:36). Although no burials were reported, a small housepit village overlooking Sawmill Creek near Kelowna is worth mentioning in that excavations uncovered a copper war club, which, although not illustrated, one can assume is similar to those reported from the Lower Columbia, The Dalles, and Spences Bridge (see discussion in Chapter 4).

In the absence of statements to the contrary, it is reasonable to assume that all those burials investigated contained single primary interments. Graves seem to have been frequently located on bluffs overlooking water. No information on age or sex is provided for any of the burials from these sites. If either Atkinson or Caldwell kept notes preserving individual grave associations, I have been unable to find them. With the notable exception of the Skaha Lake assemblage, the limited number of artifact types reported is likely misleading; almost undoubtedly both Atkinson and Caldwell failed to report the full artifact inventory in their brief articles, concentrating instead on the more unique and spectacular objects. In interpreting the assemblages, Caldwell (1954a:18) notes an apparent chronological trend from the use of cairn and stone circles in the prehistoric period to the use of cairns and cists in the protohistoric and early historic periods. Those cist burials investigated apparently all contained evidence of Euroamerican contact, supporting Sprague's (1967) chronology of burial forms.

Both Atkinson and Caldwell accept the evidence for burning seen on some of the Skaha Lake burials as indicative of the practice of cremation. Some of the supposedly cremated human remains were for some time housed in the Penticton City Museum, where Atkinson was curator, but have been since returned for reburial. Thus it is not possible to directly assess the presence of cremations in the Okanagan. However, at least two lines of evidence suggest that these burials may not represent true cremations: 1) the "charred remains" were associated with cedar cist burials, and cedar cist burials elsewhere on the Plateau appear to typically show evidence of ceremonial burning rather than intentional cremation, 2) cedar cist burials appear, at least in the Okanagan, largely protohistoric in date, and Teit's informants specifically state that the Okanagan did not practice cremation (see Chapter 5).

Despite the incomplete and purely descriptive, indeed almost anecdotal, nature of the body of material presented above, the information is important in that it provides evidence for the presence of a variety of wealth and prestige items in the Canadian Okanagan/Similkameen. This in turn at least suggests that the area, despite being somewhat "marginal" in terms of its access to salmon, did participate to some extent in the larger regional trade network, likely forming an important trade corridor between the Upper Columbia and the remainder of the Canadian Plateau (cf. Vivian 1992). Given the absence of radiocarbon dates on burials or even relative dates based on projectile point typologies, it is impossible to provide any time depth to such a scenario. Ethnographically, however, the Okanagan as a group appear to have become much more powerful with the introduction of the horse in the protohistoric period than was the case in earlier times (as witnessed by their expansion into the Similkameen and Nicola Valleys). Thus it may be that the importance of the Okanagan area and the ability of its elite to participate in the trade network of prestige goods first appeared or at least was greatly enhanced only after these developments took place. The mortuary data are not inconsistent with this interpretation, with most of the prestige items apparently associated with large quantities of Euroamerican trade copper artifacts (cf. Caldwell 1954a).

The Fraser River

Lytton

The modern town of Lytton is located at the confluence of the Thompson and Fraser Rivers. These are the two largest rivers draining the south-central interior of British Columbia, and contain the most important salmon runs. Thus it is not surprising that the locality was densely populated prehistorically. George Dawson and Harlan I. Smith conducted the earliest investigations in the area, revealing glimpses of a rich and complex material culture. Unfortunately their work, if adequate by the standards of the time, was not superseded by more rigorous investigations in subsequent decades. In fact, it was not until the late 1960s that serious archaeological work was again undertaken, and even this involved mainly survey rather than excavation. As might be expected, by this time land development and amateur collectors had both taken their tolls, such that innumerable burial and habitation sites were destroyed. Over the last two decades considerable work has been undertaken in the interior, but even it has largely been mitigative, resulting in small and scattered samples, often from disturbed contexts.

Canadian Geological Survey member George Dawson (1891) conducted the first reported

"archaeological" investigations at Lytton, which he seems to mistakenly refer to as being occupied by the "Shuswap" (Lytton is practically the centre of Thompson traditional territory). He noted a large cemetery, containing an estimated several hundred graves, in eroding sand dunes at the confluence of the Fraser and the Thompson Rivers. Dawson states that many of the bodies had been buried in the "usual upright sitting posture" (1891:11). This is not at all a common position for burials on the Plateau, and in fact Smith (1899:159) was equally puzzled by Dawson's statement, noting that he (Smith) did not find any skeletons at Lytton exhibiting such a position. However, local inhabitants of the area have also commented on observing upright seated burials during more recent roadbuilding and other earthmoving activities (Stryd and Hills 1972:196). Dawson also reported evidence for several instances of reburial, where the bones had been gathered up and lain closely together out of anatomical position. Smith (1899:159-160) may have found corroborative evidence for this practice in at least one instance.

Together, Dawson (1891) and Smith (1899) provide a list of artifact types from the large burial site at Lytton that includes many items interpretable as indicators of wealth and prestige. Artifact types attributed to the site include *Dentalium*, perforated scallop (*Pecten caurinus*) shells, abalone (*Haliotis* sp.) pendants, quartz crystals, chipped stone eccentrics, copper pendants and beads, incised and carved tubular steatite pipes, small and large nephrite celts, perforated stone discs, carved antler tine clubs, bone daggers, bone and antler zoomorphic carvings, bone and tooth pendants, and beaver tooth dice. Utilitarian items noted include projectile points, chipped knives, scrapers, drills, mauls, shaft smoothers, bone points, awls, fleshers, needles, antler wedges, harpoons, beaver tooth knives, and digging stick handles.

Smith (1899) excavated an unknown number of intact burials and a large series of disturbed human remains from Lytton. He provides relatively detailed information on only seven burials. All of these seem to have been single adult interments, flexed on the side. At least some grave inclusions were present with all of these burials. Since they were apparently selected for illustrative purposes, however (Smith 1899:159), it is quite conceivable that this was one of the criteria employed. In any case, five of the seven burials for which associations are reported contain quite elaborate inventories, often including such items as dentalia, abalone, copper beads and pendants, nephrite celts, eccentrics, steatite pipes, and numerous bone and antler objects. Burial 4 (my own designation, taking Smith's descriptions in the order in which they appear) includes two zoomorphic antler carvings executed in a strong Northwest Coast artistic style (Smith 1899:158, Figures 114, 115). No Euroamerican trade items were found in this grave.

The majority of the human skeletal material itself seems to have been found and collected from disturbed surface contexts. Thus, with the aforementioned exceptions, it is not possible to assign specific grave inclusions with particular individuals. Indeed for the most part it is not possible to identify individual skeletons. The basic unit of analysis in this case becomes the individual skeletal element. A brief examination of such surface-collected material curated in the American Museum of Natural History in New York revealed an assemblage dominated by adults, although the cranial remains of children and infants were also present (Schulting 1993b). The partial remains of a large number of individuals are represented; a specific MNI was not calculated, but is, at rough estimate, on the order of 50 or more, based on an impression derived from the cranial remains. A number of crania and mandibles were copper stained; unfortunately time did not permit an estimate of the percentage of these elements affected.

The occurrence of copper staining was recorded for all of the radii present in the Lytton material curated at the American Museum of Natural History. It was felt that this could provide at least a rough quantitative estimate of the abundance of copper artifacts in burials at this site. The radii were chosen on the basis that the forearm would be the logical location for copper bracelets, a fairly common use for this material during the protohistoric period, to which at least part of the site dates. Also, radii far outnumbered ulnae. A total of 24 left radii were observed, with copper staining present on only one (4.2%); 17 right radii were observed, with copper staining again noted on one specimen (5.9%). In fact, the two copper-stained elements closely match in size and may belong to the same individual. Thus the percentage of radii in the collection exhibiting copper staining ranges between 2.4% (1/41) and 4.9% (2/41). Only one immature radius is present in the collection, and even it is adolescent. Presumably this reflects a collection bias on the part of Smith, since immature individuals are more frequently represented among the cranial remains (no exact figures are available). Another bias is apparent in that only fairly complete elements are present in the collection.

Admittedly this measure of the occurrence of copper is extremely crude. Copper pendants are more common than bracelets, especially from prehistoric contexts. In fact, it is not clear that there are any copper bracelets known from a secure prehistoric context, from either the Northwest Coast or the Plateau. Since part of the site is undoubtedly prehistoric, the incidence of copper artifacts is probably

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underrepresented. Even during the protohistoric and early historic periods, both pendants and tubular beads were more popular than bracelets.

In terms of dating the use of the site, Dawson proposed that the cemetery had been abandoned shortly after Euroamericans reached the area. Interestingly, it was the supposedly older graves that were "better provided" in terms of grave inclusions than the more recent. The projectile point styles shown in Smith (1899:136, Figures 6, 8-10, and 15-18) are all diagnostic of the Kamloops horizon of ca. 1200-200 B.P., but many of these points are provenienced only to "Lytton or Kamloops". Furthermore, with the exception of Smith's Figure 5, the points appear to have been selected to highlight knapping skills, concentrating on elaborate late Kamloops horizon multi-notched points as well as eccentrics. Thus, while there remains some question about an earlier component at the site, the late prehistoric Kamloops horizon seems well-represented. A minimal protohistoric component is also indicated by the occurrence of copper, an iron pendant, and a single glass bead. At least some of the copper depicted by Smith (1899:151, 160, Figures 87-89, 116) may be prehistoric (i.e. native), while some (1899:150, Figure 84) is most likely protohistoric (i.e. Euroamerican trade copper).

Mile 28 Ranch, EdRk 3

The Mile 28 Ranch site (EdRk 3) is (or rather, was) located on a terrace overlooking the east bank of the Fraser River approximately midway between the modern towns of Lytton and Lillooet. The site was largely disturbed through landscaping for cultivation before being excavated by Sanger and Borden in 1968 as part of Sanger's study of the Lochnore-Nesikep locality (Sanger 1968a, b, 1970). Two undisturbed burials were recovered, together with the disturbed remains of a third. The landowner estimated that seven or eight additional burials had been disturbed prior to the arrival of the archaeologists. This brings the total for the site to an estimated 10 to 11 individuals, but, based on the number of scattered elements, Sanger (1970:13) believes that this may be too conservative. In any case, no further burials appear to have been present beyond this, making the site a fairly small one.

Burial 1 was that of an adult male, lying flexed on its left side and oriented with the head to the north. A projectile point was found embedded in a thoracic vertebrae. A total of 14 artifacts were found with Burial 1. Burial 2, an infant, was found beside Burial 1, and lay tightly flexed on its right side and oriented with the head to the east. The only grave inclusion consisted of a projectile point lying between the ribs and the left radius. Whether or not it represents evidence of a violent death is uncertain, but this seems possible given the embedded point in Burial 1 and the close spatial association between the two burials.

Artifacts found by the landowner during the bulldozing activities and those found lying scattered around the site can be attributed to the burial component with a high degree of certainty, since there appears to be little evidence for any other use of the site. The utilitarian assemblage includes some 20 projectile points, knives, a ground slate blade, two well-formed hand mauls, abraders, a fragment of a sandstone shaft smoother, antler wedges, a beaver incisor, a marmot incisor still intact in a split mandible, and five antler hafts. The sociotechnic assemblage includes two dentalia beads, seven perforated scallop (*Pecten caurinus*) shells, two copper pendants, five copper beads, nine nephrite celts (ranging from 6.5 to 27.0 cm in length), two undecorated steatite discs with central perforations (interpreted by Sanger [1970:75, Fig 32a] as spindle whorls), an unperforated steatite disc, two steatite tubular pipes, (see Sanger 1970:75, Figures 32d and e), two chipped basalt "pendants", fragments of incised bone, and three undecorated antler pendants.

Of particular interest are the seven *Pecten* shells, which, according to the landowner, were found lying nested with their perforations in alignment. As noted by Sanger (1970:101), this strongly recalls the scallop-shell rattles used ethnographically by the Coast Salish during the performance of family-owned cleansing rites (see Suttles 1987). Also of interest are the copper artifacts, which Sanger (1970:101) infers to be native, although he does not provide a basis for this claim. The two pendants are small squares (2.5 cm to a side), but the beads range from 2.5 to 8.5 cm in length—the upper end of this range may be too large for native copper beads on the Plateau, suggesting that at least some of the metal may be Euroamerican in origin. This in turn suggests the possibility of at least a minimal protohistoric component. The 20 projectile points include forms typical of both the Plateau (ca. 2400-1200 B.P.) and Kamloops (ca. 1200-200 B.P.) horizons (as outlined in Richards and Rousseau 1987), in approximately equal representation. This suggests either little temporal integrity to the burial component, or the presence of earlier occupation debris not mentioned by Sanger (1970). Alternatively, it may be that it is the transition period of ca. 1200 B.P. that is represented.

Texas Creek, EdRk 1

The Texas Creek site (EdRk 1) is located on the west bank of the Fraser River, approximately 12 miles downriver from the modern town of Lillooet. The site itself is actually at the mouth of a smaller drainage called Spray Creek, but it has taken the name of the larger creek found just over one mile to the south (Sanger 1968b). The site was severely impacted by logging operations followed by looting before any systematic investigation could be conducted. As a result no intact burials are known from the site, nor is it even possible to estimate the site's dimensions or the number of burials it may have held (Sanger 1968b:1). Only a very limited collection of human skeletal material was made, including a single element, a femur, that appeared scorched.

The assemblage collected from the disturbed surface of the site comprises 168 artifacts. Utilitarian artifact types include projectile points, bifaces, a drill, large scrapers, abraders, a sandstone shaft smoother, hand mauls, bone awls, "mat creasers" (bull roarers?), needles, bone points, unidentified worked bone, antler wedges, flakers, an harpoon head, a fragment of an antler digging stick handle, and a number of worked rodent incisors. Sociotechnic artifact types (see illustrations in Sanger 1968b) include an unusually large and diverse number of steatite artifacts, consisting of four tubular pipe fragments, three decorated pendants, a small incised "maul", an incised ring, a three-dimensional zoomorphic carving of a lizard, and two spindle whorls, one of which is decorated with the nucleated circle, or circle and dot, motif. Other types include bone beads and incised bone tubes (possibly drinking tubes as identified for the ethnographic period), a bone whistle, two incised bone pins, two perforated deer incisors, two decorated marmot tooth dice, four pierced scallop shells, three finished nephrite celts (ranging from 15.0 to 22.4 cm in length) and three "blanks", and two stone "clubs". The absence of shell beads is somewhat unusual, but may reflect the disturbed context of the site. The four pierced scallop shells (*Pecten caurinus*) suggest an obvious connection to those just discussed for the Mile 28 Ranch site.

The complete absence of Euroamerican trade items together with the presence of many temporally diagnostic small side-notched projectile points indicates a Kamloops horizon date for the burial assemblage; Sanger (1968b:15) is somewhat more specific, suggesting a date in the range 500 to 300 B.P. Hayden and Ryder (1991) informally suggest that the assemblage may be earlier than this, on the order of ca. 1000 B.P.

Lillooet

Hayden (Hayden *et al.* 1985) has argued that Lillooet cultural complexity may have been greater in the past than seen during the ethnographic period. This idea was first articulated by Stryd (1971, 1973), based on his work on large housepit villages in the Lillooet area. Hayden's work at the large prehistoric housepit village of Keatley Creek (EkR1 7) has since provided support for this hypothesis (1990a, Hayden and Spafford 1993; Spafford 1991). Resources, including lithic raw materials, faunal remains, and botanical remains, are unequally distributed between large and small housepits, with the former exhibiting greater richness. The extreme variation in both village and individual housepit size seen in a number of sites near Lillooet (and also in the Kamloops/Chase area of the South Thompson) is entirely unknown from the ethnographic period. Keatley Creek seems to have been largely abandoned by ca. 1200 B.P., possibly as a result of a catastrophic landslide that blocked the Fraser at this time (Hayden and Ryder 1991). The other large housepit villages in the area that have been dated also seem to have been abandoned at this time (Hayden and Ryder 1991; Stryd 1973).

Unfortunately the large cemeteries that must have been associated with these sites have not yet been identified, nor has any systematic attempt been made to do so. Even the single burial found during housepit excavations at the Bell site (EeRk 4), a large housepit village near Lillooet, offers some unique insights into the richness of this period. This burial will be discussed in some detail below. A large series of burials would be invaluable in understanding the cultural developments that took place during the centuries preceding 1200 B.P. The area surrounding Lillooet once held numerous other burial sites (Sanger 1961, 1968a, b), but most or possibly all have been destroyed by amateur collectors, mining and agricultural activities, and residential development. As it is, the burial evidence is so scant and poorly documented that it can add relatively little to our current understanding of this important area, and thus only a very subjective discussion of the mortuary evidence can at present be given for the Lillooet region.

One of the larger burial sites from the Lillooet area is the Murray site (EeR1 18). The site, located on a sandy terrace just outside of the town of Lillooet, is estimated to have once contained approximately 40 individuals (Stryd and Baker 1968). Concerning the human skeletal material collected by Stryd and Baker (1968), Beattie (in Stryd 1980:10) reports the presence of a minimum of 12 individuals, including five males, four females, and three individuals of indeterminate sex. Apparently this total does not include

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the three intact burials discussed below (Beattie in Stryd 1980:10).

The majority of the burials were looted, such that information is available on only three undisturbed burials. These include the remains of two infants and one adult female (Stryd and Baker 1968). One of the infants, Burial 1, was interred with a strung necklace of dentalia, tubular copper, and glass trade beads. A copper thimble was also attached to the leather thong. Preservation was sufficient to also permit the recovery of a fragment of sagebark basketry, in which the infant may have been placed. Burial 2, also an infant, contained no grave inclusions. Burial 3, an adult female, was covered first with a sagebark mat and then with four metal plates, presumably made from flattened kettles. Artifacts included the remnants of a hafted iron knife, and a deerskin pouch containing three copper bracelets and an unidentified circular iron object (Stryd and Baker 1968).

Artifacts found scattered through the disturbed cemetery include various chipped basalt implements, bone needles, incised bone tubes and whistles, a zoomorphic antler club (see Baker 1970:52, Figure 12), red ochre, dentalia beads, tubular copper beads, copper pendants, a copper needle, and some 150 glass beads, of which 148 were various shades of blue (Stryd and Baker 1968). The assemblage appears mainly protohistoric in age, although an earlier prehistoric component may of course have been present as well. Stryd and Baker (1968) suggest that the Murray site dates to the 1840's. But, considering that the vast majority of the trade beads are of the earliest blue variety, the assemblage could also easily be accommodated within the first two decades of the nineteenth century.

Wigen (1984) provides a brief report on another disturbed burial site (EeR1 192) near Lillooet. An MNI of 22 was calculated for the remains recovered from the site (Lazenby and McKendry 1984), comprising 13 adults and nine subadults. Evidence suggests that most or all of the burials were flexed (Wigen 1984). Orientation could be determined for only two individuals, both of which lay with the head to the north. No individual artifact associations could be determined, but artifacts found near the burials include diagnostic Kamloops horizon projectile points, bifaces, both utilised and unmodified flakes, quartzite implements, an abrader, a bone awl, a large nephrite celt, bird bone beads, and a steatite tubular pipe. Some of these artifacts may have been associated with the occupation component also present at the site, although it is highly probable that the celt, beads, and pipe were grave inclusions. The assemblage is dated by the presence of Kamloops points and absence of earlier forms together with the absence of Euroamerican trade items.

Fountain, EeR1 19

The Fountain site (EeR1 19) was a large pithouse village (it has since been largely destroyed by agricultural activities) located some eight kilometres northeast of Lillooet. As noted in Chapter 5, Fountain was one of the most important trading sites in the Fraser Canyon area, and possibly on the entire Canadian Plateau. In addition to conducting test excavations in a number of housepits at the site, Arnoud Stryd (1973) recovered the remains of two individuals (not within a housepit). Burial 1 was flexed on its right side, oriented with the head to the west, and covered by a sagebark mat and Douglas fir bark. Stryd (1973) identifies the skeletal remains as adult but does not provide any information on sex. Items found with or attributed to this individual (there was some disturbance caused by a bulldozer) include a birchbark container holding a chalcedony drill, a quartzite crystal, gypsum crystals and pendants, and mica flakes. Other items include a basalt biface, basalt and chalcedony flakes, red ochre, and a carved whalebone club (see Chapter 4 for a discussion of the importance of whalebone clubs). The club was found broken into three pieces, and Stryd (1983:175) suggests that at least one of the breaks was intentional. One end is simply incised with a zoomorphic image, possibly that of a fish (Stryd 1983:174-175, Figure 9:10b). Burial 2 was found directly underlying Burial 1, separated by some 20 cm of fill (Stryd 1973). It lay flexed on its left side, with the head oriented to the southeast. Douglas fir bark was again found over the body, but other than this there was no evidence of any grave inclusions. (Fish vertebrae seem to have been found throughout the fill deposits, and may not be associated with either individual, or, conversely, they may be associated with a ritual offering accompanying both. In any case they do not enter into the present discussion.) It is interesting to speculate that Burial 2 might represent a slave killed and interred in the bottom of his or her owner's grave, and then covered with some fill before Burial 1, suggested here to be the primary individual, was interred (see Skwaam Bay site on Adams Lake below for what may be a similar situation).

Stryd (1973, 1983) suggests that the burials date to the Kamloops horizon of ca. 1200 to 200 B.P. on the basis on the extensive Kamloops phase occupation of the site. However, the only two available radiocarbon dates (uncorrected) from the site, taken from an hearth (1490 ± 70 B.P.; S-583) and an oven

(1505 ± 70 B.P.; S-584) (Stryd 1980), place it in the late Plateau horizon.

Bell, EeRk 4

Perhaps one of the most interesting burials on the Canadian Plateau is that of an infant found at the Bell site (EeRk 4), also to the northeast of Lillooet, excavated by Stryd (1973). Extensive excavations at this large pithouse village site yielded only a single interment. This immediately suggests the exceptional nature of this burial, since it does not represent the normal mortuary practice. (Indeed, no cemeteries have been found associated with the large prehistoric pithouse villages of the Lillooet region, so just what the normative practice was is largely unknown.) The burial is that of an infant, approximately 1.5 years of age, found in the floor of Housepit 19 as a flexed primary interment, lying on its left side and back. Organic staining around the infant may indicate a basket (Stryd 1973). The remarkable feature of this burial—other than its location inside a pithouse, relatively uncommon on the Plateau—is the richness of its grave inclusions. These include a carved antler figurine, a carved steatite pendant, five steatite pipe fragment pendants, an incised antler comb, a quartz crystal, a siltstone bear figurine, 246 *Dentalium* beads, a number of basalt flakes, and abundant red ochre.

Of further interest is the fact that Housepit 19 was one of the largest at the site (out of 23 present). Stryd (1971, 1973:87) has long argued that differences in pithouse size within larger villages might reflect socioeconomic inequality. More recently, investigations by Hayden (1990a; Spafford 1991) at the Keatley Creek site (EkRl 7) have lent some support to this hypothesis. The presence of so many elaborately decorated pieces and the abundance of *Dentalium* in a prehistoric burial on the order of 1000 years old or more further testify to the uniqueness of this burial. Both the location of the burial inside the pithouse and the richness of the grave inclusions suggest that this was very unusual and special mortuary treatment. Whether the treatment reflects the ascribed status of the infant, that of the family or corporate group to which it belonged, or, perhaps, some combination of the two, is unknown.

Canoe Creek, EiRn 15

The site of Canoe Creek is located 50 miles northwest of Clinton, on the south side of Canoe Creek approximately one kilometre east of its confluence with the Fraser. Seven highly disturbed burials were recorded from the site, and the presence of five stone circles suggests that additional individuals are present (Rousseau 1978). Copper trade beads and pendants were present in all but one of the burials, indicating a protohistoric or early historic date for the assemblage. The sample is too small and disturbed to apply quantitative methods, so that only a brief overview will be provided.

A high proportion of subadults are represented. The seven individuals recorded include two adults (one male and one female), an adolescent, two infants, one young child (age 2-3) and one older child (age 8-10). One of the graves contained three individuals while another contained two; only two single interments were found. The high incidence of infants and children together with the occurrence of multiple burials suggest to Rousseau (1978:31-32) that the Canoe Creek burials represent the victims of an epidemic.

Considering the large quantities of copper and dentalia present, the artifact assemblage is surprisingly limited. Indeed, the only other artifact types present are perforated elk incisors and canines, a large hafted iron point, and red ochre. The excellent preservation conditions resulting from the large quantities of copper (see Schulting 1992) also made it possible to record the presence of a leather pouch, a bundle of sticks, and three feathers, all with Burial 6, a newborn. In most cases, however, due to the disturbance caused by the landscaping activities leading to the discovery of the site, individual artifact associations could not be determined.

The Thompson River

Nicoamen, EbRi 7

The Nicoamen site is located on the north side of the Nicoamen River near its confluence with the Thompson, some 17 km north of the modern town of Lytton. Skinner and Copp (1986) estimate a minimum number of 22 individuals from the site, many of which were disturbed by the construction activities leading to the site's discovery. This estimate includes eight adults, four adolescents, three children, and seven infants (the majority of which appear to have been neonates). (This differs from the four children and six infants/neonates reported in Skinner and Copp due to my definition of "infant" as less than 2 years of age.) Three of the adults were identified as male and four as female, the remaining adult being indeterminate. Skinner and Copp (1986:86) also estimate the sex of three of the adolescents as female, one infant as possibly female, and one neonate as possibly male. One of the adolescent (age 16) skeletons,

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Burial 14, reportedly exhibits pregnancy scars. Adolescent (age 18) Burial 3 was also identified as female on the basis of morphological criteria. The remaining adolescent (Burial 4) and the two infants, on the other hand, were assigned a tentative sex largely on the basis of their grave inclusions in conjunction with ethnographic information. As discussed in Chapter 7, there appears to be little validity to this type of exercise on the Plateau (see also Schulting 1993b).

The burials for which the observation could be made all appear to have been flexed, either to one side or on the back. Orientation in ten of the 13 relatively undisturbed burials was with the head roughly to the east, paralleling the direction of the slope in which the graves were placed. As has been the case in many of the other protohistoric sites discussed, many of these burials are multiple interments, either of adult and infant/child, or of two infants or children. Double adult burials are not seen. As was noted earlier with the Freeland site (45-FE-1), the tendency is to interpret this type of pattern using ethnographic sources stating that breast-feeding infants were interred with their mothers when these died (Teit 1900:329), but again in at least two instances the adult was male. Skinner and Copp (1986) interpret the high proportion of infants and double burials in the protohistoric component as representing an epidemic.

The Nicoamen artifact assemblage is fairly elaborate. Utilitarian artifact types include chipped stone projectile points, knives, scrapers, graters, utilised flakes, bone points, awls, needles, antler wedges, and abraders. Sociotechnic types include dentalia beads, an abalone pendant, unidentified shell beads, copper pendants and fragments, a brass thimble, iron fragments, glass beads, bone beads and tubes (possibly whistles), an incised bone plaque, perforated wolf canines, bone "tally" sticks, ochre, a tubular steatite pipe, nephrite celts, incised rodent mandibles, and a loon beak. The steatite pipe, found with the adult male Burial 1, is somewhat unusual in that it is unpolished. The glass trade beads were all found with one infant, Burial 12, and are all robin's egg blue, one of the earliest bead forms on the Plateau (ca. 1780-1820) (Skinner and Copp 1986:24).

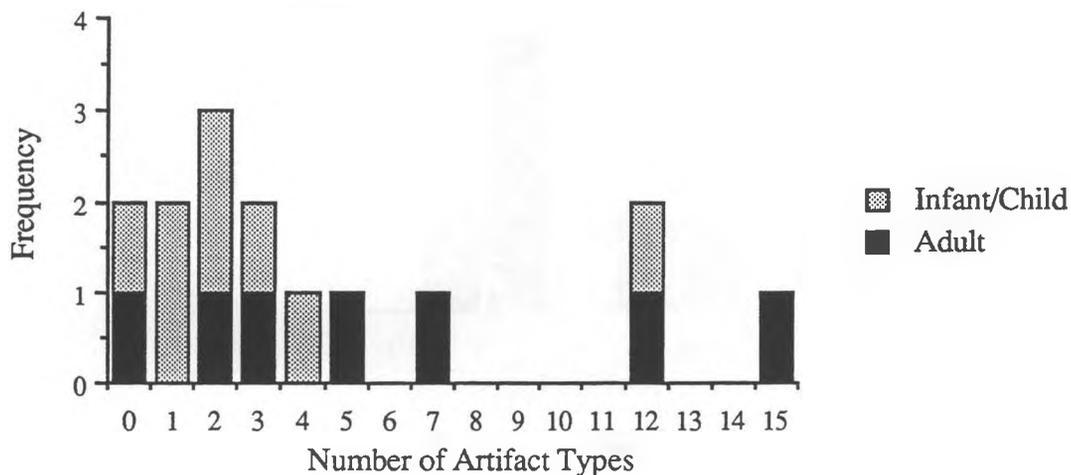
Also of note are three flat lengths of perforated bone or antler; Skinner and Copp (1986) suggest that these may be either "mat creasers" or bull roarers. Their identification as "mat creasers" is presumably based on the similarity of these artifacts to an object Sanger (1968b:9, Figure 4d) identified as a "mat creaser", found at the Texas Creek burial site, discussed earlier. The basis for his identification is unknown, however, since as far as I am aware no comparable objects have been identified in the ethnographic literature for the Plateau. Furthermore, they bear absolutely no resemblance to the fully documented mat creasers of the Northwest Coast, and could not possibly function in an analogous manner. Their alternative identification as "bull roarers" is also not without problems. For one thing, there seems to be no indication in the ethnographic literature that bull roarers were ever used on the Plateau. But the objects at least do bear a resemblance to bone bull roarers in the Southwest, although at ca. 18 cm the Plateau specimens are slightly larger (R. Carlson, pers. comm. 1993). The Plateau specimens are perforated distally, and at least some are highly decorated. Both of these characteristics could be seen as more consistent with an identification as bull roarers rather than mat creasers. The distinction has, of course, important implications for what category the artifacts are placed into. For purposes of this analysis the items have been designated as "utilitarian" (whether they are "mat creasers" or not), but this is certainly open to revision. The class occurs too infrequently to substantially affect the results of the quantitative study in any case.

The burials apparently fall into two spatially and possibly temporally defined clusters, a late prehistoric group and a protohistoric group. A single burial, Burial 6, containing two copper ear ornaments was radiocarbon dated to 740 ± 130 B.P. (S-2696; uncorrected), but the late prehistoric group to which it supposedly belongs contains copper or iron artifacts with five out of 12 burials. This, in fact, represents all but one of the occurrences of copper or iron at the site. It is possible that either the spatially defined groups are not valid, or that the date itself is in error, since this seems too early for such quantities of metal at one site. Skinner and Copp (1986:28) also question the validity of the date. Dr. Wayman of the University of Alberta is currently conducting tests on the copper ornaments from Burial 6 in an attempt to identify the source of the copper as native or Euroamerican.

Assuming for the moment that the single radiocarbon date is correct, and that the two groups identified on the basis of the date together with the apparent spatial separation are valid, the age profiles for the two groups are as follows: 25% (3/12) of the late prehistoric group are children (ages 5, 6, and 11), while 80% (8/10) of the protohistoric group are infants. Treating the sample as a whole results in 50% (11/22) subadult representation. If the late prehistoric burials have been correctly assigned, it is interesting to note the absence of infants, even given the small sample size. The protohistoric group, on the other hand, has no shortage of infants; five of the group are described as neonates by Skinner and Copp. Grave inclusions are found with some individuals in each age class (Figure 6.24).

The quantitative analysis of the Nicoamen assemblage is based on 15 relatively undisturbed burials with fairly secure grave associations. All but three burials of this group were observed and excavated *in situ*. These three, Burials 1, 3, and 18, are included as what are most likely reliable observations were made by the landowner at the time of disturbance. The 15 include six adults (four females and two males), one adolescent (possibly female), four children, and four infants. Grouping the adults with the single adolescent and the children with the infants, we find that the adult group contained twice the average number of artifact types as did the subadult group, but the difference is not statistically significant at the .10 level due to the small sample and high variances involved in both groups ($\bar{X} = 6.29$ vs. $\bar{X} = 3.13$; $t = 1.315$, $p = 0.2112$). The differences between adults and subadults in the average number of utilitarian and sociotechnic artifact types, while again favouring the adult group, also fails to approach the .10 significance level (utilitarian $\bar{X} = 3.57$ vs. $\bar{X} = 1.38$; $t = 1.34$, $p = 0.2019$; sociotechnic $\bar{X} = 2.71$ vs. $\bar{X} = 1.75$; $t = 0.941$, $p = 0.3637$).

Figure 6.24: Artifact Diversity Distribution at Nicoamen



It is not possible to address differences in treatment based on gender given the low number of sexed individuals. It is worth noting, however, that the single antler digging stick handle recovered from the site appears to have been associated with Burial 13, an adult male. Ethnographically these implements and the activity they supposedly represent, root digging, are invariably associated with women. This apparent discrepancy is discussed further in Chapter 7.

The Nicola Valley

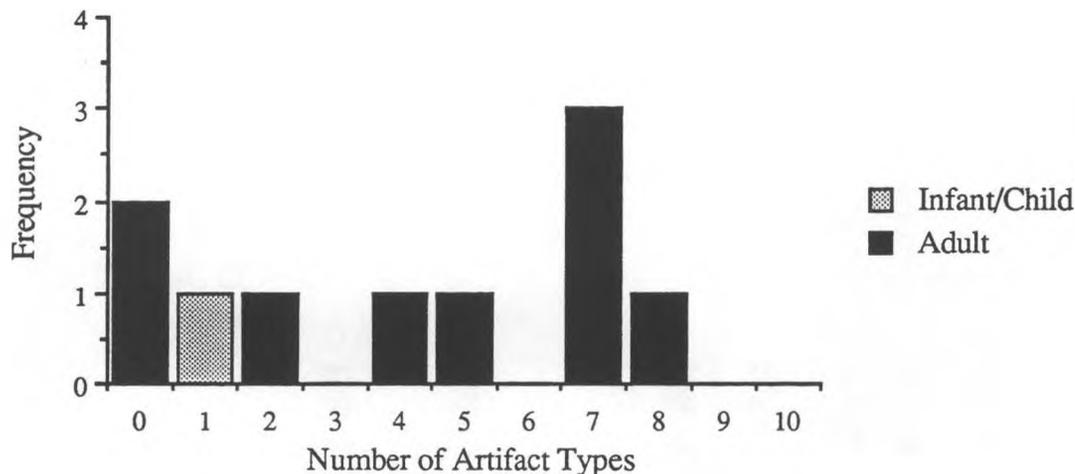
The Nicola Valley, like the Yakima Valley on the Columbia Plateau, is considered one of the poorer "backwaters" of the Canadian Plateau, with limited salmon resources (Wyatt 1972). The Nicola proper are an isolated group of Athapaskan-speaking people, though during the protohistoric and early historic they were first reduced through warfare and then assimilated by their more powerful neighbours, the Thompson to the west and the Okanagan to the east (Teit 1900), and are now extinct as a distinct ethnolinguistic group.

Smith (1900) excavated a series of 13 graves from three sites in the Nicola Valley. One of these, from the mouth of Nicola Lake, dates to 1850 or later and will not be considered here. Eleven of the 12 remaining burials were situated in talus slopes, nine at the head of Nicola Lake and two from further down the valley. Two of the burials from the head of Nicola Lake contained large sheet copper ornaments, placing at least part of that site into the protohistoric period, though some of the other burials may be late prehistoric in age. A number of isolated burials recovered since Smith's early work are also discussed in this section. There is no evidence for any burials in the Nicola Valley dating to earlier than the Kamloops horizon (ca. 1200-200 B.P.), although other evidence of occupation extends back much further (Richards and Rousseau 1987; Schulting 1991; Wyatt 1970).

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The largest assemblage from a single site in the Nicola Valley comes from a talus slope at the head of Nicola Lake. Nine burials were investigated here by Smith (1900), comprising the remains of eight adults and one child. Seven of these nine burials were available for examination at the American Museum of Natural History (Schulting 1993b). Three of the adults were identified as female and two as male, the remaining adult (Burial 2) being indeterminate. No differential treatment along sex lines could be detected. The low percentage (1/9 or 11%) of subadults may reflect recovery bias. Smith (1900) notes that the graves were difficult to detect on the talus slope, and so it could be expected that a disproportionate number of the larger, more conspicuous, adult graves would be found. In any case, given the small sample size, the representation of subadults does not significantly depart from Weiss' minimum 30% (binomial $p = 0.196$). The only association with the child grave (Burial 1) was yellow ochre (Figure 6.25).

Figure 6.25: Artifact Diversity Distribution at Nicola Valley



Two talus burials from elsewhere in the Nicola Valley, near Spences Bridge, may be added to the above assemblage. Both are adults, one female (Burial NV1—NV to distinguish these from burial numbers at the above site) and one probable male (Burial NV2) (Schulting 1993b). Burial NV1, an adult female, was found underneath a mat-covered pole tent, suggesting relatively recent interment. No grave inclusions were found with this individual. Burial NV2, an adult male, included points, flakes, a unio shell, and a nephrite celt.

Utilitarian objects in the combined Nicola assemblage include projectile points and bifaces, flakes, bone needles and awls, unidentified bone implements, a bone sap-scraper, an antler digging-stick handle, and beaver teeth. Sociotechnic objects include *Dentalium*, copper beads and pendants, large nephrite celts, incised bone drinking tubes, a bear baculum, a perforated bear claw core, and red and yellow ochre. Some of the nephrite celts are among the largest known on the Plateau—one highly polished celt in Burial 2 measures nearly 36 cm. Dog remains were also found with three burials. Burials 2 and 9 included complete skeletons (in Burial 9 the dog skeleton was covered in red ochre), while Burial 5 included only the skull. These are assumed to operate as sociotechnic items.

Obsidian and chalcedony are both relatively rare lithic raw materials in the south-central Canadian Plateau outside of the Okanagan, where assemblages are usually overwhelmingly dominated by various grades of "basalt" (Richards and Rousseau 1987; Sanger 1970). Extensive survey and limited subsurface testing in the Upper Nicola Valley found this to be the pattern there as well (Schulting 1991). Obsidian especially was found to be very rare. The inclusion of an obsidian biface with Burial 2, points with Burials 3 and 4, and five eccentrics with Burial 6 is thus unusual, suggesting that these should perhaps also be viewed as prestige items. Unfortunately, Smith (1900) provides no illustrations or indications of the size of these artifacts that could be used to support such an interpretation. The obsidian point in Burial 3, however, was covered in red ochre, which suggests a non-utilitarian use (cf. Pavesic 1985).

A number of burials from the head of Nicola Lake provide evidence for secondary interment and

possibly for the use of additional human skeletal elements in mortuary ritual. In the talus near Burial 1, Smith observed a human occipital fragment bearing knife marks, "... as though the head had been cut off" (1900:438). Burned human cranial fragments, presumably not belonging to the primary interment, are listed with the grave inclusions for Burial 3. This is the only evidence for cremation in the Nicola Valley as far as I have been able to determine. Burial 4 is said to have included a "stray" human radius in addition to the primary adult female interment (Smith 1900:439). "Burial" 6 is perhaps a misnomer, since it consists only of a single mature fibula. Yet associated with it were a nephrite celt, five obsidian eccentrics, and some chalcedony flakes.

Almost all of the known or suspected burials from the Nicola Valley are situated in talus slopes (Oliver 1991), although there is clearly a visibility bias here. It seems unlikely that pit inhumation was as infrequent as the available evidence would seem to indicate, but for now it is not possible to compare the two different forms of interment. A number of the talus burials at the head of Nicola Lake were associated with abundant grave offerings, including many exotic prestige items. Such a pattern does not agree with the hypothesis that talus slopes were generally reserved for the poor (although to be sure of this statement one would need to be aware of the full range of mortuary alternatives in the area—perhaps other burial forms contained even greater wealth). The use of talus slopes for the poor may be valid in certain areas, but it cannot be generalised to encompass the entire Plateau without empirical evidence, even given some theoretical support for it in terms of the *probable* lower energy expenditure involved in this form of burial. It should be noted that the large talus features, all or some of which may have been burials, seen in the Nicola Valley during an extensive survey in 1991 (personal observation) could represent more than the equivalent labour required for even a deep grave in a typical sandy terrace.

Kamloops/Chase

Some of the most significant excavated burial assemblages on the Canadian Plateau are those of the Kamloops/Chase area, on the South Thompson River. These include mainly data from three sites in the vicinity of Kamloops excavated by Harlan I. Smith (1900) at the turn of the century, and from the Chase burial site (EeQw 1) excavated by Sanger (1968a).

The largest assemblage from a single location in the Kamloops area comes from the "Large" site. Here, Smith recovered the remains of 13 individuals, all primary single interments. The site seems to have been substantially larger than this, but many burials had apparently been disturbed through erosion. It is also unlikely that Smith excavated the entire site. Regarding preservation of skeletal remains at the site, Smith (1900:435) states: "In some cases it was even impossible to distinguish a single bone, as the whole skeleton was decomposed to a mass resembling sawdust". However, the numerous bone and antler implements identified and collected from these very burials seem inconsistent with this observation. The human skeletal remains from the Large site could not be found by the author in either the American Museum of Natural History or the Canadian Museum of Civilization, the two institutions that Harlan I. Smith was associated with at the time.

Age and sex of the burials are very poorly reported. For the first 11 burials there is no information whatsoever regarding the skeletal remains, other than that all appeared to have been flexed on the side. The most detailed information is provided for Burial 12, an adult male approximately 50 years of age, flexed on the left side. Burial 13, a child, is the only subadult reported for the assemblage. If it is assumed that those burials not specified as to age are all adult, and there is no way to ensure the validity of such an assumption, then subadult representation is only 7.7% (1/13). Even given the small sample size, this is significantly (.10 level) below Weiss' minimum 30% expectation (binomial $p = 0.0637$), suggesting that subadults may have been partially excluded from the adult mortuary space. Differential preservation could also explain the observation. Grave inclusions associated with Burial 13 consist of *Dentalium*, unidentified pieces of shell, and what Smith (1900:436) simply terms "refuse" with no further explanation. These associations are less varied than the grave inclusions seen with the adult burials. The absence of any utilitarian artifact types is unique to the child burial, but in terms of sociotechnic types, Burial 13 does not markedly differ from some of the adults.

The artifact assemblage from the Large site is extensive and varied. Utilitarian objects include projectile points, chipped knives, scrapers, hammerstones, shaft smoothers, abraders, unmodified flakes, a slate fish knife, antler wedges, an antler harpoon point, beaver teeth, bone points, awls, scrapers, needles, and other unidentified bone implements. Sociotechnic items include *Dentalium*, *Pecten*, a whalebone object, carved bone, carved bear baculae, a bear canine, claw cores, yellow and red ochre, mica, "copper clay", copper pendants, galena, tubular stone pipes, and polished nephrite celts. Some of the *Dentalium*.

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shells are finely incised, as is at least one stone pipe. The unidentified whalebone object is assumed to be sociotechnic in nature on the basis of the scarcity of the material in interior sites, its special context when it does occur, and its affinity to high status whalebone clubs. Copper artifacts occurred in Burials 6 and 11, with copper staining on a piece of carved antler in Burial 5. Pieces of the enigmatic "copper clay" were found with Burials 3, 5, 9, 11, and 12.

Artifacts found on the disturbed surface of the site included projectile points, knives, drills, mauls, nephrite celts, abraders, bone points, composite harpoon parts, and presumably numerous other types. Of particular interest is a fine stone carving similar to the seated human figurine bowls of the Fraser Valley, Lower Mainland, and Gulf of Georgia area (Smith 1900:431; see also Duff 1956, 1975). While it can with some confidence be attributed to the Large site, the figure may have been found in a disturbed context (Smith 1900), and so its association with a burial is somewhat uncertain; however, other seated human figure bowls have been found in mortuary contexts in the interior of British Columbia (Duff 1975:52; see also Chapter 4).

Two carved whalebone clubs were recovered from the Large site (Smith 1900:422, Figures 359a, b). Smith states that these clubs were definitely associated with graves, but that, due to disturbance, he could not identify the specific individuals they were associated with. The handles of these clubs are carved to represent human heads surmounted by bird heads/headaddresses. Smith (1900:422) reports a third whalebone club found at the Large site, but it is not clear whether he is referring to the "piece of object made of bone of whale" associated with Burial 9 or another object altogether. Smith also mentions a fourth, uncarved whalebone club provenienced only to Kamloops, collected in 1893 by a Mr. C. G. King. As discussed in Chapter 4, there is excellent evidence for the interpretation of whalebone clubs as objects of great prestige and status.

Two burials exhibit possible evidence of burning as part of the mortuary ritual. Among the inclusions of Burial 9 are a burned bone awl, and what Smith (1900:435) simply reports as "burned bones, some of which are human". It is not clear from this sparse account whether the burned human bones belong to the grave's primary skeleton, or represent elements from another individual. The possible association of additional (unburned) human elements with a primary interment is also seen in Burial 6, although again no details are provided. Similarly, Burial 10 is reported to contain "burned bone", but in this case it is not even clear whether these are human or not.

A number of burials include small side-notched projectile points diagnostic of the Kamloops horizon, ca. 1200-200 B.P. None of the burials appear to include earlier point styles, although this is uncertain, since Smith does not provide illustrations of all the points found. Assuming that the copper is native, there is no evidence of Euroamerican trade goods in the 13 burials excavated. Copper beads were found scattered on the disturbed surface of the site, possibly indicating a protohistoric component, since beads are far more common at that time. However, the wide flat on which the Large site is situated also served as a habitation site well into the historic period, so that the beads could be associated with it rather than with the burials.

The Hill site is located very near the Large site. Smith recovered only two burials from this site, both adult primary interments. Of the three Kamloops sites reported by Smith (1900), only the two individuals of the Hill site were available for study at the American Museum of Natural History in New York. Both were older adolescents or young adults (Schulting 1993b). Smith (1900:437) describes the body in Burial 1 as "... probably that of a woman about twenty years of age...". While Smith's age estimation was supported by my re-examination, the sex appears to be male rather than female. This is supported tenuously by the cranium and more strongly by the pelvis. Smith's interpretation was likely based on the presence of bone needles and an iron awl among the items found in the grave, which he erroneously took to be diagnostic of gender (see Chapter 7). The assessment of the individual of Burial 2 as a young female agrees with Smith's report.

Preservation was excellent at the site, due in part to the apparent recency of the graves. Burial 1 was marked on the surface by a scattering of *Dentalium* shells and an oval of decayed wood which proved to be the remains of a broken canoe made, according to Smith (1900:436), of Alaska cedar. Wooden stakes surrounded this. The skeleton lay slightly flexed on its left side. The body had been wrapped in fabric, presumably of sagebark, and also in pieces of hide daubed with red ochre, the entire bundle being tied with vegetable cord. Strands of dentalia and tubular copper beads were found arranged across the forehead, and additional strands of dentalia and copper together with perforated elk and deer incisors lay at the neck. Other items, found in a fibre bag around the shoulders, included beaver-tooth dice, bone needles, an iron awl in a bone handle, bone tubes, a bone pendant, basalt flakes, and bearberry seeds. Red ochre permeated the bag.

The facility for Burial 2 was similar to that for Burial 1, but less elaborate. Instead of pieces of a canoe, poles had been placed around the body. The tops of these poles had been burned off about a foot below the surface; apparently none of the material in the grave was affected by the fire. The grave contained the flexed remains of a young adult female. Again, the body had been wrapped in a fabric of woven vegetable fibre. Wood fragments, possibly of a spear or bow (Smith 1900:437) lay beside one arm. Other inclusions consisted of a basalt knife retaining evidence of hafting, basalt flakes, an abrader, a beaver tooth, and a bone awl.

The abundant copper tubular beads and the iron awl together with the from of burial and the aboriginal artifacts indicate an early protohistoric date for Burial 1. Burial 2's close proximity and formal similarities suggest that it belongs to roughly the same time period. The simpler facility of Burial 2 and the lack of sociotechnic artifact types suggest that the individual was of lower status than the individual in Burial 1. The association of burning with Burial 2 and not with Burial 1 is perhaps unexpected given this interpretation, but with a sample size of two it is hardly worth pursuing the matter further.

At the Government site, Smith (1900:432, 436) excavated four graves each of which contained the partially burned remains of a single child. Unfortunately Smith provides no detail beyond this concerning the osteological remains, and the material does not seem to be available for study (I have searched the Royal British Columbia Museum, the Canadian Museum of Civilization, and the American Museum of Natural History without finding any trace of the human remains from this site). Thus it is not known either how extensive or how intense the burning was, or whether the interments represent primary cremation loci or secondary disposal.

All four burials were provided with abundant and fairly elaborate grave inclusions, including many flat bone beads, tooth and claw core pendants, *Dentalium* shell beads, nephrite celts, "copper clay", and pieces of mica, in addition to more utilitarian items of stone, bone, and antler. (In fact, the Government site burials surpass the overall Kamloops/Chase area average for number of artifact types and number of sociotechnic types.) Burial 4 is by far the richest at the site, with 17 types, including seven utilitarian and ten sociotechnic types.

The identification of the "copper clay" has been elusive; it is definitely not native copper ore, and it lacks the lustre of turquoise. Smith (1900:436) reports that some of the charred human bone fragments were copper stained, although no actual pieces of copper were recovered. Having examined it, it seems unlikely that the "copper clay" could be responsible for this staining, and so we may infer the presence of native copper in at least one of the burials (Smith does not specify whether all or only some of the four burials contained copper-stained elements).

The burials have been suggested to date to the Thompson phase, the regional manifestation of the Plateau horizon, ca. 2400-1200 B.P., based on the occurrence of a characteristic corner-notched projectile point with one of the burials (Richards and Rousseau 1982, 1987; see also Sanger 1968a:138-139). As a cautionary note, it is possible that older point forms were found and included as burial offerings. That the Natives were well aware of older point forms is clear from Smith (1899), who refers to the Thompson practice of sometimes reworking what they called "Raven's arrows" into smaller points. While the human remains themselves no longer seem to be available (and in any case the fact that they are burned would create problems), a radiocarbon date on one of the accompanying, apparently unburned bone artifacts would resolve the issue.

Although cremation was well-known even in historic times among Athapaskan groups further north in British Columbia, the Government site is possibly unique in the core south-central interior area of the Canadian Plateau. Smith's (1900:436) reference to elements as "burned" and "charred" rather than calcined suggests that no great heat was involved in the ritual, such as seen in The Dalles area on the Columbia Plateau (provided, of course, that Smith was cognisant of the distinction). While Smith does refer to the burials as "cremations", and they have certainly been accepted as such in the literature (see for example Richards and Rousseau 1987 and Sanger 1968a), it should be mentioned that light charring of bone could easily occur with ceremonial burning over a shallow grave, or over a deeper grave before it was filled. In neither of these cases would a burial strictly be interpreted as a cremation. The reported depth of the four burials ranged from one foot to "barely covered with sand". This may be compared to the reported average of three feet for burials from the Large site, two of which exhibited evidence of burning in their associations. Smith (1900:403), however, notes that the loose sand into which the interments at both sites were excavated shifts easily, and thus the depth at which the remains were found may bear little relation to the original depth of the graves. Without the human remains themselves, it is not possible to do more than advise some caution in the interpretation of the Hill burials as intentional cremations, especially in light of

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the scarcity of other well-dated *in situ* examples from the south-central Canadian Plateau.

As a final note, while Teit (1909:592) states that the bodies of Shuswap warriors dying while on raiding expeditions in enemy territory would be burned, such an explanation is not satisfactory in this case. It might be argued that young boys could join a war party (Teit 1909), but the artifacts found in the burials—including such items as nephrite celts, antler wedges, bone awls, barbed harpoon points, and antler digging stick handles—are hard to imagine as appropriate equipment.

Sanger (1968a) excavated one of the most important burial assemblages on the Canadian Plateau near Chase (EeQw 1). Unfortunately, much of the site, which may have originally held up to 50 individuals or more, had been destroyed by local collectors by the time Sanger and his crew arrived, and he was able to recover only five burials *in situ* with their associations. These included one infant, two young children, and two adults, both of which were identified as male. All five burials were flexed, the subadults tending to be more tightly flexed than the adults. The two children were lying on their backs, while the infant and two adults lay on their sides.

Utilitarian stone objects from the site include chipped points, bifaces, drills, scrapers, ground slate knives, hammerstones, undecorated mortars, abraders, and shaft smoothers. The utilitarian bone and antler assemblage includes bone points, harpoons, awls, needles, incised digging stick handles, wedges, a sap scraper, tine flakers, "mat creasers"/bull roarers?, beaver teeth, and miscellaneous unidentified implements. Grave inclusions accompanied four of the five burials, and included nephrite celts, ochre, shell ornaments, dentalia shells, bird beaks, worked bone and antler, and flaked stone implements. Burial 2, a child, lacked any grave inclusions. The largest number and variety of artifacts were found with Burial 3, an adult male.

The site produced the largest collection of art work known from the Canadian Plateau, with many objects likely indicative of wealth and prestige. The majority of this material, including a number of elaborately carved objects in stone, bone, and antler, unfortunately fell into the hands of collectors. Wilson Duff and Sanger received permission to record, photograph and sketch some of the material for publication (Sanger 1968a). The sociotechnic assemblage includes *Dentalium* (none of which appear decorated), abalone, pierced *Pecten* shells, copper ornaments, incised tubular steatite pipes, nephrite celts, ochre, quartz crystals, whalebone clubs, three highly decorated zoomorphic antler clubs, incised bear baculae, bird bone drinking tubes or whistles, bird beaks, and miscellaneous carvings in bone and antler, some of which are fully sculptural (see for example Sanger 1968a:116, Figure 8). The steatite industry is quite diverse. In addition to the 11 tubular pipes already referred to, Sanger (1968a) reports a single steatite bead, a carved human face, a carved serpent, two carved bears, a zoomorphic bird bowl, and a seated human figure bowl. Many of the pipes are incised, and one bears a human face carved in bas-relief. Two fragments of whalebone rib clubs were found. One of these (Sanger 1968a:120, Figure 9) has a carved handle very similar to those from Kamloops, discussed above. The Chase assemblage also included a total of 26 nephrite (Sanger 1968a:165, Plate IVa). The average length of this groups of celts is 19.7 cm, while the largest specimen measures 38.0 cm (Sanger 1968a:104), exceeding even the length of those found in the Nicola Valley; it seems likely that the majority of these celts functioned at least in part as prestige items.

The presence of pierced scallop (*Pecten caurinus*) shells is again worth commenting on. Four complete shells were found together with many fragments. The interpretation of these shells offered by Sanger (1968a, b) is that they relate to the historic Coast Salish spirit dancing complex. The exceptional preservation at the Chase site together with the presence of a relatively recent component (although the absence of any mention of trade beads is interesting in this regard) enabled the recovery of evidence supporting this connection. One of the amateur collectors discovered fragments of a wooden mask which appears to bear a strong resemblance to the Coast Salish *Sxwaixwe* mask also used in the spirit dances (Sanger 1968a:124-125 and p. 132, Figure 10).

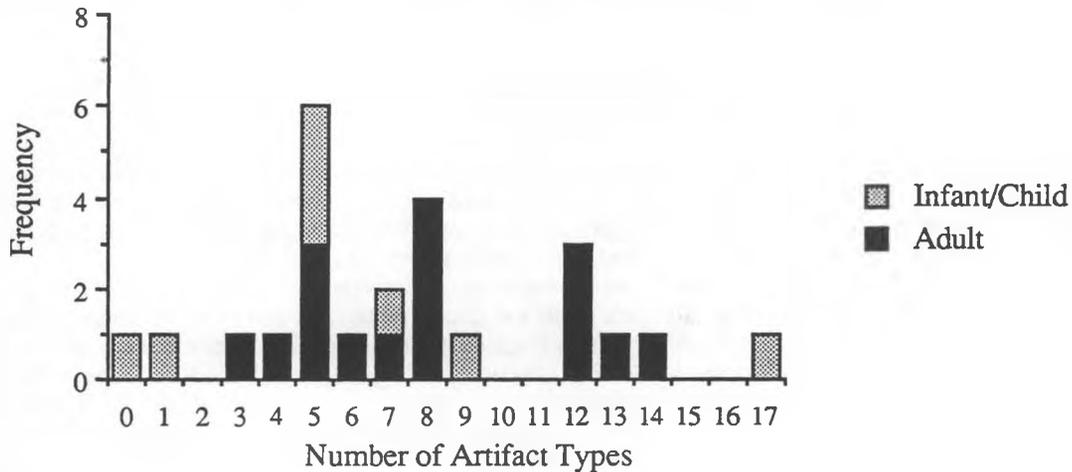
Copper staining was present on some of the human bones disturbed by collectors. Sanger notes that the locations of the staining indicate that bracelets, anklets, amulets, and neck pieces were worn (1968a:125). While the four copper artifacts obtained by Sanger from a collector seem to be Euroamerican trade copper, it is possible that the disintegrated copper represented only by green staining may have been native in origin (Sanger 1968a:125). Sanger assigned the assemblage a terminal date of A.D. 1750, and it became the type site for the Kamloops phase and horizon of ca. 1200 to 200 B.P. However, it should be noted that there are no radiocarbon dates on material from the Chase site although similar components elsewhere have been found to fall within this range. The total absence of glass beads suggests that use of the site did not continue into the nineteenth century.

Because of the importance of the Kamloops/Chase material and the frequency with which it is cited

in discussions of status differentiation on the Canadian Plateau, it will be discussed in some detail. The use of a composite sample is clearly problematic, especially when it is likely that the contributing sites span a considerable period of time. The interpretations offered below should be understood in this context. On the other hand, there is no indication of substantial differences in the variables of interest and in the relationships between them in the sites grouped for analysis. While we can acknowledge the difficulties involved in using a composite sample, there simply are no better burial assemblages available in the interior of British Columbia. Either one deals as best one can with what is available, or avoids the subject entirely. The former option is held to be preferable.

Infant/child burials make up 8/24 (33.3%) of the Kamloops/Chase composite assemblage, thus there is no suggestion that subadults are underrepresented. The infant/child group, while not differing significantly (at a .10 level) from the adult group in overall number of types of artifacts (Figure 6.26) or in numbers of sociotechnic types, does display a significantly lower number of utilitarian items ($\bar{X} = 2.88$ vs. $\bar{X} = 5.06$; $p = 0.0709$).

Figure 6.26: Artifact Diversity Distribution at Kamloops/Chase



The mortuary evidence from Kamloops/Chase is difficult to interpret. There is certainly the impression that some burials are "richer" than others (Sanger 1968a, 1971), but the differences are not nearly of the extent seen in many burial assemblages from the Columbia Plateau. Not only do all adult burials contain grave inclusions, but all have three or more types represented. There is no indication of the pyramidal structure expected in an highly ranked society. The average number of artifact classes in adult burials is 7.3 for the Kamloops/Chase area, the highest of any assemblage reported here. It seems unlikely that all members of "Shuswap" society were as wealthy as the burial evidence would seem to indicate. Even in the absence of the ethnographic information noting lack of burial for the poor in early historic times, I would suggest that a major segment of society is not being represented in the burials recovered. The presence of many relatively "rich" burials at the Kamloops/Chase sites further would suggest that these are special burial places reserved for the more privileged segments of society. Given this information, I disagree with Sanger's (1968a, 1971) statements that the Chase material in itself demonstrates a highly ranked society: it may *imply* this indirectly, however, i.e. by the absence of impoverished burials, but this is not the same thing.

Assuming for the moment that the four Government site burials can be interpreted as cremations (see earlier discussion), there is some tentative evidence for cremation being a higher status burial from. The average number of artifact types in the four cremations is somewhat greater than the non-cremation Kamloops/Chase average ($\bar{X} = 9.50$ vs. $\bar{X} = 7.05$). Both the number of utilitarian ($\bar{X} = 4.75$ vs. $\bar{X} = 4.25$) and sociotechnic types are also higher ($\bar{X} = 4.75$ vs. $\bar{X} = 2.75$). None of these differences are sufficient to reach statistical significance. The difference, such as it is, can be attributed to the presence of

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the extremely richly furnished Burial 4 at the Government site, with its 17 artifact types. It should also be recalled that the Government site may substantially predate the other burial sites in the Kamloops/Chase area. If anything, this might be expected to result in the opposite of the observed difference. That is, it has generally been assumed that artifact diversity in burials has on average increased through time on the Plateau (cf. Sprague 1967). This proposition is further examined in the following chapter.

Skwaam Bay, EgQw 1

Site EgQw 1 is located on an overgrown talus slope on Skwaam Bay on the shores of Adams Lake (Hills 1971). The remains of two adults and one child were recovered from the slope (sex was not reported). They were placed one above the other, although apparently not in a single event. Burial 1 was semi-flexed on its back, parallel to the slope contour, with the head oriented to the east. A single large flat rock had been placed over the chest. Hills (1971) notes a depressed fracture on the cranium of this individual, but provides no further details. From an accompanying photograph (Hills 1971:35, Figure 4), the fracture appears to be at least partially healed and so cannot be the direct cause of the individual's death. The photograph also suggests that this individual was male, but this is highly tentative. Burial 2 underlay Burial 1 by about 15 cm of talus. It is represented by the disturbed remains of a child; no further information than this is provided. Burial 3 was found beneath Burial 2, separated by some 60 cm of talus. The individual was again semi-flexed and parallel to the slope, with the head to the west, and also had a large flat rock placed over the chest.

Only Burial 3 had any grave inclusions. These included two abalone (*Haliotis* sp.) shell armbands, eight *Dentalium* beads, 16 *Olivella* beads, a bird bill, and four bone/antler points. The shell beads were all found in the head and neck region, suggesting that they were strung as a necklace. All of the shell items are exotic to the interior, and likely represent considerable wealth and prestige. The bird bill may be related to guardian spirit power. One of the antler points cannot be considered a grave offering, since it was found embedded in the innominate (Hills 1971:33, Figure 2). It is reasonable to assume that this injury, perhaps along with other wounds received at the same time, was directly related to cause of death.

A pine tree growing over Burial 1 was estimated to be between 120-150 years old. The grave associations of Burial 3 exhibit strong similarities to the Chase material excavated by Sanger (1968a) discussed above. Hills (1971), based on these two lines of evidence, attributes the burials to the late prehistoric period just prior to the introduction of Euroamerican trade goods (i.e. to the Kamloops horizon).

The close association of the three burials suggests a relationship between them, yet it does not seem that a single event is represented (Hills 1971). The relative abundance of grave inclusions with Burial 3 and their exotic origins suggests a higher socioeconomic status for this individual than for the other two burials. It is possible that these later burials represent slaves who were killed and buried over an individual of high status as part of later commemorative mortuary rituals. Admittedly this is highly speculative. Still, if the ethnographies are valid, the killing of slaves in mortuary contexts was certainly not unknown on the Plateau (Teit 1900, 1906, 1909).

Cache Creek, EeRh 1

The Cache Creek site is located on a slope near the confluence of Cache Creek with the Bonaparte River. The site was originally excavated by Charles Borden between 1954 and 1956, and briefly reported by Sanger (1968). It was not until 1987, however, that a detailed analysis of the skeletal material and associated artifact assemblage was conducted and made available (Pokotylo *et al.* 1987). Borden (in Pokotylo *et al.* 1987:1) originally reported the presence of "at least" 15 boulder cairns over a relatively confined area measuring some 30 by 50 m. Three cairns containing a total of four individuals were excavated by Borden and crew, and the remains of a fifth individual were acquired from local collectors who had "excavated" an additional four cairns. The site has since been destroyed by residential development.

In addition to the stone cairns, each of the four excavated burials were surrounded by wooden cists, consisting of vertical split stakes and slabs of poplar (Pokotylo *et al.* 1987:2). The identification of the wood as poplar is interesting—wooden cists are almost invariably reported as being of cedar (*Thuja plicata*) on the Plateau. While it seems that often identifications of "cedar" are based entirely on field observation and previous expectations rather than qualified analysis, in a number of cases such identifications have been subsequently corroborated (e.g. Sprague and Mulinski 1980:34). In other cases, however, it is likely that *Juniperus* is the genus represented (Sprague 1971a:188).

Burial 8, a one to two year old infant, had the largest assortment of grave inclusions at the site. These include 21 elk canines found arranged around the cervical vertebrae in three rows. Eight of the teeth

were decorated with incised lines, and the perforation on one of these held a *Dentalium* bead. Approximately 100 cut dentalia beads were also found around the neck. The remaining inclusions consisted of a bone needle and a decorated bird bone tube holding the fibula of a lynx.

The Cache Creek assemblage is very important in that it provides radiocarbon dates for four of the burials. These dates are shown below in Table 6.2.

Table 6.2: Radiocarbon dates for EeRh 1 Burials (Years B.P.)

Burial	Radiocarbon date	Sample No.
1	700 ± 80	SFU 293
6	1330 ± 260	SFU 227
8	760 ± 110	SFU 228
8a	1960 ± 400	SFU 292

(from Pokotylo *et al.* 1987:8, Table 5)

With the exception of Burial 8a, all dates are on associated unburned fragments of the wooden cists. The date for Burial 8a is based on a small amount of bone collagen extracted from unidentifiable skeletal fragments, leading Pokotylo *et al.* (1987:8) to strongly advise caution in accepting the date, since contamination could not be ruled out. Leaving aside this date, the remaining three dates cannot be differentiated at two sigmas, and may thus be considered contemporaneous within the resolution limits of the technique. Sprague (1967, 1971a) has proposed a chronology of burial practices which views wooden cist burials as practically diagnostic of the protohistoric period. Most of Sprague's data came from the Lower Snake River region, but the proposed scheme was intended to have a Plateau-wide applicability. The Cache Creek dates show that this pattern cannot be generalised to the Canadian Plateau, and underline the need for more radiocarbon dating of burials.

CHAPTER 7

DISCUSSION

Chapter 6 dealt in some depth with the description of mortuary variability at the level of the individual site. The present chapter deals with attributes of the burial data as a whole. It investigates age and sex representation and artifact associations as they relate to age and sex, summarises observations on burial form and location with regards to status, and attempts to trace the development of socioeconomic inequality on the Plateau.

Representation of Age and Sex Classes

Age

Subadults (infant/child) are underrepresented in a number of assemblages on the Plateau (Table 7.1; see also Chapter 6). Wildcat Canyon, Old Umatilla, and Sheep Creek show the clearest pattern, with the largest sample sizes, but subadults also appear to be underrepresented in the Nicola Valley sites, at Beek's Pasture, and at Congdon.

In some cases, such as Wildcat Canyon (35-GM-9), it seems that the discrepancy can be largely accounted for by the complete or near-absence of infants. This recalls the fact that, in many pre-industrial societies, new-born infants are often not named until surviving to a certain age, usually about one year. Among the Wishram, for example, a child was first named from six months to two years of age (Spier & Sapir 1930). The rationale for such behaviour is fairly clear: in situations where infant mortality is high—a characteristic of pre-industrial societies—one does not want to make an emotional or an economic commitment to a child that very well might not live past its first month. When a child dies before being named, it has not been recognised by its parents or by the community, and little or no investment of effort in its burial can be expected. Perhaps something along these lines was occurring during the late prehistoric period at Wildcat Canyon and elsewhere. Such lack of investment may be expressed by non-burial or burial in a way that somehow involves less effort, such as the absence of grave inclusions for example—recall the paucity of grave goods in the Nicoamen (EbRi 7) neonates compared to all other age classes.

In other cases the simple lack of infants does not entirely account for subadult underrepresentation, although it certainly contributes to it. At Sheep Creek (45-ST-46), no infants and the remains of only four children were found in a total of 36 individuals. The total absence of non-perishable grave inclusions with the children also suggests lower investment. The burial assemblage from Old Umatilla (35-UM-35B) includes the remains of seven infants, eight children, and eight adolescents (of less than age 15) in a total of 193 individuals—thus it appears that both infants and children are underrepresented in this case. There is no evidence of lower investment in those subadults that are present (although the possibility was difficult to test due to the fact that many of the subadult graves were disturbed and could not be included in the quantitative analysis).

None of the samples dealt with in this analysis are truly random, and some form of bias cannot be ruled out. For example, perhaps the infant and child burials, some of which had grave inclusions, were concentrated in separate parts of the cemeteries and so not recovered. There is little indication in Collier *et al.* (1942) as to the possible extent of the Sheep Creek site and the proportion of it excavated. But even if such spatial segregation did occur, it would not negate the arguments being presented here, since the whole point is exactly that such segregation symbolically as well as physically separates subadults from the adult mortuary space. In the case of Old Umatilla, however, Rice (1978a) is confident that the cemetery was very restricted spatially and that it had been entirely excavated, or very nearly so.

Another potential source of bias involves differential preservation of immature versus mature bone. This is difficult to address, since little in the way of osteological analysis is presented in the majority of the reports. Assemblages in which differential preservation definitely seems to be a factor include Beek's Pasture and Congdon (see Chapter 6). In other cases this is less clear. Collier *et al.* (1942) do

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suggest, for example, that overall skeletal preservation was relatively poor at Sheep Creek, but no comparison is made between the remains of the adults and those of the four children that were recovered. In some cases, subadult burials may be less visible; this may be a factor particularly in talus graves, such as those in the Nicola Valley, where the size of the depression is fairly directly proportional to its likelihood of discovery.

Table 7.1: Summary of Age Distributions in Plateau Burial Sites

Site	Age (total)			Age (undisturbed)†		
	adult <i>n</i>	sub <i>n</i>	Binomial <i>p</i>	adult <i>n</i>	sub <i>n</i>	Binomial <i>p</i>
Congdon	58	2	1.79E-07 ***	9	1	0.1493
Beek's Pasture	13	1	0.0475 **	13	1	0.0475 **
Juniper	10	3	0.4206	10	3	0.4206
Wildcat Canyon	53	10	0.0078 ***	29	3	0.0055 ***
Berrian's Is.	40	17	0.5535	24	9	0.4497
Yakima	23	11	0.6932	13	9	0.9084
Yakima, Selah	7	5	0.8822	7	5	0.8822
Sheep Island	18	7	0.5118	15	7	0.6713
Rabbit Island I	8	3	0.5696	8	3	0.5696
Rabbit Island II	8	5	0.8346	8	5	0.8346
Fishhook Is.	13	8	0.8523	13	8	0.8523
Okanogan	10	6	0.8247	10	6	0.8247
Keller	6	6	0.9614	6	6	0.9614
Whitestone Cr.	23	15	0.9238	23	15	0.9238
45-FE-7	11	11	0.9860	11	11	0.9860
45-ST-8	12	3	0.2969	12	3	0.2969
Sheep Creek	32	4	0.0071 ***	32	4	0.0071 ***
45-ST-47	7	3	0.6496	7	3	0.6496
Nicoamen	7	8	0.9848	7	8	0.9848
Nicola Valley	9	1	0.1493	9	1	0.1493
Kamloops/Chase	16	8	0.7250	16	8	0.7250
Total =	384	137	0.0349 **	282	119	0.4681
Old Umatilla	170	23	2.30E-09 ***	76	4	2.45E-08 ***
Total =	554	160	3.36E-06 ***	358	123	0.0181 ***

* .10 significance level, ** .05 significance level, *** .01 significance level

† grave associations considered sufficiently secure for inclusion in quantitative analyses presented in Chapter 6

On the Plateau as a whole, there is some evidence for a slight increase in infant/child representation in mortuary assemblages through time. Of 124 individuals from sites/assemblages assigned to the late prehistoric period (excluding Old Umatilla because of the skewing effects of its anomalous large sample size), 27, or 21.7%, are the remains of infants and children. This figure represents a significant departure from Weiss's expected 30% minimum (Fisher's exact $p = 0.0261$), although, again, the difference may be influenced by sites with differential preservation of subadults. By contrast, 56 of 179, or 31.3%, individuals in the protohistoric group are the remains of infants and children. The difference in subadult representation between the two time periods is not marked, but does reach the .10 significance level (Fisher's exact $p = 0.0882$), and may be accounted for by only a relatively slight increase in infant/child mortality and/or a greater tendency for inclusion in the adult mortuary space (or better preservation). Indeed, the trend is less than might be expected given accounts of the effects of introduced diseases in the

ethnohistoric and ethnographic literature. It may be that the current inability to more accurately define and date assemblages obscures what would otherwise be a more substantial difference.

Binford (1971:22) suggests that the differential burial location of children can be explained by the different level of corporate involvement generated by the death of a child as opposed to the death of an adult. Similarly, Ucko (1969) suggests that the age at which inclusion in the adult mortuary space occurs may represent the age at which the individual is more actively incorporated into the functioning of the community. One possibility is that a child is not treated as an adult upon death prior to assuming the economic role of an adult. Such a question should be approachable with archaeological data. Furthermore, from the ethnographies, it should be possible to arrive at some idea of the age at which adult activities were assumed by children. However, the formal investigation of this idea does not form part of the present work.

Sex

Some physical anthropologists have suggested that current skeletal sexing techniques tend to result in a bias towards male identification (e.g. Weiss 1972). This general tendency for greater male representation in prehistoric skeletal populations is not apparent on the Plateau (cf. Sprague and Birkby 1973:6). In fact, there is greater female representation overall (92 males compared to 103 females) (Table 7.2), although the difference is not significant at the .10 level. (However, when the Old Umatilla data are included, the difference does become significant at the .01 level.) At the level of the individual site (see Chapter 6), there are some minor departures from the expected 50:50 sex ratio. The fact that these largely average out in the combined sample indicates that the directionality of this difference is not consistent. But to say that the "expected" sex ratio is 50:50 is perhaps inaccurate. It refers to what could reasonably be expected for a "natural" population in which the sexes experienced no forms of differential mortality. In some hunter-gatherer populations, however, there may be a trend towards slightly greater numbers of adult females in the living community. This has generally been seen as reflecting greater risk to adult males brought about by warfare and hunting activities. The fact that nearly every Plateau group in the ethnographic literature is characterised as polygynous to varying degrees suggests that many communities may have had a proportion of females greater than 0.50. Thus, it may be, in fact, a somewhat greater adult female representation that should be expected. This is particularly so when the mortuary populations are predominantly from river valley contexts in which the main settlements were located. As discussed in Chapter 2, adult male deaths are expected to occur more frequently away from the villages if they are largely involved in hunting and warfare. Balancing this to some degree, on the other hand, may be the tendency to return the bodies of adult males to the main village for burial (cf. Hofman 1986). This hypothesis could be tested using more precise age at death estimates—it should be the young and middle adult males that are underrepresented at valley bottom village cemeteries.

Male and female representation does not differ significantly between the late prehistoric and the protohistoric periods (Fisher's exact $p = 0.1777$). During the late prehistoric period, however, there is some indication of a slight departure from a 50:50 male:female ratio. In a sample of 81 sexed individuals (not including Old Umatilla) from this period, only 33, or 40.7%, are identified as male, compared to 48 (59.3%) females. This difference is significant at the .10 level (Fisher's exact $p = 0.0569$). Were the Old Umatilla data to be included, the difference would become far more marked; of a total of 152 sexed individuals, 54 (35.5%) are identified as male and 98 (64.5%) as female. This recalls Hofman's (1986) hypothesis (discussed in some detail in Chapter 2) that males, given their relatively greater involvement in long-distance hunting and trading activities, are more likely to die and be buried away from central village cemeteries. The increased ease of transport brought about by the introduction of the horse may have made it more likely that the remains of individuals who died on such expeditions were returned to valley bottom locations for burial. In this regard, it is of interest to recall the account given by Dawson (1891) of the body of a Nicola man brought back to the Nicola Valley on horseback for reburial a year after his death. This hypothesis could be tested by comparing the frequency of disarticulated burials for males and females, but the ethnographically documented, status-related practice of opening the grave and rewrapping the bones of the deceased in new blankets or robes may confound the results, since males were likely more apt to receive this treatment. Furthermore, the identification of a sufficient number of sexed disarticulated burials, as opposed to disturbed burials, may be problematic given the descriptions in many of the available reports. In any case, the data available from Old Umatilla suggest that there is no tendency for males to be associated with secondary burial (see Chapter 6).

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Table 7.2: Summary of Sex Distributions in Plateau Burial Sites

Site	Sex (total)			Sex (undisturbed)†		
	male <i>n</i>	female <i>n</i>	Binomial <i>p</i>	male <i>n</i>	female <i>n</i>	Binomial <i>p</i>
Congdon	5	4	0.5000	5	4	0.5000
Beek's Pasture	5	4	0.5000	5	4	0.5000
Juniper	2	2	0.6875	2	2	0.6875
Wildcat Canyon	9	12	0.3318	9	12	0.3318
Berrian's Is.	14	23	0.0444	9	13	0.1186
Yakima	6	8	0.7880	5	4	0.5000
Yakima, Selah	0	0	n/a	0	0	n/a
Sheep Island	11	5	0.1051	10	4	0.0898
Rabbit Island I	4	2	0.3438	4	2	0.3438
Rabbit Island II	4	4	0.6367	4	4	0.6367
Fishhook Is.	3	3	0.6563	3	3	0.6563
Okanogan	3	4	0.5000	3	4	0.5000
Keller	2	2	0.6875	2	2	0.6875
Whitestone Cr.	7	14	0.0946	7	14	0.0946
45-FE-7	3	5	0.3633	3	5	0.3633
45-ST-8	2	3	0.5000	2	3	0.5000
Sheep Creek	8	10	0.4073	8	10	0.4073
45-ST-47	2	3	0.5000	2	3	0.5000
Nicoamen	2	5	0.2266	2	5	0.2266
Nicola Valley	3	4	0.5000	3	4	0.5000
Kamloops/Chase	4	1	0.1875	4	1	0.1875
Total =	99	118	0.1108	92	103	0.2370
Old Umatilla	46	87	0.0002	21	50	0.0004
Total =	145	205	0.0008	113	153	0.0083

* .10 significance level, ** .05 significance level, *** .01 significance level

† grave associations considered sufficiently secure for inclusion in quantitative analyses presented in Chapter 6

Artifact Type Associations

Age

The sample size available from any single site on the Plateau is generally inadequate for a statistical analysis of the relationship between age and artifact categories. A single pooled sample consisting of all aged skeletons from the analysed sites, however, presents the opportunity to examine these associations. The Old Umatilla material is not included in the pooled sample because of its anomalously large sample size, which would tend to bias the results towards one site. A future analysis might find it profitable to further divide the admittedly overly broad age categories of infant/child and adolescent/adult employed here. Ideally the skeletal material would be re-examined by a single researcher or group of researchers using the same aging criteria before any further subdivision was used in an analysis.

The combined sample from all sites listed in Table 7.3 provides a total of 416 individuals, of which 293 are assigned to the "adult" group and 123 to the "subadult" group. Disturbed burials for which some information on inclusions was available were nevertheless excluded from the analysis. Age was tested for significant associations against a total of 38 artifact types using chi-square with continuity correction and Fisher's exact *p*. Fisher's exact test, as the name implies, is the more accurate measure.

Chi-square values and their associated probabilities are reported only for comparison of the techniques and because they are more familiar to most readers. They provide a more conservative test, especially when the continuity correction is used (Thomas 1986).

Significant associations, including three at only the .10 level, are seen in ten artifact types (Table 7.4). Sampling error alone, however, could be expected to produce about three or four erroneously "significant" associations in 38 tests at the .10 level, or about two at the .05 level. This would suggest that little emphasis should be placed on the three associations reaching only the .10 significance level. These include bird beaks (1 adult: 3 subadults; Fisher's $p = 0.0795$), pestles (18:2; $p = 0.0751$), and miscellaneous shell ornaments (17:10; $p = 0.0599$). The remaining seven artifact types, for which a significance level of at least .05 was achieved, include: ground stone celts (20 adults: 2 subadults; Fisher's $p = 0.0307$), glass beads (13:13; $p = 0.0255$), copper pendants (11:12; $p = 0.0191$), tubular stone pipes (20:1; $p = 0.0117$), shaft smoothers (15:0; $p = 0.0074$), stone knives (56:9; $p = 0.0019$), and projectile points (69:11; $p = 0.0004$).

Stone projectile points and knives/bifaces are relatively strongly associated with adult burials, although a small number do occur with subadults. Shaft smoothers (preferred here to the commonly used, more specific term "arrowshaft smoothers") are found exclusively with adult burials, but they do not occur in large numbers, and so this exclusiveness may be due to sampling error. In fact, two pairs of shaft smoothers appear to be associated with a child, Burial 8, at Berrian's Island (45-BN-3). The burial was badly disturbed, however, and as such has not been included in the present analysis. The adult association of the type would remain statistically significant in any case. These three artifact types—points, knives/bifaces, and shaft smoothers—share a utilitarian orientation, either directly in the procurement of resources, or in the manufacture of equipment used in the procurement of resources. Further, they seem fairly specific to hunting technology rather than subsistence activities in general. Digging stick handles, for example, are not statistically associated with adults (15 adults: 5 subadults; Fisher's $p = 0.8037$). A number of other utilitarian artifacts appear to hint at adult association—iron knives, graters, bone awls, harpoons, bone needles, etc.—but occur in too low frequencies to achieve statistical significance.

There are a number of possible explanations for the occurrence of projectile points and stone knives with subadults. As is shown in the following section on sex associations, while adult males do tend to be associated with projectile points, knives, and shaft smoothers, it is overly simplistic to assume that individual subadult graves including the items are necessarily male. However, it does suggest that up to approximately two-thirds or more of the subadults with these items may be males, and that the items were seen as appropriate grave inclusions for male subadults. Related to this explanation, it may be that the subadult category as defined here includes older children that would have actually begun to participate in the activities represented. A more sensitive breakdown of age categories might reveal interesting information on the transitional age range within which the adult-oriented utilitarian items such as these begin to be included in graves. Presumably this would tend to reflect the age at which the activities represented were initiated (cf. Ucko 1969). However, it need not be assumed that all of the objects included in a grave were intended for use, or even that they were seen as appropriate for future use (as in the case of a male child being buried with hunting equipment); rather, the inclusion of some items may reflect expressions of grief and/or gifts of parting by the deceased's kin. But, based on the results achieved here, while such behaviours may add considerable "noise" to the archaeological record, they do not seem to have entirely obscured all patterning related to achieved status.

The two additional artifact types associated with adults are tubular stone pipes and ground stone celts. Very few subadult graves include either of these artifact types. Among protohistoric Plains groups, stone pipes were considered to be markers of special ceremonial and/or chiefly positions, leading O'Shea (1984) to postulate that their inclusion with subadults reflected hereditary privileges related to these positions. Interestingly, the distribution of stone pipes appeared to be partly independent of wealth, leading O'Shea to suggest that there were two different types of status represented: ascribed and achieved. While there is some ethnographic evidence (Spier and Sapir 1930; see Chapter 5) to support a similar position for stone pipes on the Plateau, it is premature to accept this interpretation without further investigation. Furthermore, the single occurrence of a tubular pipe with a subadult in this study is a child's grave near Selah in the Yakima Valley (see Chapter 6); it should be recalled that Bergen (1989) was uncertain of his identification, and that the burial may in fact be that of an adult.

Two artifact types, glass beads and copper pendants, occur with greater than expected frequency in subadult burials, although they are far from exclusive to them. At least in the early contact period, ethnohistoric accounts fairly unambiguously relate that glass beads, especially those of certain colours, particularly deep blue, were highly valued trade items. Under such circumstances, it might be considered

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Table 7.3: Sites Employed in Age Chi-Square

<i>Site</i>	<i>n</i>	<i>n adult</i>	<i>n sub</i>
Berrian's Is.	33	24	9
Beek's Pasture*	11	10	1
Congdon*	10	9	1
Juniper	13	10	3
Sundale*	10	10	0
Okanagan	16	10	6
Rabbit Is.	24	16	8
Sheep Is.	22	15	7
Wildcat Canyon	32	29	3
Fishhook Is.	21	13	8
45-ST-8	12	9	3
Sheep Creek	36	32	4
45-ST-47	10	7	3
Whitestone Cr.	38	23	15
45-FE-7	22	11	11
45-ST-48	5	2	3
45-ST-50	4	4	0
45-ST-51	2	1	1
Keller Ferry	12	6	6
Yakima	22	13	9
Yakima (Selah)	12	7	5
Kamloops*/Chase	24	16	8
Nicola Valley	10	9	1
Nicoamen	15	7	8
Total	416	293	123

* sites in which the accuracy of some of the age estimates is uncertain

unusual to find them more strongly associated with subadult burials. Possibly the lack of control over time in the analysis is masking the early high value in which glass beads were held. While beads were still valued in later times, as they became more common access to them undoubtedly became less restricted and they achieved wider circulation. The same may hold true with copper pendants. Alternatively, the inclusion of material wealth with subadults may have been practised throughout the timespan represented by the data. This would be expected if, as seems likely, a component of ascribed wealth existed in the societies in question.

Sex

As with age, the sample size of sexed skeletons available from any single site on the Plateau is generally inadequate for a statistical analysis of the relationship between sex and artifact types (the association of projectile points with males at Whitestone Creek being one of the few exceptions—see Chapter 6). Again, the appropriate response to this difficulty is to construct a single pooled sample including all sexed skeletons from the analysed sites. Sites contributing no sexed burials with reasonably secure artifact associations were not included in the analysis.

Table 7.4:
Chi Square and Fisher's Exact Tests for Age and Artifact Type Associations

Type	adult (293)	subad. (123)	Chi-square	p (c.c.)	Fisher's p
iron bracelets	3	1	0.1220	0.7268	0.9999
elk tooth pendants	10	4	0.0461	0.8299	0.9999
abraders	12	5	0.0660	0.7972	0.9999
antler wedges	11	5	0.0166	0.8974	0.9999
pigments	36	16	0.0016	0.9676	0.8714
<i>Olivella</i>	25	9	0.0470	0.8283	0.8448
copper, misc.	18	6	0.0755	0.7835	0.8181
digging stick handles	15	5	0.0431	0.8355	0.8037
drills	6	1	0.2265	0.6342	0.6791
iron, misc.	15	4	0.3309	0.5651	0.6071
beaver teeth	14	4	0.1885	0.6642	0.6037
<i>Haliotis</i>	6	4	0.1452	0.7032	0.4907
gaming pieces	6	4	0.1452	0.7032	0.4907
bone points	19	5	0.5410	0.4620	0.4894
copper beads	24	13	0.3467	0.5560	0.4530
bone beads	14	3	0.6395	0.4239	0.4159
shell disc beads	13	2	0.4376	0.5083	0.3878
scrapers	29	8	0.8480	0.3571	0.3459
mauls	5	0	0.9305	0.3347	0.3277
<i>Dentalium</i>	43	23	0.7708	0.3800	0.3068
bone needles	8	1	0.7352	0.3912	0.2920
harpoons	8	1	0.7352	0.3912	0.2920
claw core/tooth	10	7	0.9540	0.3287	0.2871
juniper seed beads	12	11	1.2436	0.2648	0.2487
bone tubes/whistles	12	2	0.6862	0.4075	0.2484
bone awls	26	6	1.4258	0.2325	0.2257
gravers	8	0	2.1296	0.1445	0.1118
iron knives	7	0	1.7192	0.1898	0.1101
bird beak	1	3	2.1034	0.1470	0.0795
pestles	18	2	2.9388	0.0865	0.0751
misc. shell ornament	17	10	3.0247	0.0820	0.0599
celts	20	2	3.6962	0.0545	0.0307
glass beads	13	13	4.5626	0.0327	0.0255
copper pendants	11	12	4.8808	0.0272	0.0191
tubular pipes	20	1	5.3404	0.0208	0.0117
shaft smoothers	15	0	5.1426	0.0233	0.0074
stone knives	56	9	8.2700	0.0040	0.0019
stone points	69	11	10.9780	0.0009	0.0004

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Table 7.5: Sites Employed in Sex Chi-Square

<i>Site</i>	<i>n</i>	<i>n males</i>	<i>n females</i>
Berrian's Is.	22	9	13
Beek's Pasture*	9	5	4
Congdon*	9	5	4
Juniper*	4	2	2
Okanagan	8	4	4
Rabbit Is.	6	4	2
Sheep Is.	16	11	5
Wildcat Canyon	21	9	12
Fishhook Is.	6	3	3
45-ST-8	1	1	0
Sheep Creek	18	8	10
45-ST-47	5	2	3
45-ST-31	2	1	1
Whitestone Cr.	21	7	14
45-FE-7	8	3	5
45-ST-48	2	0	2
45-ST-50	2	0	2
45-ST-51	1	0	1
Keller Ferry	4	2	2
Yakima	10	5	5
Kamloops/Chase	5	4	1
Nicola Valley	7	3	4
Spences Bridge	1	1	0
Total	188	89	99

* sites in which accuracy of the sex estimations is uncertain

The resulting pooled sample provides a total of 188 sexed individuals from some 29 sites (ten of which contributed five or fewer sexed individuals), comprising 89 males and probable males, and 99 females and probable females (Table 7.5). This does not exhaust the database, since there are a number of sites, each yielding a very small number of burials, that I have not included here. A sufficient sample size has been achieved, however, to enable the exploration of sex and artifact type associations. Clearly there is the potential for some of the skeletons to be inaccurately sexed (see Schulting 1993b and Chapter 6). However, given the relatively large sample size and the number of independent investigators analysing material from different sites, it is unlikely that a bias one way or the other would remain to substantially affect the results. In any case, no hypotheses are being offered or defended here, the analysis is exploratory and the results should be seen in this light.

There are relatively few significant associations between sex and artifact type. This is at least partly a result of the relatively large number of artifact types, many of which occur only infrequently. Some types, such as mauls and pestles, while suggesting the possibility of being associated with one sex, occur in numbers too low to permit satisfactory testing. It is apparent nevertheless, even with these infrequently occurring types, that any such association would have to rely on probabilistic statements rather than absolute exclusivity. In other words, there are no cases, beyond those obviously affected by low occurrence of an artifact type, in which an artifact type is exclusive to one sex or the other.

Twenty-eight artifact types were tested against sex using chi-square with continuity correction and Fisher's exact *p*. Those types not included, such as drills and gaming pieces, occurred in too few sexed

burials to present even the possibility of achieving significant results. It is obvious from an examination of the distribution of artifact types between the sexes that collapsing categories into more general types (for example, all copper types, all iron types, all marine shell types, etc.) would not achieve a significant result, as indeed it did not when tested.

Significant associations (including two at the .10 level) between artifact type and sex are found in seven instances (Table 7.6). These include: projectile points (35 males: 11 females; Fisher's $p = 1.0E-5$), shaft smoothers (10:1; $p = 0.0035$), tubular stone pipes (10:2; $p = 0.0143$), stone knives/bifaces (24:14; $p = 0.0202$), antler wedges (8:2; $p = 0.0487$), harpoons (7:2; $p = 0.0872$), and bone points (10:4; $p = 0.0929$). In all cases males are associated with the artifact type in question. Again, it should be kept in mind that, when testing for significance with a large number of possible associations, sampling error alone can be expected to produce some erroneously "significant" results. A total of 28 artifact types were tested against sex; this could be expected to result in about one falsely significant result at the .05 level, or as many as three at the .10 level. Given this circumstance, it may not be valid to place much emphasis on the .10 level associations between males and bone points and harpoons. On the other hand, Johnston (1987), who includes additional data from a few small sites not represented here, also suggests that fish spears and harpoons seem to be associated with male burials on the Columbia Plateau (although no tests of significance are provided). It is also worth noting that combining the two artifact classes—bone points and harpoons—results in a chi-square value of 6.26, significant at the .05 level ($p = 0.0124$).

It is not unexpected that more males than females are associated with projectile points. In hunter-gatherer societies cross-culturally, men are typically responsible for hunting, or at least the kind of hunting that makes use of projectile technology. Certainly in the ethnographic documentation for the Plateau, both hunting and salmon fishing are consistently characterised as predominantly, if not exclusively, male activities. There are exceptions: for example, the use of fishing spear technology by women is documented ethnographically for the Cour d'Alêne (Smith in Johnston 1987:93). But in those cases where women are said to have participated in land mammal hunting, it is usually made clear that they did not use projectile weapons, but were involved solely in such activities as deer drives and butchering, or in the exercise of shamanic/guardian spirit power.

What is of interest, if we are to go by the ethnographic accounts, is the fact that 11 females *are* associated with projectile points. There are, of course, a number of possible explanations for this. It may be that some or all of the "projectile points" associated with females actually represent some other tool type. This could easily be tested, but it seems safe to say that it is an unlikely explanation for all cases. A simpler explanation is that a significant proportion of females did indeed participate in hunting activities using projectile technology. While it could be suggested that female participation in the hunt was greater in the past than during the ethnographic period, a number of the points associated with females do appear to date to the full protohistoric period. Interestingly, a companion of the Lewis and Clark expedition to the Columbia River observed women manufacturing projectile points (Holmes in Gero 1991:170). Taken together, the two lines of evidence suggest that women did both manufacture and use projectile technology, although not as frequently as men, and perhaps in a fashion that was less accepted socially (and thus was not mentioned by male informants). A final possibility is that the inclusion of an item in a grave does not necessarily mean that that item was used by the grave's occupant during life. Winters (1968) encountered similar difficulties in interpreting the unexpected occurrence of atlatl weights in Late Archaic female graves at Indian Knoll.

One of the more interesting results of the tests of association between artifact type and sex is the discovery that shaft smoothers are strongly associated with males. Eleven male graves contained shaft smoothers compared to only a single female grave. It is tempting to invoke the possibility that the single female occurrence was wrongly sexed, but of course this is hardly satisfactory without further evidence. It is perhaps worth noting that the female grave containing the pair of shaft smoothers is from Berrian's Island (45-BN-3), which, as discussed in Chapter 6, is also somewhat unusual in a number of other respects as regards the distribution of artifact types between the sexes. Another possibility is that the class "shaft smoother" may include some artifacts that served a different function, possibly relating to bead manufacture. Mohen (1990:241) illustrates a pair of grooved abraders identified as stone bead polishers from Neolithic Europe that look very similar to what have traditionally been labelled as "arrowshaft smoothers" throughout western North America. This presents an interesting possibility, particularly since I

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Table 7.6:
Chi Square and Fisher's Exact Tests for Sex and Artifact Type Associations

Type	male (89)	female (99)	Chi-square	p (c.c.)	Fisher's p
copper, misc.	4	4	0.0430	0.8353	0.9999
glass beads	5	5	0.0230	0.8789	0.9999
bone beads/tubes	7	7	0.0050	0.9434	0.9999
<i>Olivella</i>	10	10	0.0002	0.9879	0.8173
bone awls	10	11	0.0002	0.9879	0.8173
shell disc beads	6	8	0.0050	0.9434	0.7869
digging stick handles	5	7	0.0120	0.9139	0.7710
copper beads	6	5	0.0330	0.8555	0.7588
copper pendants	5	4	0.0270	0.8699	0.7376
iron, misc.	5	4	0.0270	0.8699	0.7376
<i>Dentalium</i>	18	17	0.1220	0.7268	0.7079
iron bracelets	0	2	0.4050	0.5247	0.4987
iron knives	2	5	0.3940	0.5301	0.4490
elk tooth pendants	2	5	0.3940	0.5301	0.4490
celts	8	5	0.6000	0.4385	0.3902
<i>Haliotis</i>	3	1	0.3770	0.5393	0.3462
scrapers	13	9	0.8980	0.3434	0.2635
pestles	4	9	0.9070	0.3409	0.2590
iron tubes	0	3	1.1510	0.2834	0.2481
mauls	6	2	1.5360	0.2152	0.1523
pigments	13	7	2.0630	0.1509	0.1036
bone points	10	4	2.5540	0.1100	0.0929
harpoons	7	2	2.3470	0.1255	0.0872
antler wedges	8	2	3.2410	0.0718	0.0487
stone knives	25	14	4.7300	0.0296	0.0202
tubular pipes	10	2	5.2080	0.0225	0.0143
shaft smoothers	10	1	7.1370	0.0076	0.0035
stone points	35	11	18.6900	1.00E-04	1.00E-05

have the impression, possibly erroneously, that there is an absence of much in the way of evidence for bead manufacturing on the Plateau (but then stone beads are not that common on the Plateau except in The Dalles area). In his notes on the largely middle prehistoric (ca. 4000-2000 B.P.) Congdon site, Bergen (1989) comments a number of times on the "... interesting association of a porous basalt polishing stone and a collection of stone beads". These stones, however, are not found in pairs, nor do they appear to have the distinguishing longitudinal groove of the shaft smoother, which Bergen separately identifies, indicating that he made a distinction between the two. In any case, the association noted by Bergen is not statistically significant, at least given the data provided in his notes.

The association of stone knives/bifaces with males in just under a 2:1 ratio is likely related to the use of this tool in general hunting activities. Some artifacts identified as knives may have in fact been used as projectile points. But it is apparent that the use of knives/bifaces was by no means limited to males. It is also problematic that knives and bifaces are not distinguished in much of the early literature. Bifaces may function largely as efficient cores for producing expedient flake tools. In some cases, as suggested in Chapter 4 (see also Pavesic 1985, 1992), large, well-made bifaces may have been specialised grave inclusions never intended for use.

When the bone point and harpoon associations are included, the results show a tendency for many utilitarian artifact types to be included in male burials. The majority of these, though not all, appear to be associated with hunting and fishing activities. But it is also noteworthy that in no case is the association exclusive. Two artifact types, antler wedges and shaft smoothers, are associated with manufacturing activities. Antler wedges are presumably associated with heavy duty woodworking, while shaft smoothers are likely associated with the manufacture of hunting implements. Only one artifact type, tubular stone pipes, may be possibly considered a prestige item as generally defined (although recall the discussion in Chapter 4 suggesting that some projectile points may also have operated at least in part as prestige items).

The association of tubular stone pipes with males is susceptible to the same interpretive problems seen in the above discussion of projectile points. As with hunting, there is considerable ethnographic support for smoking being an activity indulged in primarily by men (see Chapter 4), and particularly men of high status, such as chiefs and shamans. Thus, it is not surprising that more males are found with pipes than females. But this does not account for the two pipes that are found with females, and it is the exceptions that are often more interesting than the rule. Ethnographic sources indicate that women could also become shamans, and so it is possible that some women smoked through their assumption of this role. And indeed, such an interpretation was in fact offered by Osborne (1957:33) for Burial 25 at Berrian's Island, one of the two instances of a female associated with a steatite pipe. This burial was also unusual in the quantity and variety of its grave inclusions (see Chapter 6). A related possibility is that some "pipes" functioned as sucking tubes used in shamanic performances.

A number of additional artifact types are noteworthy precisely because they did *not* associate strongly with one sex. Digging sticks, for example, are consistently and conspicuously related with female subsistence activities (i.e. root digging) in the Plateau ethnographic literature. They were held to be highly prized, personal possessions, given to young women at puberty (Cressman 1960:70). Yet, of the 12 specimens found as grave inclusions, five were found with individuals identified as male. The occasional association of a male skeleton with a digging stick handle would perhaps not require a great deal of explanation, but the absence of even a weak association between females and digging stick handles is another matter (see also Osborne 1957:84). Again, it is possible that some of the implements identified as digging stick handles actually served quite a different function. Early photographs taken by Teit at the turn of the last century (Tepper 1987) frequently show Thompson men holding "tomahawks" with antler heads that appear nearly identical to digging stick handles. The two implements should be easily distinguished by the orientation of the hafting hole. But of those specimens from burials for which illustrations are provided, none appear to be drilled for hafting in a manner similar to those shown in Teit's photographs.

It is also unusual that so few examples of this supposedly ubiquitous tool would end their use-life as grave inclusions (although a number were found either with unsexed individuals or in disturbed contexts and so were not included in the analysis). It may be, as was suggested in Chapter 4, that the majority of digging stick handles were made of wood. If this were the case, those that were made of antler—certainly a far more difficult material to work than wood—may have functioned partly as prestige items. In this regard I should note that those burials that do contain digging stick handles seem to have on average a greater richness of artifact types and an higher GLV. This would be easy to test more explicitly in a future analysis.

The distribution of ground stone celts/adzes is also perhaps unexpected. If these are associated with heavy duty woodworking, as is generally thought to be the case by those who label them utilitarian at all, then it might be expected that, as with antler wedges, they would show a tendency to be associated with males. This, however, is not the case. Eight celts were found with males, while five were found with females (Fisher's $p = 0.3902$); the majority of the celts found with both sexes are made of material identified in the primary sources as nephrite. This could be interpreted as supporting the hypothesis that a significant number of celts functioned more as prestige items than as utilitarian items. However, the possibility that women as well as men used celts/adzes in woodworking should not be discounted either.

There are, to summarise this section, three considerations in explaining and interpreting the significance of artifact/sex associations: 1) potential errors in the sexing of the skeletons, 2) errors in the classification of the artifact, and 3) the validity of assuming use during life based on inclusion at death. It is, in fact, a common but simplistic assumption that the articles included in a grave either belong to the occupant (and so were used by him or her during life), or were thought to be appropriate in terms of future role expectations (projectile points in the grave of a male infant, for example). While one finds this assumption made frequently in the literature on both the Plateau and elsewhere, it has, as far as I am aware, never been adequately tested in a cross-cultural ethnographic sample (see Ehrenberg 1989 for a similar

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critique). For example, grieving family members might present items of their own for inclusion in the grave as gifts to the dead. These last two possibilities are difficult to choose between on the basis of the available archaeological data. Some combination of the factors discussed above may be responsible for the observed pattern.

Nevertheless, the fact that patterning is still evident and that it follows reasonable expectations based on cross-cultural ethnographic data, suggests that to a large extent utilitarian items that are included in adult graves were probably used during life. (It is worth noting that most Plateau ethnographic accounts state fairly explicitly that items interred with the deceased were those used during that individual's lifetime.) Since all of these associations are with males, it seems that male social roles were more clearly defined, or at least that it was considered more important to identify distinctively male social roles in the mortuary context. These roles seem, with the exception of tubular pipes, to have been largely economic, specifically involving hunting activities, and may relate to the greater prestige often conferred upon hunters. O'Shea (1984) notes a similar asymmetry in male/female artifact associations in his analysis of three protohistoric and historic Plains groups (Omaha, Pawnee, and Arikara), although he did not discuss the possible implications of his observations. Males exhibited overwhelmingly more statistically significant artifact type associations than did females, although a few female associations were also observed. In the five cemetery sites analysed, 42 male artifact type associations were noted, compared to only 6 female associations (O'Shea 1984:293-294). It would be interesting to examine this relationship in more detail with the Plateau data, by region and through time, but such an analysis is beyond the scope of the present work, as well as probably beyond the capacity of the currently available data.

One of the more practical applications of the results achieved here is the ability to take the identified artifact type associations and apply them to burials of unknown or questionable sex. Clearly this should be done with caution—none of the associations are exclusive—but in the absence of any other information it can at least provide a tentative identification. For example, a number of shaft smoothers occur with unsexed burials and in disturbed burial contexts throughout the Plateau. In some cases it would be very useful to have the ability to estimate the sex of individuals. For example, Burial 15 from Beek's Pasture, representing a single adult cremation of unknown sex, is by far the richest burial at that site (see Chapter 6). The grave includes a shaft smoother, suggesting that the individual is most likely male. The results of this section also indicate that the veracity of sex type associations made on the basis of ethnographic accounts cannot be accepted at face value, and that they should not be applied to archaeological data without being adequately tested. The ethnographic record can, and should, however, be used as a source of ideas in the construction of hypotheses to be tested.

Age and Sex in Relation to Status

While Chapter 6 did investigate the differential distribution of grave inclusions along the dimensions of age and sex at the level of the individual site/assemblage, the small sample sizes being dealt with often resulted in an inability to obtain statistically significant differences. The results were sufficient, however, to suggest what were suspected to be meaningful trends in status differentiation in the age/sex groups (see Tables 7.7 and 7.8). In order to investigate this impression further, a pooled sample containing all data from all sites used in the quantitative analyses presented in Chapter 6 was employed (again excluding Old Umatilla).

This combined sample contains 411 individuals, including 276 adults, 16 adolescents, 71 children, and 48 infants. Of the adult/adolescent group, 91 were identified as male and 100 as female.

The two broad age groups used throughout Chapter 6—adolescent/adult and infant/child—were compared using *t*-tests for number of artifact types, number of utilitarian types, and number of sociotechnic types (Table 7.9). The pattern that emerges clearly emphasises differences in the inclusion of utilitarian items as grave inclusions between the age groups. Sociotechnic items, on the other hand, do not differ significantly between the two age groups. This being the case, it is not surprising that tests for age-based differences in grave lot value (GLV) also fail to reach an accepted level of significance, since this measure, through its differential weighting of artifact types, emphasises sociotechnic items at the expense of utilitarian items.

Table 7.7: Summary of Age Differences in Artifact Richness

Site	Age		No. Types X		Util. X		Socio. X	
	adult n	sub n	adult	sub- adult	adult	sub- adult	adult	sub- adult
Congdon	9	1	3.44	0.00	2.44	0.00	1.00	0.00
Beek's Pasture	13	1	2.62	1.00	1.23	0.00	1.38	1.00
Juniper	10	3	4.10	0.00	0.30	0.00	3.80	0.00
Wildcat Canyon	29	3	2.03	0.67	1.31	0.33	0.72	0.33
Berrian's Is.	24	9	4.67	3.56	1.58	1.33	3.08	2.22
Yakima	13	9	0.85	2.56*	0.38	0.22	0.46	2.33**
Yakima, Selah	7	5	1.14	1.00	0.14	0.00	1.00	1.00
Sheep Island	15	7	2.73	0.86	2.00*	0.29	0.73	0.57
Rabbit Island I	8	3	2.13	1.67	1.25	1.00	0.88	0.67
Rabbit Island II	8	5	2.88	5.20	1.50	2.00	1.38	3.20*
Fishhook Is.	13	8	5.69	1.75	3.38*	0.75	2.31	1.00
Okanogan	10	6	1.60	2.00	1.00	1.00	0.60	1.00
Keller	6	6	1.83	1.00	1.33	0.50	0.50	0.50
Whitestone Cr.	23	15	2.76	2.80	1.13	0.67	1.65	2.13
45-FE-7	11	11	1.64	0.36	0.18	0.18	1.45	0.18
45-ST-8	12	3	1.25	0.67	0.67	0.00	0.58	0.67
Sheep Creek	32	4	2.31	0.00	1.81	0.00	0.50	0.00
45-ST-47	7	3	1.43	3.33	0.71	0.33	0.71	3.00
Nicoamen	7	8	6.29	3.13	3.57	1.38	2.71	1.75
Nicola Valley	9	1	4.44	1.00	2.11	0.00	2.33	1.00
Kamloops/Chase	16	8	8.13	6.13	5.06*	2.88	3.00	3.25
Total =	282	119						
Average =			3.03	2.27	1.59	0.77	1.44	1.45
t =			2.04		3.42		-0.05	
p =			0.042		7E-04		0.959	

* .10 significance level

** .05 significance level

Given that a large sample was available, the four age groups were also investigated separately (see Figures 7.1, 7.2, 7.3, 7.4). Analysis of variance (ANOVA) supports the results of the bivariate analysis. The only significant difference between the age groups is seen in their association with utilitarian items ($F = 4.21, p = 0.0060$). Figure 7.2 graphically shows the trend towards increasing numbers of utilitarian items with increasing age. The use of more precise age at death estimates, particularly in the child age class, would, as was suggested earlier in the analysis of artifact type associations, provide insights into the age during which adult roles were assumed on the Plateau. While not included in this analysis, more detailed age data are available for some of the burial sites discussed here. The absence of a significant difference in GLV scores between the age groups suggests that, while they may have been underrepresented as a group, those infants that were accorded burial in the adult mortuary space did not receive treatment indicative of lower status than adults.

The results of the above analysis are subject to a number of possible interpretations. Some trends are more easily and satisfactorily explained than others. For instance, it is not surprising that the occurrence of utilitarian items as grave inclusions tends to increase with age. But it is less clear why there should not be a similar trend in sociotechnic artifacts, if it is assumed that status on average increases with age. This would appear to suggest that, over the Plateau as a whole, wealth and status were to a large extent acquired by birth into wealthy, high-status families, rather than achieved. I should emphasise that it is not the mere

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Table 7.8: Summary of Sex Differences in Artifact Richness

Site	Sex		No. Types X		Util. X		Socio. X	
	male n	female n	male	female	male	female	male	female
Congdon	5	4	4.60	2.00	3.20	1.50	1.40	0.50
Beek's Pasture	5	4	2.20	1.25	0.80	0.50	1.40	0.75
Juniper	2	2	10.00	3.50	1.00	0.00	9.50	3.50
Wildcat Canyon	9	12	2.78	1.58	1.67	1.25	1.11	0.33
Berrian's Is.	9	13	4.89	5.08	1.89	1.62	3.00	3.46
Yakima	5	4	0.20	0.50	0.00	0.50	0.20	0.00
Yakima, Selah	0	0	n/a	n/a	n/a	n/a	n/a	n/a
Sheep Island	10	4	3.30	1.25	2.30	1.00	1.00	0.25
Rabbit Island I	4	2	2.50	2.50	1.50	1.00	1.00	1.50
Rabbit Island II	4	4	2.00	3.75	1.25	1.75	0.75	2.00
Fishhook Is.	3	3	12.33	7.33	6.67	5.67	5.67	1.67
Okanogan	3	4	1.33	1.25	0.67	0.75	0.67	0.50
Keller	2	2	4.00	0.00	3.50	0.00	0.50	0.00
Whitestone Cr.	7	14	3.86	2.36	2.29	0.64	1.57	1.71
45-FE-7	3	5	2.33	0.40	0.00	0.00	2.33	0.40
45-ST-8	2	3	2.00	1.00	1.50	1.00	0.50	0.00
Sheep Creek	8	10	5.38*	1.30	4.25*	1.20	1.13*	0.10
45-ST-47	2	3	2.00	0.67	0.50	0.33	1.50	0.33
Nicoamen	2	5	8.50	5.40	4.50	3.20	4.00	2.20
Nicola Valley	3	4	3.67	3.50	1.67	2.00	2.00	1.50
Kamloops/Chase	4	1	11.50	4.00	7.50	4.00	3.75	0.00
Total =	92	103						
Average =			4.15	2.50	2.33	1.28	1.80	1.21
t =			2.86		2.85		1.73	
p =			0.005		0.005		0.09	

* .10 significance level

** .05 significance level

presence of some "rich" child burials that leads to this interpretation, but rather the fact that, on average, and with an adequate sample size, child burials cannot be distinguished from adult burials on the basis of the frequency with which sociotechnic artifact types are found as grave inclusions. Of course, this assumes that those artifacts that I have interpreted as being "sociotechnic" were in fact involved in this sphere, and that they are meaningful indicators of wealth and status. Arguments in support of these assumptions have already been presented in some detail in earlier chapters. Furthermore, the fact that the two artifact groups—utilitarian and sociotechnic—do exhibit non-random patterns with respect to age and sex suggests that the distinction made is behaviourally meaningful.

The results obtained here seem to mirror those obtained by Peebles (1971, 1978) in his study of grave inclusions at the Moundville site, in which utilitarian artifacts were found to be structured mainly along age/sex lines, while sociotechnic artifacts were not, but rather cross-cut the subordinate dimensions of age and sex. In fact it is not uncommon in complex hunter-gatherer mortuary studies to find that child burials on average display wealth equal to or greater than adult burials (for example, L. King 1982). This does not necessarily refute the hypothesis that this in many cases can indicate some degree of ascribed status as defined in Chapter 2. Mortuary analyses concentrate overwhelmingly on cases in which there are large numbers of burials from relatively well-defined cemeteries. This in itself biases the data towards

Figure 7.1: Relationship between Age and Number of Artifact Type

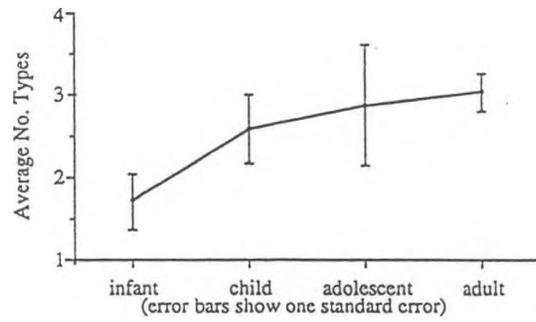


Figure 7.2: Relationship between Age and Number of Utilitarian Type

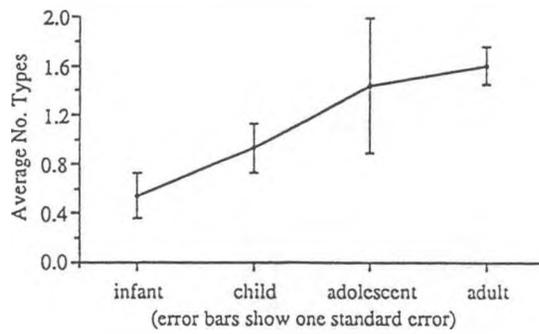


Figure 7.3: Relationship between Age and Number of Sociotechnic Type

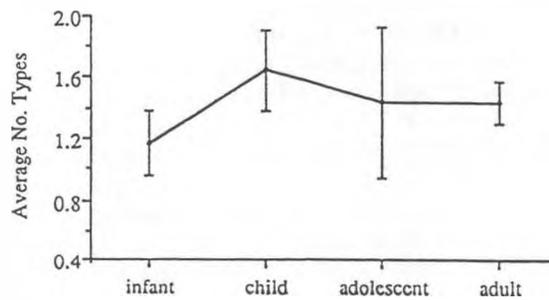
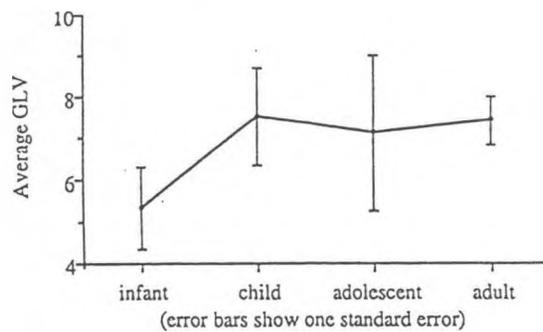


Figure 7.4: Relationship between Age and GLV



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Table 7.9: *t*-Tests for Age and Number of Artifact Types

Average	Adult	Infant/Child	<i>t</i>	<i>p</i>
<i>All Periods</i>				
<i>n</i>	292	119		
Types X	3.03	2.23	2.04	0.0419
Util. X	1.59	0.77	3.42	0.0007
Socio. X	1.44	1.45	- 0.05	0.9593
GLV X	7.40	6.64	0.73	0.4636
<i>Late Prehistoric</i>				
<i>n</i>	97	27		
Types X	2.18	1.67	0.78	0.4357
Util. X	1.48	0.52	2.03	0.0441
Socio. X	0.69	1.15	- 1.69	0.0960
GLV X	4.36	5.59	- 0.90	0.3704
<i>Protohistoric</i>				
<i>n</i>	123	56		
Types X	3.14	1.88	2.06	0.0405
Util. X	1.20	0.59	1.99	0.0525
Socio. X	1.94	1.29	1.55	0.1238
GLV X	9.18	6.00	1.74	0.0845

those more complex sociocultural systems in which some degree of sedentism, corporate groups, and socioeconomic inequality are all more likely to have been present than not.

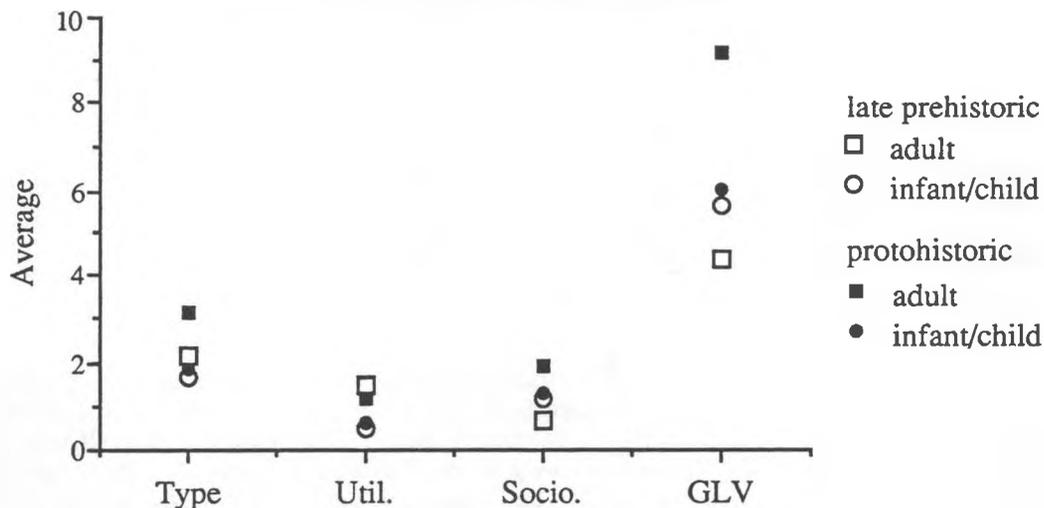
Braun (1979), whose work was discussed briefly in Chapter 2, introduces a more sophisticated model that attempts to distinguish between achieved and ascribed status in mortuary contexts. If infants and children are being used as vehicles to express the achieved wealth and status of their parents, then at some point there must be a shift when the individual determines his or her own status. Braun suggests that, ethnographically, this would occur near the time of puberty, upon the assumption of adult activities and roles. In such a situation one would expect a pattern in which adolescent burials exhibit lower energy expenditure (as measured by grave inclusions on the Plateau) than either infants and children on the one hand, or adults on the other. Some suggestion of such a pattern appears in the GLV scores, with children and adults exhibiting higher average GLV scores than adolescents. Infants show substantially lower scores, but this could relate to the phenomenon of what may be termed non-recognition discussed earlier. But, in any case, while they may be suggestive, none of these differences approach statistical significance. Possibly the observed pattern indicates a mixture of achieved and ascribed status.

Dividing the data into two broad time periods—late prehistoric and protohistoric—reveals further interesting relationships. Quite contrary to what might be expected, the late prehistoric infant/child group exhibits an higher average GLV than the adolescent/adult group, while the protohistoric infant/child group exhibits a substantially lower GLV than the adolescent/adult group (see Table 7.9 and Figure 7.5). Again, this pattern is generally not discernible at the level of the individual site/assemblage. Assuming for the moment the simplest situation—a generally isomorphic relationship between burial wealth and living status—it appears that the status of subadults *decreased* from the late prehistoric to the protohistoric period. More accurately, the average GLV value for the infant/child group hardly changed between the two periods (late prehistoric $\bar{X} = 5.59$ and protohistoric $\bar{X} = 6.00$), while that of the adult group increased dramatically in the protohistoric period (from $\bar{X} = 4.36$ to $\bar{X} = 9.18$). But since I am interested here in *relative* status, the effect is the same. The results could, then, be interpreted as suggesting a shift away from

an emphasis on ascribed status in the late prehistoric towards greater emphasis on achieved status during the protohistoric, keeping in mind that the terms “ascribed” and “achieved” represent relative positions on a continuous scale. Again, this pattern is quite unexpected. It has often been assumed that the protohistoric period on the Plateau was one of *increasing* sociocultural complexity, including a shift towards ascribed status from a more egalitarian system in the prehistoric period (Ray 1932, 1939; Stapp 1984). Why the opposite trend should be observed is unclear, unless a pattern similar to that proposed for some Northwest Coast groups held, in which sudden population decreases left previously inherited social positions more open to general competition (Ruyle 1973; see also Campbell 1989).

Differences along the dimension of sex were found to be more pervasive (Table 7.10). Here, *t*-tests reveal that male graves contain on average significantly more artifact types overall, and that this distinction is maintained when artifacts are separated into utilitarian and sociotechnic types, although only at the .10 significance level in the latter case. This trend is largely masked at the level of the individual site/assemblages forming the units of analysis in Chapter 6. Finally, male graves also on average exhibit significantly higher GLV scores than females at the .05 level.

Figure 7.5: Changes in the Relationship between Time, Age, and Grave Inclusions



To some degree this appearance of greater male status may be exaggerated. Ethnographically, women are often involved in the production and ownership of textiles—basketry and weaving—that are also forms of material wealth, but perishable. Certainly blankets and robes were wealth items on the Plateau, and were frequently used in mortuary contexts. On the other hand, ethnographic accounts presented in Chapter 5 suggest that both sexes would be wrapped in blankets or robes upon death, and so the differences observed in non-perishable wealth may still be a valid indicator of the difference between male and female status.

The shift from the late prehistoric to the protohistoric period sees a significant increase in female grave associations relative to males, though still remaining below the male average. This could indicate that females participated more equally in the new sources of wealth being made available in the protohistoric period. Alternatively, or perhaps reflecting the same underlying process, the increase in female grave wealth in the protohistoric period may indicate an increase in the importance of marriage alliances. Families invest in their children of both sexes through feasts and the distribution of gifts at important life events, leading up to and including marriage, and this investment is in effect advertised by the wearing of costly clothing and ornaments (cf. Hayden in press). On the Plateau, as elsewhere, wealth was commonly exchanged at marriage, typically in the form of bridewealth.

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Table 7.10: *t*-Tests for Sex and Number of Artifact Types

<i>Average</i>	<i>Male</i>	<i>Female</i>	<i>t</i>	<i>p</i>
<i>All Periods</i>				
<i>n</i>	91	100		
Types X	4.15	2.50	2.86	0.0047
Util. X	2.33	1.28	2.85	0.0048
Socio. X	1.80	1.21	1.73	0.0861
GLV X	9.75	6.13	2.39	0.0179
<i>Late Prehistoric</i>				
<i>n</i>	32	29		
Types X	3.41	1.48	2.21	0.0311
Util. X	2.41	1.03	2.06	0.0440
Socio. X	1.00	0.45	1.69	0.0955
GLV X	6.75	2.72	2.35	0.0220
<i>Protohistoric</i>				
<i>n</i>	33	48		
Types X	4.73	2.90	1.79	0.0769
Util. X	1.97	1.10	1.60	0.1133
Socio. X	2.76	1.79	1.37	0.1751
GLV X	13.39	8.48	1.65	0.1028

There is in fact some interesting archaeological evidence for at least limited female exogamy and patrilocality on the Plateau. Both Old Umatilla (Lynch 1978) and Berrian's Island (Newman in Osborne 1957) display higher proportions of females exhibiting cranial modification (see Chapter 6), ethnographically more typical of the Chinook-speaking Wasco-Wishram (Chapter 5). The securing of marriage alliances with the wealthy occupants of the Long Narrows would have provided a definite asset to an upriver family, presumably giving them, if the marriage was between elites (as it is far more likely to have been—see Chapters 2 and 5), trading privileges and access to its great fisheries. The availability of new sources of wealth initially controlled largely by the Wishram through their middleman position would have provided added incentive to pursue such ties in the early protohistoric period. A possible increase in the importance of marriage alliances in the protohistoric period could also reflect shifting power relations seen at this time, and the need for allies due to the increased levels of aggression. While this scenario seems reasonable, it should be emphasised that the currently available evidence supporting it is tentative. For one thing, the large Old Umatilla cemetery gives few indications of the presence of a wealthy elite.

Also apparent is a trend towards decreasing inclusion of non-perishable utilitarian items in graves. Presumably this relates to the actual decrease in use of items of pre-contact technology in favour of Euroamerican items, particularly guns and steel knives, which were too valuable to be used as grave inclusions to the same extent that earlier stone and bone implements were. When such items were included in graves, they functioned more in the sociotechnic sphere, and, because they were coded as such, the incidence of utilitarian artifacts in the protohistoric period may be somewhat artificially deflated. But there are so few Euroamerican "utilitarian" items found as grave inclusions that this would have little effect on the observed decrease. Balancing the trend in decreasing utilitarian items is a substantial increase in the number of types of sociotechnic items, particularly copper ornaments, glass beads, and *Dentalium*, deposited in burial contexts in the protohistoric period. Absolute numbers of items also increase markedly (see Schulting 1993a) at this time, due largely to the increased availability of shell and copper.

It is frequently postulated that a shift in social organisation occurred during the protohistoric period, one which provided for a greater emphasis on ascribed status and rights on the Plateau (cf. Stapp 1984). This may have been related to the impact of European trade goods and a shift in economic emphasis towards the new trading patterns brought about by them. The acquisition of the horse and of the gun and their impact on native mobility and warfare are well-known phenomenon, and conceivably contributed to an increase in social complexity. Possibly the observed increase in grave inclusions, particularly sociotechnic items, in the protohistoric period indicates an increasingly differentiated ranked society requiring greater conspicuous consumption of status objects. Parker Pearson (1984) refers to the need of elite classes to consume increasing quantities of surplus and prestige items as fundamental for the maintenance and/or advancement of prestige and power. Expensive ornaments are obviously well suited to this role. Such a scenario has also been advocated by Stapp (1984), who presents the following hypothesis:

Stimulated by the arrival of new items (trade goods to the west, and the horse to the east), local headmen reorganised their villages into corporate groups (Hayden & Cannon 1982). This led to an increase in production, leading to surpluses, which were then transformed into various forms of wealth, among them, copper ornaments. The ornaments, symbolic indicators of this newfound wealth and power, were distributed to family members, thus setting the stage for an evolution from an egalitarian society to a ranked society [Stapp 1984:102-103].

But there are a number of problems with this scenario. For one thing, given the small sample sizes, poor documentation, and inadequate skeletal analysis of many of the burial assemblages investigated by Stapp, it is not clear how much confidence can be attributed to his interpretation of rich "familial units" (Stapp 1984:99). Perhaps the shift, if indeed it does exist, can rather be attributed to the devastation wrought by introduced diseases. The epidemics may be assumed to have taken an especially heavy toll on children, and are almost certainly responsible for the extremely high infant and child mortality and frequency of multiple interments seen at protohistoric sites such as Freeland, Canoe Creek, and Nicoamen. Faced with these losses, perhaps the perceived value accorded to infants and children increased (cf. Brown 1981:29; Hofman 1968:172).

But more importantly, there is little indication, based on the mortuary evidence presented here, that any significant increase in wealth—and presumably status—differentiation did in fact occur between the late prehistoric and the protohistoric (discussed further below). There is no statistically significant difference in Gini indices between the two periods. The late prehistoric period cannot be characterised as "egalitarian". Regarding both adult and subadult burials, there is indeed on average an increase in the frequency and quantity of grave inclusions in the protohistoric period (as proposed by Sprague 1967), and also a tendency for the inclusions to be of a more ornamental nature, but this appears to indicate a general increase in the availability of new sources of material wealth, which then tend to remain distributed with an equivalent degree of inequality as that seen in the late prehistoric period. In fact, the observed trend is quite the opposite of what would be expected if a model assuming an increase in complexity in the protohistoric period were true. Infants and children are buried with *less* wealth (particularly as measured by GLV) relative to adults than in the late prehistoric period, arguing against any increased emphasis on ascribed status during the protohistoric period. The idea that the late prehistoric period was more egalitarian than the protohistoric period is not supported by the mortuary data as presented here.

Given my earlier discussion (see Chapter 2) on elite options in the face of increased availability of both new and traditional status items (copper and *Dentalium*, for example), there are alternatives to interpreting the increase of sociotechnic items found as grave inclusions during the protohistoric period as an increase in social complexity. In the late prehistoric period, rare single objects, such as tubular stone pipes or large nephrite celts, may have been sufficient to indicate high status (at least in terms of non-perishable goods likely to be interred with the dead). In the prehistoric exchange system, there would have been no dramatic increase in the availability of such items, and so one would not expect to find increasingly large numbers of them in burials. But once having incorporated such items as copper ornaments as indicators of wealth and status (or rather, having placed a greater emphasis on them, since prehistoric copper was known on the Plateau and most likely functioned as a status item), the exponentially increasing availability of the metal through trade would have made it necessary for the elite to incorporate more and more of it in order to maintain its ability to differentiate status (cf. Cannon 1989). One way of reducing the

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supply (i.e. to curb inflation) would be to remove large amounts from circulation, and I suggest that this is very likely what was occurring on the Plateau during the protohistoric and early historic periods.

Exploring Inequality Through the Use of Lorenz Curves and Gini Indices

Mortuary data from 27 Plateau burial assemblages (some of these are composite samples) provide a range of Gini indices from 0.30 to 0.77 with richness as the measure of "wealth", and from 0.33 to 0.80 with GLV as the measure of "wealth" (Table 7.11). As might be expected, all assemblages depart significantly from perfect equality. By way of comparison, family income inequality in the United States in 1980 ranged from $G = 0.3163$ in Wyoming to $G = 0.4450$ in the District of Columbia (Braun 1988). (Of course these values are in no sense directly comparable since the same measure of wealth was not employed, but they do provide a sense of the degree of inequality that is being discussed.)

Table 7.11: Summary of Measures of Inequality in Plateau Mortuary Assemblages

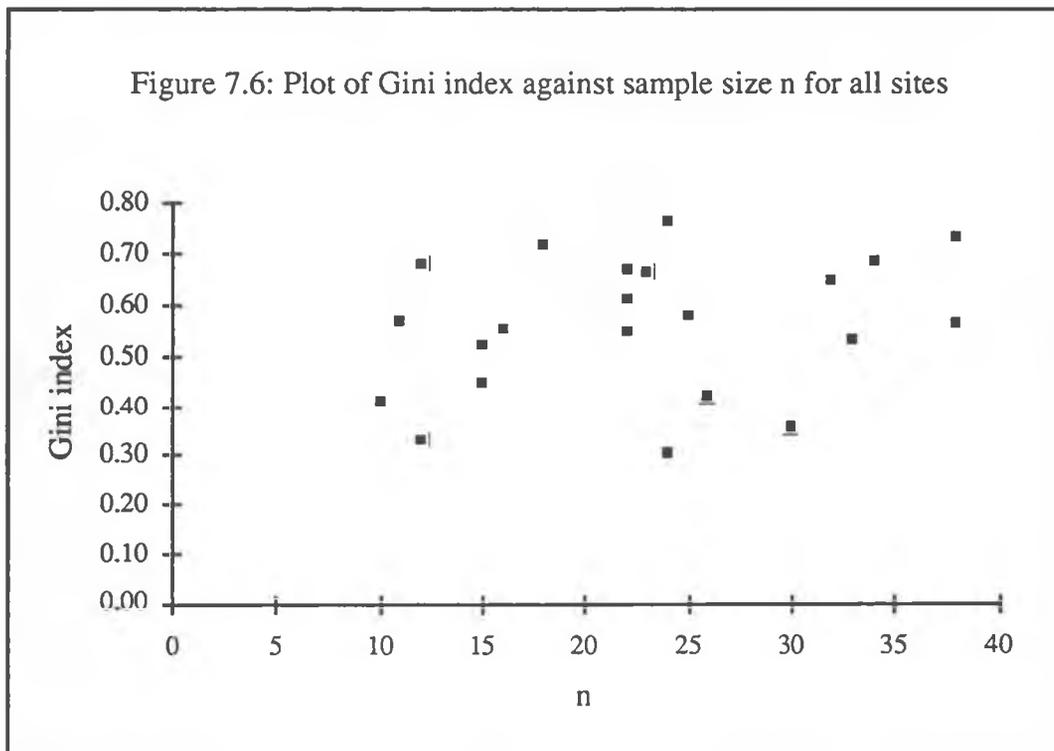
Site	n	All Types		Gini GLV	Utilitarian		Sociotechnic	
		C.V.	Gini		C.V.	Gini	C.V.	Gini
Kamloops/Chase*	24	0.36	0.30	0.33	0.39	0.34	0.45	0.41
Selah	12	0.42	0.33	0.37	-	-	-	-
Rabbit Is. I, 45-BN-15	11	0.44	0.36	0.33	0.55	0.57	0.48	0.46
Congdon, 45-KL-41	30	0.39	0.36	0.35	0.43	0.41	0.43	0.40
Rabbit Is. II, 45-BN-15	15	0.41	0.37	0.41	0.49	0.52	0.47	0.48
Nicola Valley*	10	0.43	0.41	0.42	0.50	0.52	0.45	0.42
45-ST-8	15	0.47	0.45	0.58	0.58	0.67	0.60	0.70
Rabbit Is. (I&II), 45-BN-15*	26	0.44	0.42	0.46	0.51	0.55	0.51	0.54
Nicoamen, EbRi 7	15	0.51	0.52	0.50	0.57	0.64	0.47	0.48
Berrian's Is., 45-BN-3	33	0.53	0.53	0.53	0.56	0.65	0.56	0.56
Juniper	22	0.54	0.55	0.59	0.68	0.82	0.57	0.60
Okanogan, 45-OK-66, 112*	16	0.52	0.55	0.49	0.58	0.66	0.48	0.46
Whitestone Cr., 45-FE-24	38	0.52	0.56	0.57	0.68	0.76	0.53	0.59
45-ST-47	11	0.59	0.57	0.60	0.65	0.84	0.57	0.75
Fish Hook Is. I, 45-FR-42	10	0.54	0.57	0.67	0.58	0.67	0.64	0.77
Fish Hook Is. II, 45-FR-42	13	0.54	0.57	0.61	0.54	0.59	0.58	0.66
Sundale	25	0.53	0.58	0.62	0.63	0.75	0.57	0.65
Sheep Island, 45-BN-55	22	0.58	0.61	0.60	0.60	0.69	0.60	0.70
Old Umatilla, 35-UM-35B	105	0.54	0.62	0.66	0.54	0.62	0.72	0.87
Wildcat Canyon, 35-GM-9	32	0.83	0.65	0.68	0.62	0.71	0.66	0.78
Fish Hook Is. (I&II), 45-FR-42*	23	0.60	0.67	0.69	0.60	0.70	0.60	0.73
Yakima Valley*	22	0.58	0.67	0.70	0.67	0.81	0.61	0.73
Keller Ferry, 45-LI-27	12	0.59	0.68	0.72	0.62	0.72	0.67	0.81
Dalles-Deschutes*	34	0.60	0.68	-	0.53	0.59	0.67	0.82
Beek's Pasture	18	0.65	0.72	0.71	0.68	0.81	0.65	0.72
Sheep Creek, 45-ST-46	38	0.64	0.73	0.77	0.63	0.73	0.70	0.84
45-FE-7	24	0.65	0.77	0.80	0.68	0.69	0.83	0.83
number of sites/assemblages = simple average = r^2 (with preceding column) =	27	0.53	0.55	0.57	0.58	0.66	0.58	0.65
			0.74	0.92		0.93		0.88

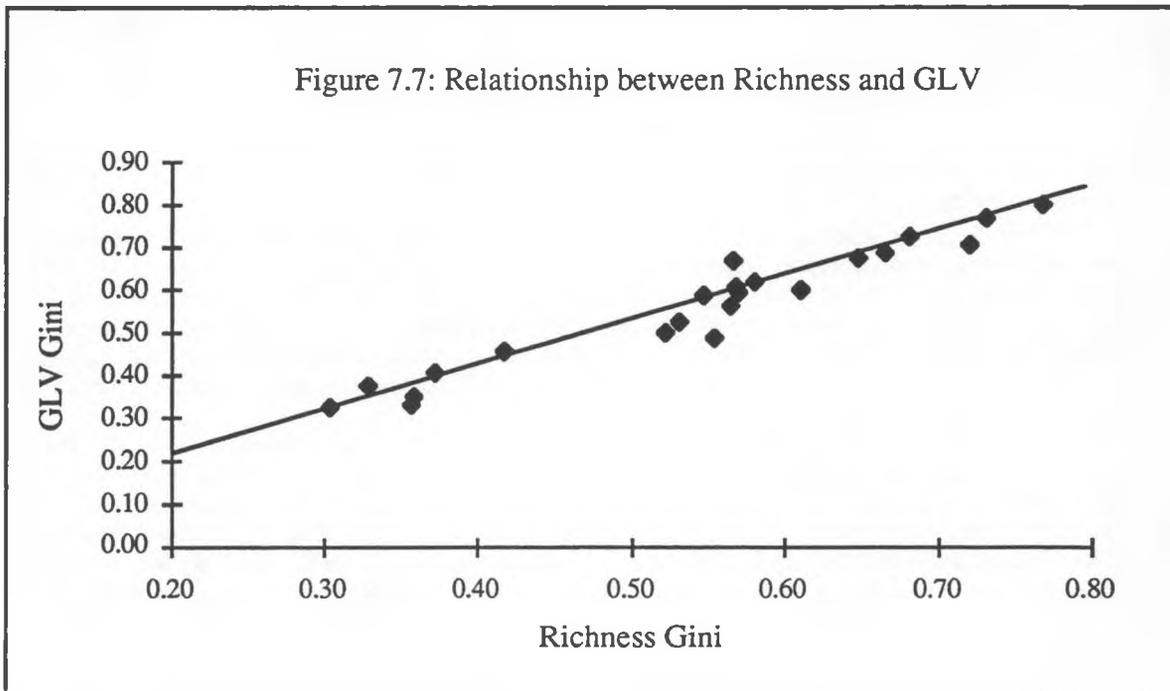
* denotes composite assemblages

Sample size ranges from 11 individuals at site ST-47 to 38 individuals at both Whitestone Creek and Sheep Creek, and 105 at Old Umatilla. Because the Lorenz curve and its derivative Gini index are measures of relative inequality, sample size should not be a factor, despite the fact that the larger samples tend to display a greater richness of artifact types. This is important given the criticism of sample size dependence levelled against many other measures of richness and diversity (cf. Bobrowsky and Ball 1989). Plotting the Gini indices against sample size for 19 sites (see Figure 7.6) clearly shows no correlation between the two variables ($r^2 = .02$).

One of the more interesting results seen in Table 7.11 involves the high correlation ($r^2 = 0.92$) between the Gini indices calculated from the simple richness of artifact types, and the GLV Gini indices calculated from weighted "wealth" scores (Figure 7.7). This result is emphasised in the richness and GLV Lorenz curves for individual burial assemblages presented in Appendix C. The rank order of assemblages does change in a few cases, but none of these shifts are significant when tested. Furthermore, the direction of change is not predictable, so that in some cases the GLV Gini score will be lower than the richness Gini score, while in others it will be higher.

The averages of the Gini scores calculated for artifact richness and for GLV across the 27 assemblages are basically identical ($G = .55$ and GLV $G = .57$, respectively). This result might be expected, since those graves with a greater richness of artifact types are more likely to contain exotic and prestige items, and such items receive a higher weighting in the calculation of the GLV Gini. However, I would like to emphasise that this result need not necessarily apply in other contexts; rather, the relationship is a matter for empirical research. It is also worth noting that the Gini index is fairly highly correlated ($r^2 = 0.74$) with the computationally simple coefficient of variation (defined as SD/\bar{X} , in this case transformed to vary between 0 and 1.0), which is simply a standardised measure of variability.





Before conducting the analysis, I hypothesised that sociotechnic artifact types would be more unequally distributed, given the greater expense involved in their acquisition compared to utilitarian artifacts. Presumably all adults participated in subsistence activities and so would possess the “tools of the trade”, and might often be buried with them. The elite, on the other hand, would be expected to participate disproportionately in regional exchange systems and so would have greater access to exotic and other prestige items relative to the rest of the community. This expectation was not borne out by the results, however, which are notable only for the overall lack of observed differences in inequality in distributions of utilitarian and sociotechnic artifact types. In fact, the average Gini indices of both groups are nearly identical (UTIL G = 0.66; SOCIO G = 0.65). As fairly substantial differences are seen at the level of the individual assemblages, it may be that confounding factors, particularly age (at death), sex, and time period, are partly responsible for this result. As demonstrated earlier in this chapter, adult males in particular are significantly more likely to be interred with a number of specific utilitarian artifact types, including projectile points, knives, shaft smoothers, antler wedges, bone points, and harpoons; thus they contribute substantially to the observed inequality in the distributions of utilitarian artifact types. Finally, because of the low richness in utilitarian artifact types in some of the assemblages, some of the high Gini scores may in some cases be misleading. That is, they are likely not behaviourally meaningful.

The difficulties in testing the statistical significance of Gini indices and the offered solution were presented in Chapter 3. Once sample sizes of approximately 20 are reached, the difference between the two Gini indices being tested are required to reach about 0.20 before a significance level of .05 is attained. As is apparent from Table 7.12, there is little problem in reaching the required degree of separation in many cases. It is, of course, much more difficult to achieve significant results with very small sample sizes of less than about 15. It is this that largely prevents the investigation of within-group variability in inequality.

To my knowledge, the results presented here constitute the first attempt to test differences between sample Gini indices for statistical significance in an archaeological context. The advantage of treating assemblages as samples rather than populations regardless of the completeness of recovery at a site should be obvious. Doing so enables the use of Lorenz curves and Gini indices to move beyond being merely a descriptive tool to meaningful inferences concerning larger groups. I would argue that, even in cases where an entire burial group or cemetery *has* been systematically excavated, it is still more useful to treat the resulting burial assemblage as a sample rather than a population. Following Cowgill (1989), in such cases the “population” may be thought of as a “sample” of what would be present at a site if the cultural groups responsible for the material record there had continued doing the same things in the same place for a longer

period of time. Rarely would we want to restrict our comments to only the recovered assemblage, no matter how "complete" it appears.

Table 7.12: Randomisation Tests for Gini Indices based on Plateau Mortuary Data

	Kam	Sel	Cong	Nic	ST8	Rab	Nicm	Ber	Jun	Okan	White	Sun
Kamloops	-											
Selah		-										
Congdon			-									
Nicola				-								
45-ST-8					-							
Rabbit Is.						-						
Nicoamen	<.05	<.10	<.10				-					
Berrian's	<.01	<.10	<.10					-				
Juniper	<.01	<.10	<.05						-			
Okanogan	<.01	<.10	<.05							-		
Whitestone	<.01	<.05	<.05			<.10					-	
45-ST-47	<.01		<.10									
Sundale	<.01	<.05	<.01			<.10						-
Sheep Is.	<.01	<.10	<.01	<.10		<.05						
Wildcat	<.01	<.05	<.01	<.05		<.01						
Fishhook	<.01	<.01	<.01	<.10		<.05						
Yakima	<.01	<.01	<.01	<.05	<.05	<.01						
Keller	<.01	<.01	<.01	<.10	<.10	<.05						
Dalles-Des	<.01	<.01	<.01	<.05	<.05	<.01	<.10	<.10	<.10			
Beek's	<.01	<.01	<.01	<.05	<.10	<.01	<.05	<.05				
Sheep Cr.	<.01	<.01	<.01	<.01	<.05	<.01	<.05	<.01	<.05	<.10	<.05	<.10
45-FE-7	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.05	<.05	<.05	<.05

NB. 45-ST-47 has been left off of the horizontal axis of the table as it adds no significant results.

So, now that it is possible to: 1) quantify the degree of inequality in a distribution of grave inclusions, and 2) test differences in the resulting values for significance, it remains to ask how the results are to be interpreted. That is, what can they tell us? Selected Plateau assemblages in Table 7.13 show the proportion of "wealth" (artifact richness in this case) held by population deciles, together with theoretical distributions of perfect equality and absolute inequality for comparison. Thus, for example, even in the most equitable distribution, that of Kamloops/Chase, the top ten percent of the burials hold about 25 percent of the "wealth". In contrast, the top ten percent of the Sheep Creek burials hold about 67 percent of the "wealth". Looking first at the low end of the range of Gini scores, randomisation tests seem to separate Kamloops/Chase, Selah, and Congdon as showing significantly less inequality than most of the remaining assemblages. The Selah assemblage, besides displaying a relatively equal distribution of artifact types ($G = 0.33$) and GLV ($GLV\ G = 0.37$), gives an impression of extreme simplicity. As Table A.2 (see Appendix A) shows, there is little "wealth" in the assemblage to be differentially distributed; there are only three artifact classes present in the entire assemblage. Such an assemblage, especially because of its small size ($n = 12$) is very susceptible to skewing, and this is just the kind of situation that might be expected to lend itself on occasion to a very unequal distribution and thus an high Gini value. That this is not the case could suggest that the Selah data do not in fact represent a wide range of status positions. Whether or not these positions were present in the living community is another matter, since more elaborate burials might have been located elsewhere.

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Table 7.13: Proportion of "Wealth" for Given Proportion of Population in Selected Plateau Assemblages

% of Pop.	% of Wealth							
	Equality	Kamloops	Rabbit Is.	Berrian's Is.	FishHook Is.	Wildcat	Sheep Cr.	Inequality
0 to 10	0.10	0.01	0.00	0.00	0.00	0.00	0.00	0.00
10 to 20	0.20	0.05	0.03	0.02	0.00	0.00	0.00	0.00
20 to 30	0.30	0.10	0.05	0.04	0.00	0.00	0.00	0.00
30 to 40	0.40	0.19	0.13	0.09	0.00	0.03	0.00	0.00
40 to 50	0.50	0.27	0.18	0.14	0.03	0.08	0.00	0.00
50 to 60	0.60	0.36	0.27	0.21	0.10	0.12	0.05	0.00
60 to 70	0.70	0.50	0.41	0.31	0.18	0.18	0.09	0.00
70 to 80	0.80	0.60	0.51	0.40	0.31	0.30	0.20	0.00
80 to 90	0.90	0.74	0.71	0.63	0.48	0.53	0.33	0.00
90 to 100	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
GINI =	0.00	0.30	0.36	0.53	0.57	0.65	0.73	1.00
n =	1000	23	26	36	22	39	34	1000

The Kamloops/Chase composite assemblage displays the least inequality in its distribution of grave inclusions, both in terms of richness and GLV. Despite the fact that its Gini value of 0.30 is almost identical with that of Selah, Kamloops/Chase presents an entirely different impression. As with the Selah assemblage, it almost entirely lacks the pyramidal structure expected in a situation of high inequality and status differentiation. The difference is, that while the Selah assemblage is characterised by simplicity and a low artifact richness, Kamloops/Chase is the second most diverse assemblage in the collection after Berrian's Island (see Table A.2). To some extent this may be a result of the composite nature of the Kamloops/Chase assemblage, as it undoubtedly encompasses a wider temporal span than Selah. But this alone does not nearly account for the discrepancy. Kamloops/Chase also exhibits the highest average number of artifact types, over seven per burial. While the low inequality in the distribution of artifact richness could be interpreted as indicating a more "egalitarian" society than most of the other assemblages, an alternative explanation would be that the lowest socioeconomic group is simply not represented; i.e. its members were either being buried elsewhere or not being buried at all in ways that would leave traces in the archaeological record. A similar interpretation for Selah seems far less likely given the impoverished nature of its artifact assemblage. The relative lack of inequality observed in the Kamloops/Chase assemblage, then, may be occurring *within* the upper wealth stratum alone. Rather than indicating a more egalitarian society, it may actually point to greater and more formalised social inequalities, with special burial areas for the most important community or lineage members. Interestingly enough, Teit (1909:592) notes that, among the Shuswap, poor people who had no powerful relatives were not buried, but simply deposited on the ground or piled over with mats and brush. This is not to say that the ethnographic observation can be uncritically used to "explain" the archaeological data. More work needs to be done before a satisfactory account can be offered for the relatively low inequality seen in the Kamloops/Chase, particularly given the problematic nature of the sample. But, given the available data, and recognising its limitations, it does appear that the grave inclusions indicate a relatively wealthy group, and that the poor are entirely absent.

At the opposite extreme, the highest Gini values are seen at Beek's Pasture, Sheep Creek, and FE-7, ranging from $G = 0.72$ to 0.77 . Beek's Pasture and FE-7 both date to the protohistoric period, while Sheep Creek dates to the late prehistoric period. As might be expected, assemblages with high Gini scores are characterised by having a significant number of burials containing no grave inclusions, together with relatively few burials containing many and diverse items (see Table A.2). There is always the problem of

contemporaneity to deal with, but it seems unlikely that, in all the cases examined, those burials lacking grave inclusions are substantially earlier than those burials with grave inclusions. One thing this brings into focus is the oft-cited idea that grave inclusions are almost "invariably" found in Plateau burials (Sanger 1969; Sprague 1967:201, 1971a; Stryd 1973:88); clearly this is not the case, although it may hold more for the Canadian than for the Columbia Plateau. Again, one must be cautious in the interpretation of the observed differences in inequality. While they certainly do suggest a very unequal access to certain types of goods, at least for the purposes of mortuary display, this should not be taken to imply that great social distances necessarily separated "rich" and "poor" groups within the community. The basic necessities of life may have been more equitably distributed. On the other hand, ethnographic evidence indicates that, at least among some groups, access to even basic resources was indeed very differentially distributed. In the most extreme cases, some groups had a class of slaves with no ownership or access rights whatsoever.

Lorenz curves and Gini indices can be also used to break down inequality within assemblages along age and sex lines. Unfortunately, in practice it is difficult to analyse age and sex groups separately due to the small sample sizes involved. In those few assemblages divided by age, there are no statistically significant differences in the Gini indices. Gini values are nearly identical for adults and subadults at Berrian's Island and Whitestone Creek (Figures 7.8 and 7.9), two assemblages in which relatively large numbers of adults and subadults are present.

Comparing inequality between the sexes is subject to the same problems of sample size. Nevertheless, the protohistoric Berrian's Island assemblage suggests greater female inequality, although only at a .10 significance level (Figure 7.10), compared to that seen in males from the same site in terms of number of sociotechnic artifact types ($G = 0.6154$ and 0.3621 , respectively). This is a relatively anomalous result, and its interpretation is unclear at this point. Sufficient numbers of artifact types are present (indeed, this is the most diverse assemblage in this regard) so that the Lorenz curves and Gini indices are likely to be valid measures, i.e. they are not subject to the kind of fortuitously inflated inequality possible in small samples with extremely limited richness.

This example serves to highlight some of the uncertainties involved in the interpretation of Gini indices: Does the relatively greater inequality in the distribution of sociotechnic artifact types in female burials indicate greater status for some females, or does it reflect a tendency for relatively few female burials to be given what might be called a "high status" treatment, while such treatment is more common among the male group? Additional lines of evidence suggest that the observed pattern favouring high status for some females is "real" and behaviourally meaningful, in the sense that it is not an artifact of the technique or the sample size. Both the average richness and GLV are higher in the female group than in the male group, although the difference does not reach statistical significance. Furthermore, an examination of artifact associations reveals that copper and iron artifacts, which are expected to be prestige items during this period, are more commonly found in female graves (see Chapter 6). Given the small sample size, only the association of iron ornaments (with females) produces a significant chi-square at the .10 level (chi-square = 2.77; $p = 0.096$) (and this includes associations in a number of disturbed burials, and so may be questionable). The point here is that an examination of the broader context of mortuary treatment is an essential aspect of interpreting differences in inequality seen in measures such as the Lorenz curve and Gini index.

Lorenz curves and Gini indices are potentially a very useful means of exploring inequality in many different contexts. Of course, the validity of any conclusions made rests solely on whether or not we accept 1) the premise that the number, kinds, and attributed values of artifacts in a burial are valid measures of wealth, and 2) that wealth is a meaningful dimension of variability in mortuary behaviour on the Plateau. Neither of these arguments can be made on the basis of the Lorenz curves, but rather rely for support on the kinds of subsidiary arguments presented earlier; that is, they are archaeological questions and not statistical ones. Perhaps the main use of the Lorenz curve and Gini index should at present be in the exploration of various dimensions of inequality.

Comparison of Ethnographic and Archaeological Burial Data

Ethnohistoric and ethnographic accounts discussed in Chapter 5 provide considerable support for the presence of differential burial practices relating in a fairly direct fashion to socioeconomic status differences present in life. While the direct applicability of this information to the archaeological record, and particularly to prehistoric material, remains questionable, it is important in that the model it provides is

Figure 7.8: Berrian's Is. Lorenz Curves for Adults and Subadults

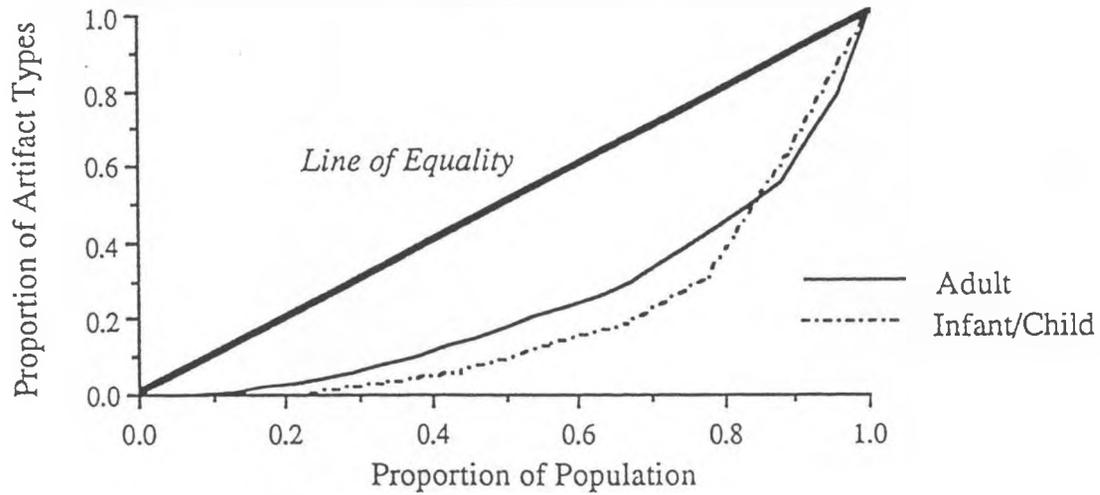
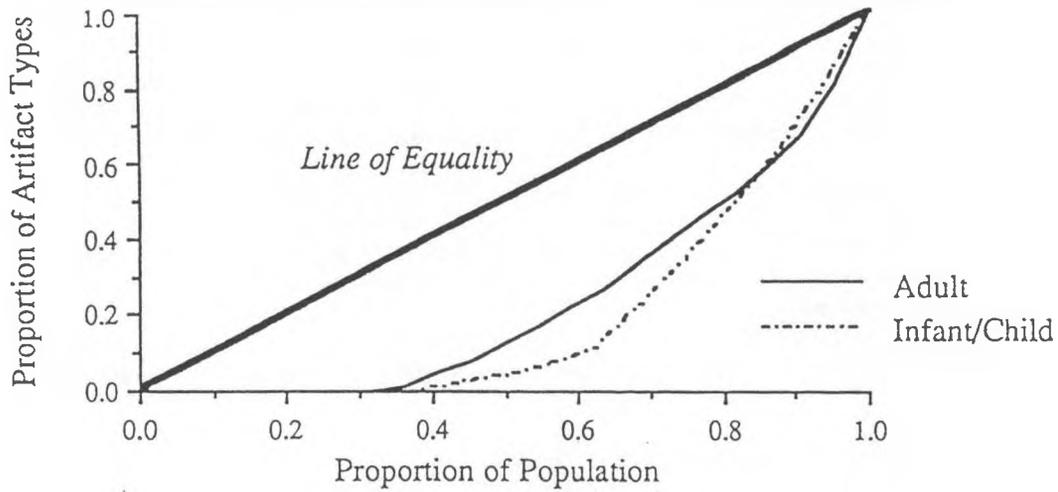


Figure 7.9: Whitestone Creek Lorenz Curves for Adults and Subadults



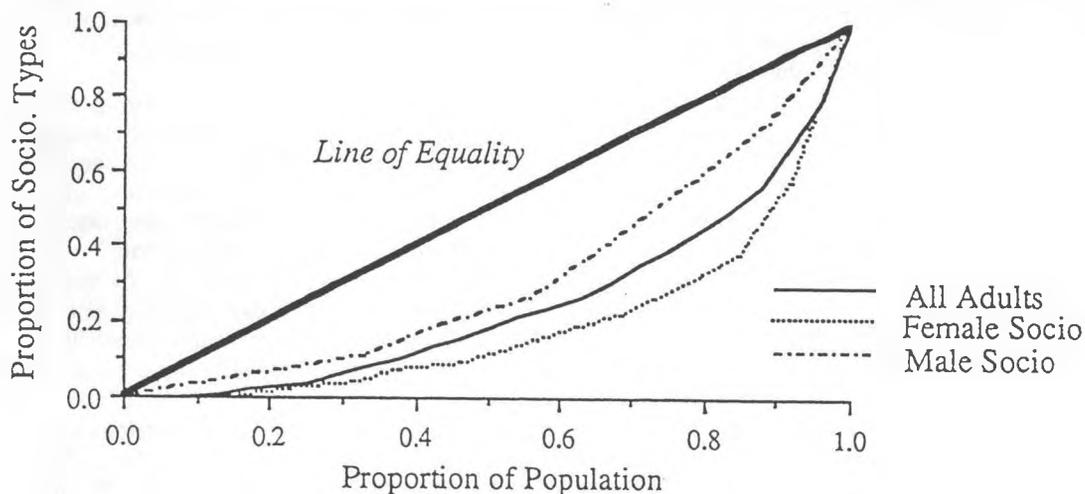
consistent with many of the theoretical expectations underlying mortuary analysis. There are also a number of apparent contradictions between the two sources of data, some of which are discussed below.

Ethnographically, the denial by the Shuswap and Lower Lillooet that talus slopes were ever used for burial could suggest that this was seen as a low-status form of burial and would not be admitted by Teit's (1906, 1909) informants. Well-documented archaeological evidence from the late prehistoric period indicates that talus burial was employed well within Shuswap territory, and there is no reason to suppose massive population displacement in Shuswap territory during this period (cf. Hills 1971). The artifacts found in some of these burials, however, are not consistent with the hypothesis that only poor people were being buried in talus slopes. Thus the explanation may be simply that the practice predates ethnographic memory. It is also possible that the few known examples of talus burial in these areas represent hurried disposal of the deceased by outside groups.

More difficult to account for is the fact that Spier and Sapir's (1930) informants state that neither the Wishram nor their neighbours practised cremation. Cremations, together with talus burial, are the most common forms of burial in the late prehistoric/protohistoric period in The Dalles-Deschutes region. Numerous copper artifacts are found in cremations at B. Stewart, Badger Creek, Miller's Island Sites 15 and 21, Spedis Valley, Beck's Pasture, and others. There is no evidence that cremations were a low status form of burial—in fact, quite the opposite—and so it is not reasonable to suggest that Spier and Sapir's informants would deny it on this ground. This could be interpreted as supporting the idea, mentioned in Chapter 5, that the Wishram were very late arrivals at The Dalles, possibly displacing a Salish-speaking group (although, as mentioned in Chapter 5, other evidence argues strongly against this).

The denial among the Okanagan that cremation was ever used (Teit 1930:289) may also be contradicted by archaeological evidence, though scant and in some cases poorly documented (Atkinson 1952; Caldwell 1954a, b; Barlow 1969b; Chatters 1986). Since there is no reason to suspect that cremation would be seen as a low status burial form and would thus be denied by informants, it may be that this practice predates ethnographic memory as well. The best documented cremations are those from 45-OK-561 investigated by Chatters (1986), who suggests that the remains are largely those of murder victims. Temporary shifts in normative mortuary practices can be caused by unusual circumstances of death or mass death (Binford 1971; O'Shea 1984; see also Teit 1900, who mentions the practice of cremation for dying

Figure 7.10: Berrian's Is. Lorenz Curves for Male and Female Adults



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Thompson warriors in enemy territory), both of which seem to apply in the case of 45-OK-561. If so, an outsider's casual inquiry on what is almost universally a sensitive subject would be unlikely to elicit an informant's full response.

Ethnographic accounts summarised in Chapter 5 related the practice of killing a slave upon the death of an high status person for some Plateau groups. Archaeologically, evidence for this practice can be expected to survive only in those cases where the two (or more?) bodies are interred together. Two sites discussed in Chapter 6, Fountain (EeR1 19) and Skwaam Bay (EgQw 1), provide very tentative evidence of the killing of slaves as part of the mortuary ceremony surrounding high status burials. In both cases, this evidence consists of the placement of a burial entirely lacking grave inclusions either directly above or below a burial with relatively elaborate inclusions. Interestingly, the "low" and "high" status individuals at both sites are also differentiated by their opposing orientations; this may have served to further symbolically separate the respective status positions represented. The evidence is better at Fountain, since in this case, although the two individuals are separated by some 20 cm of pit fill, there is no indication that any length of time passed between the two interments. By contrast, a period of time *may* have elapsed between the interments at Skwaam Bay, although this is not clear from the report. Even if this were the case, it is conceivable that a slave would be killed a number of years later as part of the extended commemorative funerary ritual typical of the ethnographic period on the Plateau.

On the Columbia Plateau, evidence for the sacrifice of slaves is even more tenuous. At Old Umatilla, the skull of Burial 177, a young adult male, was found crushed by a stone club head, which still remained *in situ* in the left parietal (Rice 1978a:50, Figure 33). Whether this is unusual enough in itself to be taken as evidence of sacrifice rather than more generic violence is questionable. Finally, the unusual multiple burial at Rabbit Island II (Feature 1) may have a sacrificial origin (see Chapter 6).

The Socioeconomic Implications of Burial Location and Grave Type

Stryd (1973:88) has stated regarding burial practices on the Canadian Plateau: "Differential burial location may have been a conscious social practice...". I think that this is certainly true. Differentiation by burial location is a very common feature in many societies, and I earlier suggested some of the underlying theoretical reasons for this. The preceding section compared aspects of ethnographic and data on burial form, highlighting some contradictions between the two in the process. In this section I expand on the archaeological evidence for differential burial location and also grave type based on age and socioeconomic status. Sex is not examined in relation to either location or type, but it seems fairly clear that little in the way of either intra- or intersite patterning appears in this dimension.

Data discussed in Chapter 6 suggest that infants were sometimes located outside the adult mortuary space, either by burial in a different area, or possibly by non-burial, either one of which might be responsible for the observed pattern at such sites as Wildcat Canyon, Old Umatilla, Sheep Creek (45-ST-46), and Kamloops/Chase. Other examples, although less rigorously documented, may also be found. Sprague (1967), for example, cites H. T. Ball as stating that, in the Spokane area, talus slope burials contained a far higher proportion of infants than seen in inhumation areas, and that this was especially true for the early historic period. Cole (1958) noted the paucity of infant remains in historic burial sheds on two grave islands in the lower Middle Columbia.

There is some, albeit limited, archaeological evidence that different forms of burial were associated with different socioeconomic statuses. As with many aspects of Plateau mortuary behaviour discussed above, the absence of absolute dates and proof of contemporaneity are problematic. The energy expenditure model presented in Chapter 2 suggests that cremation should be associated with the highest socioeconomic status, followed by inhumation, and, lastly, talus burial. As seen in Chapter 6, the evidence either in support of or against this model is largely equivocal. In all cases the absence of data on the number of individuals represented in the cremations makes comparison difficult and tentative. At Beek's Pasture, cremations appear to have significantly higher grave wealth than talus burials. This may also be true of Miller's Island, Wahluke, and Kamloops/Chase. In no case is it possible to formally demonstrate this proposition. At other sites (e.g. Juniper, Yakima, Sheep Island), it appears unlikely that cremations surpass alternative burial forms in grave wealth.

Archaeologically, there is some indication that talus burials, at least in some areas, are associated with lower socioeconomic strata (of those forms that preserve archaeologically). Sprague and Birkby (1970) report two sites in the Lower Snake River region, Ferguson (45-WT-55B) and Palus (45-WT-56), where they suggest that the talus slope burials investigated may indicate poorer segments of society, based

on the paucity of artifacts. The sites are inferred to date to the late prehistoric and protohistoric periods, respectively. As discussed in Chapter 6, W. Strong *et al.* felt that the talus burials they investigated in Spedis Valley represented "... the inferior ranks of society ..." (1930:44). But only in one case can a quantitative argument be made: the inhumation burials at Whitestone Creek (45-FE-24) exhibit a significantly higher average artifact richness and GLV than the talus burials at 45-ST-8. And, as discussed in Chapter 6, even here the relationship between burial form and status is less than entirely satisfactory (for one thing, the two sites are separated by a considerable distance and were occupied in the historic period by two different ethnolinguistic groups).

Possibilities other than socioeconomic status differences for the use of talus slopes involve changes in burials norms through time, seasonality (talus burial might be used when the ground was frozen), and cultural conservatism (Sprague & Birkby 1970:6). Factors such as these may have been involved in the Nicola Lake talus slope burials, since these do not appear "poor" in terms of their grave inclusions. Since so few inhumations are known from the Nicola Valley, it may also be that talus burials were simply the normative practice for that area in the protohistoric period. Thus the common suggestion that talus burials reflect a lower status form of burial cannot be substantiated for the Plateau as a whole. Again, regional variability exists such that in some areas this relationship may hold while in others it does not. The familiar problem of demonstrating contemporaneity plague a thorough investigation of the position of talus burials. It must also be recognised that there exists great variation within talus burials themselves, with some likely representing more than the equivalent labour seen in many inhumation burials (see Oliver 1991).

Inhumation burials, then, at least on average, are placed in an intermediate position between cremation and talus burial in regards to the energy expenditure model (see Chapter 2). Thus there are no separate tests to discuss concerning them, since they have been dealt with in the examination of the other two burial forms presented above. But it is possible to examine inhumation burials as a class in themselves in considerably more detail; not only are they more abundant, but they tend to be both better preserved and better reported than either cremations or talus burials. And inhumations lend themselves to a series of easily recognised and quantifiable elaborations, such as depth of burial, and the addition of such features as plank cists and rock cairns. However, preliminary investigations (see Chapter 6) appear to indicate little or no relationship between any of these elaborations and the quantity and variety of grave inclusions (it should be emphasised that more obvious elaborations sometimes seen over inhumations, such as monumental wooden sculpture, are not included in this analysis—these certainly could be expected to exhibit evidence of higher status in a number of dimensions). Thus this avenue was not pursued further here, although a future analysis might find it profitable to reconsider.

It is also possible to use inhumations to investigate the relationship between primary and secondary burial and status. The large cemetery at Old Umatilla (35-UM-35B) (see Chapter 6) presents the opportunity to test this idea. The results (primary = 1.62, secondary \bar{X} = 0.90; $t = 2.33$; $p = 0.0217$ (see Chapter 6) do not support the hypothesis, offered in Chapter 2, that secondary burials should on average be associated with greater grave wealth, as they represent an additional stage of effort. However, the large proportion of secondary burials (especially when those too disturbed to include in the analysis are taken into account) at this site suggest that their context is not the same as was envisioned when this hypothesis was introduced. The severely restricted size of the cemetery and the large number of disturbed burials suggest that many of the secondary burials represent aboriginal disturbance by later inhumations and habitation (the cemetery itself was apparently occupied intermittently between burial episodes [Rice 1978a]). Possibly the lower average number of grave inclusions reflects this disturbance (i.e. occasionally some grave items were missed or appropriated upon reburial).

A small number of more isolated occurrences seem to suggest that in some cases secondary burial was associated with individuals of high status—the child burial at Tucannon (45-CO-1B) presents one example of this (see Chapter 6).

There is no indication, from the few data that are available, that any particular burial form is associated with greater or lesser inequality internally, i.e. talus burials show similar Gini indices to pit inhumations. It is not possible to test cremations similarly, since there are too few with reported complete artifact associations. Along the Middle Columbia, and especially in The Dalles-Deschutes region, it seems that artifact richness between cremations is more uniformly distributed than in other burial forms. But even this impression could easily be erroneous, since the number of individuals per cremation is generally undetermined, and may range from one or two to 20 or possibly more individuals in a few cases. Given the methods of recording artifact types and determining "wealth" measures used here, it is not valid to compare

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facilities holding multiple individuals as equivalent to groups of burials each holding only one or two individuals.

In summary, the position of different forms of burial *vis a vis* socioeconomic status differentiation is as yet unclear. In some cases there seems to be a significant relationship between burial form and the amount of grave wealth, while in others no such relationship can be detected. The current inability to deal adequately with problems of dating and proving contemporaneity of different burial forms within an area exacerbates this situation.

Mortuary Evidence and Intensity of Landscape Use

Ethnographically, substantial differences in socioeconomic complexity between the various ethnolinguistic groups of the Plateau are seen (see Chapter 5). Furthermore, there is some indication that these differences are related to resource richness, most importantly the availability of salmon and the potential to control this resource by laying claim to the most productive fisheries. However, preliminary investigations along these lines do not suggest that we will be able to discern regional patterning of this nature with the quality of mortuary data presently available, at least not in a solid quantitative sense. The lack of control over time and the limited number of sites with adequately documented numbers of burials and their associations both contribute to this failure. It can be said, however, that the burial regimes in The Dalles-Deschutes region appear to represent the most elaborate treatment of the dead on the entire Plateau, for both the prehistoric and the protohistoric periods. Other sites further upriver on the Middle Columbia also exhibit elaborate burial assemblages (e.g. Berrian's Island, Wahluke, Pot Holes), particularly in the protohistoric period, although probably not to the degree seen in The Dalles-Deschutes region. Again, disturbance by amateur collectors and inadequate reporting make a direct comparison of The Dalles-Deschutes sites with other Middle Columbia sites difficult if not impossible.

While there are a number of lines of evidence that suggest that the Mid-Fraser Canyon region should also exhibit considerable mortuary complexity and differential deposition of grave wealth (cf. Hayden 1990a, 1992b; Hayden *et al.* 1985), the burial evidence from this area is relatively scant and poorly documented. But what evidence there is does not appear to contradict this proposition. Considerable investment in funerary behaviour is particularly evident in the protohistoric and historic periods, with the erection of monumental wooden grave figures among the Lower Lillooet and Thompson (Ostapkowicz 1992). Prehistoric mortuary data from the Kamloops-Chase area also exhibits considerable complexity, including a series of possible cremations only rarely seen elsewhere in the south-central interior of British Columbia, together with elaborate grave inclusions. At the same time, the assemblage also exhibits less inequality than seen elsewhere, but, as discussed earlier, this may result from the presence of only relatively high status burials. Other areas, including the Yakima Valley, the Upper Columbia region, the Okanogan, and the Okanogan/Similkameen appear to exhibit considerably less elaborate burial regimes. These areas do, however, in some cases show marked inequality in the distribution of grave inclusions, including wealth and prestige items, that *are* present.

Three areas of the Plateau—the Yakima Valley, the Okanogan/Similkameen, and the Nicola Valley—appear to share some interesting similarities with regards to the distribution of burial sites over the landscape. While not yet thoroughly investigated and formally tested, there is an impression that these areas exhibit a pattern emphasising numerous small burial sites scattered over the landscape, sometimes at frequent intervals within a relatively limited area. The Selah talus burials (Bergen 1989), for example, occur in a number of small clusters that may represent use by family groups for short periods of time. A very similar pattern was observed by the author during a survey of talus burial sites in the Upper Nicola Valley (see Oliver 1991); the interpretation of many of these sites as small family plots was supported by discussions with members of the Upper Nicola Band, as well as by observation of the distribution of twentieth century cemeteries.

This is not to say that the distribution of burial sites is random—as seen throughout the Plateau, it tends to focus on terraces overlooking rivers and lakes—but the large cemeteries seen in other areas (particularly The Dalles-Deschutes, the McNary Reservoir, and Lytton-Lillooet), do not appear to have parallels here (the medium-size sites reported for the Yakima Valley, Skaha Lake, and Douglas Lake in the Nicola Valley may be exceptions, but they also appear to date to the protohistoric period—see below). One of the problems with an examination of this possible pattern is that the areas in question have seen relatively little scientific investigation of burial sites, and have been heavily disturbed and looted.

The presence of many small burial grounds suggests a less intensely focused use of the landscape. This is supported in the Yakima, Okanagan/Similkameen, and Nicola Valleys by settlement data, which appears to exhibit fewer and smaller village—and by inference lower population densities—sites than in many surrounding areas of the Plateau (see Grabert 1971; Smith 1910; Vivian 1992; Wyatt 1972). The availability of abundant, predictable, and concentrated resources such as salmon at The Dalles and the Six-Mile/Bridge River fisheries would encourage large settlements. This in turn, it is argued, leads to more intense resource competition both within and between communities. As discussed in some detail in Chapter 2, one manifestation of such competition is the appearance of large conspicuous cemeteries near the resource loci in question. These cemeteries are expected to contain more elaborate burials and to exhibit greater internal differentiation (in terms of socioeconomic inequalities as evidenced by, for example, number and variety of grave inclusions).

This scenario fits relatively well with the resource base of the Yakima, Okanagan/Similkameen, and Nicola areas, where land mammal hunting, plant gathering, and, in the latter two areas, lake fishing probably constituted the most important resources. But salmon, at least in the Okanagan/Similkameen and Nicola Valleys, are relatively scarce, and those runs that are available are of poorer quality. The situation in the Yakima Valley may be somewhat different, but it seems that little research has taken place there from this perspective. The nature of the resource base in these areas thus promotes a more diffuse use of the landscape, one in which it is both difficult and uneconomical to attempt to assert control over access to specific resources in anything but a very general sense, usually involving limiting use by outside groups. Such conditions do not favour the formation of corporate groups and their concomitant claims to important resource extraction locations (Saxe 1970; Goldstein 1980, 1981; Charles and Buikstra 1983—see Ch. 2).

This situation may have changed with the introduction of the horse in the protohistoric period. The availability of open rangelands in the Yakima, Okanagan (far less so in the more rugged Similkameen), and Nicola Valleys, and the shift in emphasis to overland trade routes appear to have greatly increased the influence of both the Yakima and the Okanagan peoples (indeed, one expression of this shift in power is the nineteenth century Okanagan expansion into and domination of the eastern half of the Nicola Valley). This scenario has been suggested by other Plateau researchers for the two separate areas, quite independently of the mortuary evidence. While the mortuary evidence can neither confirm nor refute this scenario, it does seem to be consistent with it. Those elaborate burials and larger cemeteries (e.g. Skaha Lake and Douglas Lake) that do exist in these areas appear to be an entirely protohistoric phenomenon. But again, the mortuary record from the three areas is such that this proposition must be viewed as highly tentative and subject to modification upon further research.

The Development of Socioeconomic Inequality on the Plateau

One of the specific interests of this study was to attempt to trace the development of socioeconomic inequality on the Plateau. Although perhaps biased by an evolutionary perspective, the expectation was that inequality would increase through time as social systems became more complex. Certainly this progression need not be steady, but could proceed sporadically. Evidence already available from numerous excavations on the Plateau strongly supports the idea that, at least in general, such indicators of societal complexity as the extent of trade networks and material culture became increasingly elaborated through time (cf. Browman and Munsell 1969; Richards and Rousseau 1987).

One of the main problems with dealing with Plateau mortuary assemblages is the lack of absolute dates, or in many cases even relative dates. The extent of this difficulty is perhaps best expressed by noting that, of the more than 450 individuals represented in the combined sample, only one individual, from the Nicoamen site, is associated with a radiocarbon date, and that date is problematic (Skinner and Copp 1987) (the Cache Creek burials were not included in this aspect of the analysis). For the purposes of the analysis, it must be assumed, in the absence of evidence to the contrary, that all of the burials in an assemblage are at least roughly contemporaneous. While this assumption is probably not strictly justified in any but a few cases, there are reasonable grounds for imparting a certain robustness to the methods being employed here. Barring the presence of individuals from periods exhibiting vastly different socioeconomic organisation, the burials in any single assemblage, even if representing a timespan of several centuries, can be thought of as reflecting a kind of averaged behaviour. This is not to belittle the very real problems of sample size, poor temporal control, and a veritable host of other difficulties. But as long as the analysis is considered in its proper context, as exploratory, these problems are to some extent mitigated.

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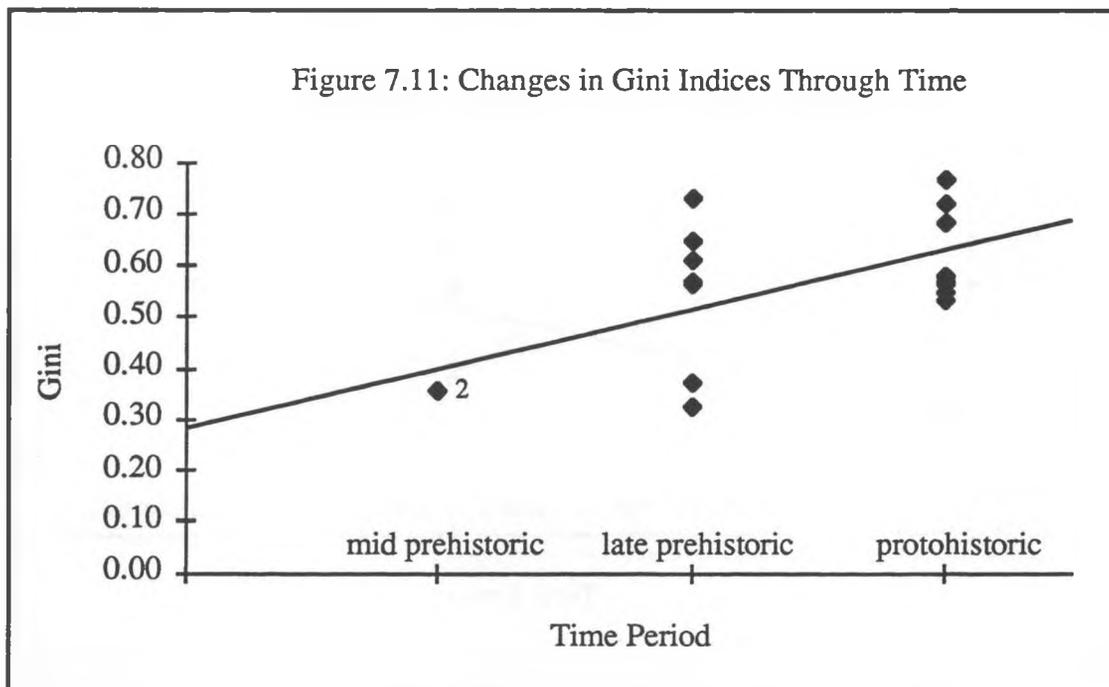
Keeping in mind these difficulties, it is possible to explore changes through time in inequality as expressed by the Gini indices. Two assemblages, Congdon and Rabbit Island I, are fairly securely dated to approximately 3000 B.P. by projectile point styles (Lohse 1985; Cole 1993). Nine protohistoric assemblages are fairly easily identified by the presence of early forms of Euroamerican trade items, most importantly copper beads and pendants, but also iron pendants and bracelets, and early forms of blue and white glass beads. The remaining seven assemblages can then simply be lumped together into a late prehistoric group (ca. 2000-200 B.P.), recognising that this almost certainly introduces some distortion. This presents a total of 18 assemblages for this aspect of the study (Table 7.14). A number of composite assemblages and assemblages deemed excessively problematic in terms of their dating are excluded from the analysis. It should be noted that none of those excluded would fall into the middle prehistoric group (ca. 4000-2000 B.P.). (Again, Old Umatilla has been excluded due to its anomalous large sample size—its inclusion would not substantially affect the results.)

The results are shown in Figures 7.11 and 7.12. Averaged Gini values for richness of artifact types are 0.36 for the middle prehistoric, 0.54 for the late prehistoric, and 0.60 for the protohistoric. Similarly, averaged Gini scores based on GLV as a measure of wealth are 0.34 for the middle prehistoric, 0.58 for the late prehistoric, and 0.63 for the protohistoric. An analysis of variance (ANOVA) shows the differences among the three time periods to be significant at the .10 level for richness ($F = 3.49, p = 0.057$) and at the .05 level for GLV ($F = 5.48, p = 0.016$). In both cases, Spearman's rank correlation coefficient indicates that the relationship between time period and Gini scores is significant at the .10 level (Spearman's $r = 0.427$ and 0.445 for richness and GLV, respectively). The main difference is clearly between the middle prehistoric and the subsequent two periods. The late prehistoric and the protohistoric periods are not distinguishable statistically, either in terms of richness or GLV. The large variance seen in the late prehistoric group could reflect errors in the assignment of its constituent assemblages, or it could be a real characteristic of the period. It is not possible to distinguish these two possibilities without refinements in dating.

The fact that protohistoric burial assemblages do *not* appear to exhibit greater inequality than the late prehistoric group is perhaps unexpected, but is open to a number of interpretations. The influx of new wealth created by the introduction of the horse and by the early fur trade does not appear, on the basis of the

Table 7.14: Assignment of Plateau Sites to Time Periods

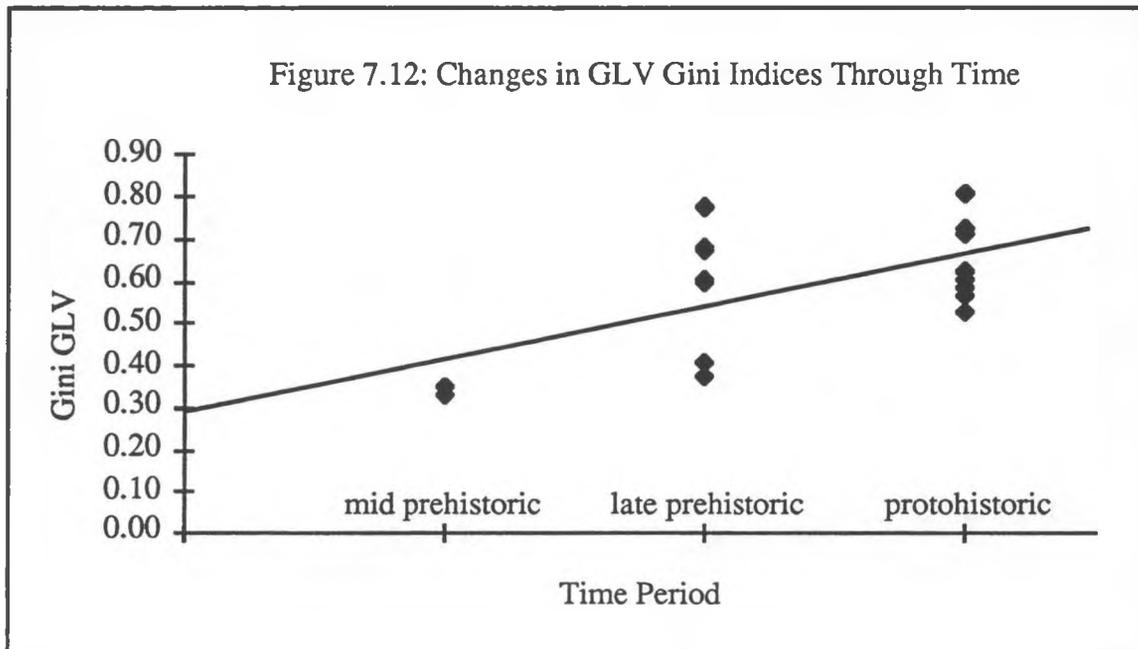
<i>Middle Prehistoric</i>	<i>n</i>	<i>Late Prehistoric</i>	<i>n</i>
Rabbit Is. I, 45-BN-15	11	Yakima (Selah)	12
Congdon, 45-KL-41	30	Rabbit Is. II, 45-BN-15	15
		Fish Hook Is. I, 45-FR-42	10
		Sheep Island	22
		Wildcat Canyon, 35-GM-9	32
		Sheep Creek, 45-ST-46	38
<i>Protohistoric</i>	<i>n</i>	<i>Composite Assemblages</i>	<i>n</i>
45-ST-8	15	Kamloops/Chase	24
Berrian's Is., 45-BN-3	33	Nicola Valley	10
Juniper	22	Nicoamen, EbRi 7	15
Whitestone Cr., 45-FE-24	38	Okanogan	16
Fish Hook Is. II, 45-FR-42	13	Rabbit Is. (I&II), 45-BN-15	26
45-ST-47	11	Fish Hook Is. (I&II), 45-FR-42	23
Sundale	25	Dalles-Deschutes	34
Keller Ferry, 45-LI-27	12	Yakima	22
Beek's Pasture	18		
45-FE-7	24		



mortuary evidence, to have drastically disrupted the nature of the socioeconomic status system in place during the late prehistoric period. However, as suggested in Chapters 2 and 3, it may be that the methods of analysis need to be modified for the protohistoric period. The sudden availability of new wealth may have led to an increasing emphasis on the absolute quantities of a limited range of suitable artifact types (e.g. *Dentalium*, copper and iron ornaments, etc.). Such a scenario would be similar to what Cannon (1989:438) has labelled an "... inflationary spiral of display fueled by emulation". In such a case, the measures of "wealth" employed for earlier periods would have to be modified somewhat to take into account the changing way in which material culture was being used both to maintain and to challenge the status system (see Schulting 1993a). On the other hand, the analysis of the distribution of grave inclusions among infant/child and adult age groups presented earlier in this chapter also showed no evidence for an increase in socioeconomic complexity (as measured by the degree of emphasis on ascribed status) in the protohistoric period.

While it is difficult to deal with them in a quantitative fashion, a number of additional burials provide further important insights into the development of inequality on the Plateau. Foremost among these on the Columbia Plateau are the human remains recovered from Marmes Rockshelter (45-FR-50) in southeastern Washington, in levels dating from 10,000 to 9,000 B.P. (Rice 1972:153). *Olivella* shells were commonly found as grave inclusions with many of the burials throughout a long sequence (see Chapter 6). The next well-dated group, and even here the dating is entirely based on projectile point typology, is Rabbit Island I (45-BN-15) at ca. 3000 B.P., leaving large gaps of millennia for which there are few data on burial practices from the Columbia Plateau. The Rabbit Island I burials were all extended. Many of the burials from Congdon may date to roughly the same period, but here, the majority of interments seem to have been flexed (Bergen 1989).

The situation for the Canadian Plateau is somewhat different. The earliest human remains from south-central British Columbia are from the Gore Creek site, EeQw 48. The remains of an adult male were dated to 8340 ± 115 B.P. (Cybulski *et al.* 1981). But the unfortunate individual seems to have been caught in a mudslide, and thus can present no information on mortuary practices from that time. The earliest purposeful burials known are from Clinton, EiRm 7, and date to 4950 ± 170 B.P. (McKendry 1983; Stijelia and Williams 1986). The remains of two adults were found; both apparently lay extended, a position extremely rare in later burials on the Canadian Plateau. Neither burial was associated with any grave inclusions, although Burial 2 was disturbed.



The next burials in the sequence date to the Shuswap horizon, ca. 4000/3500-2400 B.P., of the Canadian Plateau Pithouse Tradition as proposed by Richards and Rousseau (1987). A total of three or possibly four burial sites appear to date to this period: Shuswap Lake Park (EfQu 3) (Sendey 1972), Punchaw Lake (FiRs 1) (Fladmark 1976), and Pine Mountain (EdRk 9) (Sanger 1970). As Richards and Rousseau note (1987:29), there seems to be some consistency in the burials from this time. All are from housepit contexts. The Shuswap Lake Park site, EfQu 3 is the only one of these sites to contain more than a single individual. Here, the remains of a total of seven individuals were recovered from excavations in H.P. 13, and the cranium of an eighth individual was encountered in the wall of one of the units. Shuswap horizon burials are also similar in that, other than red ochre, they seem to lack grave inclusions.

By contrast, grave inclusions appear quite common from ca. 1500 B.P. onwards. Examples, discussed in Chapter 6, in undisturbed contexts from ca. 1500 to 1000 B.P. include Cache Creek (EeRh 1) (Pokotylo *et al.* 1987), Adams Lake (EfQw 2) (Schulting 1993c), the Bell site (EeRk 4), and Fountain (EeRl 19) (Stryd 1973). All four sites contain burials with relatively abundant and diverse grave inclusions. Another interment possibly dating to this period (see Chisholm 1986:146) was reported from the Brocklehurst site (EeRc 8) in Kamloops (Wilson 1976). The burial was that of an adult male accompanied by a total of 121 items, including stone net weights, retouched flakes, a bone leister point, a composite toggling harpoon valve, red ochre, 12 bear tooth pendants, and 92 shell beads. Finally, the Government site child cremations discussed at some length in Chapter 6 may date to before ca. 1200 B.P. Other burials from the same period have been found without grave inclusions, although they seem to be in the minority. McLeod and Skinner (1987), for example, report the interment of an adult male, dated to 1410 ± 110 B.P., in a bark-lined pit at Fountain Creek (EeRl 19) near Lillooet. No grave inclusions were identified, although the pit fill included a number of lithic flakes not in direct association.

While the database is thus far quite meagre and any conclusions must remain tentative, it appears at present that there is a near total absence of grave inclusions in burials dating to before ca. 1500 B.P. on the Canadian Plateau. It is almost certain that to some extent this reflects a sampling problem, since there are wide gaps in our knowledge of the burial practices of this period. But while the specific date of 1500 B.P. may be pushed back as new data are brought to light, it is unlikely that the vagaries of sampling can account for the entire timespan. Thus we have an early period in which material culture was relatively simple compared to later times, and either lacked or had very limited quantities of many of the items that may be thought of as primitive valuables (Richards and Rousseau 1987), together with mortuary practices that did not place emphasis on the inclusion of non-perishable objects of any kind in graves. This was followed by a period exhibiting considerably more diverse material culture, incorporating many items

brought from long distances and/or manufactured with intensive effort and skill, combined with an increase in final deposition of these items in burial contexts. It seems reasonable to suggest that the two are related, and that it was the need to display wealth and status, both in life and in death, that fueled the elaboration of material culture and intensification of trade contacts in the area at this time.

On the Columbia Plateau grave inclusions appear almost with the earliest human remains, and from the very beginning include exotic marine shells. Nor does there appear to be a subsequent period in which grave inclusions are not found relatively frequently. But it does appear that there were marked expansions in trading activity on the Columbia Plateau after ca. 2000 B.P. (Nelson 1969), and again after ca. 1000 B.P. (Browman and Munsell 1969; Erickson 1990). *Dentalium* makes its first appearance after about 2000 B.P., with incised forms appearing only after 1000 B.P. *Haliotis*, *Pecten*, and a number of other genera also make their appearance at this time (Erickson 1990). Other valuable materials, such as nephrite, steatite, turquoise, native copper, and whalebone clubs, either first appear during this period or greatly increase in frequency and expand in distribution at this time (Browman and Munsell 1969; Richards and Rousseau 1987).

It has long been recognised that two of the most important archaeologically accessible sources of information on socioeconomic inequality are mortuary remains and settlement data. Ames (1991a, b) has suggested that the appearance of both very large houses and large villages on the Columbia Plateau occurred between 2000 and 1500 B.P. The large houses and villages of the Mid-Fraser Canyon also fall within this timeframe (Hayden *et al.* 1985; Hayden and Spafford 1993; Hayden and Ryder 1991; see also Stryd 1973). These structures did not replace smaller dwellings, which in fact remained far more common, but supplemented them, adding another level in the village/settlement hierarchy, one which does not appear to have existed before. In both cases it is possible to suggest the formation of corporate groups, and increasing differences in household wealth and power (Ames 1991a; Hayden and Cannon 1982; see also Naroll 1956 and Netting 1982).

It has frequently been suggested that art conveys socially important information (e.g. Schaafsma 1985; Hartley 1992). If this is the case, then the increasingly elaborate iconography seen in the art of the late prehistoric period leading into the protohistoric period may indicate the need for increased display of ownership, rights, and privileges. The poor context and lack of dates make it difficult to fully address this relationship, but certainly the distinctive "grinning face" images of lower Middle Columbia region date to late in this transition. I have already argued in Chapter 4 that the connection between parietal and mobile art seen most dramatically in the distinctive "grinning face" image of Tsagiglalal can be interpreted as an iconography associated with advertising elite access, either directly or indirectly, to the best fisheries of the Long Narrows. A similar interpretation may be made for some of the rock art of the Mid-Fraser Canyon area (Lundy 1979; see Chapter 4).

Less certain is how far back this type of function for art on the Plateau can be traced. Carlson (1993) has recently summarised stylistic changes in Northwest Coast rock art. He relates most or all early (first appearing ca. 2500 B.P.) rock art images to experiences relating to the spirit power quest; only during the late prehistoric/early historic period does rock art become involved with the "... proclamation of wealth, power and high rank" (Carlson 1993:9). Timing aside, I would suggest that, on the Plateau, the display of spirit power images and wealth and status were intimately connected and largely inseparable. The oldest known mobile art on the Canadian Plateau is a zoomorphic hand maul from the Lehman site (EeRk 8) near Lillooet, dated by association to 2185 ± 150 B.P. (Stryd 1983:175). More importantly, Stryd (1983:175) notes the "... sudden appearance of small carvings in various media" at approximately 1500 B.P. Again, this appears to roughly correlate with the period of increasing socioeconomic complexity suggested here.

Increasing connections with the coast are also indicated in material culture (Fladmark 1982) and art styles, for example in the seated human figure bowl complex (Duff 1956, 1975), and in whalebone clubs (Boas 1907). The postulated date of ca. 2000 to 1500 B.P. for the increased development and expression of socioeconomic inequalities on the Plateau presents interesting parallels to what was occurring in the Gulf of Georgia region of the Northwest Coast. The Marpole Phase, dated ca. 2400 to 1600 B.P., is often held to have been a cultural climax in this region (Borden 1970, 1983; Burley 1980; Mitchell 1971). It shows more elaborate material culture in non-perishable artifacts than in preceding times, including an highly developed art style, and a far greater emphasis on ornamental display items and exotic materials than seen either previously or subsequently; burials also display an highly unequal distribution of grave inclusions (Burley 1980). Furthermore, Marpole Phase material culture displays many traits more typical of the interior, leading Borden (1950) to postulate actual migration from the interior at this time. While I do not necessarily agree with this interpretation, it serves here to demonstrate the presence of a close connection

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between the coast and interior at this time. Recent excavations at the Scowlitz site indicate that the transitional Fraser Valley was also characterised by considerable socioeconomic differentiation at least by the end of this period (Blake *et al.* 1993). As with Marpole sites, connections to the interior are indicated at Scowlitz, based on projectile point styles and the occurrence of native copper (assuming an interior source).

It is suggested here that the increase in exotic materials during the period after ca. 2000 B.P., together with evidence for increasing inequality in house size and grave inclusions, indicate a relatively rapid period of increasing socioeconomic inequality on the Plateau as a whole. The elite at this time strove to both enhance existing long distance trading contacts and develop new ones, in order to acquire exotic wealth and prestige items used to enhance their status through display, feasting, and the giving of gifts to supporters. These features of Plateau society may have been present in some form prior to 2000 B.P.—indeed they almost certainly were—but after this we see, if not a qualitative difference in the form of socioeconomic inequality, then at least a considerable increase in its expression (cf. Ames 1985). That the process seems to have occurred over such a wide area at roughly the same time strongly suggests that it involved a complex net of interrelations encompassing much of the Plateau and probably parts of the Northwest Coast as well (see also Fladmark 1982). This recalls recently formulated arguments to the effect that nonegalitarian societies develop not in isolation, but in clusters (Kelly 1991; Clark and Blake 1994; Fox 1994). “One society does not hoist itself from one social level to another; the process involves the simultaneous emergence of a network of *chiefdoms* from a network of interacting *chiefs*” (Clark and Blake 1994:20) (emphasis in original).

To repeat my earlier cautions, I am not simply proposing a steady evolution towards increasing cultural complexity on the Plateau. Nor do I mean to imply that a shift back to a simpler organisational system cannot occur (cf. Ames 1991a, b). Indeed, there are a number of lines of evidence suggesting that such a simplification did in fact occur on both the Plateau and parts of the Northwest Coast. The proposition that the Marpole phase in many ways represents the most complex culture type for the entire Gulf of Georgia regional sequence has already been presented. And the large, internally differentiated pithouse villages of both the Mid-Fraser Canyon and the Middle Columbia regions do not persist into ethnographic times (Hayden and Ryder 1991; Stryd 1973; Osborne 1951; Schalk 1983). The burial evidence can be interpreted as indicating a more elaborate material culture in the protohistoric period, but this may be to some extent biased by the increasing availability of new wealth items, such as copper ornaments and glass beads. As seen in this chapter, there is no evidence for increasing socioeconomic inequality from late prehistoric times to the protohistoric period. Still, it is possible that complexity decreased on the Plateau sometime after 1000 B.P., and then increased again during the protohistoric period. The poor temporal resolution of late prehistoric burial assemblages does not permit the testing of this hypothesis using burial data, although there is some evidence for it from other sources (e.g. the settlement data mentioned above).

A full examination of the reasons underlying the proposed increase in complexity and inequality at ca. 2000 B.P. are beyond the scope of the present study. However, it is intriguing that some researchers (e.g., Johnston 1987; Thomison 1987; Chance and Chance 1982; see also Mitchell 1971) have argued that the heavy reliance on salmon that characterised much of the Plateau, and particularly the western portion that forms the core study area of this analysis, did not appear until after ca. 2000 B.P.

CHAPTER 8

SUMMARY

The validity of Ray's authoritative statements concerning the egalitarian nature of sociopolitical and socioeconomic organisation on the Plateau has, until fairly recently, simply been accepted as given. Rather than attempt to supplant this view with one labelling Plateau societies as organised at any particular level of complexity, I have attempted to address a number of dimensions along which inequality is expressed in mortuary behaviour, and suggest a means by which it may be measured on a continuous scale. And I have shown that there existed a considerable range in the degree of inequality in non-perishable burial wealth. Irrespective of where we place Plateau societies on the continuum from egalitarian to rigidly stratified social organisation, there is something to learn from examining the degree and kinds of inequality that *are* visible. The results presented here, I believe, have pointed out some of this potential.

Considerably more work needs to be done before the kinds of differences seen in mortuary analyses such as presented here can be translated into a fuller conception of meaningful behavioural differences in the living community. In the majority of Plateau burials from the prehistoric and protohistoric periods the display and subsequent destruction of wealth during the funeral does not outlive the memory of the witnesses. This is supported by the commonly high degree of aboriginal disturbance and the frequent superimposition of burials seen in larger circumscribed cemeteries such as those at Wildcat Canyon and Old Umatilla (Dumond and Minor 1983; Rice 1978a), in which the majority of graves are unmarked. While there are some notable exceptions from the early historic period (i.e. the carved wooden mortuary figures erected by the western groups of the Canadian Plateau and the mortuary sheds of the Wishram/Wasco), in general the absence of conspicuous surface structures over Plateau graves limits the role that the dead can play in validating the social position of the living. The special position of specific ancestors or even groups of ancestors cannot be recognised from their mortuary treatment and used to reinforce and naturalise dominance relationships in the way that funerary monuments in advanced chiefdoms and states frequently do.

Perhaps the need for wealthy high status groups in "incipient" or "simple" chiefdoms to repeat the display and continually re-emphasise their position provides a kind of "negotiated" levelling mechanism that prevents the accumulation and concentration of excessive wealth in the hands of a few individuals. It could also be argued that this in itself is only a secondary effect, and that the important feature of these societies is the use of exotic prestige items as gifts to build and maintain a group of followers. In this sense it may be that the elite at this level of sociopolitical complexity cannot avoid the expenditure of wealth, as this is the basis of social capital, used in turn to manipulate obligations and power within the community. What does seem likely is that the elite of any society will continually push and test the bounds of their influence and power in an attempt to increase it. It seems equally likely that the non-elite would resist any such attempt as long as it was in their interest to do so, if only as an indirect result of their own attempts to gain status and power (cf. Blau 1977).

This study has concentrated on elucidating the structure of Plateau mortuary behaviour as it relates to status differentiation. Age and sex, the primary referents of mortuary structure, were examined in some detail in relationship to grave inclusions, as well as to other dimensions of variability. An examination of age and sex representation revealed a paucity of subadults in a number of assemblages (relative to Weiss' suggested 30% minimum), and possibly over the Plateau as a whole during the prehistoric period. This likely reflects a combination of behavioural and preservational factors. Male and female representation, with the notable exception of the large burial population of Old Umatilla (with nearly twice as many females as males), is approximately equal.

An investigation of age and sex artifact type associations using a large pooled sample revealed some interesting relationships. As might be expected, adults tend to be associated with a number of

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utilitarian artifact types, including projectile points, knives, pestles, shaft smoothers, and ground stone celts. Adults are also associated with tubular stone pipes, although there may be one instance of a pipe interred with a child. Subadults tend to be associated to a slight degree with ornamental items such as shell ornaments, copper pendants (but not copper beads), and glass beads. Artifact types associated with sex revealed some more unexpected relationships. Again, males are associated with a number of utilitarian types, emphasising hunting activities. But a number of females also appear to have participated in the hunt. The only non-utilitarian type associated with males are tubular stone pipes, and even this relationship is not exclusive. Females do not appear to be associated with any artifact types, including such items as digging sticks, which in the ethnographic literature are strongly identified with female activities. In no cases, barring those clearly susceptible to the effects of small sample size, were age or sex associations found to be exclusive.

The relationship between status (as measured by artifact richness), age and sex was also investigated using a pooled sample. Age appeared to be a factor involved in the structure of the distribution of utilitarian artifacts, but did not account for differences in sociotechnic artifact types. This suggests that a degree of ascribed status existed on the Plateau. Dividing the data into two time periods—the late prehistoric and the protohistoric—provided further insight along these lines. Contrary to what might be expected, the protohistoric period appears to exhibit a decrease in the amount of grave wealth deposited with infants and children relative to adults, suggesting less emphasis on inherited wealth at this time compared to the situation in the late prehistoric period. Males in both periods have on average greater wealth than females, although the distance between the two decreases in the protohistoric period to the point where it becomes largely statistically insignificant. This may be related to the increasing importance of marriage alliances at this time. Independent supporting evidence, could it be found, would greatly strengthen this interpretation.

Stryd (1973:89), suggesting that the existing evidence is not compatible with the degree of egalitarianism attributed to Plateau society ethnographically, wrote: "It is too early... to state whether status was simply achieved within an egalitarian society, or whether some form of ranking, possibly ascribed, existed." If one accepts that "rich" child burials are an indication of ascribed status, then the findings from many of the sites discussed here would suggest that some degree of ascribed status did indeed exist on the Plateau for at least the last ca. 2000 years. Both utilitarian and sociotechnic artifacts occur with infant/child burials, as well as with those of adults, and the degree of differentiation based both on number of types of goods and absolute numbers of items seems to be of roughly the same order in both groups. But, as has been frequently noted in the literature on mortuary analysis, the simple equation of rich child burials with the presence of ascribed status is highly problematic, if by this we mean a system in which such things as political office are strictly inherited. If, on the other hand, it is taken at face value, then it can be said with confidence that the intergenerational transfer of wealth was seen as an appropriate behaviour. Presumably this can be related to an attempt to increase the value of one's offspring in preparation for advantageous marriage and trade alliances (cf. Hayden in press). The distinction between this process and ascribed status is unclear, and may be largely semantic.

Lorenz curves and Gini indices were employed to investigate the degree of inequality in artifact richness seen in Plateau burial assemblages. The results indicate a varying degree of inequality, ranging from slight to considerable ($G = 0.30$ to 0.77 on a scale that ranges between 0 and 1.0). One useful contribution made here involves the presentation of a method of testing differences in Gini indices between assemblages, thus enabling them to be treated as samples concerning which inferences can be made, rather than as populations as has been the case in all previous archaeological uses of the measure of which I am aware. The interpretation of differences in inequality is not always straightforward and other lines of evidence frequently must be brought to bear, but the technique is nevertheless seen as having great potential.

One of the major goals of this study was to attempt to rank different burial forms in terms of their association with higher or lower socioeconomic status, as measured by richness of grave inclusions. The results achieved were mixed, largely due to problems with looting, the lack of consistent reporting of grave associations and number of individuals represented in burials (particularly in cremations), and difficulties in demonstrating contemporaneity. In the lower Middle Columbia region (largely equated with The Dalles-Deschutes), it can be suggested with some confidence that cremation represents the highest status form burial present in the late prehistoric and protohistoric periods. But outside of this area the relationship is far less clear. There is also some archaeological evidence that talus burials represent a lower status form of disposal than inhumations, but in most cases this relationship does not appear to hold.

Despite the considerable problems with lack of chronological control, it was possible to present a preliminary investigation of the development of socioeconomic inequality using mortuary data. The data were divided into three broad time periods—the middle prehistoric (ca. 4000-2000 B.P.), the late prehistoric (ca. 2000-200 B.P.), and the protohistoric—and compared on the basis of their Gini indices. While the late prehistoric and protohistoric periods could not be distinguished, the two middle prehistoric assemblages were found to exhibit significantly less inequality. A more qualitative discussion of a series of earlier sites from both the Columbia and Canadian Plateaus does not appear to indicate the existence of great inequality in mortuary behaviour at this time, although the available data certainly leave much to be desired. It is suggested that a marked increase in inequality occurred at roughly 2000 B.P. This approximate date appears to be supported by other lines of evidence, including richness of material culture, evidence of greater emphasis on long-distance trade, an increase in the use of both rock art and portable art, and settlement data.

The analysis of mortuary variability has often concentrated on a limited number of relatively well-known areas of the world wherein considerable social differentiation clearly existed. If we are to understand more about the *development* of social complexity, it is clearly in areas such as the Plateau that we will have to look. Irrespective of where we place Plateau societies on the continuum from egalitarian to rigidly stratified social organisation, there is something to learn from examining the degree and kind of, and the variability in, inequality that *is* visible.

The purpose of this study has been to examine Plateau mortuary data from the perspective of socioeconomic status differentiation with the main emphasis on the differential distribution of grave inclusions, since this appears to provide the most meaningful and accessible expression of socioeconomic status inequality in the study area. Ethnographic data regarding the level of status inequality as expressed in both the living community and in burial practices has also been summarised. In some areas different forms of burial appear to be associated with higher socioeconomic status, while in other areas this relationship is unclear. The middle prehistoric period (ca. 4000 to 2000 B.P.) appears to indicate significantly less inequality in the distribution of grave inclusions than later periods. The late prehistoric and protohistoric periods appear to exhibit similar levels of socioeconomic differentiation. Thus, the mortuary data seem to support a model of increasing socioeconomic inequality after ca. 2000 B.P. Neither the ethnographic nor the archaeological mortuary data support an egalitarian model for the Plateau. The differential distribution of grave inclusions indicates an unequal access to exotic prestige and wealth items.

Suggestions for Future Investigations

Much of the body of this work has been descriptive, emphasising only very basic pattern recognition. Little previous work on the investigation of socioeconomic inequality as expressed in mortuary behaviour has taken place on the Plateau, making this a necessary step. Data had to be acquired from various sources, many of which were unpublished. A surprising amount of information was collected in the end. While the results have pointed out a number of interesting relationships, some quite unexpected, they have suggested even more lines of inquiry for future analyses. Before I briefly discuss what I feel are some of the major research questions that could profitably be explored with mortuary data on the Plateau, I would like to point out that there is an enormous, largely untapped archaeological resource in the collections and fieldnotes of amateur collectors. While this information is usually less than adequate by modern standards, it can be nevertheless extremely useful. I would strongly encourage those interested in the archaeology of the Plateau to document and make use of this resource before the remaining collections are sold or forgotten.

The placement of grave inclusions in relation to the body within the grave could potentially be of great interest in the study of how the objects were perceived and how they functioned in the mortuary ritual from an emic perspective. These data may be available for a surprising number of sites. Combes (1968), for example, includes detailed diagrams showing the placement of grave inclusions around the body for all of the burials at Fish Hook Island. In other cases both published and unpublished photographic documentation provides an equally useful source. Artifact placement can be used to help determine the function of an item, an excellent example of which is provided by McGuire (1992b), who distinguished hair pins in Hohokam graves by their position near the head. Lacking this information, it could be difficult to differentiate hair pins and such items as decorated awls or blanket pins. Placement can also be used to suggest or even to test hypotheses about the importance attached to an artifact class, specifically whether it was considered to be utilitarian or ceremonial. I am thinking particularly here of the placement of exceptional projectile points or large, finely made bifaces in relation to the body. The placement of such a

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biface behind the head of Burial 11 at 45-OK-66 (Grabert 1968:Plate 22), for example, suggests a special role for the object beyond any functional use.

The recurrence of certain artifact types with one another is an important aspect of mortuary analysis, but one that I have barely been able to address here. Given a large enough sample, it is almost certain that patterns will emerge, and that these will reveal the ability of different artifact classes to mark socioeconomic status, among other things. Even the exploratory analysis attempted here shows some of this potential (e.g. the strong association of *Dentalium* and copper in the protohistoric period). The main problem is that, given the small sample sizes available combined with the relatively great variety of artifact types, this kind of analysis is not possible at the level of the individual site, which for the most part has been the focus of the present research. These difficulties may be alleviated by pooling data from a number of sites, as was done in the investigation of age and sex associations, and/or by collapsing artifact classes. Both of these solutions are not without their own problems, but nevertheless it is still possible to investigate broadly occurring meaningful patterning.

Technical studies involving material sourcing and knowledge of manufacturing locations, processes, and costs have barely begun on the Plateau. The only materials that have been subjected to fairly extensive analysis are obsidian, and, to a lesser extent, *Dentalium*. Too often, ground stone celts are identified as "Fraser River nephrite" in the absence of petrological examination, ignoring the possibility of alternative sources. The same may be true of steatite. The failure to adequately investigate prehistoric use of native copper, and the assumption that all copper is of Euroamerican origin is another obvious problem. Sources of marine shells and the identification of different species within such genera as *Dentalium* is another area that has recently received some attention (Barton 1990; Erickson 1990). The results of this research are particularly important in light of the ubiquitous presence of such shells in Plateau burials, together with their presumed wealth connotations. Sourcing of a number of additional materials, both common (e.g. red ochre and high quality cryptocrystalline lithic material) and rare (e.g. galena and turquoise), would also be of great use in investigating the extent of trade networks and the nature of the items exchanged between regions.

The study of trade networks begins to address the wider question of regional interaction. Hayden (1993) has proposed that the elite of different groups on the Plateau participated in a Plateau-wide interaction sphere, involving the restricted circulation of various prestige and wealth objects. Sourcing studies are a good beginning towards testing the validity of these claims. Another line of evidence that should be investigated involves the analysis of parietal and especially mobile art and its stylistic and iconographic content. Such data are potentially more useful in determining the nature of interactions.

One area that has yet to be adequately investigated on the Plateau is the association between burial and habitation sites. To some extent this is related to the scarcity of radiocarbon dates, especially for burials. Together, the study of burials and settlements provide some of the best available archaeological evidence for socioeconomic complexity. It is especially important to be able to correlate the two kinds of evidence given recently expressed concerns about the potential for mortuary ritual to distort or even invert social relationships held in life (Braithwaite 1984; Hodder 1982, 1984, 1986; Parker Pearson 1982, 1984; Shanks and Tilley 1982; Shennan 1982; McGuire 1992a, b). The tendency to bury the dead some distance from the village, combined with intensive re-use of the landscape in attractive restricted locations, presents a serious challenge to this type of study. Nevertheless, it is essential that such work be undertaken.

Unusually detailed analysis and problem oriented excavations at Keatley Creek (EkR1 7) in south central British Columbia provide evidence suggesting preferential access to exotic raw materials (e.g. high quality lithics, native copper, etc.) by the groups occupying the larger housepits at the site (Hayden 1990a; Hayden and Spafford 1993; Spafford 1991). If a contemporaneous cemetery for the village site could be found, it would be possible to correlate these two strong lines of evidence. In some cases, it may already be possible to associate cemeteries with their contemporaneous village sites (e.g. Old Umatilla, 35-UM-35A and B; Berrian's Island, 45-BN-3). But the level of detail found in available reports still does not permit the kind of intrasite analysis that is needed.

If large, bounded, relatively long-term cemeteries mark the presence of corporate groups and their claims to important, spatially restricted resources (as discussed in Chapter 2), then it would be expected that individuals that are excluded upon death from these cemeteries participated to a lesser extent in the corporate group. Such burials should on average be poor relative to burials in cemeteries. While the observation is admittedly subjective and tentative, it appears that there may be meaningful differences in artifact associations, at least in some areas of the Plateau, between burials found in larger cemeteries and more isolated burials. Given my concentration on larger burial sites, it has not been possible to investigate

this possibility. One problem is that the recovery of isolated burials often occurs either 1) through the activities of amateur collectors, or 2) through the recovery of disturbed remains in a salvage context. In neither case can it usually be stated with any degree of confidence that the burial was not part of a cemetery.

Another area that could profitably be explored involves the investigation of intracommunity differences in salmon consumption. While innovative stable carbon isotope analyses have been conducted in British Columbia, and have to varying degrees examined salmon use in the interior (Chisholm 1986; Chisholm *et al.* 1983; Lovell *et al.* 1986), these studies have been regionally based and preliminary, using skeletal materials with poor context other than locational. They have not addressed the possibility that, for some Plateau groups, lifetime differential access to salmon resources may have existed within the community. (Even less research using stable carbon isotopes has taken place on the Columbia Plateau; the few measurements that exist are from burials recovered in salvage contexts, and at least one is highly problematic. Chatters [1986] reports a $\delta^{13}\text{C}$ value of -26 per mil—the normal range of variation in humans is from approximately -12 to -21 per mil.) Thus, one might propose a model in which, as one moves further away from major salmon bearing streams, access to the resource becomes increasingly restricted along lines of socioeconomic status. In salmon-poor areas, those individuals with greater access to other forms of wealth, and who would therefore be expected to participate to greater extent in the regional trade network, would have better access to salmon, assuming that the fish was seen as a desired food. As noted in Chapter 2, the elite also tend to marry outside of the immediate community or locality with greater frequency, and so could be expected to have greater access to productive salmon sites through kinship ties than other members of their communities. In salmon-rich areas, on the other hand, other foods, such as deer, may be seen as more desirable (Teit 1900; Romanoff 1992a). It is possible to address this type of question through stable carbon isotope analysis. Part of the significance of the present work is that it lays the groundwork for future research involving the relationship between socioeconomic status differences and salmon consumption.

Stable carbon isotope studies also have the potential to address the possible role of the intensification of salmon utilisation in the development of increased sociocultural complexity on the Plateau. This is still an highly contentious issue, energetically debated in the literature (e.g. Thomison 1987; Johnston 1987; Ames and Marshall 1980).

As should be apparent by now, by far the most pressing problem in adequately dealing with Plateau mortuary variability from any viewpoint, whether chronological or socioeconomic, is the almost complete lack of radiocarbon age estimates on burials, particularly from the major sites excavated prior to the last two or three decades. The paucity of dates and detailed skeletal analyses is even more of a concern given the repatriation of Native human remains and associated objects. While I am not suggesting that these remains should not be returned, their future unavailability means that any programme of dating and chemical analysis must be implemented immediately. It is to be hoped that agreements can be reached between the academic and Native communities involved that will not only allow, but encourage the timely development of such a programme.

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APPENDIX A

Table A 1: Plateau Burial Sites Discussed in Text

<i>Site Name</i>	<i>Site No.</i>	<i>Source</i>
Dalles-Deschutes		W. Strong et al. 1930
Leachman	45-KL-68	E. Strong 1960a
Congdon	45-KL-41	Butler 1959, 1963; Bergen 1989
Indian Well	45-KL-42	E. Strong 1960a
Atlatl Valley		E. Strong 1960a
Maybe		Butler 1959; E. Strong 1960a
Beek's Pasture		Bergen 1989
Sundale		Bergen 1989
Bead Patch		E. Strong 1960a; Seaman 1946
Five Mile Locks		E. Strong 1959a, 1960a; Butler 1965
Big Leap		Butler 1957, 1959
B. Stewart		Butler 1957, 1959
Rufus/Badger Creek		E. Strong 1959a; Gerity 1964
Little Klickitat		Bergen 1989
Juniper		Bergen 1989
Wildcat Canyon	35-GM-9	Dumond & Minor 1983
Old Umatilla	35-UM-35B	Rice 1978a, b; Lynch 1978
Berrian's Is.	45-BN-3	Osborne 1951, 1957
Yakima Valley		Smith 1910
Selah		Bergen 1989
Sheep Island	45-BN-55	Osborne 1957, et al. 1961; Garth 1952
Rabbit Is.	45-BN-15	Garth 1952; Crabtree 1957
Fish Hook Island	45-FR-42	Combes 1968
Tucannon	45-CO-1b	Iverson 1977
Marmes Rockshelter	45-FR-50	Rice 1968
Wahluke	45-GR-306	Krieger 1927, 1928a, b
Pot Holes	45-GR-131	Crabtree 1957
Okanogan	45-OK-66, OK-112	Grabert 1968, 1970
Keller	45-LI-27	Collier et al. 1942
Whitestone Creek	45-FE-24	Collier et al. 1942
FE-7	45-FE-7a, b	Collier et al. 1942
ST-8	45-ST-8	Collier et al. 1942
Freeland	45-FE-1	Sprague & Birkby 1970; Mulinski 1977
Sheep Creek	45-ST-46	Collier et al. 1942
ST-47	45-ST-47	Collier et al. 1942
Mile 28 Ranch	EdRk 3	Sanger
Texas Creek	EdRk 1	Sanger
Fountain	EeRl 19	Stryd 1973
Bell	EeRk 4	Stryd 1973
Canoe Creek	EiRn 15	Rousseau 1978
Nicoamen	EbRi 7	Skinner & Copp 1986
Nicola Valley	EaRd y	Teit 1900; Smith 1900
Kamloops	EeRb y	Smith 1900
Chase	EeQw 1	Sanger 1968
Skwaam Bay	EgQw 1	Hills 1971
Cache Creek	EeRh 1	Pokotylo et al. 1987

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Table A 2: Summary of Artifact Type Distribution by Site

The Dalles-Deschutes			Congdon				Beek's Pasture				Sundale			Juniper			
Burial	Age	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Types	Burial	Age	Sex	Types
S2-2	child	0	19a	adult	F	0	3			0	3	adult	0	4			0
S2-3		0	19b	child		0	4			0	4	adult	0	10	child		0
S2-4		0	20	adult	F	0	5			0	5	adult	0	11	infant		0
S10-7		0	2			1	8	adult	M	0	6	adult	0	24	child		0
S10-8		0	3			1	10	adult	M	0	7		0	3			1
S11-9		0	5			1	16	adult	F	0	18		0	5			1
C12-2		0	7			1	17	adult?		0	19		0	12	adult?		1
C12-3		0	23	adult	F	1	18	adol.?		0	21		0	13	adult?		1
C12-8		0	1			2	7	adult	M	1	22		0	14	adult		1
C12-9b		0	6			2	9a	adult	F	1	1	adult	1	16			1
S16-11		0	17			2	9b	infant		1	2	adult?	1	17			1
S16-15		0	4			3	6			2	8	adult?	1	18			1
S20-23	adult	0	9			3	11	adult	F	2	16		1	6	adult?		2
S20-24	adult	0	10			3	13	adult?		2	24		1	25			2
S1-1	adult	1	11			3	14	adult	F	2	30		1	1			3
C12-4		1	14			3	1	adult	M	5	11	adult	2	21	adult	F?	3
C12-9a		1	24	adult	M	3	12	adult	M	5	27		2	2			4
S16-10		1	13			4	15	adult		16	29		2	9	adult?		4
S16-12		1	21			4					26		3	22	adult	F?	4
S16-14		1	22	adult	M	4					10	adult?	4	7	adult?		5
S16-16		1	25	adult	M	4					20		4	23	adult	M	8
S20-18		1	29			4					25		4	8	adult?	M?	12
S9-6		2	8			5					9	adult?	5				
C12-6		2	18			5					17		5				
S16-13		2	27			5					15		6				
S20-19		2	12			6											
S8-5		3	15	adult	M	6											
C12-7		3	16	adult	M	6											
C12-1		5	28			6											
S20-17d	infant	6	26	adult	F	7											
C12-5		7															
S20-17c	child	7															
S20-17b	child	9															
S20-17a	adult	12															
n =		34				30				18			25				22
Gini =		0.68				0.36				0.72			0.58				0.55

Wildcat Canyon				Berrian's Island				Yakima Valley				Selah		
Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Types
2	adult	F	0	25a		infant	0	N. Yak. 21	child		0	11	infant	0
15	adult	F	0	31		child	0	N. Yak. 22	adult	F	0	12	infant	0
27	adult		0	33	F	adult	0	N. Yak. 26	child		0	1	adult	1
28	infant		0	40		adult	0	N. Yak. 27	adult	M	0	2	child	1
29	adult		0	17	M	adult	1	N. Yak. 29	adult?		0	3	child	1
36	adult		0	19		infant	1	Ellensburg 30	adult	M	0	4	adult	1
41	adult		0	20	F	adult	1	Ellensburg 36	adult	F	0	5	adult	1
45	adult	M?	0	21	M	adult	1	Priest Rap. 38	adult	F	0	6	adult	1
61	adult	M?	0	30		child	1	Priest Rap. 40	adult	male	0	7	adult	1
62	adult	F	0	23	M	adult	2	Priest Rap. 41	adult	M	0	9	adult	1
4	adult	F?	1	27		child	2	N. Yak. 12a	adult	M	1	10	adult	2
7	adult	M	1	34	F	adult	2	N. Yak. 24	child	F?	1	8	child	3
10	adult	F	1	42	F	adult	2	N. Yak. 28	adult?		1			
17	adult	M	1	47		adult	2	Ellensburg 33	adol.		1			
19	adol.		1	50		infant	2	Priest Rap. 39	child		1			
21	child	F	1	18	F	adult	3	N. Yak. 25	child		2			
25	adult	F	1	22	M	adult	3	Priest Rap. 42	adult	F	2			
40	adult	M	1	35	F	adult	3	Ellensburg 31	child		3			
55A	adult	M	1	37	F	adult	3	Ellensburg 35	child		4			
59	adult		1	38	F	adult	3	Ellensburg 37	child		5			
66	adult	F	1	43	F	adult	3	N. Yak. 1	adult		6			
67	infant		1	46		child	4	Ellensburg 34	child		7			
1A	adult	F	2	29	M	adult	5							
6	adult	F?	2	32	F	adult	5							
16	adult	M	2	45	F	adult	5							
20	adult	F	2	49	M	adult	5							
35	adult		2	41	M	adult	6							
9	adult	F	3	24	M	adult	8							
5	adult	F	6	26		infant	10							
64	adult	M?	9	48		child	12							
3	adult	M	10	36	M	adult	13							
65	adult		11	39	F	adult	13							
				25	F	adult	23							
n =			32			33					22			12
Gini =			0.65			0.53					0.67			0.33

Table A 2(cont.): Summary of Artifact Type Distribution by Site

Sheep Island				Rabbit Island I				Fish Hook Is. I			Okanogan				Keller Ferry			
Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types
O-9	adult	M	0	12S2	adult		0	4	infant	0	66-5	adult	F	0	1	adult	F	0
O-12	infant		0	6S1	adult	M	1	7	adult	0	66-6	adult	M	0	3	child		0
O-16	infant		0	6S2	adult	M	1	11	adult	0	112-3b	adult		0	5	adol.		0
G-2	child		0	13S2	infant		1	18		0	112-5a	infant		0	8	child		0
G-3	adult	M	0	8S1	child		2	20	adult	0	112-8	child		0	11	infant		0
G-5	adult	F?	0	10S1	adol.		2	14	adol.	2	66-7	child	M?	1	13a	child		0
G-8	adult	M	0	4S2	adult	M	2	15	adult	2	66-8	adult	F	1	13b	adult	F	0
O-8	adult	F	1	7S2	infant		2	17	child	2	66-12	adult	F	1	7	child		1
O-14	infant		1	10S2	adult	F	2	23	adult	2	112-6	infant		1	2	adult	M	3
O-15	adult	M	1	11S1	adult	F	3	24	child	4	66-4	adult	M	2	10	adol.		3
G-9	child		1	9S1	adult	M	6				66-11	adult	M	2	9	adol.	M	5
O-6	adult	F	2								112-5b	adult		2	12	child		5
O-10	infant		2	n =			11			10	66-9	adult	F	3				
O-11	infant		2	Gini =			0.36			0.57	112-2	infant		4				
O-17	adult	M	2								112-3a	adult		5				
G-4	adult	F	2	Rabbit Island II				Fish Hook Is. II			66-3	infant		6				
G-7	adult	M	2	1a-52			0	9	?	0								
O-1	adult	M	3	5S1	adult	M	0	10b	infant	0								
G-6	adult	M	3	1S1	adult	M	1	16	infant	0								
O-4	adult	M	4	2S1	adult	F	2	21	child	0								
O-7	adult	M	9	3S1	adult	M	2	10a	adult	1								
G-10	adult	M	12	7S1	infant		3	12	infant	3								
				4S1	adult	F	4	19	child	5								
				3S2	child		4	13b	adult	6								
				9S2	infant		4	6	adult	7								
				1s	adult	F	4	2	adult	8								
				1S2	adult	F	5	22	adult	9								
				8S2	adult	M	5	13a	adult	12								
				5S2	child		6	3	adult	25								
				2S2			8											
				11S2	child		9											
				n =			15			13								
				Gini =			0.37			0.58								
n =			22				26			23				16				12
Gini =			0.61				0.42			0.67				0.55				0.68

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Table A 2(cont.): Summary of Artifact Type Distribution by Site

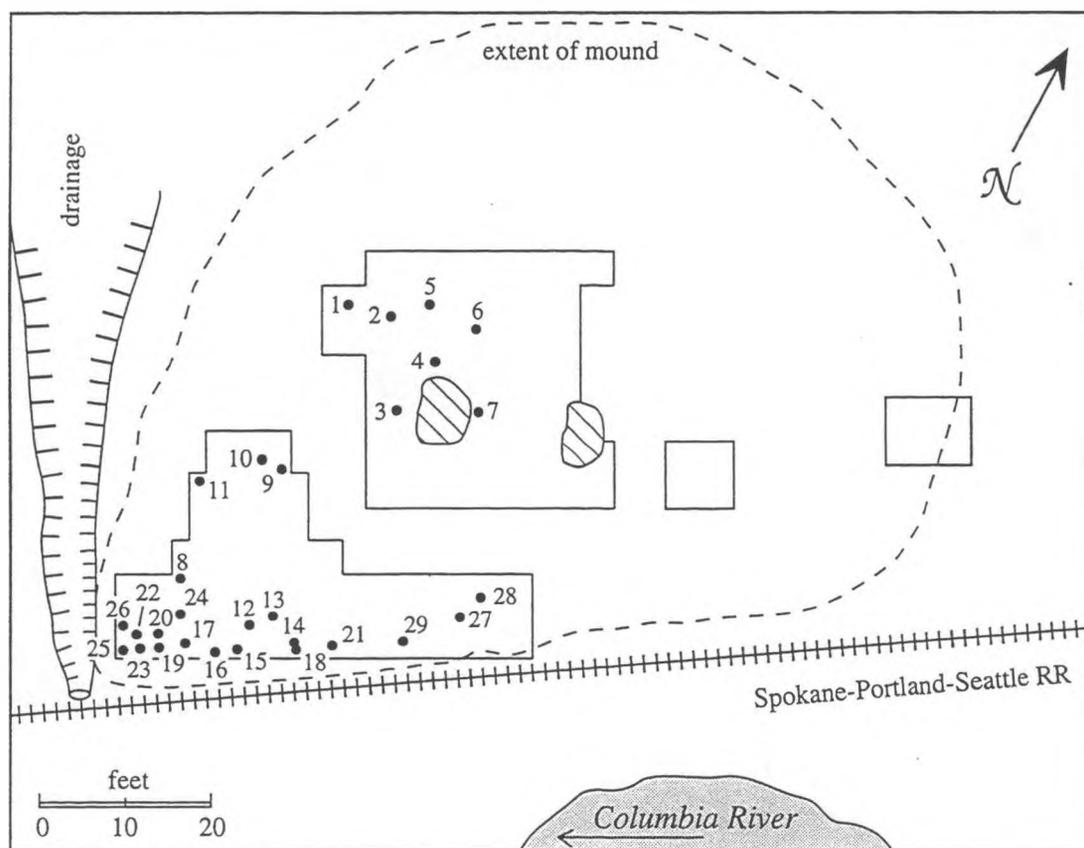
Whitestone Creek				45-FE-7				45-ST-8				Sheep Cr.			
Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types
6b	infant		0	1a	infant		0	5	child		0	1	adult		0
17b	adult		0	1b	adult	M	0	7B	adol.?		0	3	child		0
21b	infant		0	1c	inf/child		0	10	adult		0	4	child		0
26	child		0	2	adult	F	0	12	child		0	6	adult		0
28	adult	F	0	7	adult		0	1B	adult	F	1	9	adult	M	0
31	adult	M	0	10	child		0	1C	adult	F	1	11	adult	F	0
32	infant		0	11a	infant		0	2	adult		1	13	adult	F	0
34	adult	F	0	12	child		0	3	adult		1	15	adult		0
36	adult	F	0	13	child		0	6	adult	M	1	18	child		0
37	adult	F	0	15	adult	F?	0	7A	adult	F	1	19	child		0
38	infant		0	16	adult	F	0	8	adult		1	25	adult	F	0
39	adult	F	0	17	adult	M	0	4	adult		2	26	adult	M	0
40	child		0	19	adult	F?	0	9	child		2	30	adult	F	0
9	infant		1	22	child		0	1A	adult	M	3	31	adult		0
20	infant		1	11b	inf/child		1	11	adult		3	36	adult	F?	0
27	adult	M	1	14	inf/child		1					37	adult		0
30	adol.	F	1	18	child		1					39	adult		0
12	adult	F	2	20	adult		1					8	adult	F	1
19	child		2	21	child		1					12	adult		1
29	adult	F	2	5	adult	F	2					14	adult	F	1
3	adult	F	3	9			2					16	adult	F	1
4	adult	M	3	8			3					21	adult	M?	1
5	adult	F	3	4	adult	M	7					27	adult	F	1
22	adult	M	3	3	adol.		8					32	adult		1
1	adult	M	4									34	adult		1
13	adult	F	4									7	adult		2
16	adol.		4									10	adult		2
18	adult	M	4									20	adult		2
2	adult	F	5									28	adult		2
10	adult	F	5									29	adult	M	2
15	child		5									33			2
23	infant		5									2	adult	M	4
6a	child		6									5			4
11	infant		6									22	adult		7
17a	infant		7									38	adult	M?	7
25	adult	F	8									17	adol.	F	9
21a	child		9									23	adult	M	12
35	adult	M	12									24	adult	M?	17
n =			38				24				15				38
Gini =			0.56				0.77				0.45				0.73

45-ST-47				Nicoamen				Nicola Valley				Kamloops/Chase			
Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types	Burial	Age	Sex	Types
2	adult	F?	0	9	adult	F	0	NV 1	adult	F	0	Chase 2	child		0
4	adult	F?	1	10	neonate		0	7	adult	F	0	Large 13	child		1
5a	adult	M	1	5	child		1	1	child		1	Large 7	adult?		3
5b	adult	F	1	18	neonate		1	8	adult	M	2	Gov. Hill 2	adult	F	4
6	infant		1	3	adol.	F	2	9	adult	M	4	Chase 1	child		5
9	adol.		1	11	neonate		2	NV 2	adult	M	5	Chase 4	infant		5
3	adult	M	3	22	child		2	3	adult	F	7	Gov. 3	child?		5
8	adult		3	2	adult	F	3	4	adult	F	7	Large 3	adult?		5
7	infant		4	7	child		3	5	adol.		7	Large 4	adult?		5
10	child		5	12	infant		4	2	adult		8	Large 10	adult?		5
i			17	13	adult	M	5					Large 8	adult?		6
				8	adult	F	7					Gov. 1	child		7
				1	adult	M	12					Large 2	adult		7
				4	child		12					Chase 5	adult	M	8
				6	adult	F	15					Large 1	adult?		8
												Large 5	adult?		8
												Large 6	adult?		8
												Gov. 2	child?		9
												Chase 3	adult	M	12
												Gov. Hill 1	adult	M	12
												Large 9	adult?		12
												Large 11	adult?		13
												Large 12	adult	M	14
												Gov. 4	child?		17
n =			11				15				10				24
Gini =			0.57				0.52				0.41				0.30

APPENDIX B: Site Maps

Key	
•7	Inhumation burial
◦13	Talus burial
○ CP4	Cremation pit
⊘	Disturbed area
++++	Railroad

Figure B.1: Plan view of the Congdon site (after Bergen 1989)



NB: Scale refers to excavation units only; the units are not in scale with regards to the mound.

Figure B.2: Oblique view of Beek's Pasture (after Bergen 1989: not to scale)

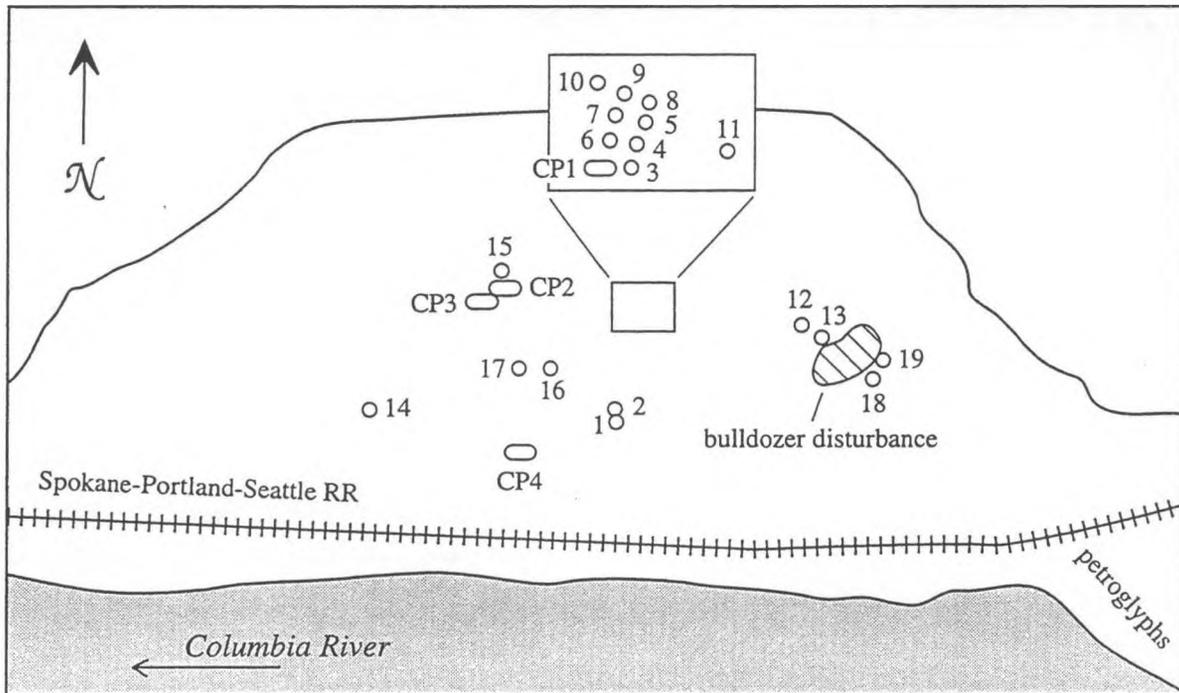


Figure B.3: Oblique view of the Sundale site (after Bergen 1989: not to scale)

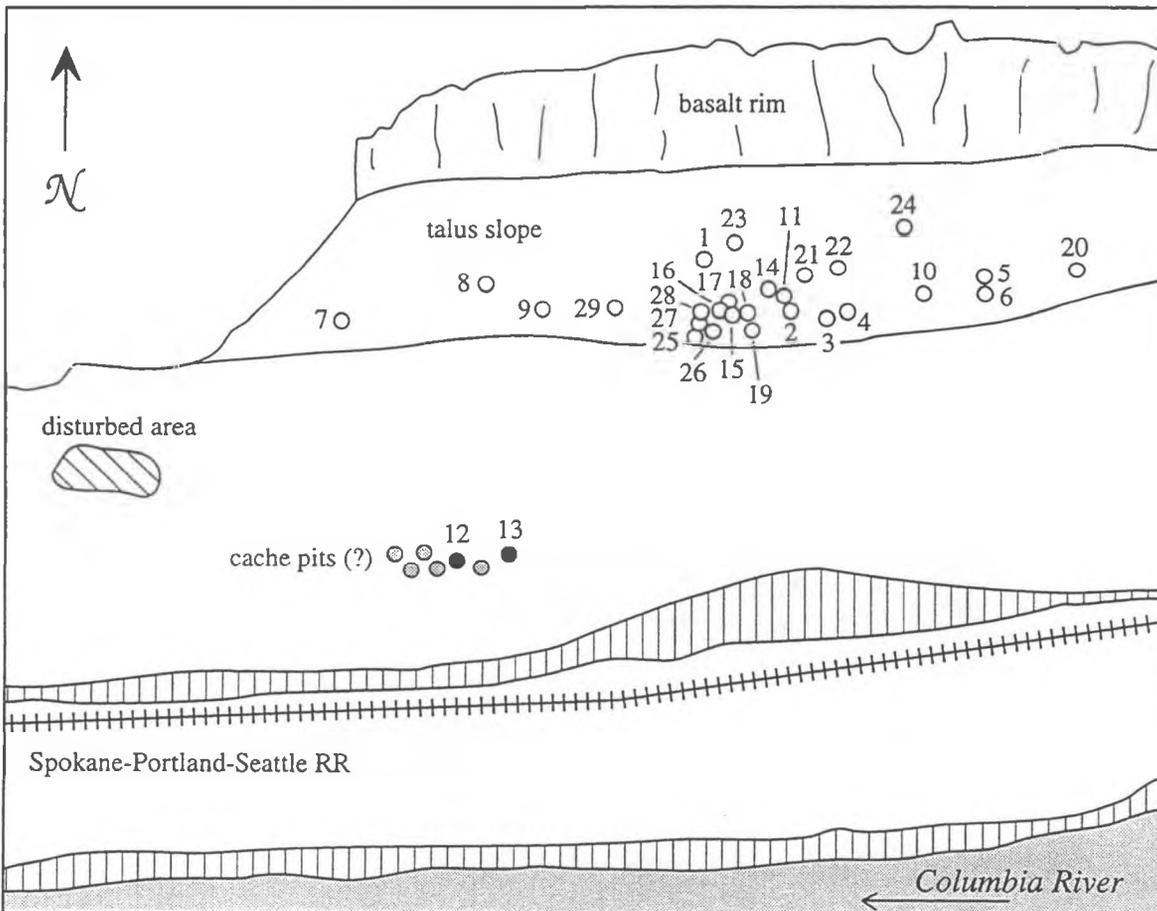


Figure B.4: Oblique view of Juniper site (after Bergen 1989: not to scale)

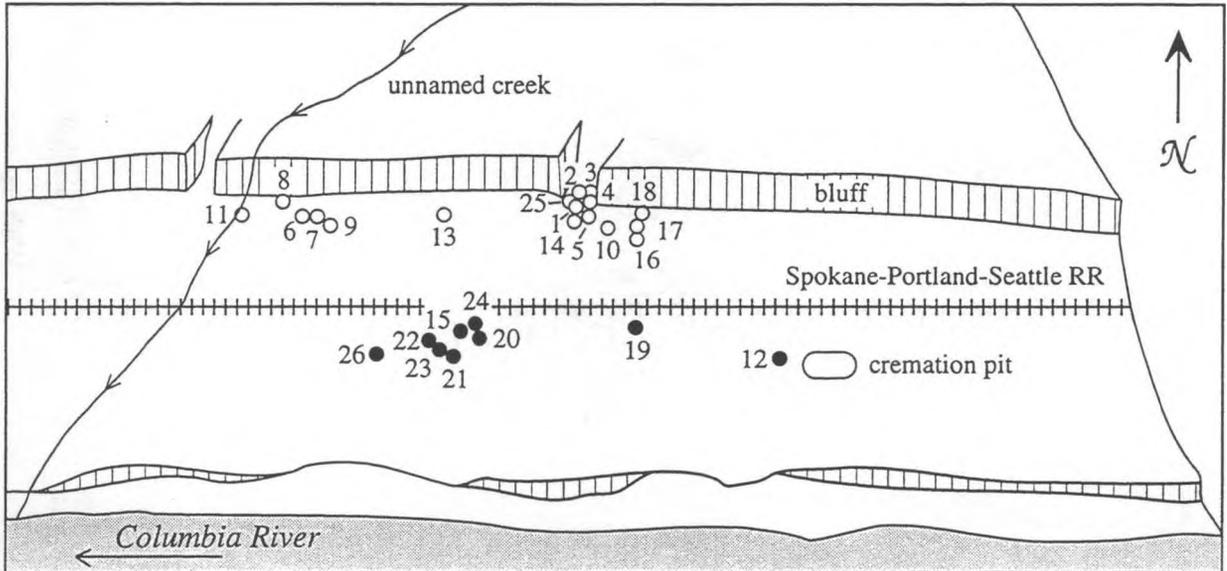


Figure B.5: Plan view of Selah, Yakima Valley (after Bergen 1989: not to scale)

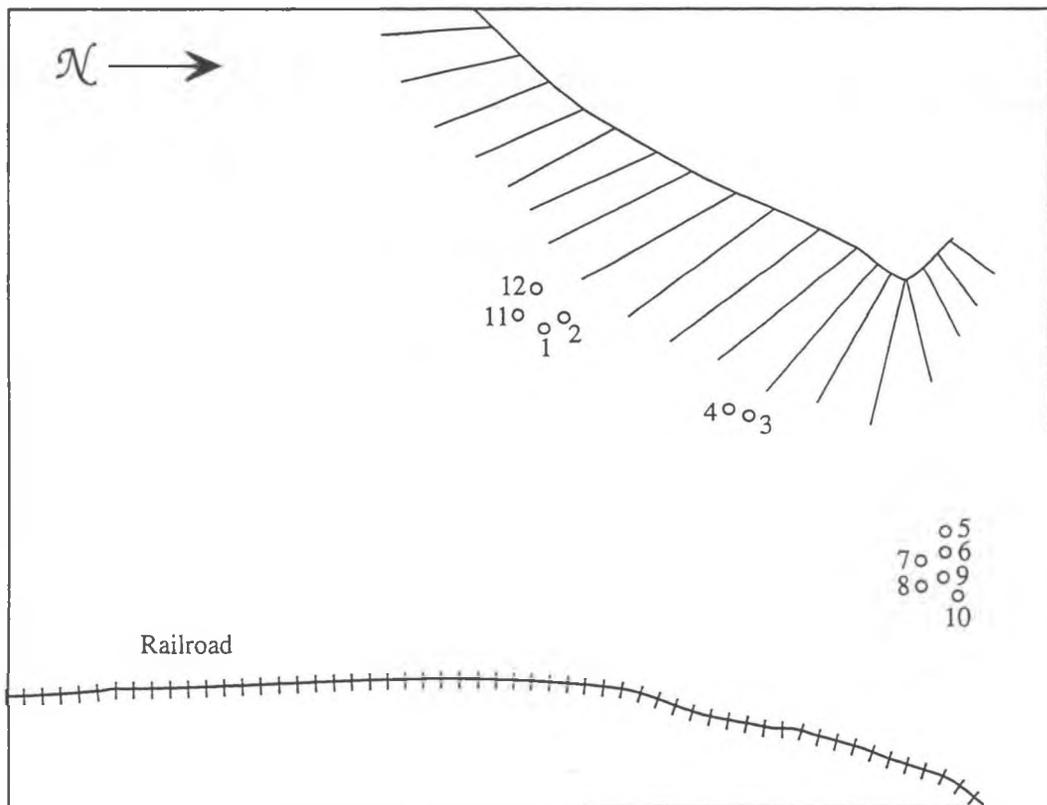


Figure B.6: Plan view of Whitestone Creek, 45-FE-24 (after Collier et al. 1942: Fig. 7)

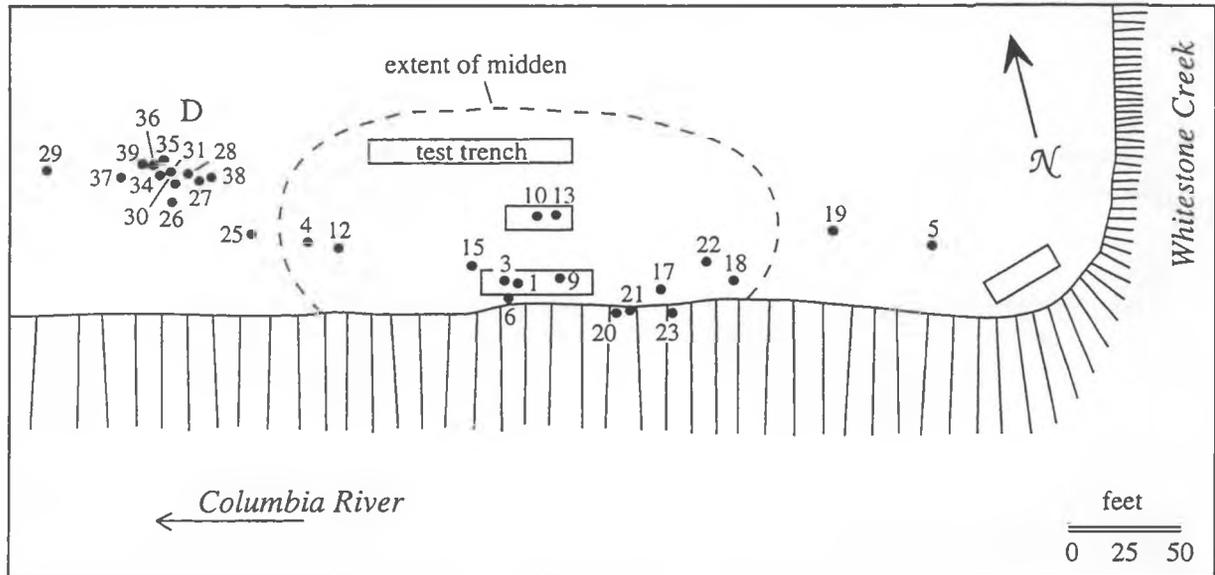
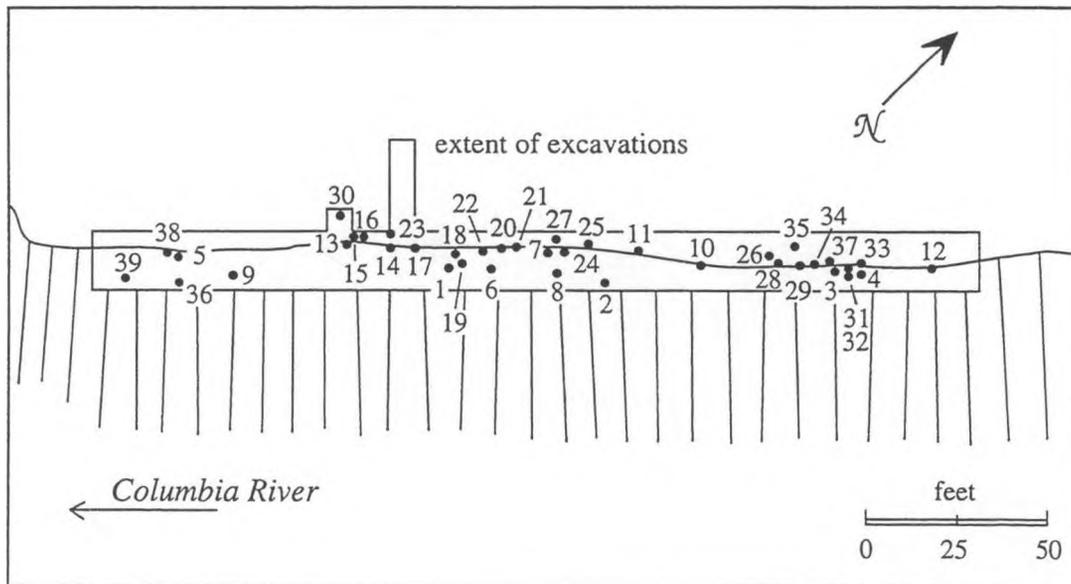


Figure B.7: Plan view of Sheep Creek, 45-ST-46 (after Collier et al. 1942: Fig. 10)



APPENDIX C: Lorenz Curves for Plateau Mortuary Assemblages

Figure C.1: Dalles-Deschutes Lorenz Curve

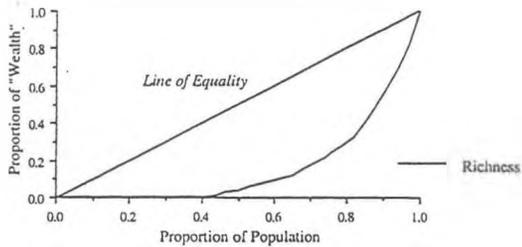


Figure C.2: Congdon, 45-KL-41 Lorenz Curves

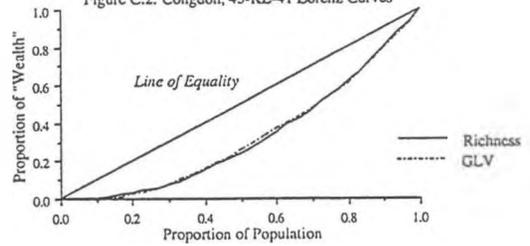


Figure C.3: Beek's Pasture Lorenz Curve

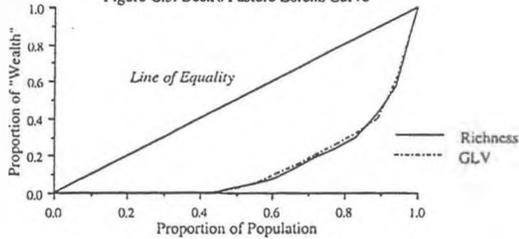


Figure C.4: Sundalc Lorenz Curves

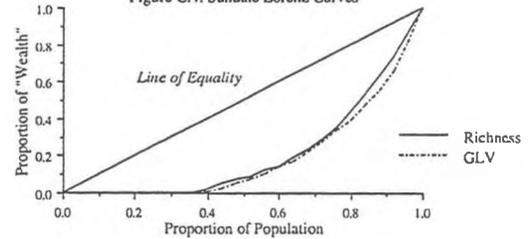


Figure C.5: Juniper Lorenz Curves

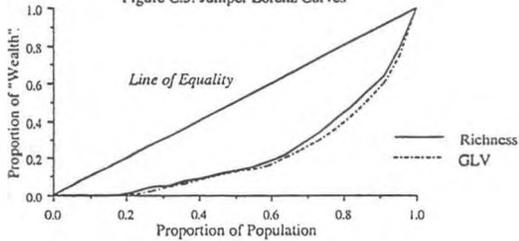


Figure C.6: Wildcat Canyon, 35-GM-9 Lorenz Curves

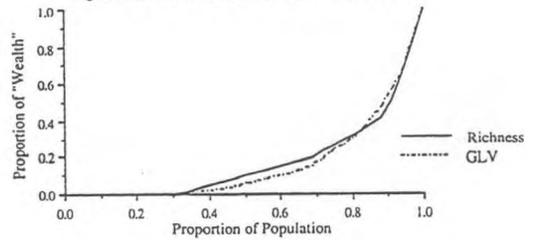


Figure C.7: Berrian's Island, 45-BN-3 Lorenz Curves

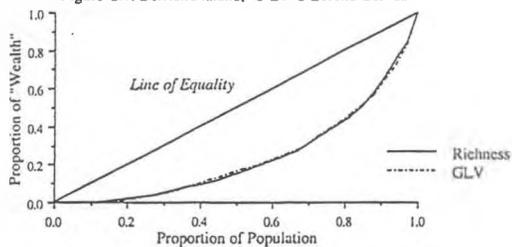
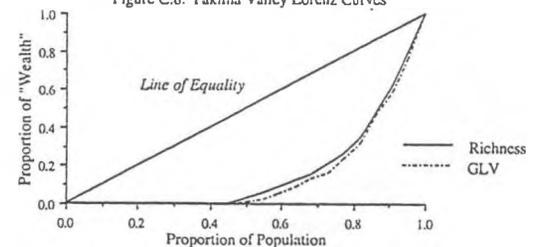


Figure C.8: Yakima Valley Lorenz Curves



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