

TEMPORAL ARTICULATION

Mitchell (1969), in a polemic style, has argued that a prehistorian is able to approach the archaeology of a region from either of two perspectives or models. These are dislocation and continuity. Whereas the proponents of a dislocation model explain culture change through population displacement (migration) or diffusion of whole cultural complexes, those stressing continuity see it as a series of adaptations within a local context (Mitchell 1969: 208–211). Although a continuity approach does not totally rule out the possibility of trait diffusion, there must be an explanation as to why diffused traits were accepted by the recipient culture. Within the current archaeological literature, Mitchell (1969: 208) has deduced that continuity models are “in” and dislocation approaches “out”. As support, he offers several examples of shifts from explanation by migration to that of *in situ* development.

Bringing his arguments closer to home, Mitchell (1969: 212), with certain qualifications, posits a statement of intent. That is, unless, under “constrained circumstances”, migration or cultural complex diffusion can be proven, he will emphasize a continuity model. Although he is speaking only of his future research interests within the Johnson Straits region, there is little doubt that such a perspective was meant to apply to the Gulf of Georgia. Not surprisingly, Borden (1969: 256) likens Mitchell’s intentions to a “Midden Manifesto” branding it scientifically unsound.

While the merits and drawbacks associated with Mitchell’s position could long be debated, his characterization aptly reflects the historical development of culture history within the Gulf of Georgia. Two schools of thought, those of dislocation and continuity, have developed and strenuously argued their case. The Marpole culture type, positioned in a central time range, has figured heavily within the ensuing debate. It is to the origins and demise of this unit which I now turn.

The Question of Marpole Origins

At one time Abbott (1961: 108) suggested that Marpole and Locarno Beach phase assemblages were simply different settlement pattern aspects of one cultural system. This was based on certain assemblage commonalities and what appeared to be a large overlap in C_{14} assays. Given the overlying stratigraphic position of Marpole to Locarno Beach components at several sites and the now available array of dates, this position seems highly improbable.

The possibilities of some overlap between the end of Locarno Beach and the beginnings of Marpole remain, however. Marpole culture type components at Glenrose Cannery, Musqueam Northeast, Cherry Point and Marpole have dates suggesting contemporaneity or greater antiquity than dated Locarno Beach assemblages at Pender Canal, Belcarra Park and Locarno Beach (Table II) (Figure 7). Of this situation, it should be pointed out that several dates are in dispute. These include the early dates at Marpole (S-17b) (Mitchell 1971: 61) and the later determinations from Locarno Beach II (S-3bis) and Belcarra Park (GaK 3903) (Charlton 1977: 187). If they are discarded, there exists but one overlapping component of the Locarno Beach culture type, Pender Canal. Although one date does not make a case, there seems little reason to reject the sample from which it was run (Wilmeth 1969: 95).

Whatever the case, from Table II there is little doubt that Marpole origins can be affirmatively recognized by 400 B.C. Either shortly before or shortly thereafter, Locarno Beach ends. The transition from one to the other has been open to wide ranging interpretation stressing developmental continuity, large scale diffusion and migration.

In preceding sections, I have broadly outlined the historical development of dislocation models for the Gulf of Georgia. Borden (1951) early proposed that the Marpole phase (intermediate period cultures) had strong affinities with interior plateau cultures. Although the exact mechanisms were never explicitly stated, it is assumed that he believed there to be a population replacement during the Locarno Beach/Marpole interface. The Locarno Beach subsistence pattern was thought to have a more maritime orientation with Fraser Delta sites on the periphery and, probably, indicative of seasonal occupations (Borden 1968a: 18). He also suspected that the major locus of the Locarno Beach phase would be found on the islands in the Strait of Georgia.

Borden’s views have significantly changed over the past quarter of a century. However, it would appear that, until recently, he maintained major differences between Marpole and Locarno Beach cultural assemblages such that one could not have developed out of the other. Despite the fact that they have never been thoroughly outlined, three slightly variant themes can be found in his dislocationist perspective.

The earliest model, that of interior origins for Marpole,

Table II Carbon 14 Dates for Marpole and Locarno Beach Culture Type Components

Site	Sample	Date	Culture Type	Reference
Locarno Beach	S-3	480 B.C. ±160	Locarno Beach	Borden 1970
Locarno Beach	S-3 ^{bis}	320 B.C. ±100	Locarno Beach	Borden 1970
Crescent Beach	WSU 1701	1310 B.C. ±80	Locarno B. (?)	Carlson, per com.
Crescent Beach	WSU 1702	1030 B.C. ±80	Locarno B. (?)	Carlson, per com.
Crescent Beach	WSU 1703	1080 B.C. ±80	Locarno B. (?)	Carlson, per com.
Musqueam N.E.	I-7790	600 B.C. ±85	Locarno Beach	Borden & Archer 1974
Musqueam N.E.	I-7791	1020 B.C. ±90	Locarno Beach	Borden & Archer 1974
Belcarra Park	GaK 3903	A.D. 240 ±90	Locarno Beach	Charlton 1977
Whalen Farm	S-19	500 B.C. ±160	Locarno Beach	Wilmeth 1969
Cherry Point	RL-272	680 B.C. ±240	Locarno Beach	Grabert & Larsen 1975
Bowker Creek	GaK 2760	960 B.C. ±100	Locarno Beach	B.C.P.M. 1976
Bowker Creek	GaK 2761	790 B.C. ±100	Locarno Beach	B.C.P.M. 1976
Montague Harbor	GSC 437	1210 B.C. ±130	Locarno Beach	Mitchell 1971
Montague Harbor	GSC 406	940 B.C. ±140	Locarno Beach	Mitchell 1971
Pender Canal	M-1515	250 B.C. ±120	Locarno Beach	Wilmeth 1969
Georgeson Bay	GaK 2753	870 B.C. ±100	Locarno Beach	Haggarty & Sendey 1976
Marpole	S-17a	A.D. 370 ±180	Marpole	B.C.P.M. 1976
Marpole	S-17a	65 B.C. ±166	Marpole	B.C.P.M. 1976
Marpole	S-17a	A.D. 1 ±125	Marpole	Borden 1970
Marpole	S-17b	950 B.C. ±170	Marpole	B.C.P.M. 1976
Marpole	S-17c	350 B.C. ±60	Marpole	B.C.P.M. 1976
Marpole	S-93	A.D. 170 ±60	Marpole	B.C.P.M. 1976
Marpole	L-337	150 B.C. ±90	Marpole	B.C.P.M. 1976
Marpole	Har 2183	A.D. 440 ±90	Marpole	Burley 1979b
Beach Grove	GaK 1478	220 B.C. ±70	Marpole	B.C.P.M. 1976
Beach Grove	GSC 440	A.D. 220 ±130	Marpole	Wilmeth 1969
Beach Grove	UW 44	A.D. 47 ±120	Marpole	Wilmeth 1969
Beach Grove	UW 43	A.D. 406 ±130	Marpole	Wilmeth 1969
Beach Grove	UW 42	A.D. 560 ±25	Marpole	B.C.P.M. 1976
Glenrose Can.	S-790	390 B.C. ±115	Marpole	B.C.P.M. 1976
Glenrose Can.	GaK 4646	360 B.C. ±105	Marpole	Matson 1976b
Glenrose Can.	S-787	350 B.C. ±70	Marpole	B.C.P.M. 1976
Glenrose Can.	GaK 4647	80 B.C. ±95	Marpole	Matson 1976b
Helen Point	GaK 4937	160 B.C. ±105	Marpole	Carlson 1977, per com.
Helen Point	GaK 4935	A.D. 580 ±85	Marpole	Carlson 1977, per com.
Helen Point	GaK 4936	A.D. 830 ±100	Marpole	Carlson 1977, per com.
Helen Point	GaK 3200	A.D. 850 ±90	Marpole	Carlson 1970
Garrison	GaK 4933	150 B.C. ±100	Marpole	Carlson 1976, per com.
Garrison	GaK 4934	A.D. 370 ±60	Marpole	Carlson 1976, per com.
False Narrows	GaK 2754	A.D. 240 ±90	Marpole	Mitchell 1971
Dionesio Point	GaK 2762	A.D. 70 ±90	Marpole	Mitchell 1971
Fox Cove	UW 24	A.D. 436 ±40	Marpole	B.C.P.M. 1976
Cadboro Bay	GaK 2751	A.D. 140 ±90	Marpole	B.C.P.M. 1976
Maple Bank	WSU 1540	A.D. 790 ±70	Marpole	B.C.P.M. 1976
Point Grey	GaK 1480	20 B.C. ±100	Marpole	B.C.P.M. 1976
Musqueam N.E.	GaK 1283	400 B.C. ±80	Marpole	Wilmeth 1969
Cherry Point	WSC (no #)	390 B.C. ±200	Marpole	Grabert & Larsen 1975
Birch Bay	UW 344	A.D. 5 ±98	Marpole	Gaston & Grabert 1975

has been abandoned (Borden 1968a, 1970). There is little doubt that a major contributing factor was the controversy of the mid 1950s (Borden 1951, 1954; Caldwell 1954; Osbourne *et al.* 1956). In addition, with the gathering of more data from interior locales, a direct predecessor to Marpole could not be found. While Borden has all but dropped his early hypothesis, Cressman (1977) has recently revived the model fleshing it out by relating language families to individual culture types. The Locarno Beach population is suggested to be a Penutian speaking group who migrated to the Coast from the Great Basin via the Columbia River and, thence, northward. Subsequently,

they were displaced in the Gulf of Georgia region by westward moving Salishan speakers bearing a Marpole type material culture.

Borden's later hypotheses, although again never fully developed or qualified, continue to hint at Marpole displacement of Locarno Beach. These are laid out in several, what may be termed speculative, statements on the progenitors of Marpole. He first looks to the Fraser Canyon:

Mention should be made of the obviously broad affinities that exist between the culture of the Marpole phase and that of the somewhat earlier Baldwin phase in the Fraser Canyon. Many of the upriver

traditions and practises were continued and further developed in the delta region during the Marpole phase. Intriguing also is the fact that the climax at the mouth of the river occurred in the centuries after the arrival of the people of the Skamel phase had brought an end to the Baldwin phase in the canyon region (Borden 1968a: 20).

In a slightly later paper, the suggestion of *in situ* development from an early pre-Marpole base, not including Locarno Beach, was posited.

The Marpole phase of the Fraser delta region appears to represent a climax of long cultural development. Basic affinities of the Marpole culture with both the Eayem phase (ca. 3,500–1,000 B.C.) in the Fraser Canyon and with the early component at the St. Mungo Cannery site (which is contemporary with the Eayem phase) in the eastern part of the delta suggest that this was essentially a local cultural development. However, many of the cultural features that lend diversity and glamour to the Marpole culture are not yet present in either the Eayem phase or in the early assemblage at St. Mungo. Obviously, strong external cultural stimuli from diverse directions played an important role in generating the cultural efflorescence of the Marpole phase with its many features that are generally regarded as characteristic of the classic Northwest Coast culture of more northerly coastal peoples in recent times (Borden 1970: 107).

I have reported earlier that Borden (1975) has defined the Charles phase, a unit incorporating the St. Mungo, Eayem and Mayne phases. In that it is a regional complex spread throughout much of the Gulf of Georgia, it appears to contradict a direct Marpole evolution out of Fraser River and canyon populations isolated from developments in the Gulf and San Juan Islands. Since he has described the Charles phase as ". . . the important transitional stage which preceded the climatic developments of the ensuing Baldwin, Locarno Beach and Marpole phases. . . (1975: 97)", his thoughts would seem to have shifted towards direct continuity.

The continuity model also has been long considered for the Gulf of Georgia. King (1950), as stated in a previous section, has proposed a developmental sequence at the Cattle Point site based on gradual adaptation to the maritime environment. His chronology, nevertheless, is somewhat confusing and difficult to relate to subsequent and later culture historical units. Both the Developmental and Maritime phases seem to include traits characteristic of Marpole. They also have Locarno Beach elements. Moreover, a recent series of dates from this site (J. Robinson, personal communication to R. Carlson 1977) places the Maritime phase between 910 ± 158 B.C. (USGS 22) and A.D. $1,083 \pm 159$ (USGS 25) with the Developmental phase intervening.

In a slightly variant manner, Carlson (1960: 584) has proposed an *in situ* continuous evolution of Marpole.

Culture change is related to two key variables, progressive adaptation to the environment and long range diffusion. He suggests:

The factors which are most likely involved are a progressive adaptation to the environment coupled with the development in the Mesolithic and Neolithic cultures of the Old World of the customs of using and manufacturing artifacts of horn, bone, and stone by sawing, abrading, and polishing techniques, and the diffusion of those techniques and artifacts to the cultures of this area. Types differ, but change is a natural consequence of distance in time and space (1960: 584).

The processes involved in this diffusion stream are left open and there is no attempt to answer why such a transition of types was so readily adapted by a regional populace.

The *coup de grace*, so to speak, for those professing dislocation has been put forth by Mitchell (1971). In a well argued case, he reviews all pertinent anthropological data amassing a variety of evidence for continuity from at least the beginnings of the Locarno Beach culture type. Four major points are stated (1971: 68–79):

- 1) archaeological data are indicative of a continuity. Specifically, for Locarno Beach and Marpole, there is an overlap in chipped and ground slate point styles as well as the common occurrence of a microblade technology, labrets, earspools and grooved and notched sinker stones.
- 2) the osteological data do not illustrate differing physical populations through time.
- 3) from glottochronological studies, it would seem that the Coast Salish developed *in situ* and interior Salishan branches are a more recent spread. Moreover, there would be a considerable time depth involved.
- 4) there is no mythological evidence reported for Coast Salish documenting a migration. Similarly, it is argued that Coast Salish social organization does not reflect one of a militaristic society, a trait which would be needed to displace earlier inhabitants in the Gulf of Georgia.

The transition from Locarno Beach to Marpole is posed as a gradual adaptation to changing climatic conditions. That is, there would be a shift from a warm environment of the hypsithermal to a cooler period during the post glacial (Mitchell 1971: 71). In turn this would have affected local vegetation, particularly oak and camas, and require a greater reliance on the fishery, especially salmon. Further, given that the resource base has always been prone to fluctuations, a less diversified economic orientation necessitated changes in social organization. Thus we see a development of the food to wealth to prestige system, a pattern suited to equalization of productivity variation (Suttles 1960: 304). This pattern is documented in Marpole by the large number of identified wealth objects and

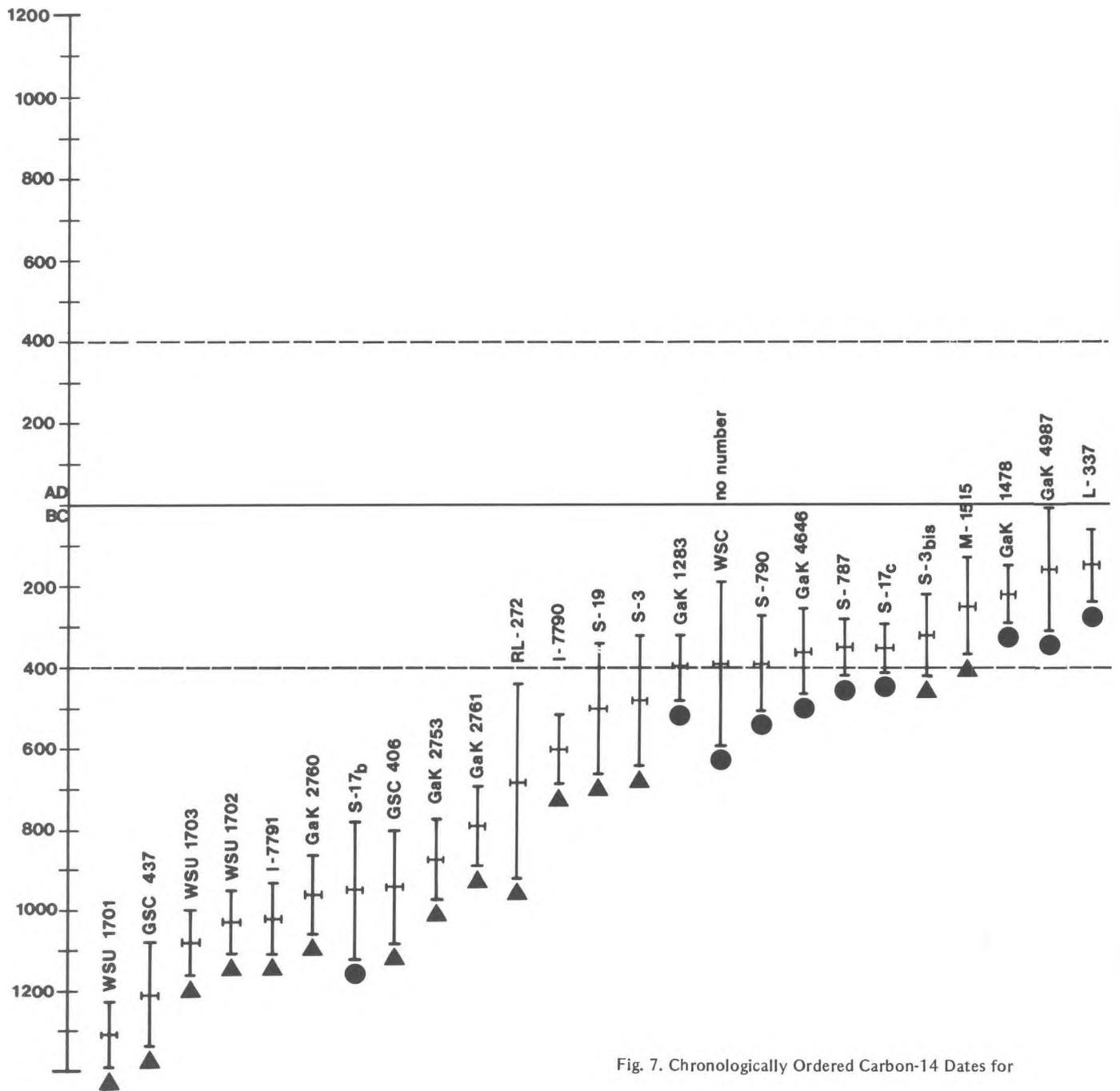


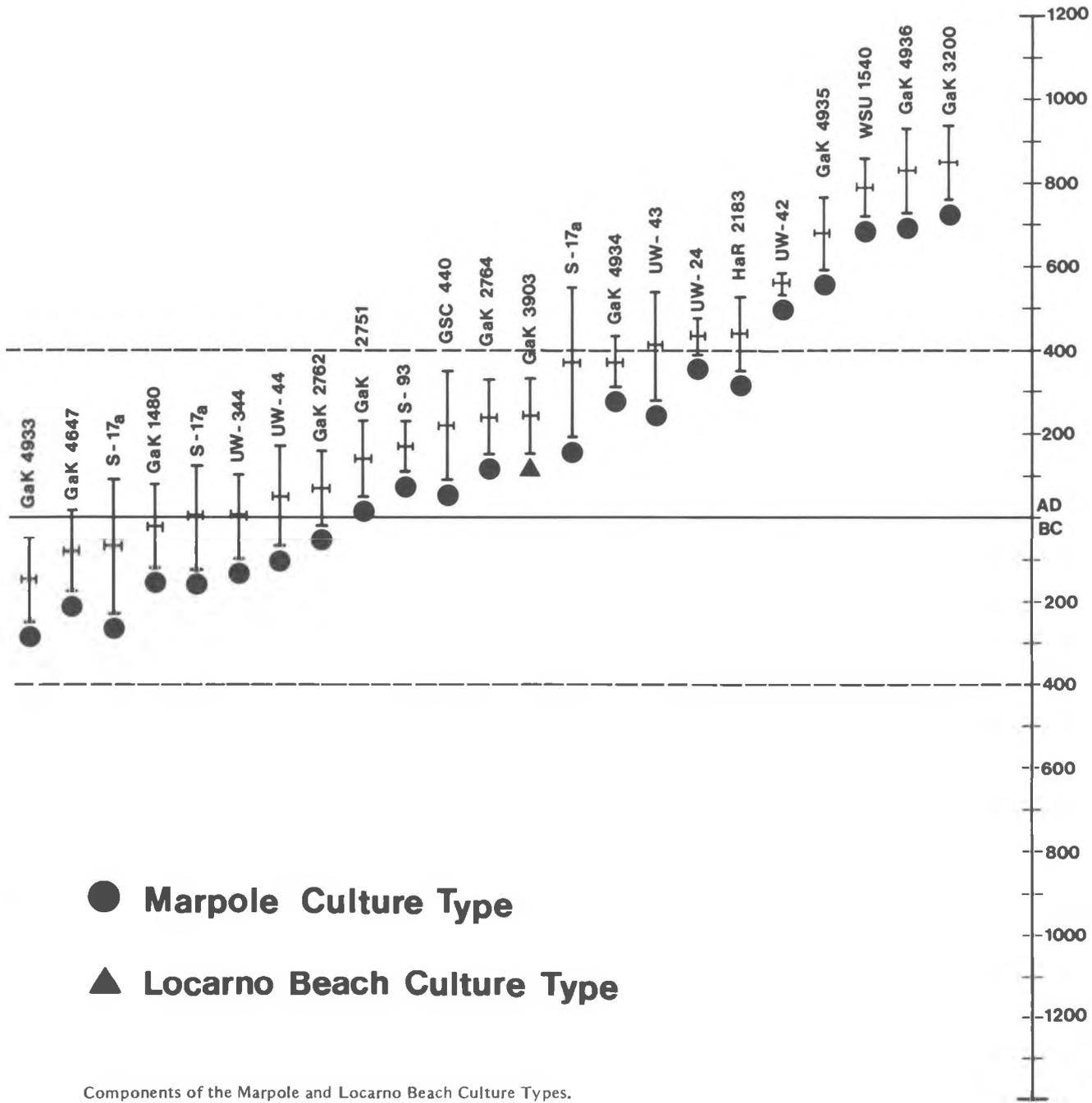
Fig. 7. Chronologically Ordered Carbon-14 Dates for

personal ornamentation. Mitchell (1971: 71) also argues that the occurrence of thin ground slate knives during Marpole illustrates improvements in the techniques of salmon preservation and storage.

Mitchell's concept of continuous local development is, at present, the most widely accepted model. With rare exception, discontinuity has been totally abandoned as an explanation for culture change. However, in a recent

paper, Beattie and I (Burley and Beattie 1977) have suggested the case to be far from definitive. Reviewing existent archaeological, osteological, ethnographic and linguistic materials, we argue that dislocation is a viable alternative at the *present* time, given the *present* data base. A compendium of this position follows.

Mitchell has noted that evidence for intruded physical types is absent. He states:



Hill-Tout's (1895: 112) postulated change from dolichocephaly to brachycephaly in the local populations was not supported in the later excavations by H.I. Smith (except possibly at North Saanich) and the shift has never been reported for more recent excavations (1971: 69).

While the above citation remains correct, it is important to point out that Hill-Tout's classification may have been

describing something other than head shape. Specifically, as Heglar (1958a: 10-11) reported 20 years ago, the differences are equally accounted for by varying forms of artificial cranial deformation. Moreover, the Eburne sample being described, at least in part, could be a contemporaneous population.

The major drawback with reliably distinguishing differing physical populations is the securing of a large sample.

Rarely are midden interments complete enough to allow a total metric assessment of individuals. In addition, given that cranial deformation is widespread from Marpole onwards, comparative studies of cranial metrics are all but impossible (but see Cybulski 1975). Combined, these problems may never be overcome in full.

Those data which are available neither prove nor disprove continuity. On the one hand, as Heglar (1958a, 1958b, 1958c; also see Kidd 1933) found, differences beyond gross cranial shape seem to exist between Marpole and pre-Marpole physical types (Burley and Beattie 1977: 19). On the other hand, however, these differences are not blatantly distinct, are based on an inadequate population size and may be characterizing samples which are not homogeneous in themselves. Further, even if an improved data set were to verify separate populations, it would be necessary to show that localized microevolution is not the causal agent. Beattie (1978, personal communication) is currently involved in a comprehensive study of Gulf of Georgia osteological remains and, hopefully, his findings will shed new light on the situation.

Glottochronological studies of Salish linguistic divergence have considerable antiquity in the literature. Swadesh's (1949, 1950, 1954) pioneering research has been refined and evaluated over the past quarter of a century (Suttles and Elmendorf 1962; Jorgenson 1969; Kincade 1976). Although, currently, few linguists would support the tenet that divergence can be measured in absolute time, its status as a relative measure is open to interpretation (see Suttles and Elmendorf 1962: 47). The most significant conclusions for an archaeological perspective may be listed.

- 1) It would appear that interior probably separated earlier than any other major subgrouping within Salish (Suttles and Elmendorf 1962; Jorgenson 1969; but also see Kincade 1976).
- 2) The original Salishan groups were associated with riverine and forested valley environments of the Pacific Northwest. In addition, given the geographical position of present day Salishan peoples, there must have been access to both east and west sides of the Cascade divide (Kincade 1976).
- 3) The most probable homeland and, hence, dispersal centre of the Salish language family is around the mouth of the Fraser River (Suttles and Elmendorf 1962; Diebold 1960; Jorgenson 1969; Kincade 1976).
- 4) Interior and Coast Salish branches have a maximum divergence between 55 and 65 units. This is relatively early when comparing, for instance, the divergence within Wakashan of Nootka and Kwakiutl (Swadesh 1954; Suttles and Elmendorf 1962).
- 5) Coast Salish branches developed as a chain along the coast with Bella Coola the northernmost

member and Olympia the group furthest south (Suttles and Elmendorf 1962).

These inferences, at least superficially, would seem to support a lengthy continuum for Gulf of Georgia Coast Salish. It must be noted, however, that recent introductions are present within Swadesh's basic word list (Suttles and Elmendorf 1962: 43). Since all glottochronological analyses have, for the most part, relied on Swadesh's data, we may not have a clear picture of Salishan divergence. As Suttles and Elmendorf (1962: 43) have stated, should new word lists be available, "... a complete reworking of Salish would yield higher cognate scores". Given that a glottochronological unit cannot be equated with absolute time, in conjunction with the above noted contamination, the linguistic data does not appear quite so defensible.

The problems of time depth aside, from linguistic analyses we can infer with some degree of confidence that interior Salishan, in relative terms, split early and probably represents a migration from the western edge of the Cascade/Coastal range. This is in direct conflict with models positing interior origins for Salish. Still, the linguistic evidence does not rule out all possibilities for dislocation between Marpole and Locarno Beach. In fact, if one looks at Marpole as a separate *in situ* development as Borden (1968a, 1970) at times has done, there remain but few contradictions.

Finally, to bring glottochronology and lexicostatistics into arguments of continuity or discontinuity in the archaeological record, we must assume that linguistic groups are recognizable archaeological manifestations and each can only be replaced by a different linguistic population. Such a hypothesis is not supported within either the ethnohistoric or archaeological literature. The possibility of population displacement by adjacent peoples of the same language family is ever present.

The archaeological evidence, as implicitly stated in earlier discussions, does not settle arguments over the Locarno/Marpole interface. Both similarities and differences exist. Of the traits in common, those most predominant are a microblade technology, labrets and earspools, grooved and notched sinker stones, bone needles, a variety of awls, and some overlap in chipped and ground stone projectile points. Turning to the dissimilarities, the shift in harpoon technologies from a composite toggling variety to the antler barbed form with line hole or guard is striking. Provided that composite styles are more advantageous and have less potential for breakage, the sudden adoption of a unilaterally barbed type is difficult to account for in a continuity model (but see Mitchell 1971: 72). Other distinctive traits include the sudden appearance in Marpole of a wide variety of chipped point styles, the discrete occurrence of several large well made ground bone and stone points in Locarno Beach, the use of well made barbed

antler and to a lesser extent bone points in Marpole, the presence in Locarno Beach of a series of unidentifiable artifacts grouped under the rubric of Gulf Islands Complex and the presence in Marpole of stone and antler pendants with lateral perforations. Since large well made spooled hand mauls, large celts, house platforms and large post moulds would appear to first occur in Marpole, we might speculate on the introduction of the Coast Salish plank house style. As well, a more developed art form and increase in personal ornamentation and grave goods suggest some differences in social organization.

Although it must be admitted that overlapping artifact styles point toward a continuum, several seemingly abrupt shifts are apparent for which transitional stages are lacking. Also, given the temporal overlap of these culture types, the assemblage differences grossly outweigh the similarities. Should a continuity have been the case, we might expect some intermediate stage whereby Locarno Beach and Marpole material culture would appear mixed. Such a situation, at least for the present, cannot be recognized. However, this can be illustrated in the following discussions on the Marpole decline.

From the archaeological data, two sets of qualifications may be drawn. If one accepts a cultural continuum from the archaeological record, then a large number of differences in Marpole and Locarno Beach artifact assemblages must be accounted for. In essence, this would mean a delineation of the stimulant(s) and processes by which this transition took place. On the other hand, if a population displacement is favoured, then the many similarities must also be explained. At present, probably the most acceptable thesis for the latter is that of a single diffusion and/or interaction sphere. In this model, Marpole would be viewed as a separate intraregional development.

Mitchell's (1971: 69) final arguments for continuity turn to ethnographic data. He states specifically that evidence for migration or population replacement is absent in both the mythological traditions and social organization of Coast Salish. To the contrary, from even a brief reading of the ethnographic literature, it is possible to recognize a population fluidity which undoubtedly extended back into prehistory. To cite but a few examples, Barnett (1955: 22–24) reports that the Salishan Comox were forced into a more southerly position by pressures exerted on them by the Kwakiutl. In turn, the Comox harrassed and caused the dispersal of several Pentlatch groups on Campbell River. Duff (1952: 43–44) also reports a population shift by the Chilliwack. In this case, the movements are related to a specified environmental event, the changing course of the Chilliwack River. Although on a less concrete level, it is noteworthy to point out that the Salishan speaking Bella Coola somehow have been isolated (population displacement?) from the mainstream language stock. Further, one must ask why the closest linguistic relatives of

the Tsimshian are the lower Chinook on the Columbia River (see Sutherland 1977 for a migration hypothesis)? We can only surmise that population movements did occur in the past and must be given equal consideration with continuity models when working with archaeological data.

To conclude, it must be maintained that, at this time, it is not possible to verify either a continuity or dislocation model. There are arguments for both and each is open to interpretation. Indicative of a population replacement are some rather sudden changes in material culture between the Locarno Beach and Marpole culture types. A number of differences in physical type may also be present although such statements, as yet, are somewhat premature. The major problem with a displacement model, however, is the place of origin and progenitors of Marpole. If they did not evolve out of Locarno Beach, why has a parent cultural complex within the Gulf of Georgia region not been found? The discussions again take up this point.

Marpole Demise and the Gulf of Georgia Culture Type Interface

As with the question of origin, the decline of the Marpole culture type has received close attention within the past several years. The Gulf of Georgia culture type, at least that portion manifest in the San Juan and Stselax phases, is firmly accepted as the ultimate successor (Mitchell 1971; Carlson 1960, 1970). However, between the terminal date for Marpole and an emergence of the more recent complex, there exists an approximate gap of 400 to 500 years (A.D. 600 to 1100). Moreover, until recently, components dating to this intermediate period were lacking. The mechanisms by which the transition has taken place were therefore left open to speculation. Carlson (1970: 122) outlines three possibilities:

- 1) the bearers of Marpole phase culture were replaced by another human population with a different technology;
- 2) changes in technology were a response to changing conditions of the natural habitat;
- 3) the major changes are due to the diffusion in of new techniques for exploiting the environment.

The idea of a population replacement of Marpole peoples by those of some other group has long been in the literature. Borden (1951) has argued that, in the uppermost deposits at Marpole, Beach Grove and Whalen Farm, there exists a cultural complex indicative of discontinuity. This he has labelled the Whalen II phase. Characteristic of these components are the absence of ground slate artifacts; stone bowls and stone carving; the occurrence of microblades; side-notched and corner-notched chipped stone points; olivella beads; and, finally, the reintroduction of the two piece composite toggling harpoon and attendant loss of the unilaterally barbed form (Borden 1970: 108–9).

A single C_{14} assay on the assemblage from Whalen Farm dates this phase to A.D. 370 ± 140 (S-19) (Mitchell 1971: 62) thus indicating contemporaneity with late Marpole. Of this situation, Borden has stated:

...two C_{14} dates from late Marpole phase deposits at Beach Grove fall well within the time of the new phase, suggesting the persistence of the Marpole culture in some parts of the delta even after the appearance of Whalen II groups in the region.

The appearance of somewhat similar points and other new traits in the Fraser Canyon several centuries earlier, terminated the Baldwin phase in that part of the valley. Perhaps these sudden breaks in cultural development are somehow linked with the movement of new ethnic groups into the lower Fraser (1970: 107-9).

The termination of the Whalen II phase is placed at A.D. 800 and, although there are no components associated with its successor, the transition is viewed as a cultural continuum. This gap between the end of Whalen II and beginnings of the Stselax phase (A.D. 1250) has been filled with the hypothetical pre-Stselax phase (Borden 1970: 110).

Despite Borden's insistence on the uniqueness of Whalen II, further components have yet to be discovered. Moreover, the association of the Beach Grove and Marpole sites with this phase remain unsubstantiated (see Abbott 1961; Smith 1963; Burley 1979b) thus leaving the Whalen Farm assemblage as the sole constituent. Given that the collection consists of less than 200 pieces (Mitchell 1971: 56), the possibility of a sampling bias remains. Moreover, if negative traits (those not occurring) are disregarded, the assemblage includes few artifacts which have not already been described as Marpole. Olivella beads are a possible exception and, generally, are rare in archaeological collections from the Gulf of Georgia. Previously, Mitchell (1971) had come to the same conclusion resulting in a Whalen II placement within the Marpole culture type. There is little dispute with such a suggestion.

Ruling out the possibilities for discontinuity between Marpole and the Gulf of Georgia culture type, Mitchell states:

Origins of the Gulf of Georgia culture type involve us in an almost anticlimatic discussion. The transition from Marpole culture introduces no major shifts in culture configurations, as already has been pointed out. There are many continuities indicating perpetuation of a well established regional tradition and the discontinuities (absence of microblades in the later type, changes in form or material of similar artifact classes, a return to the toggling harpoon as the dominant variety) seem slight by contrast. Possibly, even some of these differences will appear less abrupt as more assemblages are discovered from the present five century gap between the culture types (1971: 72).

Excavations at the Belcarra Park site have revealed what must be considered the elusive transitional component (Charlton 1977). This is Belcarra Park II, a component having dates of A.D. 330 ± 90 (Gak 3905) and A.D. 880 ± 90 (Gak 3904). Including no succinct break in stratigraphy nor evidence for cultural replacement within the component, it would seem to document a continuous development up to at least A.D. 900. The Belcarra Park II material culture includes, in combination, a number of traits one would expect to see in a transitional assemblage. For instance, chipped stone points are abundant and diversified in form with stylistic elements overlapping both Marpole and the local variant of the Gulf of Georgia culture type, the Stselax phase. Also of extreme importance is the direct association of unilaterally barbed harpoons of antler and bone with valves for composite toggling harpoons. The latter type included 93 specimens (Charlton 1977: 8). Unilaterally barbed bone and antler points, numerous small bone points for composite tools and nipple top hand mauls, again, are indicative of an evolutionary stage from late Marpole to the Gulf of Georgia culture type.

Although undated, an assemblage comparable in many respects to that from Belcarra Park has been unearthed by Crowe-Swords (1974) from the Carruthers site on nearby Pitt Lake. Lacking shell deposits, preservation of bone and antler is poor and artifacts of these materials are all but absent. Despite this problem, the lithic assemblage again shows considerable overlap between Marpole and later components. As at Belcarra Park, there is a large number of chipped stone points with several types represented. In particular, the contracting stemmed and corner-notched forms are reminiscent of Marpole while side-notched types are directly comparable to Belcarra Park II and Stselax Village. Excurvate ground slate points in combination with stemmed and notched styles also point towards an intermediate stage.

Two other sites, I believe, may be firmly tied to this transition. These are False Narrows (Burley 1979a) and Deep Bay (see Monks 1977). The False Narrows II component, while unlike Belcarra Park II and Carruthers, has elements of both Marpole and a later culture. Since a majority of the assemblage seems closely related to the Marpole period and there is a date of A.D. 240 ± 90 (Gak 2754), it may be indicative of the beginnings of this transition. Associated with such Marpole elements as a barbed antler harpoon and several antler points are valves for toggling harpoons and a variety of small bone points. Also, there is considerable overlap in the style of ground stone points between False Narrows II and III, the latter a Gulf of Georgia culture type component.

The Deep Bay site is reported to be the most northerly Marpole component yet uncovered. I would also argue that its assemblage appears more like the Gulf of Georgia type

than Marpole. That is, late traits seem to outweigh those of Marpole (cf. Monks 1977: 222). Whatever the case, two dates may illustrate a continuous development from mid-Marpole up to early Gulf of Georgia times. These are A.D. 40 ± 110 (Gak 6037) and A.D. 1050 ± 90 (Gak 6036) (Monks 1977: 61). The latter assay suggests, at least in part, a relatively recent transitional stage for the component.

While there appears to be adequate proof to argue that Marpole evolved into the Gulf of Georgia culture type, there is also evidence that this so-called transition did not proceed at an equal rate through all parts of the region. Several dates from what appear to be "typical" Marpole assemblages overlap with Belcarra Park, False Narrows and Deep Bay. Included here are Marpole II (Burley 1979b), Garrison (Carlson 1960), Helen Point Marpole (Carlson 1977, personal communication) and possibly Beach Grove (Smith 1963).

In light of the preceding arguments what can be said of the demise of Marpole and at what point do we draw the line between it and the Gulf of Georgia culture type? While the contextual dynamics of the transition are unclear, it is interesting to note here what might be considered differing diffusion streams into the area during the late Marpole period. Charlton (1977: 192) has stated of the Belcarra Park II component:

By the beginning of Belcarra Park II times there is indirect evidence for increased contact (trade and/or diffusion) with populations of the southern interior. In the Belcarra Park II component a number of artifact classes could "fit" comfortably in late pre-historic sequences from the southern interior . . .

Such interior traits are not restricted to Belcarra Park. Elements of what might be considered a Kamloops phase are found at Carruthers (Crowe-Swords 1974), Stselax Village (Borden 1970) and False Narrows (Burley 1979a).

In addition to influences from the interior, there is evidence for a diffusion stream from adjacent coastal areas. Specifically, several late traits including a profusion of small bone points, two piece toggling harpoons with channeled valves for insertion of small bone points, and small triangular ground stone points are known in earlier contexts in territories of the Wakashan speaking Kwakiutl and Nootka (Dewhirst 1977; Chapman 1977).

Being a continuous cultural development, it is extremely difficult to draw a line at one point in time and propose a realistic division between the Marpole and Gulf of Georgia culture types. Also, what of the transitional state up to A.D. 1250? Should it be considered a new culture type and, if so, what are its distinguishing diagnostics? These problems are further compounded by the time differential of the transition throughout the region.

I would argue that such questions cannot be answered given the analyzed data with which we are currently working. A single date neither ends Marpole nor starts the recent period. It may only be suggested that items of material culture characteristic of later assemblages are present by A.D. 300 and by A.D. 1000 the transition is virtually complete. We might also anticipate that diagnostic artifacts of the Marpole and Gulf of Georgia culture types have an inverse association of occurrence in this intervening period.