X. TIME AND SPACE RELATIONS OF SOME GREAT BASIN PROJECTILE POINT TYPES

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Three-quarters of a century ago (actually 77 years B.P.), Thomas Wilson, of the U.S. National Museum, set forth a descriptive system for the classification of projectile points in his book, A Study of Prehistoric Anthropology, Handbook for Beginners (Wilson 1890:640-642). He subsequently elaborated this system in a complex fashion which, despite its intricacy, was based upon ideas he hoped would make "classification as simple as possible" (ibid. 1899:890). Wilson's treatment of point systematics was virtually ignored for nearly a quarter of a century, until Gifford and Schenck (1926: 80-85) employed it in their work, Archaeology of the Southern San Joaquin Valley. Schenck, Dawson, Steward, and Strong, to name but a few, used Wilson's system rather consistently from 1926 until 1935 in several widely circulated publications (Schenck and Dawson 1929; Strong, Schenck and Steward 1930; Strong 1935). Other investigators did not begin to utilize the system so early (e.g. up to 1932 Bureau of American Ethnology reports referred to projectile points as "lesser objects of material culture"), but by the early 1940's detailed descriptions of points had become standard procedure for most archaeological reports written for a professional audience.

There are several historical reasons why descriptive classifications of projectile points, and the idea of points as valuable aids in cultural interpretations, did not come into more immediate widespread use after Wilson's work had been published. First, although Uhle, Nelson, and others had experimented with application of the stratigraphical method since as early as 1902, it did not come into full acceptance until 1916 (Haag 1959:92). Kroeber, in fact, wrote (1952:151), "Incredible as it may now seem by 1915-25 so little time perspective had been achieved in archaeology that Wissler and I, in trying to reconstruct the native American past, could then actually infer more from the distributions and typology of ethnographic data than from the archaeologists' determinations. Our inferences were not too exact, but they were broader than those from excavations." Second, Wilson (1899:913, 924-925) had anticipated that his method would be used for deducing temporal distinctions, but it need scarcely be stated that until archaeology as a discipline could determine and control the time dimension and associate different strata with different cultural periods at any given site, it was not possible to associate any point type (or, as Wilson intended, point shape) with a definite period in the cultural past. Of course, as the stratigraphical method found wider utilization, it was only natural that certain point shapes would begin to stand out as associated with particular time periods.

This process was hastened by one of the single most important events

in the history of American archaeology; namely, the Folsom discoveries of 1926-28 (cf. Roberts 1935, 1937). What had happened was that an absolutely distinctive type of point had been linked conclusively with a Pleistocene beast, the relative age of which was firmly established. This association was pregnant with implications for the future in that, (1) the Folsom point became the first of many incontrovertible time or "horizon" markers, and (2) the type itself took on uncontested cultural, as opposed to descriptive, connotations by its direct connection with the implied subsistence pattern of Pleistocene big game hunting. (See Black and Weer 1936:280-294, on Folsom as a cultural designation.) Clovis, Gypsum, and other point types, each with its corresponding temporal and cultural implications, thereafter began to gain recognition.

In addition to the obvious advantage of using point types in intersite stratigraphical correlations and as time markers and cultural indicators, there is an additional reason for the marked emphasis on point description in the late 1930's. Before 1870, American archaeology had centered its attention on the more spectacular aspects of the ancient past and on the collection of interesting objects for museum display (Taylor 1948:23). After this date, the attention of researchers turned to artifacts themselves, and for their own sake (op. cit.). Unfortunately, until after World War I, few field workers in archaeology had been trained as anthropologists (Griffin 1959:387) and their handling of point typologies was minimal in regard to cultural implications. Beginning about 1934, however, American archaeology "underwent a tremendous growth" (Haag 1959:93), aided in no small part by available Federal funds for relief purposes, and the majority of workers thereafter received professional training in anthropology. From this time, descriptive typologies, some newly contrived (e.g. Finkelstein 1937; Ray 1936; Woodward 1936; Black and Weer 1936) and some based on Wilson's earlier work, proliferated in the literature. The problem is, however, that rather than devise new typological approaches to deal with the increased cultural evidence which could be gained from projectile points, the majority of authors continued to use the older descriptive approach—with its inherent lack of flexibility—for making cultural distinctions.

The situation rapidly became acutely confused, and various authors called for a re-evaluation of the system and an end to purely descriptive classification schemes (Krieger 1940, 1944). This proposal went unheeded, and even today individual authors often set up their own descriptive categories for points at their own sites, even though identical points from similar sites are designated by an entirely different classification system by others. Aside from the obvious confusion created thereby, this practice may be criticized on solid theoretical grounds. Most purely descriptive systems which reduce point types to a welter of letters or numerical codes, with little if any cultural significance, are essentially repetitions of

Wilson's effort of 1890. As has been stated, this system was designed for "beginners" at a time when stratigraphy and the use of time markers were unknown to the infant science of American archaeology. Now, in 1967, archaeology has achieved a higher level of sophistication: many advances in field techniques—especially the current interdisciplinary approach to culture history—allow us to make inferences about the past which would have been unimaginable to workers of Wilson's day. Thus, it would behoove us to discard the outmoded and simplistic methodology of entirely descriptive point typology and utilize the expanded concepts at our disposal.

The first comprehensive use of a typological analysis for the specific area of the Great Basin in which points of a given distinguishable type are called by the name of the site where they were first discerned, or where they characteristically occur in large numbers, was in the Wagon Jack Shelter report by Heizer and Baumhoff (1961). Lanning (1963) continued this practice in his Rose Spring report, and a number of workers in recent years have accepted this system as a model and employ it in point typologies. This approach has several advantages over the purely descriptive classification previously discussed. In the first place, if a type is defined correctly, that is, with recognition of formal as well as stratigraphical and distributional attributes, the name of the type will carry cultural inferences whenever it is employed. In other words, the named type will connote a certain temporal and geographical association and, in well established types, will bespeak associations with subsistence techniques, as, for example, the Elko Eared type implies use of the atlatl while the Desert Side-notched point is associated with bow and arrow technology. Ideally, as Krieger (1944:272) has stated, a type will "have demonstrable historical meaning in terms of behaviour patterns." If a type is broadly defined, allowing for a degree of variation on a "similar structural pattern" (ibid. 279), the necessity of calling obviously similar points by different code names on the basis of miniscule variations will be obviated. It must be stated, however, that this approach, which has proved its utility to the author during the past year in dealing with projectile point typologies, is intended here to apply specifically to the Great Basin and not necessarily to other regions with differing artifact complexes. A similar approach, however, has been utilized elsewhere. Suhm and Krieger (1954), for example, employed a system of named point types in Texas, which was later used by MacNeish both in northern Mexico (1958) and in the Tehuacan Valley (1961).

Twenty-one named types, some combinations of which may be called by the larger term of "series,"[1] are in current usage. For example, the Elko

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[1] This term appears to have first been used in this context by Kreiger (1944:282). It seems to be equivalent to what Taylor (1948:121) calls "class."

series contains the Elko Eared, Elko Corner-notched, and Elko Side-notched types. In Table 1, occurrence of eight named types is indicated at eight different Great Basin sites. The first four sites are stratified, and of these the South Fork Shelter and Rose Spring sequences cover a long time span. At four sites, all eight point types are present and are found stratigraphically in roughly the same relative distribution as they are arranged (horizontally) in the table. Elko Eared, Elko Corner-notched, and Desert Side-notched points (Baumhoff and Byrne 1959) have been well established as time markers in the Great Basin, and Pinto points are also accepted as time markers (Harrington 1957; Lanning 1963). On the basis of the stratigraphical occurrences noted in the table, I propose that the Cottonwood Triangular, Rose Spring Corner-notched, Eastgate Expanding Stem, and Humboldt Concave Base types be considered in the light of presently available evidence as time markers of the sort which Krieger (1944:283) has defined as "sub-types," a temporary designation for a form which "cannot definitely be termed a variation of one type or as a type in itself." This definition is especially applicable to the Humboldt Concave Base A type which, as Table 1 shows, bears some similarities to the Pinto points, especially the Pinto Shoulderless variety. Note that in sequences where the Pinto points occur, the Humboldt Concave Base A point also occurs. Among the points from Wagon Jack Shelter and from site NV-Pe-5 (Elsasser 1958), no Pinto points are present, but the Humboldt Concave Base A type does occur. Future work may make clear whether the Humboldt Concave Base A point is in fact a separate type, or merely a developmental variant—carrying thereby a slightly different time implication—of the Pinto type proper.

The problem of developmental trends also occurs in the subtlety of distinction between the Rose Spring Corner-notched and the Eastgate Expanding Stem subtypes. These two subtypes fall in time between the end of the Elko series (ca. 600 A.D.) and the appearance of the Desert Side-notched (ca. 1300 A.D.). Present information indicates that in this case we are dealing with two variations of the same general form.

Although these subtypes do not yet have the temporal and spatial confirmation of fully established types or time markers, they may still be utilized to advantage in cultural interpretations. This is particularly true of the subtypes considered here, since they fit conveniently into the established stratigraphic sequence in periods not completely accounted for by well designated types. That is, a base date of 3000 B.C. (equivalent to Pinto) and a terminal date of 1500 B.C. (base date for the Elko series) may be assumed for Humboldt Concave Base A type occurrences. The Rose Spring and Eastgate points appear to cover the period from 600-1300 A.D., or the time between the end of the Elko series and the appearance of the Desert Side-notched form (see J. O'Connell, Paper IX in this volume). A recent radio-

TABLE 1

Distribution and Average Weights of Point Types*

Site	DSN	CT	RSCN	EES	EE	ECN	HCB	PP
Hidden Cave	-	-	-	-	-	-	x	x
Wagon Jack Shelter	x	x	x	x	x	x	x	-
South Fork Shelter	x	x	x	x	x	x	x	x
Rose Spring	x	x	x	x	x	x	x	x
Lovelock	x	x	x	x	x	x	x	x
NV-Ch-15	x	x	x	x	x	x	x	x
NV-Pe-5	-	-	x	-	x	x	x	-
NV-Pe-67	x	x	x	-	-	-	-	-
Average weight	1.04	0.8	1.7	2.0	7.7	4.1	4.7	4.32

* DSN = Desert Side-notched
CT = Cottonwood Triangular
RSCN = Rose Spring Corner-notched
EES = Eastgate Expanding Stem
EE = Elko Eared
ECN = Elko Corner-notched
HCB = Humboldt Concave Base A
PP = Pinto Point

x = present
- = absent

carbon date of 1210 $\pm$ 60 A.D. (UCLA 1071F) for material from Lovelock Cave directly associated with Rose Spring Corner-notched points would bear out this assumption. The Cottonwood Triangular point, given its close stratigraphic, as well as ethnographic, associations with the Desert Side-notched type, could be an unnotched version of the latter, but is, in all likelihood, a separate type, bearing, however, the same temporal, but slightly different, spatial associations.

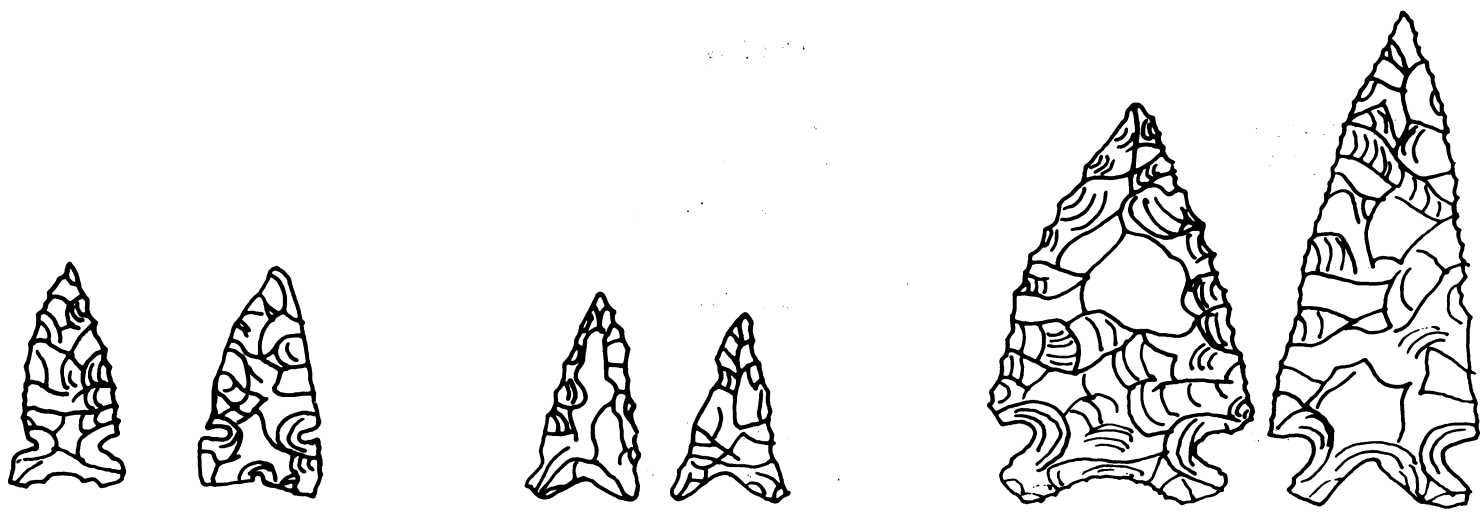
As a separate check on the cultural implications of both the established time markers and the point groups which I have proposed as subtypes, I weighed and determined the average weight of twenty-five points of each type as a random check. The results are included in Table 1. Weight is a factor known to be of functional and temporal significance in points (Fenenga 1953). The points listed in Table 1 show a tendency to weigh less through time; this would seem to uphold the sequential validity of the subtypes and time markers discussed in this paper.

In closing, it may be noted that if a point typology, such as the one discussed above, carries both temporal and cultural implications, as opposed to merely descriptive ones, then some obvious advantages are available to the culture historian merely in his noting the presence or absence of given types at specific sites. For example, in two surface sites from the lower Humboldt Valley (NV-Pe-5 and NV-Pe-67), a neat "horizontal" stratigraphy of point types relates not only to time factors but also to the changeover from atlatl to bow and arrow. Another example from Table 1 is the settling once and for all of the problem of whether or not Lovelock Cave was occupied in late proto-historic and early historic times (Grosscup 1960:60, 65-66). In the summer of 1965, a University of California field party screened the talus pile left by guano miners as they stripped the top layers of the deposit out of Lovelock Cave during 1911-12. In the screening process, four Cottonwood Triangular and four Desert Side-notched points were recovered from the talus spoils. These points, given their established position in a sequential Great Basin typology—and assuming them to be from the uppermost layers of deposit in the cave—allow the conclusion that Lovelock Cave was probably used as a habitation site at least as late as 1300 A.D.

Explanation of Figure 1

Examples of Eight Projectile Point Types (actual size)
[Accession numbers are those of the Lowie Museum of Anthropology]

a,b. Desert Side-notched projectile points, Nos. 1-65133, 1-65112
c,d. Cottonwood Triangular projectile points, Nos. 1-65301, 1-65800
e,f. Elko Eared projectile points, Nos. 1-65632, 1-65620
g,h. Eastgate Expanding Stem projectile points, Nos. 1-65482, 1-19038
i,j. Rose Spring Corner-notched projectile points, Nos. 1-65606, 1-65593
k,m. Elko Corner-notched projectile points, field catalogue Nos. S-28, S-27
n,o. Pinto Sloping Shoulder projectile points, Nos. 1-65358, 1-65636
p-r. Humboldt Concave Base A projectile points, Nos. 1-65076, 1-65041, 1-65364



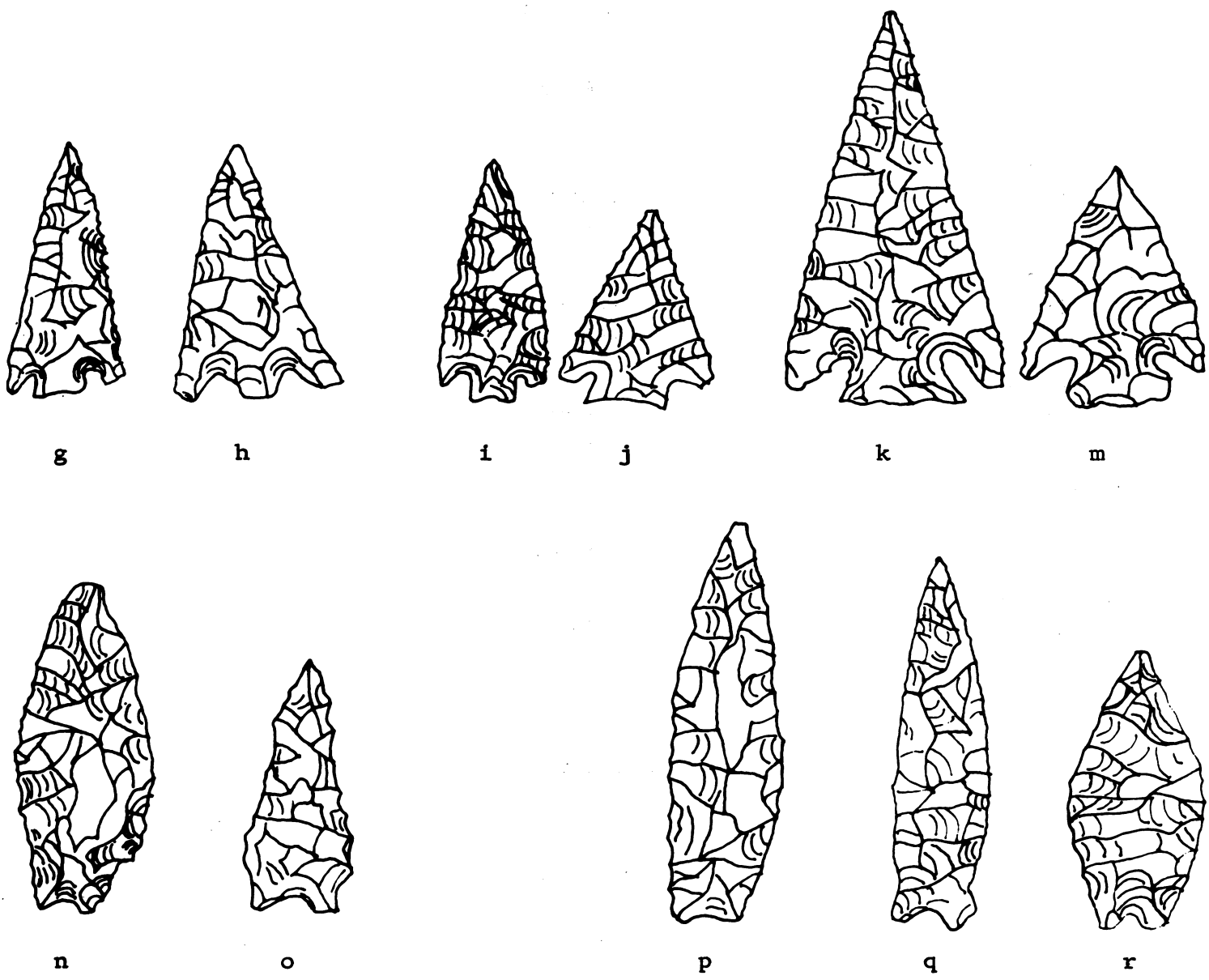


Figure 1

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