Site Abandonment and the Archaeological Record: An Empirical Case for Anticipated Return

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ABSTRACT

Cultural formation processes of abandonment are examined in light of recently discovered hammerstone caches at an aboriginal novaculite quarry site. De facto refuse formation is shown to vary according to the conditions under which site abandonment took place.

Hammerstones are related systematically to the activities of lithic raw material extraction, refinement and tool manufacture. Though these tools are also well suited for other activities such as driving stakes or pulverizing plant materials, their primary function was associated with stone working. When activities directed toward procuring and working stone are terminated, the hammerstones and other tools involved in these activities might be treated in a number of ways. The tools might be discarded in the area where they were used, such as in a quarry pit, and thus become "primary refuse" (Schiffer, 1972). They may be carried away from the activity area and discarded along with other items and become "secondary refuse" (Schiffer, 1972). The items may be stored or they may be transported for use in another area.

Many of the hammerstones found at the quarry site seem likely to have been deposited via "normal processes" of discard (Schiffer, 1975). Under these conditions, the hammerstones were committed to the archeological record because they were either worn out or broken, or for some other reason the replacement of these items at a later time was easier than salvaging and transporting them for use in another area.

The groups of hammerstones, however, do not appear to have been deposited by discard processes. All of the hammerstones in each group are whole, not fragmentary, and thus still usable for stone working activities. Also, the hammerstones are arranged in an orderly grouping as opposed to being randomly strewn about an activity area.

An obvious interpretation of this phenomenon is that the artifacts were arranged in such a manner for storage. Storage of course is a common activity, but surprisingly one whose transformational properties have not been examined in great detail. The following discussion seeks to identify the variable conditions under which items are stored and subsequently abandoned at a resource extraction site and also the formal properties of these items in archeological context.

The technological success of any society is based in part upon its ability to maintain supplies of necessary resources. Thus, periodically, known resource locations are frequented to obtain needed materials. It is very likely that an extensive resource deposit of suitable quality is revisited again and again as raw material needs become apparent. Though considerable time may elapse between visits, return to the resource location is expected as raw material supplies on hand become depleted.

In the case of a resource extraction site, abandonment will occur once a desired quantity of a particular resource has been acquired. Whether certain items in use during procurement activities are transported to another site or are abandoned with the activity area depends upon several factors.
For example, the relative difficulty of transporting an item will determine its treatment during abandonment (Schiffer, 1972). Though technological development largely determines transport capability, the rate at which an item is transported from an activity area is expected to vary inversely with the item's gross size. Thus, the probability that an item will be abandoned with an activity area increases proportionately with the difficulty of its transport. Also, it should be obvious that the difficulty of transporting tools away from their area of use varies directly and proportionately with the quantity of extracted materials that must be transported from the resource location.

If the subsequent use of a tool related to resource extraction activities is not anticipated at the area of relocation, it is likely that the item will be abandoned within the resource area. In essence, then, tools which are activity-specific are likely to be abandoned in their area of use. Because hammerstones are associated primarily with stone working activities, the rate at which these items were abandoned is proportionately greater than the rate at which they were transported.

This brief discussion has outlined several conditions under which items are abandoned with an activity area, but there is still the matter of the items' treatment prior to abandonment. Several reasons for item discard have been pointed out, but the reasons for the storage of certain items need to be discussed.

Obviously there is no need to store something which is not intended for further use. Initially, then, it seems reasonable to suggest that an item will be placed in storage only when return to an activity area is anticipated. Even if return is anticipated, however, there are still more basic conditioning factors which influence the storage of certain items. The most important of these appear to be protection and ease of relocation.

If, for example, a common quarry area was revisited intermittently by several social groups, specialists within any particular group upon termination of procurement activities might store their quarry tools inconspicuously to avoid their loss through pilfering. This might be true especially if one or more hammerstones were found to be particularly well suited for certain activities. Storage for protection might also occur if a particular type of hammerstone was difficult to obtain.

A second type of protective storage might relate to the upkeep of an item. Some tools, if left unprotected, might deteriorate and become unserviceable for later use. The storage of hammerstones perhaps was intended for their protection against the elements. Also, if these items were buried purposefully, ground moisture absorption may have rendered tools better suited for certain activities.

Finally, the storage of certain items may be intended to facilitate their rediscovery at a later time. In the context of an extraction site, if scavenging by other groups is no concern, a group of tools may be stored inconspicuously within the activity area to assure their relocation upon return.

The formal properties of stored items in archeological context are expected to be different from those of other items committed to the archeological record by processes other than abandonment. Even within the domain of abandonment processes, stored items which subsequently are abandoned should exhibit attributes that are distinctive from those of other items which are abandoned.

"De facto refuse" has been defined as the primary refuse type which is transformed to the archeological record during the abandonment of an activity area (Schiffer, 1972). Specifically, de facto refuse "consists of the tools, facilities and other cultural materials which, though still usable, are abandoned" when an area is deserted (Schiffer, 1975).

It is very clear that under variable conditions, abandonment processes may yield vastly different arrangements of "still usable" items to the archeological record. On the basis of a recent study (Ascher, 1968), Schiffer offers a general hypothesis in this regard which suggests that "differential abandonment of a site changes the...normal spatial distribution of elements" in their cultural systemic context (Schiffer, 1972, p. 160). Thus, though abandonment causation may be somewhat difficult to explain, the character of an abandonment process may be suggested by the character and arrangement of various types of de facto refuse.

The foregoing discussions of resource area desertion and stored de facto refuse should serve to help one distinguish between permanent and temporary processes of abandonment. The conceptual distinction of these processes is facilitated by use of the following hypothesis: the orderly arrangement of de facto refuse proximal to an identified activity area reflects the anticipated return to the area; conversely, the random arrangement of de facto refuse may suggest more permanent abandonment.

The identification of the correct abandonment process is crucial to making a sound interpretation of the conditions under which de facto refuse was produced. This identification is especially important in lithic resource studies where the significance of a particular resource is in question. For example, quarry sites with large amounts of stored de facto refuse are likely to have been more important than quarry sites with little or no de facto refuse. Obviously, the areal extent of a quarry site would be an additional clue in this regard.

The study of cultural formation processes in archaeological has, unfortunately, a relatively short history. However, the identification and understanding of these processes is extremely important if archeologists are to make sound interpretations of past human behavior. In this paper, an attempt was made to understand some of the processes by which a part of the archeological record is formed through abandonment. Though many of the principles discussed warrant further testing, the data presented should be useful for broader comparative studies of abandonment processes.

LITERATURE CITED


