

Recycling

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Figure 1 depicts a late archaic side notch projectile that was recycled from a Folsom preform. I use the term “recycled” instead of “curated” because there was no intent by the Folsom knapper to save this preform for the Archaic knapper or anyone else. It was of no value to the Folsom knapper and he had tossed it. This is different from curated where there is intent to save an artifact for future use by oneself or other members of one’s group. In this paper I define recycling as the convenient return of an abandoned artifact to service.¹

In the archaeological record, recycling and curating are very difficult to separate. For example, if one abandons an artifact on one day and chooses to recycle it the next, how is the archaeologist going to recognize the difference? Only when a vast amount of time elapses between the abandonment and recycling events is it possible to state with certainty that recycling has occurred. One way to know that considerable time has passed is diagnostically, or being able to identify the technological efforts of two different groups that are hundreds of years apart in time. This is the method employed with Figure 1. Folsom and Late Archaic are thousands of years apart. Unfortunately, diagnostically identified recycling is extremely rare. In the Baker Collection this type of recycling represents about 1 out of every 650, or 0.15% of the cataloged artifacts.²

The presence of visually different flake surfaces is another way to identify recycling. Figure 2 depicts an archaeological biface fragment with two different surfaces; the more recent marked with the red line. They are easy to see without the aid of expensive equipment. In addition, different surfaces can occur on all artifacts, diagnostic and non-diagnostic, so this type of recycling is more frequent in the archaeological record. Recycling identified by different surfaces is the focus of this paper.



Figure 1

Note 1—I considered using intentional and unintentional recycling instead of curate and recycle because of the vague and various definitions associated with curate. However, to ease readability I chose the second. In this paper curate means use—save—use. Recycle means use--discard--use.

Note 2--Cataloged artifacts have an artifact number and are in a database. They represent all artifacts that are more than flakes. A flake with use-wear or retouch is an artifact.



Figure 2

It Takes Time

Cortex is the unmodified outer surface of a rock, similar to the rind on an orange. Break a rock and compare the cortex to the newly created inner surface. The two surfaces are visually different. See Figure 3. Break the rock a second time and compare the surface of the second break to the surface of the first break. Are they different? Of course they're not. So, why is the outer surface different from the two, newly created inner surfaces? The answer is the outer surface has experienced chemical alteration and/or mechanical abrasion. So, why are the two inner surfaces not different from each other? Again, the obvious answer is there was not enough time between the creation of the first and the second inner surfaces for the agents of chemical and mechanical to affect a visual change in the two. The basic assumption of this paper is that it takes time for the chemical and/or mechanical agents to affect changes to the surfaces of the rock. In this case, time is not measured in days or years, but in hundreds of years and more likely thousands of years. I suspect the time difference between the cortex surface and the new surfaces in Figure 2 is millions of years.

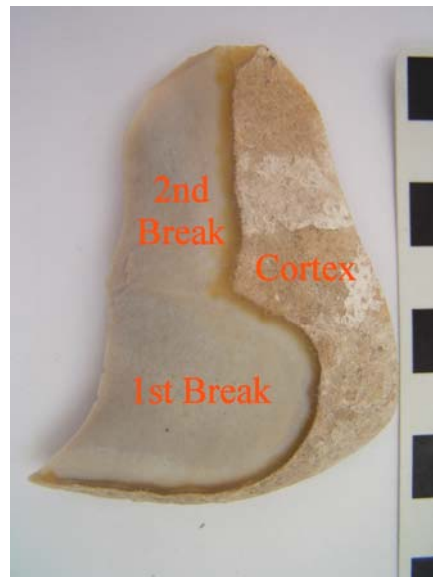


Figure 3

Returning to artifacts from the archaeological record, if a modern chip is removed from an old artifact, there is often a visual difference between the new and old surfaces. Figure 4 is a base of a Belen projectile (maybe 10,000 BP) made of opaque obsidian. After it was collected, it was inadvertently dropped and suffered damage from impact. The red lines mark the newly created surfaces that occurred as a result of being dropped. If the projectile had been made by a modern knapper, then there would be no difference in surfaces. The differences in Figure 4 are the result of 10,000 years of chemical and mechanical alteration.



Figure 4

Modern knappers are aware of this “old look” that is visible in Figure 4. A few, who want to pass their creations off as authentic, will purposely tumble them in an abrasive environment to create the “old look.” This method reduces the time required to create an older looking surface from thousands of years to hours or days. But even this takes time. Again, the basic assumption of this paper is that it takes time for chemical and/or mechanical agents to visually alter a newly created surface.

