

FLINTKNAPPING SCHOOL - JULY 1969
SHOSHONE FALLS, IDAHO

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I first became interested in flintknapping because of an interest in lithic technology. As my doctoral thesis is going to be an analysis of technological change, within a single geographic region, I thought that a manual understanding of the mechanics of working stone would be of great value to me.

From my month of study with Don Crabtree, I gained the rudiments of this manual understanding, plus a great deal more. I had not previously realized how visible is the difference between percussion and pressure, and between hard and soft hammers in percussion. Another factor which needs to be taken into account is the suitability of a certain kind of hammerstone for a certain kind of raw material. That is, for obsidian one needs a light hammerstone of some material such as sandstone, whereas for British flint a much heavier hammerstone is required. This is because a heavy hammer will crush obsidian and a light one will make no impression on flint.

Another feature of interest coming out of the course concerns the amount of thought and calculation which goes into the creation of an artifact, be it a crude hand axe or a Folsom projectile point. Before doing much chipping one tends to consider it a hit or miss proposition in which you swing the hammerstone until something comes off. On the contrary, it turns out that each blow struck should be the result of careful deliberation, of consideration of the nature and direction of the material to be removed and of evaluation of the balance between inward and downward force necessary to take off enough but not too much material. Learning all this requires some understanding of the nature of cones of force and of the effects of weight, velocity and force upon the shape and duration of any cone. After a while parts of these calculations become fairly automatic, but the more one understands about the cone, the better one can chip flint. Another factor which one comes to understand much better is the difference between raw materials. With some materials, a crudely made point is a major achievement; with others, an excellent point is not very difficult to make.

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Heat treatment, its uses and results, was also treated during the course of the month. Heat treatment can make a hard recalcitrant stone possible to work; a problem which I intend to pursue is whether it can make a soft stone take a sharper edge.

All of the understanding of stone gained through using it can then be applied to the analysis of archaeological collections. With the understanding of how stone works, one is much less likely to make bizarre functional deductions about one's tools.

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