

THE BROTHERHOOD OF THE HAMMER

HAMMER THROWING

By Jim Underwood

Blacksmith and woodworker as well as a stonemason, Jim Underwood was fascinated by the kinetic act of hammering and did not need much encouragement from me to begin work on an article about it. But not long after producing the first draft Jim took sick and, last winter, he died. Jim was, if not one of the Stone Foundation's founding fathers, one of its nurturing uncles. He was a good man and will be missed.

Publishing his unfinished (and unedited) draft seems good way to honor him. In this work in progress, his presence is palpable.

Jim intended to solicit comments from artisans of various persuasions, though he only got around to asking Ken Follet and myself. Our comments are included here as postscripts and I am asking a few other practiced hammerers to add some of their reflections on this elemental act so integral to our craft. If you also have thoughts on the subject, please do share them with us.

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THROWING IS PRIMAL,

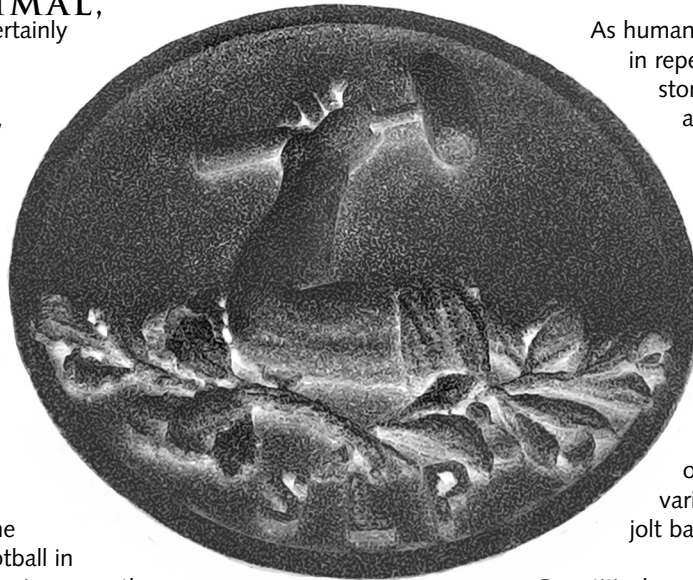
probably predating language and certainly tool-making as the brain evolved. Hammering is just another form of throwing. When you throw a stone, all your control has to be concentrated in a fraction of a second of muscle sequencing; usually you know in that instant whether the throw will be a "sweet" one or not. It's the same with hammering – once the momentum of the hammer is established, there is little (though some) subsequent control possible, and you know when the swing is sweet.

I suspect in all of this a theory on the attraction of baseball and (USA) football in modern society - those great at throwing were the evolutionary genetic heroes.

There has always been primal magic in the old blacksmith's art of bringing iron ore through a smelter to the forge and then to tools. I now suspect that there is primal response in the visual act and the sound of hammering as well, whether by the black or stone smith. Response in both the hammerer and the observer.

In the practice of their trades stone smiths and blacksmiths alike combine hammering (very lateral left brain, motor sequencing) with spatial relationship sensibility (very lateral right brain, artistic). From elemental materials we create useful and beautiful things.

There is a rhythm in hammering that can be harmonic to the body and the ear, or disharmonic to both. Stonemasons know this, and blacksmiths, carpenters and tinsmiths – even shoemakers. There is a brotherhood of the hammer, who have learned to work the arm all day and still hoist a pint in the evening. We could define an apprentice as one who hammers all day and uses the *other* arm to hoist the pint.



As humans evolved we did not often engage in repetitive motions such as blacksmiths, stonemasons and many sports enthusiasts do today. The human arm seems to have evolved to throw things and accomplish tasks in coordination with the eye through certain well-wired pathways in our body and brain. Our aim can become very accurate, whether we are throwing rocks at game or using a throw-stick or a bow to launch spears or arrows. The advantage to the arm of this kind of throwing is that there is irregular, varied motion and little if any stressful jolt back through arm tissues.

Repetitively swinging a hammer at wood, steel or rock, or swinging a tennis racket, are very recent events. Swinging an object to strike another object brings a jolt to the arm on impact that throwing does not. Tying that rock (later, iron or steel) to a handle in order to magnify the swing transmits and magnifies the jolt-stress to the tissues of the arm system. Technological evolution, our braininess, has gotten well beyond the evolution of our physiology in many ways.

But body and brain do learn to cope. The tool becomes an extension of the arm and hand, part of the body as full body/mind integrity develops – conscious at first, then unconscious, instinctive; the same as it is with musicians - body, mind and tool working in balanced harmony. And there is music to hammer sound. An individual cathedral stone-carver can be identified by the rhythm of his hammer taps. It has been recorded that in African smithies a bellows boy develops a unique sound known all over the village, and that the smith can harmonize by his hammering.

Think of shaping rock at your banker, as Tomas mentions below, a sea of stone chips at your feet, each representing a hammer blow,