“Doing” Craft

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Technology educators have distanced themselves from industrial arts practitioners with fashionable messages that deny the usefulness of a handicrafts-based curriculum in today's push for technological literacy. At this time in the evolution of the field, it may be useful to briefly discuss the assumptions that once fashioned an alliance between industrial education and handicraft labor. Students might derive a greater understanding of the importance of this connection in project assignments which use the handtools of our artisan heritage, a pedagogical process called “doing” craft.

The idea of “doing” craft may simply suggest that execution is more important than expression. For example, Clyde Jones, a North Carolinian folk artist, litters his front lawn with assorted animals he creates from logs. This yard artist, unschooled in the practices of fine woodworking, uses a chainsaw to shape the figures he crafts. Jones, like others who engage in whittling, for instance, view the outcome of their work as subordinate to the immediate pleasures they gain from creation (Condon, 1990). It is not just therapy to forget your pending economic or social difficulties, and seek emotional release in the manipulation of tools and materials. Rather, craftsmanship offers a unification of art and labor. Lewis Mumford (1952) eloquently describes the aesthetic process in handicrafts when he writes:

> He [craftsman] took his own time about his work, he obeyed the rhythms of his own body, resting when he was tired, reflecting and planning as he went along, lingering over the parts that interested him most, so that, though his work proceeded slowly, the time that he spent on it was truly life time. The craftsman, like the artist, lived in his work, for his work, by his work; and the effect of art was merely to heighten and intensify these natural organic processes—not to serve as mere compensation or escape (p. 62).

Craft labor, therefore, is an art form relying upon the intuitive and tactile senses, or personal knowledge, as Michael Polanyi (1958) has noted, of its practitioners. The craft labor of the family of instrument makers in Cremona, Italy, for example, contributed to shop fabrication practices that are unknown today because machine-designed replication of Stradivarius's violins and the chemical analysis of his varnishes fail to uncover the mysteries of this master

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instrument maker. The highest level of artistic development among skilled crafts workers is connoisseurship, Polyani has suggested, and connoisseurship does not require scientific prescription (or technological innovation) in order for practitioners to successfully engage in their work. “Rules of art can be useful,” Polanyi (1958) has written, “but they do not determine the practice of an art; they are maxims, which can serve as a guide to an art only if they can be integrated into the practical knowledge of the art” (p. 50).

The work processes of medieval master masons are a case in point. With limited geometric knowledge to guide them, skilled masons with just hammer and chisel were able to hew stones to exacting proportions (as well as design intricate stone tracery). How did they do it? Unschooled in Euclidean principles and stereotomic computations, the cathedral builders had a series of primitive construction aids to help them: steel square, wooden template, and string lines. Still, gothic construction was quite detailed, and these remarkably talented men, unable to understand the underlying mathematical principles of vault construction, nevertheless managed to erect their memorials to God (Shelby, 1972).

Artisans in general may follow some scientific rules but more often rely upon their personal knowledge to ensure accuracy in “doing” craft. The ability to “hear” one's trade, for instance, helps a carpenter gauge when nails are driven tightly into wood. A plasterer's trowel “chatters” when the material is workable to a smooth surface. The wheelwright listens for a sound when applying hot iron to the cold wheel: a “pop” says that the cooled tire has contracted firmly onto the wooden rim and the spokes have drawn up tightly in their felloes. There are no rules of science here; craft knowledge is developed from long-standing practices — the folk tradition. “Reasoned science for us did not exist” (p. 19), wrote George Sturt in The Wheelwright's Shop (1923), an autobiography of his craft business in rural England. He continues:

> A good wheelwright knew by art but not by reasoning the proportion to keep between spokes and felloes; and so too a good smith knew how tight a two-and-a-half inch tyre should be made for a five-foot wheel and how tight for a four-foot, and so on. He felt it, in his bones. It was a perception with him. But there was no science in it; no reasoning. Every detail stood by itself, and had to be learnt either by trial and error or by tradition (p. 20).

Still, the time came when Sturt began to realize that modern production methods were cheaper and, for economical reasons, would displace traditional methods of workmanship in his shop. Machine-manufactured spokes, for instance, were readily available; hence, Sturt purchased them for his shop instead of having his men hand-hew spokes from aged hardwood stock. And the installation of gas-driven woodworking machinery in 1889 was, for him, a much needed measure of cost efficiency. Yet Sturt knew that he too was responsible for ushering out the age of craft:

> And from the first day the machines began running, the use of axes and adzes disappeared from the well-known place, the saws and saw-pit became obsolete. We forgot what chips were like. There, in that one little spot, the ancient provincial life of England was put into a back seat (p. 201).

What can technology educators gain from presenting their students with "doing" craft? Because craft labor is rooted in the work culture of artisanship, the mutuality of shop labor, and the social organization of work (apprentice-journeyman-master relationships), the technology education laboratory gives students an opportunity to develop reciprocal exchanges of knowledge, allied decision making, and voluntary organization of tasks and duties. Practical application should be accompanied by readings in labor history, labor laws, collective bargaining, labor-management relations, labor union activities and membership, the union label, occupational safety, industrial democracy—all are based upon collective histories of tradesworkers negotiations on the shop floor. Students may need to be reminded that the practice of job seniority, for instance, was established through craft tradition: the most valued jobs went to the journeymen who were employed in the master's workshop; apprentices were expected to run errands, deliver goods, and perform custodial duties for as long as one year into their indentures before they would ever be allowed to use a handtool.

Technology education students may benefit from "doing" craft because the activity itself may stimulate a political philosophy of labor alliance and industrial protest. By virtue of its handicraft basis, students engaged in craft labor may begin to acknowledge the debilitating effects of machine technology, and seek solutions to the degradation of industrial work on the shop floor. Craft labor may be an "aesthetic - in - opposition," a term that Peter Dormer (1988) used to distinguish handicraft production from industrial technology. For example, the lining of a nuclear reactor and a reed basket are both beautiful, he suggests, but the reactor's beauty "is chilling" because it "tampers with nature," whereas the basket is organic, "in harmony with nature" (p. 135). Yet handicraft production also reinforces personal relationships between crafts workers and customers, and distinguishes itself from the impersonality of mass consumption of factory-manufactured goods: "With a single piece of furniture made by a man or a woman in a craft studio in Pennsylvania, there was the suggestion of a personal relationship between maker and user, but with a car mass-produced in Detroit there was not" (Dormer, 1988, p. 139).

Technology education students may develop a craft ethic that places greater emphasis upon the importance of customer relations in today's service economy. This ethic, derivative of the master's social relations with his purchasing public, once set a high priority upon skillful execution of the work, dignity of labor, honesty of techniques, and integrity in choice of materials to be used. Perhaps "doing" craft will help students reclaim the artisan legacy: personal service and quality workmanship go hand-in-hand.

References

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