

sore but marginally strengthened muscles, some excess exhalation of carbon dioxide, perspiration, and a product that becomes part of the humanly shaped world. So, is the nail entering the board necessarily the most important feature of the activity called “hammering”? Hammers, like all technologies, are polypotent in their social functions, effects, and meanings.

Today’s accepted view of technology takes a step toward acknowledging polypotency by speaking of technologies’ unintended or secondary consequences. However, the term “polypotency” is helpful in not presuming that one knows automatically which of a technology’s many functions or meanings are the most important or even which are intended. Many social historians of technology have, for example, argued that a latent but intended function of some innovations in manufacturing technology has been to substitute low-paid unskilled workers for higher-paid skilled workers, discipline the remaining workforce, and weaken unions.

It is furthermore useful to introduce the term “focal function” to refer to a technology’s (ostensibly) intended purpose. “Nonfocal” then denotes its accompanying complex of additional—but often recessive—functions, effects, and meanings. Thus, nineteenth-century New England schoolhouses’ focal function was to provide a space for educational instruction, whereas one of their nonfocal functions was to help generate—in part via the symbolism of churchlike architectures—a relatively docile workforce.

Occasionally technologies function as social structures precisely by virtue of their focal purpose. For instance, weapons function coercively because they are designed to do just that. But more often and more subtly, it is technologies’ latent polypotency that accounts for their structural performance. This is illustrated by many previous examples, ranging from sofa cushions (which help to latently reproduce our culture’s sense of privacy) to computer toys (which unexpectedly alter children’s psychological development). Even technologies focally designed to function structurally are apt to structure nonfocally as well.

For instance, nuclear weapons are designed focally to coerce, deter, or destroy other societies, but they contribute nonfocally to legitimating authoritarian government institutions within the societies that possess them. Marshall McLuhan popularized this truth as it applies specifically to technologies focally designated as communications devices: “The medium *is* the message.” In other words, the technical means of focally delivering a message can, owing to polypotency, matter more than the message itself.

Moreover, often groups of focally unrelated technologies interact latently to produce a structural effect that no one of them could accomplish alone. Distinct sofa cushions would not help establish cultural norms of privacy and individualism were they not part of a complex of artifacts and ritual behavior that contribute jointly toward that same result. (Other artifacts in the complex with sofa cushions include individual eating utensils, private bedrooms, telephone receivers designed to accommodate one person at a time, and so forth.) In short, to achieve social insight and efficacy, it is essential to consider all the different artifacts and practices that comprise a society’s technological order.

There are important functional equivalences between technologies and nontechnological social structures (e.g., legal statutes, government agencies, and large corporations). All represent enduring social products that shape subsequent social experience. However, there are also differences, revolving around contrasting levels of social understanding with respect to each.

First, laws and political and economic institutions are contingent social products, and at some level everyone knows this truth. Societies evolve these things through formal political or juridical processes, and it is commonly understood that alternative choices are possible. In contrast, people are prone to misperceive a society’s technologies as inevitable, that is, as naturally determined rather than socially shaped and chosen.

Second, laws and other formally evolved social structures are commonly understood to function as social structures. That is their explicit purpose. Certainly, they can also be implicated in