NOTES TOWARD A PHILOSOPHY OF META-TECHNOLOGY

Carl Mitcham, Pennsylvania State University

Let me first thank Paul Durbin for organizing this symposium and my fellow panelists for participating. I am honored to be in the presence of people who have done so much to contribute to philosophical reflection on technology over the last twenty years.

In my fifteen minutes of fame, I want to make two comments relevant to this retrospective and prospective symposium. The first, more retrospective, concerns the power and impotence of the philosophy of technology. The second, more prospective, is on the emerging presence of what I will call meta-technology.

Both comments presume (as well as criticize and extend) a distinction between engineering and humanities philosophies of technology that was argued at length in my *Thinking through Technology* (1994). Briefly rehearsing this distinction: Engineering philosophy of technology (EPT) takes technological thought and action as the model for all human thought and action and attempts to explain or reformulate all apparently non-technological thought and action in technological terms. Humanities philosophy of technology (HPT), by contrast, argues that technological thought and action are only one aspect or dimension of human thought and action, and seeks to delimit or restrict the technological within a more expansive framework.

1. THE POWER AND IMPOTENCE OF THE PHILOSOPHY OF TECHNOLOGY

As a self-conscious activity the philosophy of technology emerged scarcely 100 years ago among engineers trying to reflect upon and give more general meaning to their work. These engineer philosophers — from Ernst Kapp to Friedrich Dessauer, Simon Moser, Hans Lenk, Günter Ropohl, Mario Bunge, Samuel Florman, Henry Petroski, and others — have succeeded in two tasks.

First, they have gotten engineers to reflect in a general way on their work, and to see technology as something distinct from science, as deserving its own epistemological, metaphysical, ethical, and political analysis.

Second, they have successfully countered the grand humanities criticisms of technology put forth by philosophers such as Lewis Mumford, Martin Heidegger, or Jacques Ellul. In place of such grand humanities criticisms, in the spirit of engineering philosophy of technology, there now exist the numerous piecemeal criticisms of applied philosophy, especially applied ethics.

The power of the philosophy of technology is manifest in the vigorous life that currently exists in such interrelated specializations as biomedical ethics, environmental ethics, engineering ethics, and computer ethics. This twofold achievement is not to be belittled.

At the same time, the power of the philosophy of technology exercised by engineering philosophy and applied ethics exists only on the margins or at the periphery of the modern technological project. From the perspective of the grand critiques of Mumford, Heidegger, and Ellul — that is, the humanities philosophy of technology — the philosophy of technology exhibits a historical impotence.

Modern technology grew out of a philosophical critique of the received philosophical tradition. During a two or three century period from the Renaissance through the Enlightenment, Galileo Galilei, Francis Bacon, René Descartes, and their followers undertook a comprehensive criticism of traditional philosophy, a criticism that contributed to a world historical transformation and the rise of the modern technological way of being in the world.

But beginning in the late eighteenth century, throughout the nineteenth century, and continuing into our own late twentieth century, counter philosophers from Jean-Jacques Rousseau through Karl Marx and Friedrich Nietzsche to phenomenologists and existentialists have subjected the modern tradition to its own withering critique. This critique has, however, had no more than a marginal, not to say a reactionary influence on the modern technological project.

What is one to conclude from this failure, this impotence of humanities philosophy of technology? This is a question which, I would venture to suggest,

has not yet been addressed in any comprehensive manner by the humanities tradition in the philosophy of technology. Instead, like Christians faced with the historical delay of the *parousia*, members of the HPT tradition have simply replied "not yet — but soon."

In reading much critical theory of technology, for instance, I cannot help being reminded of my favorite TV evangelists, the Reverends Jack and Rexella Van Impe. Each week on one of the Christian cable networks Rexella reads the newspapers and then Jack comments. And from the soap opera of the British monarchy to Hubble telescope discoveries, the Reverend Van Impe sees only signs of the imminence of the Second Coming.

By contrast, EPT, not troubled by the impotence of its critique, has been able to interpret the failure of humanities philosophy of technology as a confirmation of its own tradition — a tradition that has begun to merge with a postmodernist celebration of the electro-media culture from movies to television and the World Wide Web.

In the interest of disclosing possible conflicts of interest — and since this symposium is billed as something like "personal reflections on the past and future of the philosophy of technology" — let me venture to admit my personal attraction to both the engineering and the humanities philosophies of technology. I am serious when I say that the applied ethics of technology is no mean achievement — and that it seems to me ultimately marginal. I work with and desire to contribute to the engineering philosophical tradition, at the same time that I continue to entertain fundamental doubts about and criticisms of the modern technological project. This is not so much an attempt to straddle the fence as it is to live the dialectical reality of the present. As Rexella also emphasizes, we can never know the day or the hour, or be completely sure of our prophesies, can we Jack?

Mention of the World Wide Web is, however, occasion to turn to the second of my two points, the emergence of meta-technology.

2. THE EMERGENCE OF META-TECHNOLOGY

With the progressive development of a global electro-media infrastructure and its culture I would venture to suggest that we are entering a new phase of

technology, a phase that I venture to term meta-technology, for which the traditional humanities criticisms are increasingly marginal if not irrelevant. Let me try to say something more about this by means of a broad-brush interpretation of the historical trajectory of the modern project.

The history of the modern project has been characterized in an indefinite number of overlapping ways. It is a matter of the very core character of modernity that those of us who live within its vortex will not be able to agree on any single characterization. As typically modern individualist intellectuals, we want each to say it in our own way.

One way, derived from a conflation of the economic historian Karl Polanyi and the critical theory of Jürgen Habermas, is to place the philosophy of technology in a broad, three-phase historical framework somewhat as follows.

First: Pre-modern technology, what might more properly be called technics, does not require a philosophy of technology. Because pre-modern technics is contextually entangled in the lifeworld, the philosophical reflection on and consideration of technics is appropriately and implicitly present within philosophy more generally speaking.

Second: Modern technology, or technology properly so called, is part of a great decontextualizing process — a process that includes the assertive deconstruction of socio-cultural unity in order to construct the autonomy of what sociologists call the major institutions of society: science, religion, art, etc. This decontextualization is naturally reflected in and calls forth those branches of philosophy known as philosophy of science, philosophy of religion, philosophy of art — and, last but not least, philosophy of technology.

To say the same thing in different words: What Martin Heidegger in *The Question Concerning Technology* (1954) calls "resources" are created as a public perception when, under the assumption of scarcity, the economy is, as economic historian Karl Polanyi describes it, "disembedded" from society. In Polanyi's words,

> before modern times the forms of [human] livelihood attracted much less . . . conscious attention than did most other parts of . . . organized

> existence. In contrast to kinship, magic or etiquette with their powerful [influences], the economy as such remained nameless. . . . Only two hundred years ago did an esoteric sect of French thinkers coin the term and call themselves *économistes*. Their claim was to have discovered the economy (Karl Polanyi, "Aristotle Discovers the Economy," in *Trade and Market in the Early Empires* [Glencoe, IL: Free Press, 1957], p. 71).

According to Polanyi, "The prime reason for the absence of any concept of the economy is the difficulty of identifying the economic process under conditions where it is embedded in non-economic institutions" (*ibid*.). The economy is at once discovered and invented by disembedding it from the broader socio-cultural lifeworld. As Jürgen Habermas has noted about the modern project, such disembedding of the economy has counterpoints in the Enlightenment effort "to develop objective science, universal morality and law, and autonomous art according to their inner logic" (Jürgen Habermas, "Modernity — An Incomplete Project," in Hal Foster, ed., *The Anti-Aesthetic* [Seattle, WA: By Press, 1983], p. 9). Moreover, the disembedding of economy, science, and technology — in each case by methodologically separating an approach to the world from all others with which it might otherwise be linked, thereby turning each approach into an autonomous pursuit — effectively reacts back on the world itself to reduce the world to a series of unlinked disclosures, that is, resources. When an element or function, formerly embedded in some whole, is thereby abstracted from its context, it readily becomes, in its new freedom from all contextual entanglements, simply a resource and open to instrumental manipulation.

But it is the paradox of instrumentality as such — as that which is given to be used independent of any user — that calls forth the attempt to perform the philosophical constitution — indeed, the philosophical self-constitution — of a user. I take it that one way of describing the trajectory of modernity is as a pinball bouncing off the flippers of an empty instrumentality, with a corresponding emptiness in the self. The moderate but so-far-doomed effort to incorporate instrumentality into the self through the tactics, for instance, of aestheticism or applied ethics, may be no more than attempts to create temporary holding patterns in the vortex of a world-transforming plunge.

But, third: We are in the midst of a virtual re-contextualization or re-

embedding that, although it is in no way a return to the premodern contextualization or interlinking of science, religion, art, etc. is nevertheless a stepping beyond the specific autonomies of modernity. As one aspect of this phenomenon one can note that modern technology no longer exists as such — or at least is more and more ceasing to exist. Technology proper has been or is in the process of being supplanted by a post-technology, a hyper-technology, or what (following Ernesto Mayz Vallenilla) I prefer to call a meta-technology. Under such historical conditions the philosophy of technology can be seen as an epoch-specific event that is coming to an end, that is petering out in a kind of exhaustion or displacement. If this is true, then the philosophy of technology may well be in the process of being replaced — not with a philosophy of meta-technology but by philosophy in a general sense that re-incorporates into itself reflection on the meta-technical condition of the postmodern techno-lifeworld.

Today we live in a new interrelating or interconnecting of the realms. Increasingly it is recognized that science depends on technology as much as technology has been reputed to depend on science. Economics implicates politics and vice versa, politics implicates religion and vice versa, art even implicates economics and vice versa. It is not so much that the autonomous spheres are being re-embedded into a common culture as that they are being linked, networked, interconnected in ways that nevertheless echo or mimic traditional culture. What is being created is what might be called a virtual common culture in large part through technology, the most visible instance of which is currently the World Wide Web. It is this which, for want of a better word, I refer to as a meta-technology.

3. CONCLUSION

Consider, by way of conclusion — and as a means of linking my two points — Lorenzo Simpson's recent and insightful book, *Technology, Time, and the Conversations of Modernity* (1995). Simpson's book pivots on a distinction between meaning and value. An action is meaningful if it fits into or repeats some life pattern. An action has value when it is an efficient means to some end value. To adapt one of Simpson's examples: to help a neighbor paint a house can actualize "a background cultural commitment to communalism" (p. 45). The meaning of helping the neighbor is in "enacting, sustaining, extending, reinforcing and reaffirming communal notions of solidarity" (p. 188, note 6). By contrast,

the *value* of this action is simply getting the house painted.

Technology is an attempt to develop means for the ever more effective realization of end values. To extend this example, imagine the development of a house-painting technology that just drops a large paint bomb from a helicopter. Maybe it's a smart cluster-bomb that divides up the house surface and spray paints it in seconds with thousands of tiny wire guided spray cans. Although the end-result value of this 60-second technological miracle process by paint-bomb engineers and helicopter pilot would be the same as a week-long paint-and-brush cooperation among neighbors, its meaning would be quite different. If the two technological alternatives of paint bomb versus paint-and-brush cooperation are evaluated simply on the basis of the values they achieve, there is no difference. That is, there is no meaningful difference or difference in meaning, because meaning is excluded. Assuming rough dollar price equivalent, the paint bomb will be chosen because it's quicker, takes the least amount of time.

Indeed, these two approaches to house painting — the meaning perspective and the means-end or values perspective — have different implications for the experience of time. When the focus is on the meaning of the house painting, the fact that the painting takes a week is not necessarily experienced as a negative factor, because during the whole time the participants are actualizing the meaning of cooperation. Indeed, the length of time may even be a positive factor in deepening communal feelings and commitments among the neighbors. But from the means-end values perspective, this week is just a waste of time. Let's get this project over with by paint bombing the house!

Simpson's thesis is that "[T]he growing hegemony of the temporality of making (*techne*), at the expense of temporalities of doing (*praxis*), stands as a threat to the continued presence of meaningful differences in our lives and to there being meaning in a life as a whole" (p. 63). This is the classic humanities philosophy of technology critique of the modern technological project. Simpson argues that technological action and its coordinate experience of time constitute only one aspect or dimension of human action and human temporality, and he seeks to delimit or restrict the *tempus technologicus* within a more expansive *tempus humanus*.

But when Simpson argues that modern technology is devoid of meaning, it seems to me he is overlooking the phenomenon of the delight people take in

engaging with technology for its own sake, never mind the end value that may result. This is most vividly presented to us in the attractiveness of the Internet and its graphic utility, the World Wide Web. People readily spend hours and hours glued to this interface — hours that lead to no significant increase in marginal utility production, and which in fact in many instances probably decrease utility. Value is not enhanced by spending time on the World Wide Web, but meaning is. This is the wave of the future.

Gary Wolf, channeling the late Marshall McLuhan through the Internet in the January 1996 issue of *Wired* magazine, asks, "Do you still believe that the medium is the message?" McLuhan replies,

> The real message [or "meaning"] of media today is *ubiquity*. It is no longer something we do, but something we are part of.

The last twenty years in the philosophy of technology has been an attempt to think technology as something we do. The next twenty years must be an attempt to think meta-technology as something we are part of.