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Paul Ricoeur and the Philosophy of Technology

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Paul Ricoeur is widely regarded as among the most important philosophers of the 20th century. He is a prolific author of 30 books and over 500 articles that contribute to most of the major philosophical movements from the 1940s to the present, including existentialism, phenomenology, hermeneutics, philosophy of language, narrative theory, philosophy of religion, and moral and political philosophy. It is, therefore, surprising that he has so little to say about the philosophy of technology given the popularity of the subject among phenomenologists and Marxists in the 1960s. On the few occasions when Ricoeur did discuss technology, he generally agreed with Heidegger, Marcuse, and Habermas, each of whom contrasts the dehumanizing characteristics of technology and technological reasoning with more humane forms of experience and action. Ricoeur incorporated the views of these philosophers without adding much new to the study of technology. In the 1980s when a new generation of philosophers turned their attention to the empirical dimensions of technology, Ricoeur had even less to say on the subject. He either ignored the recent developments entirely or he continued to address the subject using older, dated, frameworks from the Sixties. This is unfortunate because Ricoeur's works would be enhanced if he read in the philosophy of technology just as much as the philosophy of technology would benefit if Ricoeur were to join in the conversation.

The Philosophy of Paul Ricoeur

There are five aspects in Ricoeur's work that are relevant to the philosophy of technology: hermeneutic philosophy, post-Hegelian-Kantian methodology, narrative theory, philosophy of the self, and a moral-political philosophy.

First is "hermeneutics," a term Ricoeur has used to describe the kind philosophy he has practiced since about 1960, beginning with the publication of the *Symbolism of Evil*.[1] Hermeneutics for Ricoeur is the interpretation of signs, symbols, and texts that relate us to the world and impose an indirect or interpretive approach to knowledge. What distinguishes hermeneutics from phenomenology is the rejection of any claim to immediate, intuitive knowledge of the world grounded in subjective self-certainty. Interpretation is always limited, prejudiced, linguistic, and contextual. Ricoeur's version of hermeneutics is geared toward the interpretation of human works and other symbolically-mediated endeavors. As opposed to the "short-route" taken by Heidegger from hermeneutics to ontology, Ricoeur posits that hermeneutics must take a "long route" or a "detour" through language before it reaches its destination. The idea of a detour as a hermeneutical technique for reading signs of experience through something else is one of Ricoeur's favorite metaphors which reappears throughout his career. Ricoeur once said that the "detour/return is the rhythm of my philosophical respiration."[2]

By the 1970s, Ricoeur replaced signs and symbols with the text as the model for the linguistic mediation of experience. Unlike spoken language, where meaning is more clearly related to the speaker, the listener, and the dialogical situation, written language has a meaning independent of the author, original audience, and original situation. Understanding the meaning of writing is a more explicitly interpretive act. The hermeneutics of texts also applies to actions because like texts, actions are also readable, with meanings that are distanced from the intentions of the actors, and subject to conflicting interpretations. In the same way that a text becomes detached from its author, an action is detached from its agent and may take on unintended meanings of its own. Ricoeur believes that if human action can be read and interpreted like written works then the methods and practices of textual interpretation can function as a paradigm for the interpretation of action for the social sciences. Texts and actions have underlying structures to be explained as well as social meanings to be understood.[3]

The second aspect, closely related to the first, is Ricoeur's unique method of philosophical mediation, what he calls a "post-Hegelian Kantian" philosophy. A post-Hegelian Kantian accepts Hegel's critiques of Kant, yet, like Kant, refuses to reconcile the dualism that haunts our understanding of self, nature, and God. A post-Hegelian Kantian recognizes the importance of the concept of totality but not to the point where social, political, and religious integration become the conditions for rational reflection. Ricoeur believes it is important to limit the scope of reflection for the sake of critique. He attempts to preserve universal rationality and particular, historic, and temporal contingency. This means contrasting philosophical positions in such a way that highlights and preserves differences, resists the temptation to synthesize a new unity, and yet carefully suggests ways that opposites could be seen as related. Ricoeur's "third way" between Kant and Hegel recognizes the *aporetic* quality of human experience and respects the plurality of voices and conflicting interpretations, while at the same time affirming the ability of philosophy to find reason.[4]

The third aspect of Ricoeur's works is a narrative theory. Ricoeur's thesis in *Time and Narrative* is that a (hermeneutic) circle exists between human experience and narration: experience has a pre-narrative quality that is meaningfully and coherently organized into a story by means of a plot.[5] Time becomes human time to the extent that it is organized after the manner of a narrative; narrative, in turn, is meaningful to the extent that it portrays the features of temporal experience. The basic feature of a narrative is a plot, which is the glue that holds a story together. The plot picks out, orders, and assigns significance to otherwise random and disparate elements by arranging them into an intelligible whole. This structuring activity is what gives the story a meaning and what allows it make its point. In light of narrative theory, hermeneutics for Ricoeur is construed as the telling, writing, and understanding of fictional and non-fictional stories, in effect, linking time, narrative, and history.

The fourth aspect of Ricoeur's work is a philosophy of subjectivity. Philosophy for Ricoeur is essentially a reflective process of questioning and clarifying the meaning of our existence. The subject of reflection is not a self-transparent *cogito* that functions as an ultimate foundation for reason. Instead self-understanding is mediated by signs, symbols, and language, and, therefore, requires an indirect method of interpretation – i.e., a hermeneutic philosophy. Narrative theory continues this tradition of reflective philosophy with the notion of a

"narrative identity." Ricoeur's thesis is that we understand a person's identity as we would a character in a fictional or historical narrative. One's identity is formed by the stories one tell about one's self, as well as the stories told by other people in our lives like parents, spouses, friends, and enemies. The identity of a group, culture, or nation is also a recounted story. These collective identities require that their members be convinced of the truth and rightness of their story. To be effective, these narratives have to shape how the members understand themselves as parts of a group. Ricoeur is particularly interested in stories of founding events that establish and maintain communities and nations but that also sustain hatred and conflict with others.[6]

The fifth aspect of Ricoeur's work is his moral philosophy. To put it crudely, moral philosophy for Ricoeur is a version of Aristotelian practical wisdom tested by Kantian deontology. The "ethical intention" is to aim at the good life, with and for others, in just institutions. Practical wisdom, on his account, is the art of mediating the particular requirement of the (Aristotelian) ethical aim and the universal requirement of the (Kantian) moral norm in order to achieve happiness, autonomy, and justice. Ricoeur proposes three theses with respect to ethics and morality: 1) The primacy of ethics over morality; 2) the necessity that the ethical aim be mediated by the moral norm; and 3) the recourse morality must seek in ethics to resolve conflicts and *aporias*. Ethics encompasses morality – yet morality is a necessary, deontological moment of the actualization of ethics. The reason why ethics needs morality is to ensure that ethical life respects the autonomy and dignity of every individual. The reason why morality needs ethics is two-fold: 1) Without ethics morality would be empty; ethics is founded on and presupposes our desire to live well together with others. 2) When deontological norms produces conflicting obligations – as they inevitably do – we must refer back to the ethical aim of a particular good life in order to figure out what to do. Sometimes there is no right answer to a moral problem. If moral judgment were simply a matter of balancing the ethical aim and moral norm there would be no room for "the tragedy of action," exemplified in stories like that of Antigone. It is in these intractable situations that the art of practical wisdom helps us make decisions and act justly and appropriately in the face of tragic situations.[7]

The hallmark of Ricoeur's philosophy is his emphasis on the fragility of the human condition. In his early existentialist work, *Fallible Man*, he argues that there is a basic disproportion in human beings

between our finite and infinite dimensions – between what we are as limited and embodied beings and what we are as rational and infinitely creative beings.[8] By reason of this disproportion, we are never wholly at one with ourselves and hence we can go wrong. We are fallible. This fallibility not only makes human evil possible but also human goodness, knowledge, and achievement. Ricoeur's work since then continues to remind us of our fallibility and fragility. He proposes not solutions, but creative, practical responses to cope with our limitations. Because we are limited, incomplete, and imperfect, so are our responses. Everything is fragile; none of our undertakings can be completely justified. Ricoeur reminds us to be humble – but also to be responsible and respond as best we can.

The Philosophy of Technology

Philosophy of technology is a critical, reflective examination of the nature of technology as well as the effects of technologies upon human knowledge, activities, societies, and environments. The aim of the philosophy of technology is to understand, evaluate, and criticize the ways in which technologies reflect as well as change human life, individually, socially, and politically. The assumption underlying the philosophy of technology is that technology not only extends our capacities and affects changes in the natural and social worlds but also does so in ways that are interesting with respect to fundamental areas of philosophical inquiry. The task for a philosophy of technology is to analyze the phenomena of technology, its significance, and the ways that it mediates and transforms our experience.

The major 20th Century philosophers of technology, Heidegger, Marcuse, and other existentialists and Western Marxists, tended to lay out transcendental perspectives on technology, or theories that account for the very conditions of making and using instruments. They treated technology as a singular phenomenon with a rationale that is radically different from that found in the social world. These early philosophers of technology contrasted the detached objectivity of technological rationality with a more humane forms of experience that are connected to, not severed from, the natural and social worlds. According to this approach, the problem with objective, neutral, "techniques" of knowledge is that they treat the entire social world as an object of control. These philosophers worried about the fate of human beings when managed and handled as mere technological

problems. They criticized technological thinking and suggested humane alternatives to dehumanizing technological societies.

Recent philosophy of technology has taken an "empirical turn" away from the transcendental orientation of the early philosophy of technology and toward a more practical, contextualized interpretation.[9] As opposed to the early pessimistic assessments of a singular technological rationality, philosophers since the 1980s tend to view technology empirically and historically, in terms of its actual uses in social contexts. Technology is now seen as inter-dependent with society rather than independent of it. Recent philosophy of technology examines the way that our technologies form the background, context, and medium for our lives, shaping our culture and the environment, altering patterns of human activity, and influencing who we are and how we live. If there is a single, over-arching theme to recent philosophy of technology, it is the attempt to find a balance between the technical and social aspects of technology. If the narrowly construed "instrumental" meaning of technology understands it only terms of technical properties, techniques, and precise knowledge, the broader (and more accurate) understanding of technology includes the full range of cultural, economic, political, and legal dimensions – in addition to technical factors – that form the technological character of a society. The task for the philosophy of technology is to examine and evaluate the various ways that technical artifacts and systems figure into our lives.

What Ricoeur Adds to the Philosophy of Technology

Ricoeur belongs to the tradition that equates technology with domination and control. In the early 1960s Ricoeur warns of "the conquest of the economy by . . . the same rationality that was previously at work in technology and in the sciences."[10] Both welfare state capitalism and state socialism subordinate the social-political and culture dimensions to "dehumanizing calculation" and "technocracy." The task facing us, he argues, is to begin a process that would subject technology and the economy to democratic processes in order to restore our lost humanity and shattered cultural heritage. If we fail we will face increasing "anonymity and dehumanization," "barbaric forms of urbanism," and "the leveling of tastes and talents by the technique of consumption and leisure."[11]

In his 1961 article, "Universal Civilization and National Cultures," Ricoeur contrasts the dehumanizing effects of scientific-technological-political progress with the "creative nucleus" of a cultural heritage.[12] Universal civilization has a positive sense and a negative sense. The positive sense is that science and technology can help humanity achieve global harmony through "world-wide technics." The application of science in technology, in conjunction with techniques of economic management, employ a universally-applicable form of rationality has the potential to reconcile nations and to bring about an awareness of ourselves as a single humanity. Echoing Marcuse, Ricoeur says that "the original universality, with its scientific character, permeates all human technics with rationality."[13] These technics might transform nations into a true "world civilization" in which all of us would share equally in the benefits of science and technology, as well as increased prosperity, democracy, and other progressive Enlightenment values.

The negative sense of universal civilization is the homogenizing tendency of rationality, technology, politics, and the economy. For every advancement brought about by globalization, Ricoeur says it "at the same time constitutes a sort of subtle destruction . . . of the ethical and mythical nucleus of mankind."[14] The kind of world civilization we are creating is "mediocre civilization" that is "wearing away" at the cultural resources of the "truly great civilizations of the world" by creating a uniform, standardized culture. Ricoeur notes that "everywhere throughout the world, one finds the same bad movies, the same slot machines, the same plastic or aluminum atrocities, the same twisting of language by propaganda, etc."[15] The triumph of such a conformist consumer culture, where everything is identical and everyone anonymous, would "represent the lowest degree of creative culture" and a danger "at least equal and perhaps more likely than that of atomic destruction."[16]

Ricoeur will return to this contrast between instrumental-economic reasoning and ethical-cultural values throughout his career. In his 1983 essay, "Ethics and Politics," Ricoeur explains that "the dissatisfaction of modern man" comes from conflicts we experience from being both economic and political agents. The contradictions that individuals and nations experience are that the very technological order in which they must participate to survive at the same time undermines and erodes the ethico-political core of historical communities. We find ourselves trapped in between two competing rational orders: the new rationality of calculating efficiency and the old

rationality of our shared cultural and political life.[17] Technology thus continues to be calculating technological rationality for Ricoeur.

The problem with this pessimistic view is that it is unoriginal, limited, dated, and false. There are too many different things we call technology to be captured by the notion of a single technological rationality that ostensibly underlies them all. The empirical approach to technology studies understands it hermeneutically and contextually: technology must be interpreted against a cultural horizon of meaning, like any other social reality. When technology is viewed in this manner, Ricoeur's work becomes extremely helpful for understanding it philosophically – in spite of his own unoriginal views on the subject. Ricoeur's hermeneutic philosophy provides a model for interpreting the meaning of technological practices; his idea of a hermeneutic arc provides a way of mediating between the technical and social dimensions of things; his narrative theory helps to show how technology figures into the stories of our lives; and his moral-political philosophy provides a framework for evaluating the rightness and appropriateness of technology. If the password for Ricoeur's hermeneutics is "mediation," then it might help us to interpret the various ways that artifacts mediate experiences – and the ways we can respond to it given our limitations. Ricoeur contributes to a philosophy of technology in at least four ways.

The first contribution is the model of the text as a paradigm for the linguistic mediation of experience. A technology on this model is like a text: it is readable, with a meaning that is independent of the intentions of the original creators and users. Like any object, a technology is given against a background in terms of which it gains meaning. A device or system is what it is in relation to its use-context and broader cultural context. Technologies are, therefore, open to the same fate as any other human creation. They are open to multiple, often conflicting, interpretations of their nature and meaning. Don Ihde has already taken steps in the direction of applying Ricoeur's notion of indirect, mediated experience to our experience of technology.[18] Our experience is technologically-mediated when, for example, we view the world through glasses, talk on a telephone, tell time on a watch, or read a speedometer. Ihde notes how devices that are read exhibit the hermeneutic character of a technology particularly well. On Ricoeur's model of the text, what is referred to is referred by the text and is referred to through the text. Following Ricoeur we can say that, in the

case of technologically-mediated experience, what is referred to is referred by the instrument through the instrument.

A second contribution of Ricoeur is the model of the hermeneutic arc. The opposition in the philosophy of technology that is crying out for mediation is that between the technical properties of a thing and its social meaning. Technologies have multiple social meanings relative to use and context yet technically-explicable functions that are value-free, non-contingent, and a-contextual. (An automobile, for example, is both a machine with mechanical features, but also a device with layers of social meanings). We could follow Ricoeur and draw an arc from one side of the opposition to the other that would allow us to see how the technical influences the social, and the social influences the technical – without reducing one to the other. All technologies could then be seen as, at the same time, composed of intertwined technical and social considerations. Following Ricoeur's version of mediation, whenever one pole of the technical-social pair becomes over-emphasized, we can always restore a richer sense of meaning by emphasizing its opposing pole. In this way we can still retain an admittedly useful dichotomy with reifying it into falsely opposing ontological categories. A hermeneutic arc drawn between the technical and social aspects of things is a dialectical way of understanding technology, in Ricoeur's limited sense of dialectics.

A third contribution of Ricoeur is a narrative theory of interpretation for making sense of all of the different ways that technologies figure into our lives. Our devices, systems, and substances are always there, sometimes operating in the background, sometimes used deliberately, sometimes accidentally. There are an infinite number of stories that can be told about the ways that the innumerable things we make and use figures into our lives. Stories about technological development, for example, help us to understand how and why a technological device or system is designed the way it is. Often just telling the story of how something comes into being reveals previously hidden actors, the conscious and unconscious decisions made, economic and political motives, and technical challenges and triumphs. Another kind of revealing story is the story of technological distribution. That story explains how it is that people have access to technologies, and what the effects and consequences are on the people who have and use them. Or perhaps most applicable to Ricoeur are stories of identity-formation that explain how technologies figure into individual and shared lives. Most of the identity-constructions people have are

inseparable from having and using things. We are who we are in relation not only to other people but also to technologies. We form our interests, attachments, hobbies, and vocations through technologically-mediated practices. One's very self-conception is developed, in large part, in relation to technology and the technological environment we find ourselves in.

There is a large class of artifacts that we might call "identity technologies." These are the manmade objects that are used in the process of shaping our self-identities, our means of identifying others, our relationships, and our broader social-political identities. These include everything from mirrors, make-up, medicine, cell phones, cameras, computers, surveillance equipment, genetic screening, and the entire technological networks (of people and things) that contribute to the different lifestyles, habits, and knowledge of ourselves and each other. While it might be possible to determine *what* we are as human beings without the aid of technology (perhaps through philosophical reflection), it is impossible to determine *who* we are without understanding the technologies that establish personal identities, maintain them, maintain the relationships that constitute identities, and form the material of the customs and habits that make us who we are. Sometimes the story of technological identity construction is simple, even trivial (e.g., the basketball player, the knitter, the computer expert), other times more serious and complex (e.g., the diabetic fast-food consumer, the war veteran with an artificial limb, the terrorist suspect caught through surveillance then subject to extraordinary rendition). Or another non-trivial role technology plays in one's identity is in the developed or underdeveloped world. The very concept of development attests to the importance of technology in characterizing entire nations and affecting the capacities of individuals and societies to realize their potential. A life in a society is a life with technology; technology is what it is through its social uses. The technical and social are inextricably intertwined.

Finally, there is the contribution of Ricoeur's moral philosophy, concerned equally with living the good life, respecting autonomy, and institutional justice. While most technologies probably have little effect on our rights, happiness, and institutions, some technologies do. Some of the choices made about devices and technical systems affect our health, happiness, and autonomy and thus shape the very character of our individual and collective lives. In this country market forces and elected officials determine what technologies are adopted and how

they are distributed and administered. Most of us have little or no control over the former; the latter rarely make technology policy a matter of public debate. As a result, citizens have little or no say in decisions that shape and pattern our collective fate. The answer would appear to be to allow for the democratic participation of those affected by a technology or technological systems. Their design, choice, administration, and distributed should be subject to democratic processes, if we truly respect the rights of individuals and well being of communities.

If we follow Ricoeur, legitimate and desirable technology and technology policy would derive from the aim to live well with others in just institutions. All citizens should have a right to participate in the decisions about technologies that affect autonomy, freedom, and opportunity, either directly or indirectly through our political representatives. In addition, since we all have a desire to live well, and since technologies affect our notion of the good life, we should be able to determine, individually and collectively, which technologies we believe will foster it and which will prevent it. The institutional mechanisms of technological research, development, and distribution would also have to promote social justice – or human capabilities – in addition to economic or technological successes if they are to be considered just institutions. The implication for public policy is to create the cultural values and institutional mechanisms that would encourage and enable people to accept or reject technologies or technology policy where ever we determine our autonomy and ability to live the good life is affected. The citizen review panels found in Western Europe and Japan are good models for civic participation in technology policy.[19]

Arguably, such important and often lasting decisions about technology should be made by experts, not left to a non-expert citizenry. Arguably, it is unjust not to let citizens have a voice in the most important and lasting decisions that effect the public welfare. Ricoeur is again helpful here. He is keen to point out that all political action is fragile. Political fragility stems from the fragility of political discourse itself, which is never entirely free of rhetoric and ideology. Ricoeur wisely links the fragility of everything political with the political responsibility held by every member of society to exercise prudence and judgment given the enormous powers of governments and the enormous weight our collective decisions and actions might have. Any institution or regime conferred with the authority to use force is inherently dangerous to us. We need to be especially vigilant about the powers we confer onto

political institutions precisely because of the vital role they play in holding us together or tearing us apart. Consequently, the call to increase democratic participation in technology policy would only heighten the already fragile nature of governing bodies, and demand even more responsibility on the part of us all. Following Ricoeur, we should be at once more ambitious and more humble in our political aspirations. We should put technology policy on the political agenda – cautiously yet bravely.

What the Philosophy of Technology Adds to Ricoeur

There are two main contributions from philosophers of technology to the thought of Paul Ricoeur. The first is to add a material dimension to hermeneutics. Ricoeur acknowledges that experience is affected by historical, material conditions but he does not take the next step and recognize that these material conditions are also textured by technologies. He comes closer to thematizing the materiality and material conditions of hermeneutics than his counterparts, Heidegger and Gadamer, and his hermeneutic philosophy is more attuned to the needs of the social sciences.[20] But whenever Ricoeur speaks about this materiality in the form of technologies, he falls back on familiar philosophical frameworks that, ironically, are anything but materialist. This, I believe, is far from necessary. The step from hermeneutics to technology is, in fact, very short.

This step toward an empirical philosophy of technology has already been made implicitly by most philosophers since the 1950s who have turned away from Modernist, representationalist epistemology and embraced some kind of turn toward language, context, social practice, or history as the true locus of meaning. This movement away from the private interior of one's own mind and toward the public world of social activity is the key to the connection between hermeneutics and the philosophy of technology. Once we recognize how our technologies texture the environments from which we think and act, we have opened the door to philosophical reflection on how technology mediates experience. Philosophers of technology simply call attention to this fact, examining how our capacities are embedded in a social (and physical) world of artifacts. Ricoeur's life-long project to understand human capabilities itself needs to take a detour through our various technological forms of life. By exploring the ways that our experience is limited by technology – enabled, constrained, empowered,

and rendered fragile – philosophers can continue to think with Ricoeur, developing an implicit but underdeveloped dimension of his work, while applying it fruitfully to a myriad of questions concerning technology.

The second way philosophers of technology add to Ricoeur's work is through their challenge to the Romanticist legacy in Continental philosophy that too sharply distinguishes between persons and things. On this view, the human realm must be purified of anything that prevents it from being united with itself, with nature, and with God; conceptual reasoning and detached objectivity apply only to a non-human realm. Dilthey crystallizes this distinction in the hermeneutic tradition by distinguishing between two forms of inquiry: scientific "explanation" of the natural world, and historical "understanding" of the social world.[21] Ricoeur concurs with Dilthey that they are two distinct forms of knowledge, yet he rejects the claim that each is restricted to mutually exclusive domains: explanation to the causal world of facts and laws, understanding to the human world of intentions and desires. Instead, he maintains that explanation and understanding are two moments in a dialectical unity. Both texts and actions have underlying structures to be explained as well as social meanings to be understood. But in spite of Ricoeur's attempt to bridge universes of discourse, he cannot bridge them completely. He contends that actions in the social world are both explained and understood, but objects and events in the natural world can only be explained. Hermeneutics and narrative theory apply only to human action; natural events and objects are not the subject of interpretation or narration, except as props in the stories of our lives. They are to be explained following the methodology of the natural sciences. From the perspective of the philosophy of technology Ricoeur remains trapped in the Romanticist legacy. Though dialectically related, persons and things belong to ontologically distinct realms.

The contribution of philosophy of technology to Ricoeur (and to most of 20th Century Continental philosophy) is a fresh perspective on tired modernist dichotomies between persons and things, social understanding and scientific explanation. Bruno Latour is the philosopher of technology who has taken the most radical steps to overcome the dualistic paradigms that define modernity. For Latour, the modernist narrative of progress, which involves the differentiation of the natural world (science, technology, and rationality) and the social world (values, politics, and individuality), is mistaken. The exact opposite

is happening as science, technology, and society are becoming more and more connected, not differentiated. This connection is nothing new: there has never been such a thing as humanity without technology or technology without humanity. Humans and machines are thoroughly, and increasingly, intertwined. Any attempt to disentwine them is a modernist error resulting from a failure to grasp that humans and machines are forever bound up together in networks of "sociotechnical collectives." Rather than defend the integrity of humanity from an encroaching technology, philosophers should instead show how "imbroglios of humans and non-humans" occur on an ever increasing scale.[22]

While Ricoeur's philosophy might resist such an attempt to dissolve the boundaries between the human and the non-human, his works do offer resources for philosophers engaged in such projects. Once disabused of its Romanticist character that, in principle, inclines us toward a one-sided, pessimistic view of technology, Ricoeur's work offers promise to philosophers of technology who are trying to imagine a new relationship between humanity and technology, social understanding and technical reasoning. Drawing a hermeneutic arc from humans to machines is one path we might take. Telling stories of technology that show how technology mediates experiences and figures vitally into the stories of our life histories is another path. The task for philosophers of technology and Ricoeur scholars is to read our world critically, understanding its material dimensions from as many perspectives as possible and to continue to find practical mediations between humans and machines—remaining mindful that new mediations highlight our fragility while calling us to responsibility.

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Notes

[1] Paul Ricoeur, *The Symbolism of Evil*, trans. Emerson Buchanan (Boston: Beacon Press, 1967).

[2] Paul Ricoeur, "Interview with Charles Reagan, July, 1991," in Reagan, *Paul Ricoeur: His Life and His Work* (Chicago: The University of Chicago Press, 1996), 133.

[3] For Ricoeur's hermeneutic philosophy of the 1970s, see, *Interpretation Theory: Discourse and the Surplus of Meaning* (Fort Worth: Texas Christian University Press, 1976).

[4] See for example, Paul Ricoeur, *The Conflict of Interpretation: Essays in Hermeneutics*, trans. Willis Domingo et al. Ed. Don Ihde (Evanston: Northwestern University Press, 1974), 412-16.

[5] *Time and Narrative*, vol. I., trans. Kathleen McLaughlin and David Pellauer (Chicago: University of Chicago Press, 1984).

[6] Paul Ricoeur, "Narrative Identity," in David Wood, ed. *On Paul Ricoeur: Narrative and Interpretation* (London: Routledge, 1991), 188-199.

[7] Ricoeur's "little ethics" is found in *Oneself as Another*, trans. Kathleen Blamey (Chicago: The University of Chicago Press, 1992), 169-296.

[8] Paul Ricoeur, *Fallible Man*, trans Charles Kelbley (New York: Fordham University Press, 1986).

[9] For a clear statement on the empirical turn in philosophy of technology see, Hans Achterhuis, "Introduction: American Philosophers of Technology," in *American Philosophy of Technology*, ed. H. Achterhuis (Bloomington: Indiana University Press, 2001), 1-9.

[10] Paul Ricoeur, "Socialism Today," in *Political and Social Essays*, ed. David Stewart and Joseph Bien, (Athens: Ohio University Press, 1974), 230.

[11] Paul Ricoeur, "The Tasks of the Political Educator," in *Political and Social Essays*, 290-292.

[12] Paul Ricoeur, "Universal Civilization and National Cultures," in *History and Truth*, trans. Charles A. Kelbley (Evanston: Northwestern University Press, 1965).

[13] Ricoeur, "Universal Civilization and National Cultures," 275.

[14] Ricoeur, "Universal Civilization and National Cultures," 276.

[15] Ricoeur, "Universal Civilization and National Cultures," 274-276.

[16] Ricoeur, "Universal Civilization and National Cultures," 278.

[17] Paul Ricoeur, "Ethics and Politics," in *From Text To Action: Essays in Hermeneutics, II*. trans Kathleen Blamey and John B. Thompson (Evanston: Northwestern University Press, 1991).

[18] Don Ihde, *Technology and the Lifeworld* (Bloomington: Indiana University Press, 1990), 80-97, 162-177.

[19] On democratizing technology policy, see, Richard E. Sclove, *Democracy and Technology* (New York: Guilford Press, 1995), 25-57.

[20] See, for example, Paul Ricoeur, "The Model of the Text: Meaningful Action Considered as Text," in *From Text to Action*.

[21] Wilhem Dilthey, *Selected Writings*, ed. and trans. H. P. Rickman (Cambridge: Cambridge University Press, 1976), 66-105.

[22] Bruno Latour, "A Collective of Humans and Non-Humans," in *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge: Harvard University Press, 1999), 174-215.