The Technological Imperative and Medicine

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My argument is this. Because of technology's success and dominance in medicine, our dependency on it has created a "technological imperative," and this imperative objectifies and frames people according to mechanistic rules. However, such a view of people lacks the ability to account for people's unique, moral, and spiritual dimensions. This aspect of the patient's identity requires an ethic that guides medical technology to serve the comprehensive purposes of human life; it needs a teleological ethic.

The Ethical Dilemma of Using Technology in Healthcare

The use of technology in healthcare can mean a stethoscope, needle, hammer, or scalpel. These instruments, over which we do not have moral quandaries, are natural extensions of the hands, ears, and eyes.

However, sophisticated machines such as EKGs, MRIs, CAT Scans exercise diagnostic and therapeutic influence on patients that are more than natural extensions. They replace the user.[1] They discover and decipher information and some attempt correction and therapy. The ethical worries about technology are about it being an independent force from the user.

Technology, undoubtedly, contributes significantly to healing, and this should continue, but, to be so successful, it by design treats the patient as an object explainable by algorithmic analyses. The user thus looks upon the patient in the same way that technology is applied upon the patient— organism following mechanistic laws so that the use of technology can yield measurable and quantifiable results. Of course, the chemical-physiological aspects of the person follow law-like patterns and hence are measurable and somewhat predictable. Yet, the laws cannot measure people's personal identity; that is, our sense of being the same person across time, our emotional makeup, and the defining relationships with others and the world. This personal aspect is as affected by disease, injury, and psychological duress as is the individual's chemical components. However, the more the use of technology succeeds, the more its users must objectify the patients, and, consequently, the more it either overlooks, ignores or deemphasizes the personal identity of patients.

Here is the ethical dilemma. To contribute to people's health through technology, medicine must view patients as organisms measurable by nomological patterns (that is, law-like patterns). Because their success as healthcare providers depends on the successful application of technology, the providers may acknowledge the patient's personal aspects, but they cannot make them a primary focus of their treatments.

In that technology, due to its accomplishments, dominates medical practices, it has also become domineering.[2] Medicine, thus, must view the patient in ways amenable to technological

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Notes

[1] I am borrowing from Stanley Reiser's definition of technology, "material inventions developed to extend or replace human capabilities," (Cole, 2015, 75).

analysis and description. Technology's success generates a demand, that is, to continue to improve healthcare, we must increase the use of technology. This is the "technological imperative."[3] We are logically and professionally forced to think that if we do not increase the use of technology, we are not as committed to increasing the health and healing of patients. Subsequently, we anthropomorphically confer onto technology an agency. We say, "what does the instrument tell us" or "machines don't lie." Technology does not talk or tell lies. It cannot. Its output, which we read, is strictly algebraic, the conferring of symbols upon data. The mystique of technology transforms it from a blind and soulless machine into an intelligent agent who engages our minds in a dialogue about the patient.

Moreover, for those inclined toward philosophical materialism, the technological imperative makes the assumptions of reductionist materialism even more convincing. If we can heal without taking into consideration the personal aspects of a person, we can treat these aspects as epiphenomenal to the body. They are not actual parts of what are treatable, and thus we need not factor them into the scientific treatment of patients. Others can address these aspects, but they are beyond medicine's therapeutic interests. The person is reduced to physical-chemical explanations, and healing becomes the rectifying of the physical-chemical problems. In this respect, healthcare providers are always under the pressure to become in their practice and outlook upon patients thoroughgoing philosophical materialists. Consequently, their professions become expressions in tangible practices of a tendentious metaphysical position, one that disregards the anomological aspects of human identity.

Ethics Serving Technology or Technology Serving Ethics

Because technology naturally tends to dominate the diagnostic and therapeutic actions of healthcare, it de-emphasizes the personal identity of patients by framing them into technicized categories and by making any encompassing purpose greater than the successful application of technology to be epiphenomenal to the person. Thus, we are faced with a choice—does ethics serve the power and promise of technology so that medicine can continue to fulfill its moral commitment to heal or should technology help medicine contribute to the societal goal of experiencing the profound happiness achieved in realizing a sense of human well-being, a final aim?

This choice arises from within technology's essence.[4] On one hand, technology determines its application upon patients and also defines its own successful application, and, on the other hand,

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[2] Albert Jonsen is right when he says, "The crucial ethical problem, then, is to measure the use of technology to the fragility of life. The fragility of life had dominated medicine since its inception; now the power of technology has assumed priority" (Jonsen, 2006, 670).

[3] The phrase is common, but for a description of it see Weissman, 2016, 2.

[4] The question of "what is technology's essence" has generated much discussion, and, although an important topic for this paper's concern, unpacking that discussion would distract from the paper's argument. However, behind much of what I say in the paper about technology's role and power are arguments found in the following books: Jacques Ellul's *The Technological Society*, *The Technological System*, and *The Technological Bluff* ("The abstraction, Man, is only an epiphenomenon . . . a natural secretion of technical progress" [Ellul, 1964, 390]; Martin Heidegger's "The Question Concerning Technology" ("Unlocking, transforming, storing, distributing, and switching about are ways of revealing" [Heidegger, 1977, 16]); and Hans Jonas' *Philosophical Essays: from*

technology is an artifact created by people and thus manifests the nature of causal forces—the efficient, material, and formal dimensions of causal efficacy. However, because the technological imperative mandates a materialistic assessment and understanding of the patient, it obstructs the formulation of a final cause or purpose. A final cause, having the capacity to fulfill an overarching number of pursuits than the specific act of technology, has greater ontological significance than what may be the efficient, formal, and material cause of an action or artifact. It compels moral actions toward a surpassing and comprehensive reality by creating ways to actualize the natural desire to seek a completed action.

A final aim is beyond what technology can articulate. Even though we should further the success of technology, we must also realize that it cannot contribute to an understanding of a moral purpose comprehensive enough to serve as a final aim of human pursuits.

What kind of ethic would best serve the therapeutic and caring purposes of healthcare and at the same time control and guide the technological imperative?
It would not be preferential utilitarianism. Such cannot correct the potential of technology to de-humanize people. This is the ethic of the Princeton ethicists, Peter Singer. Singer's basis for ethics is simple—that is, an action is desirable and permissible if it maximizes a person's interests or preferences,[5] which he believes expresses the natural biological impulses, making irrelevant any appeal to God, substance, natural law, or intuitions. Our interests are as identifiable to us as are our natural urges, so Singer contends, and hence are easily indexical, enabling us to take guesswork and mystery out of ethical decisions.

However, preferential utilitarianism cannot contain the technological imperative. Because our interactions with objects, social experiences, and future prospects shape our specific preferences, the preferences become a way of measuring and forming which objects etc. can actually formulate a preference for us. The greater we can create and measure preference-creating events, the more preferences we identify and chose. The application of technology increases our ability to create and measure preference-creating experiences and consequently, the more we use technology, the more preferences we can maximize.

However, by conferring such power to technology, it subsequently frames persons into objects amenable to technological measurements, into objects defined by what can be technologically analyzed. Thus, the best preferential utilitarianism can do in facing the dilemma of medical technology is perhaps to offer guidelines but never a goal, and, thus, it becomes an acolyte to the technological imperative.[6]

Ancient Creed to Technological Man and *The Imperative of Responsibility: In Search of an Ethics for the Technological Age* ("In other words, technology, apart from its objective works, assumes ethical significance by the central place it now occupies in human purpose" [Jonas, 1980, 11]).

[5] Singer reduces the search for the criterion of morality to interest or preferences. Animals and humans are equal in that they can have interests (Singer, 1985, 9). He claims that we should consider something morally significant if it can suffer because the "capacity of suffering and enjoying things is a pre-requisite for having interest at all (Singer, 1986, 221)." In fact, we should consider the pre-born human embryo morally significant only when it become sentient, can fell pain; "until that point is reached, the embryo does not have any interests and . . . cannot be harmed—in a morally relevant sense (Singer, 1990, 73)."

However, ethical decisions are not merely identifying preferences and interests. They are more like what University of Pittsburgh philosopher Michael Thompson calls "life-forms" (Thompson, 2008, 62); that is, the internal directivity of certain actions compelled to act in ways properly called ethical, like the DNA of an animal compels it to be the species it is. There are four reasons to agree with this explanation. First, ethical actions are unique because of their particular directivity and intentionality. We distinguish (at least try) them from other actions.

Second, this type of activity is goal-oriented, aimed toward comprehensive aims that justify the actions. We do them for reasons.

Third, these comprehensive-fulfilling goals determine which actions are proper ones and whether the actions are acting properly. For example, the reality of a baseball game describes which actions by the players should occur and whether they occur successfully. And fourth, the properness of these actions is thus attributive, not predicative, to the actions, in that they describe the internal orientation of the actions, rather than an addition to the action's innate directivity. Therefore, it is cogent to maintain that ethical actions are aimed toward a more comprehensive aim.[7]

Moreover, it follows that the final aim fulfills all the life-forms aimed toward more and more comprehensive fulfilling experiences. If indeed it is a final aim indicated by the directivity of life-forms that aim for it, then consequently there is the expectation of completion, of fulfillment of human purpose. Furthermore, a telos that fulfills also cannot be conditioned by a more comprehensive reality; its completing power cannot depend upon another reality. Due to the fact that the telos fulfills the immanent process towards fulfillment, it must be an unconditional reality, not one in process or becoming toward another reality. Thus, it is reasonable to maintain that the telos exists, fulfills the inner directivity of human nature to find happiness, and is an unconditional reality.[8]

Conclusion

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[6] Samuli L. Saarni et al conducted a study to determine the influence of ethical deliberation upon the selection and use of technology in medicine. They concluded, "The work is based on the insight that ethics seen as an 'add on' to solve the moral issues of a technology is likely to have little effect on the implementation of the technology. Ethical analysis performed in isolation of the HTA [that is, Health Technology Assessment] process appears to be too narrow and come too late (Saari, 2008, 620)."

[7] My claim needs to acknowledge and also reject what a Kantian-ethicist would say at this point. A Kantian would say strict adherence to the "categorical imperative" is enough to safeguard humanity from the potential abuses of the technological imperative. All we need is "to treat oneself and all others *never merely as means* but always *at the same time as ends in themselves*" (Kant, 1996, 83). Even though to determine the source of ethical obligation Kant focuses on the autonomous individual rather than the utilitarian consequences, his definition of such a person as a rational agent who can formulate a universal and necessarily true moral claim narrows the ethical field of players too much. The very young, the feeble old, the mentally disable, the comatose lives crippled by illness cannot reason this way, and hence are not under ethical obligations, and consequently are treated by those who can follow the "categorical imperative" as only recipients of good-will but not as rational agents with dignity, thereby making them more vulnerable to technological abuses than would be the adult rational agent.

[8] The Thomistic influence here should be obvious, "Final and perfect happiness can consist in nothing else than the vision of the Divine Essence." (Aquinas, 1990, 381).

Medicine needs a teleological ethic to control the technological imperative and to help medicine contribute to human well-being.

A teleological ethic has two aspects—that is, horizontal and vertical. Although they are distinct in their aims, they define each other. The horizontal aspect refers to the immediate aims of an action compelled by a particular person's life-form. For instance, health is the immediate aim for eating good food.

However, health is not the only compelling reason why we should eat good food. We reasonably believe that health is a necessary means to gain a greater aim than health itself—that is, happiness in the sense of human well-being. Hence, we determine heath to be a legitimate aim because we realize that to fulfill our innate drive for fulfillment, we should seek happiness. Moreover, though happiness as well-being can justify many pursuits as necessary means to greater goals (for example, courage, generosity, friendship, and so on), happiness must also have a purpose. We can fulfill all the social virtues but still realize there is a greater reality than the sum of our actions. Aristotle would call this dimension the contemplation on "a reality that cannot be otherwise;" Aquinas would call it our worship of the perfectly good reality, God. God would thus be the vertical aspect of the teleological directivity that adjudicates which aims finally lead to human fulfillment.

The horizontal aspect of a teleological ethic would ask of any application of technology, does its use promote a sense of a fulfilled life greater than the mere the successful application of the technology? The application should contribute, for example, to the health of the patient. Health then is the horizontal aim of technology. A teleological use of technology would not consider using technology just to use it; would not describe a person primarily as a machine-like organism reducible in analysis to the aims of the successful application of technology. We thus would justify technology in medicine only if its aim is the health of patients.

Consequently, this restriction would reject using technology in medicine primarily to secure and increase the use of technology and also would alert us to the domineering effects of the technological imperative. For example, it would be unethical to implant nanochips in a person just to see how they would work or use them in a non-remedial sense to make a person smarter. These would be unethical because the values of such implants are merely technological values, values relative to a machine and not relative to humans with a life-form. The principle is this— the applicative value of technology in medicine must be whether it enhances the values of a life-form aimed at health, not whether it makes for a more productive or effective machine-like organism. However, we must also understand the aim of health.

Our recognition of the vertical aspect is just as needed and important to curb the technological imperative. Because with technology we assume we can conform nature to our preconceived goals for it, the basic motivation of the technological imperative is "knowledge is power." It confers tremendous control to those who apply technology and those who benefit from it. Yet, this aim reduces people to materialistic systems, measurable by algorithms and laws of mechanical engineering. This reduction is a constant temptation to medicine and should be countered with what philosopher Hans Jonas calls the sacred (Jonas, 1980, 19), with those

objects and practices that indicate an unsurpassable reality in which people are ultimately oriented in their life-forms. It would be consistent with the goal of medicine (that is, to contribute to people's health so that they can experience happiness in relation to the final aim) to find ways to incorporate the objects and practices that indicate a transcendent purpose; for example, religious symbols in hospital and clinical rooms, chapels and prayer rooms, chaplains playing a vital part in healthcare, acknowledgment of patient and family's religious lives, and so on.

This vertical aspect would focus the various aims of healthcare toward an ontologically surpassing reality inclusive of all human actions directed towards comprehensive fulfillment. Of course, some people may be indifferent or ignorant of sacred objects and practices, but their presence alongside the practices of medicine would indicate that the practitioners serve a greater and more comprehensive purpose than their immediate technological actions, thereby encouraging and enabling people to better pursue and realize their internal directivity towards what properly describes an ethical person.

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