

Repositioning Technology for Human Responsibility: Beyond Heideggerian Determinism

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Abstract

It is pure truism to say that technology has done so much to improve man's material well being. However, technology poses a real danger today, namely, that of the fragmentation and eventual absence of the identity of the human subject. It has been recommended that resignation is the best response to the situation. But this attitude may be tantamount to a dereliction of duty. Therefore, this paper argues that technology as a form of human knowledge (techné) should subordinate itself to politics, public sphere, for the good of man. Our method is expository and hermeneutic. The conclusion of this study shows that no field of knowledge should claim to have the last word with regard to solutions to man's existential predicament.

1. Introduction

« One of the paradoxes of modern technique is that it produces a situation in which it is impossible to act in a responsible way at the very time that it expands moral responsibility. It gives rise to moral demands we are incapable of fulfilling». ⁱ These words of D. J. Wennemann describe in a most succinct manner the problem which contemporary man faces as a result of the modern idea of progress which is the driving force in advancement of science and technology. The wisdom of men of science in the seventeenth century was in listening to craftsmen and artisans and the willingness to borrow from their trade which led to the introduction of the use of instruments and apparatuses in scientific research. ⁱⁱ The consequence was steady and speedy progress in the area of scientific discoveries such that when the results of science were in turn introduced into the domain of technique, the breakthrough in technical advancement was astronomical. With the idea of progress which gourd on technical advancement and scientific discoveries, the growing ethical concern has been whether the direction in which science and technology are going is still under man's control or whether man has become ineluctably bound to the impulse for something new that he can no longer dictate the pace for, and the direction of, science and technology. The fruits of science and technology are such that they even threaten the very continued existence of man in the world. The situation appears paradoxical, and the natural response to the imaginative prediction of catastrophic future, according to Hans Jonas, calls for a decisive now. In a *Preface* to a collection of essays titled *Reason and Violence: Philosophical Investigations*, Sherman M. Stanage described the human condition in a near pessimistic note when he wrote, "Only by cutting down violence, and by cutting it down still further, can our civilization be enriched and move away from barbarism – if we still have the time to do so". ⁱⁱⁱ In the opinion of John O'Neill, the political landscape is becoming intolerably violent that a counter-myth needs to be generated in place of the ideology of world domination which has nurtured violence to the point of usurping power to entrench libidinal politics. ^{iv} One only needs to think of Dresden, Hiroshima, Auschwitz, Vietnam, Biafra and Ruanda to realize how far the Archemedian point discovered by man has been used against man himself. Beside instances of physical violence in which the fruit of technology is historically

implicated, there is a feeling of alienation associated with the use of modern technical devices and appliances such as Television, Home Video, GSM, automations etc. This worrisome situation informs Martin Heidegger's conception of technology, a response to which inspired this reflection. In the face of the danger which technology poses, Martin Heidegger suggests that we comport ourselves in the manner of the contemplative, that is, letting things be. Technological things should be seen as revealing one kind of world among many others. For him, technology belongs to the last stage in the history of the understanding of Being in the West. Given the direction in which technology is moving, Heidegger concludes that it will result in the elimination of the subject, that is, it will create the fragmentation and eventual absence of identity. The greatest danger which technology poses lies in the fact that it is outside human control; it imposes itself on man such that there appears to be no alternative way of seeing man and his world other than the way of technology. It is by returning to what he calls focal practices that we will be able to come to terms with situation in which technology has put man. It is, therefore, the burden of this article to expose this view of Heidegger in order to draw out its full implications with a view to proffering a healthier and more salutary approach to technology. To this end we adopt expository and hermeneutic approaches. We begin by laying bare Heidegger's analysis of nature and essence of technology. This will be followed by a note on the phenomenon of cultural crisis engendered by technology. We will equally consider the problem of responsibility for addressing the crisis. There will be some personal input in the direction of proffering solution to the problem and in this regard we will be drawing from ancient philosophical myth to argue in favour of subordinating technology to the political order as means of making man morally responsible for the direction which technology takes. The paper winds up with an indication of the significance of the study which is the affirmation of the fact that no field of knowledge can claim to have the last word with regard to man's existential problem. Technology and experimental sciences should be honest enough in this regard by listening to the speculative sciences in their common quest for solutions to man's existential predicament.

2. Heidegger's Analysis of Technology

2.1. The Essence of Technology. At the heart of Heidegger's critique of Western tradition is his claim that the withdrawal of Being took place in modern epoch. With the withdrawal of Being the question of Being was forgotten, and this has made the truth about beings as a whole entirely questionable. He argues that modern metaphysics came to this stage through a history of interpretation of being as *phusis, nature*. For this reason he sees science as essential to modernity; it is that on the basis of which the epoch is determined. Against this background he claims that the essence of science lies in the essence of technology. He sees the failure to sustain an essential distinction between science and technology as representative of disappearance of the priority of nature over artefacts, a phenomenon which is characteristic of modernity. In plain language, Heidegger is saying that at a time when it was thought that one could investigate nature by thinking about it, the question of being preoccupied men of science. With the turn of the modern period of Western history, science was no longer just thinking about things but "investigating them experimentally with special apparatus."^v This development is thanks to the association of technique with science. It meant that if one would come to the truth about nature, one needed to use instruments specifically adapted to experimental purposes to achieve one's end. The marriage of technique with science is such that it is difficult to separate the essence of science from technology. The alliance of science and technology was complete when science was applied to industry, leading to the alteration of man's way of life.^{vi} It is, therefore, characteristic of modernity to keep technology and science intertwined; and until a separation of the two is

achieved, it will be impossible to return to the initial belief in the priority of nature over the product of art.

The essence of technology, he warns, is not to be understood in the sense of the traditional use of the word essence, referring to genus (class) and *essentia* (essence). Essence here refers to the way something comes into presencing and endures. The essence of technology, therefore, would mean the direction of technology, the manner of its persisting in its finality despite change in time and circumstance. In this regard, the essence of a thing has to be distinguished from the thing itself.^{vii} Of course, even this distinction applies to the traditional understanding of essence. Passing through and long and winding analysis he came to designate the essence of technology with the word “Enframing”. Enframing, according to him, is nothing technological nor does it belong to the order of machine. It is simply the way the real reveals itself as storing-for-future-use, “standing-reserve” to use Heidegger’s own expression^{viii} The essence of technology is such that it destines man to the event of truth, revealing. And since freedom governs the open, the revealed or truth, man is free, and neither man himself nor technology belongs to the sphere of the “inevitableness of an unalterable course”.^{ix} There is an ongoing revealing or event of disclosure of reality involved even in the idea of extracting energy from nature, and storing it for future use and distributing it at will. For Heidegger, it is not as a result of human action that modern technology is the way it is. It means that man cannot alter and change its direction. What is required of man is to learn how best to cope with the ‘destining’ of man by technology. Although humanity discovers itself summoned by technology, it should not see itself as enslaved by it.

2:2. Authentic Producing as *Techne* and *Poiësis*

Heidegger tells us that disclosure of the world is characteristic of human nature. He uses the word *Dasein* to refer to that entity which is capable of investigating its own being; wondering about itself as existing. According to him, disclosure belongs to understanding of *Dasein* itself, that is, *Dasein*’s understanding is a disclosing of the being of entities, and it is this that grounds any discovering; that is, encountering of those entities. It is in the context of involvement that equipment or ready-to-hand occurs, and even this context is itself situated within a totality of involvement clarified in interpretation. All interpretation is grounded in what he calls fore-having (*vorhabe*). Fore-having as part of the *as-structure* of interpretation refers to certain prior in respect of the function and purpose of the object to be interpreted. Against the Cartesian view that the world is *res extensa* (extended thing), he says that the world is an understanding of being by which we are able to encounter people and things as such. He distinguishes between an understanding of being and beings that reveal themselves in the event of such understanding. It is this insight of his, he claims that distinguishes his philosophy from that of traditional philosophy which Descartes very well represents. Later in his career he came to distinguish another paradigm in the understanding of being in the West. Here the focus is on the work of art. H. L. Dreyfus and C. Spinoza explain that Heidegger traces the history of the development of this understanding of being from the Greek *phusis* (nature), *poiësis* (art and production), *techné* (technique) through the medieval notion of being as creatures produced by God to the modern understanding “in which everything was organised to stand over against and satisfy the desires of autonomous and stable subjects”.^x Following his deconstructionist reading of western tradition, Heidegger claims that we are entering the last epoch in the understanding of being. He describes the present epoch as that of the technological understanding of being.

According to Dreyfus and Spinoza, Heidegger at first saw technology as constituting a danger to man in the sense that man was instrumentalizing the world for his own profit as if he were a subject that controls everything, resulting in the difficulty with objectifying things.^{xi} But he soon afterwards realised that even objects cannot resist the advance of

technology. So, he thinks that the fear that technology is dangerous because it embodies instrumental reason is due to traditional tendency to see reality from the subject-object point of view. Technology, he insists, is no mere means: "Technology is a way of revealing."^{xii} In other words, technology belongs to the realm of truth. According to him, if we give heed to this understanding, then a new realm for the essence of technology will open itself up to us. This other realm is the realm of revealing or truth. Michael E. Zimmermann underscores this point when he wrote:

Techné as ontological revealing makes possible 'production' as we ordinarily understand it. Only because artisans are capable of understanding and disclosing in advance what the envisioned product is, can they do the things needed to gather the thing together, draw it forth, let it be, Heidegger clarified the disclosive character of techné with the example of the process involved in making a chalice,^{xiii}

The point of Heidegger's illustration with the process involved in the making of the chalice is seen in the way he analyses our understanding of making as a type of causal activity. According to him, we have been accustomed to understand causality in terms of bringing something about. But this is only reducing cause to *causa efficiens* as if that is all that causality entails. Returning to the Aristotelian doctrine of the four causes – formal, material, efficient, and final – he illustrates the fact that the four causes, not just one of them, are together in being responsible for something else (chalice) and that that (chalice) to which they are causes remains indebted to them.^{xiv} He replaces understanding of cause as "that which brings something about" with the idea of cause as "responsibility and indebtedness". The chalice is said to be in potentiality and it is only freed by these causes to become itself; they make it arrive from not-yet-present into presencing.

Explaining the above idea of causality, Zimmerman observes that Heidegger assigns this gathering role to the logos, "understood not as an overarching causal agent but instead as somehow analogous to the Tao, that 'pathless way' which makes it possible for entities both to gather themselves into a stable presence (as in the case of living things) and to be gathered into presence through an artisan attuned to logos."^{xv} In short a cause is that which makes what was not initially present to come into presence in terms of existing. He summarises Heidegger's concept of techné or authentic producing as "the disclosive occasioning that makes presencing and bringing-forth possible." According to him, "presencing" and "bringing-forth" are two aspects of techné corresponding to the dual nature of poiesis as art and producing. "Poiesis belongs not only to the work of art and to producing, however, but also to physis."^{xvi} In distinguishing utility products from work of art and natural things, Heidegger notes that usefulness is constitutive of the being of ready-to-hand as he describes objects of use. But natural or living things or work of art should not be treated as commodities. When work of art is treated as commodity, even in the market, it loses what it is; it fails to achieve its purpose. Great work of art opens the way to a new world rather than making practical contribution to a given world. It is for this reason that all great work of art are considered as truly revolutionary. The all embracing purposiveness grounding the technological system conceals profound purposefulness. According to Zimmerman's view of Heidegger, every human project has its purpose but this is not the case with the technological system which strives after greater production for its own sake. On account of its lack of purpose, Marcus calls modern technology irrational. Heidegger prefers to use the term a-rational to describe the purposelessness of modern technology. He sees it as a-rational in the sense that like other historical worlds, the technological world lacks ultimate "purpose". It has no ultimate "ground" or "foundation" to which it points. It is its own finality. It is only by virtue of the ontological disclosure of entities within a historical world that the distinction between rational and irrational can arise. And there is nothing on which

worlds are grounded as such.^{xvii} Heidegger sees modern technology as constituting itself the way beyond the danger that it poses. He sees the urge to provide metaphysical ground for justifying total control of things as leading to the threat of complete destruction rather than the expected control.

3. Cultural Crises in a Technological Age

Heidegger believes that technology is not fatalistic in its invitation to man to open up to his responsibility. The claim that technology makes on man could be misconstrued and it is at this point that it becomes dangerous. It is when the claim of technology is misunderstood that it is thought in terms of means or the instrumental. The first danger in this way of perceiving technology is indifference on the part of man. At this point all that exist is taken to be subject to man, indeed, man's product. The objectivity of the world is denied and invariably man loses his subjectivity for a solipsistic self is not a true self.^{xviii} Man indifferent to the world, is man alienated from himself, for man risks self destruction when he thinks only of himself. True knowledge of self passes through encounter with the world, a certain objectification. That technology alienates man from himself and his world is a real danger, but this danger is possible only when man fails to take responsibility for the claims which technology makes on him. Come to think of the technological devices and equipments like GSM, television, video etc which while fulfilling the promise of material and social liberty inflicts cultural wound on man.

A. Borgmann illustrates the fact of the presence of this wound, though hidden, when he decries the fact that the culture of the word – conversation, reading, sharing text from the scripture and narrating issues in literature – has been replaced by television.^{xix} While he refuses the determinist view that sees technology as holding sway over man, he remarks that we need to explicate, consider and transform our implication in technology for the ailing heart of the contemporary culture to be healed. He expresses optimism in the possibility of a viable counter-paradigm to the device paradigm. His view of technology could be said to contrast with that of Heidegger. In his opinion, the trend of technology shows that in the future there will be the elimination of the object. For Heidegger it is the subject that is in danger of being eliminated. Dreyfus and Spinoza alluding to Borgmann's book, *Crossing the Postmodern Divide*, note that there he distinguishes between modern (hard technology) and postmodern soft technology. Modern technology, by using its qualities of rigidity and control, has succeeded in overcoming the resistance of nature and in fabricating impressive structures like railroad, bridges and other durable devices. Post modern technology, on the other hand, is more flexible and adaptive, and have produced diverse array of quality good like synthetic or high-tech athletic shoes designed to suit a given athletic activity.^{xx}

Another danger which the Enframing or the way technology presents the real poses is that of reducing all beings it encounters to resources available for technological exploitation. When calculative thinking which is characteristic of technology replaces contemplative thinking then everything goes wrong. If then the poetic character of technology is to be restored, there is need to be a return to contemplative thinking. But is contemplative thinking all that there is for solution to the problem of technology? For Heidegger, it is enough we keep raising questions about the danger but we should not seek answer in calculative thinking. He underscores the fact that the notion of responsibility in technology has no moral undertone. Man is said to be responsible for technology to the extent he is involved in starting something on its way into arrival. But one wonders if this would not result in dereliction of duty.

Buckley, however, gives us another sense of responsibility in Heidegger. He presents this from the point of view of man's task in the face of the forgetfulness of Being. It is necessary that forgetfulness should not be seen as a moral lapse. We are called to assume responsibility to the question of being as a part of Dasein's possibility. Here the recollection

of responsibility has two aspects: the response and the ability. Buckley explains that Dasein could be said to be responsible for technology insofar as in response to the call of being, being gives itself even if it does so in our time through the revelation of technology. But here, responsibility does not call for control since that will entail instrumental understanding of technology. In being responsible for technology, Dasein is, in a way, responsible for that which, to a certain extent, is beyond it. Responsibility, here, has to do with a sense of acceptance and ability to respond to that which comes from beyond. What makes one responsible in this sense is the fact of taking into account the possible results and properly evaluating and predicting possible repercussions of any given action.^{xxi} In light of Heidegger's notion of human existence as care, responsibility will mean letting entities be what they are. It is in this light that he speaks of the gathering activity in which things and people are brought into their own appropriation.

In their comparative study of the thoughts of Heidegger and Borgmann on how to affirm technology, Dreyfus and Spinoza rightly pointed out that the former sees technology as disaggregating our identities into contingently built-up collection of skills. Heidegger, they observed, thinks that the danger is that the absence of identity may make our mode of being as world disclosers impossible. According to Heidegger, it is only when we can navigate between pre-technological identities and a technological style of coping that the absence of identity could be of positive service. In this case technological things will be responded to as revealing one kind of world among many others. The saving power of technology lies in the fact that technology frees us from having a fixed identity for the experience of ourselves as multiple identities disclosing multiple worlds. While one may readily agree with Heidegger that our response to technology would require our having to see it as revealing one among the many possible worlds, we consider that this is not enough in terms of taking responsibility for technology. We still believe that it is necessary to think of responsibility in moral terms.

4. The Problem of Responsibility: Beyond Heideggerian Determinism

4.1. Critique of Heidegger's Attitude to Technology

We would like to take our bearing here from Heidegger's deconstructionist interpretation of western history. He had traced the development of thought or the various modes of the revelation of Being (of which technology is one and the final phase) through different stages back to the Greeks. He tells us also that authentic thought or philosophy is not about recounting past thought, but a personal interpretation of the intellectual deposits at one's disposal. The thought of each philosopher is considered valid with respect to other thinkers because it is a philosopher's own interpretation of reality. And while the interpretation given of Being may differ from a given epoch to another, there are still marked similarities in the thinking of the philosophers in each given epoch. The specific form of thinking of each philosopher contributes to the revelation of Being, even if by digressing from the central question they may have brought about the forgetfulness of Being, as Heidegger would put it. It is significant to know that in the history of the forgetfulness of Being it is man's active role in terms of his interpretation of reality that constitutes the dynamics in the unfolding of history to the point of the emergence of technology as a final phase in man's knowledge of Being.

It makes sense, therefore, to say that just as man by his active engagement in the course of history had evolved the various understanding of Being of which technicity is one, so it is possible that he can redirect or channel the full development of technology in a way that can control the danger which technology at its present stage of development seems to pose to human existence. To say with Heidegger that there is nothing we can do about technology would mean either to give in to an apocalyptic prediction that is blind to human possibilities

or to submit to a kind of Hegelian arrogance that arrogates to itself the final word on the development of reason. Carl Mitcham has described the apocalyptic attitude in Heidegger's interpretation as "an exercise in sign-reading that conflates with issues of possibility and probity".^{xxii} Thomas Kuhn teaches us that people will not let go of a ruling paradigm unless or until a viable counter-paradigm is on the horizon. Developing a counter-paradigm will be part of our responsibility.

Perhaps it may be useful at this point to appeal in part to what Andrew Feenberg says of Heidegger in his Marcusean critique of Heidegger. Feenberg maintains that technological world does not add up to a life, it is not autonomous and non-human. For him, the development of technology and modernity is historical. Against an essentialist view of technology, historical understanding of technology does not support teleology – the development of technology is contingent. We accept the historical understanding of technology but beyond Feenberg we endorse equally the essentialist view without which it will be difficult to make a critical analysis of the general meaning of technology since only studies in individual technological systems will be impossible. David J. Stump tells us that social constructivists say that technology is political, that is, "that human interactions are essential to technology".^{xxiii} Feenberg argues that since Heidegger claims that the technological doer is historically transformed by its acts, he undermines by this claim the possibility of neutral consideration of technology. In this regard Ian Thomson remarks:

Heidegger shows that 'technology is not merely the servant of some predefined social purpose; it is an environment within which a way of life is elaborated' ... And thus, 'for good or ill, the human manner of inhabiting the environment can only be [an] ethical' question.^{xxiv}

Heidegger acknowledges that technology is not neutral since it has an ontological impact the greatest danger of which is spreading technological understanding of Being in such a way that we will lose the capacity to understand ourselves in any other way. While admitting this Heideggerian analysis Feenberg accuses Heidegger of failing to appreciate the "resources internal to technological society capable of combating this ontological devastation".

Heidegger advocates a non-addicted proper use of technical devices in which we keep ourselves so free of them that we can let go of them at any time. He asks us to let technical devices enter our daily life, and at the same time to leave them outside. Feenberg, however, thinks that Heidegger's fatalism gives over too much human autonomy to the technical order. It is fetish of Heidegger to think that technology rigidifies into destiny. Here Feenberg fails to acknowledge that, for Heidegger, enframing is our destiny, but is not necessarily our fate. It is not the way we have to be rather it is our current cultural clearing. What we can draw from Feenberg at this point is his insistence against Heidegger that we need to recognise the historical malleability of technology. He thinks that Heidegger falls victim of fatalistic view of technology because he does not view modern technology from within. Feenberg reminds us that there are two sides to technology: the operator and the object. Where both operator and object are human beings, technical action is an exercise of power. Where, further, society is organised around technology, technological power is the principal form of power in the society. One-dimensionality results from the difficulty of criticizing this form of power in terms of traditional concepts of justice, freedom, equality, and so on. But the exercise of technical power evokes resistances of a new type immanent to the one-dimensional technical system. It is, here, that we can hope to find an explanation for internal tensions.^{xxv}

Drawing from Certeau, Feenberg remarks that technological systems impose technical management on human beings. Some manage, others are managed ; and these two positions represent the strategic and tactical standpoints respectively. Feenberg thinks Heidegger had criticised technology from the strategic standpoint; here control and efficiency and the

perception of the world in terms of affordances are stressed. However, Feenberg judges that the tactical side is richer since it is the everyday lifeworld of a modern society in which devices form a nearly total environment. In this environment, individuals identify and pursue meanings. Power has only marginal role to play, and where it imposes itself, resistance is temporary and limited in scope by the position of the individuals in the system.^{xxvi} But he quickly adds that, “insofar as masses of individuals are enrolled into technical systems, resistance will inevitably arise and can weigh on the future design and configuration of the system and their products.”^{xxvii}

Heidegger, he insists, sees technology exclusively as a system of control and overlooks its role as a lifeworld; and this is the source of his negative judgment on technology. Borrowing from Latour’s concept of the ‘delegation’ of norms to devices Feenberg affirms norms as intrinsic to technologies, as delegated to them, and hence as dimensions of everyday technical life. The fact that values are internalised as technical choices is seen in the improvement of technical devices.

4:2. Moral Responsibility for Technology: The Case of Political Decision

In the foregoing discussion we have tried to expose the position of Heidegger with respect to technology and the reactions of some of his critics. We agree in part with him already that the way to cope with the violating influence of technology on our environment and culture is to invest on our focal concerns. We recognise his view that the saving power of technology lies in its capacity to free us from having a fixed identity for the experience of ourselves as multiple identities disclosing multiple worlds. But with the insight from Feenberg’s historical interpretation of technology, we have stretched the argument to include recognition of the malleability of technology. From here it becomes obvious that if technology as “Enframing” or “device paradigm” had become a paradigm at all, then it is part of our responsibility to develop a counter paradigm. And given that every program has its anti-program, the thesis of technological determinism which leaves us folding our hands to contemplate technological products will have no place in a realistic understanding of technology which admits of historical malleability of technology. We, therefore, would like to return to Heidegger’s initial idea that there is a fundamental relationship between technology and poesis or other forms of art insofar as they are aspects of *techné*.

In Plato’s dialogue, *Protagoras (321c -323a)*, we read of the discussion between Socrates and Protagoras on how Zeus ordered Hermes to endow man with political virtues, justice and temperance, so as to save humanity from extinction. Before this, man had been endowed with other arts, such as that of the smith, what is best represented by modern technology, but these arts were not useful enough to save man. It was only the art for forming and maintaining a stable human community that has this saving power. In this connection it could be said here that if technology does not suffice to save the human race such that political art is needed, as the myth presented by Protagoras shows, then one could conclude that technology in our time is also incapable of providing solution to the danger it poses itself to man. It would require, therefore, recourse to another art, namely, political virtue to help man in taking moral decisions about the direction of technology for his own interest and safety.

Further more, since Heidegger remarked that “a higher essence than what is endangered” (man) may be needed for rescuing man from the menace of technology, it would not be wrong to conclude that that higher essence refers to the divine. The introduction of the divine implies the place of religion in the formulation of the right attitude to technology. This appeal to the gods is in line with the religious teaching and the mythical doctrine, as seen in *Protagoras*, that art (*techné*) is a gift from the divine. In other words, the best way to use the gift received from God may have to be spelt out in religious moral teaching. It means, therefore, that there is good reason to think that both politics and religion have

important contributions to make with regard to the direction of technology. It is in this way that a truly moral responsibility for technology will be taken by man. It is when technology is repositioned as a gift from God that it will be handled most responsibly by humans.

5. Recommendation

Since technology is at the service of the human person, nay, the human community, it has to be subordinated to that specialized art, politics, by which the survival of the human community is guaranteed. Moreover, a genuine sense of responsibility enlightened by consciousness of the place of the divine in the affairs of men gives fresh impetus to proper direction of technology for common good.

6. Conclusion

We would like to end this paper by pointing out that the danger posed by technology and the various levels of discussion on it have helped us to realise that no field of human knowledge can arrogate itself the right to have the last word on human problem. Experimental science would not be in a position to proffer solutions to moral and cultural problem that the result of its researches poses. It is required that while it addresses its proper field of competence, it should be sufficiently open to other disciplines for contributions to solutions to human problem. The reality of the situation of technology is such that instrumentalist approach to it permits its being used for well or for ill, but this would not warrant the claim that man's situation is fatal. Technology as a dimension of man's artistic potential remains susceptible to control through the deployment of other human potentials.

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