In his later thinking Heidegger wrote as one who knew destiny. He expresses himself freely on whatever he treats, as if he has been beyond the everyday secular world and enjoyed broad perspectives. This reaches not only from West to East, but from ancient times to the present, so as to seize the real through the eyes of his mind. This can be seen in his philosophizing about the essence of modern technology. Wherever technology holds sway in modern society and people strive to engage in technological pursuit, he finds the phenomenon of alienation. He tries also to pursue world destiny or providence through technology and maintains that man needs to keep observing destiny. This sounds like an old principal of the Chinese philosophy: through technique to Tao. This paper will provide a brief review of his view about technology, alienation and destiny.

TECHNOLOGY AS STANDING IN RESERVE

Heidegger searches deeply into this problem, questioning even the essence of essence. When talking about essence (Wesen), he maintains that: "The noun is derived from the verb wesen and is the same as to last or endure (wahren)." With the prefix an, anwesen means "to come to presence." In short, for Heidegger essence means enduring or being present. Thus, he could say, to question the essence of technology is to question how technology as a phenomenon is enduring and present. In his The Question Concerning Technology, sometimes, Heidegger uses the word an-wesen to denote essence. As originally, there was no hyphen between the prefix an (to, at, toward) and the root wesen, by it using the hyphen he intends to emphasize the meaning of "coming to presence".

Though Heidegger is often criticized as playing word tricks, here we shall not comment on whether this is legitimate or whether there is philological grounds for so tracing the meaning of essence. At any rate, it is obvious that his point is to focus not upon "what technology is", but rather to think how the phenomenon of technology comes to presence and endures, which is to grasp the essence of technology by its origin and procedure, i.e., a genetic manner.

Heidegger had developed this way of thinking much earlier in Being and Time where he points out that even in ontology which has universal beings or categories as its objects one should raise first of all the question of the meaning of Being. This is the so-called "ontological priority of the question of Being". There Heidegger brought
out the primordial meaning of Being, which long had been forgotten. To deal with beings on this ground is to uncover the various ways in which the beings reveal Being. Hence, Heidegger’s discussion of the essence of technology is a concrete use of "the ontological priority of the question of Being". Here the particular being is technology and to work out the essence of technology is to uncover the way in which technology reveals being.

Heidegger finds a support for his point of view from the origin of Greek culture. He writes that the Greek term for technology is *techné*, "the term not only for the activities and skills of the craftsman, but also for the fine arts. *Techné* is a matter of bringing-forth, *poiesis*; it is something *poietic*."4 "From earliest times until Plato, the word *techné* was linked with the term *epistéme*: both being names for knowing in the broadest sense: to be entirely at home in something, to understand and be expert in it. Such knowing provides an opening, and as such is a revealing."5 "Thus what is decisive in *techné* does not lie at all in making and manipulating, nor in using of means, but rather in the aforementioned revealing. As revealing, not as manufacturing, *techné* is a bringing-forth."6

The problem then is in what way is modern technology revealing? In response Heidegger distinguishes different levels to reach his conclusion step by step.

First, "The revealing that rules in modern technology is a challenging (Herausfordern)".7 Herausfordern is formed by a verb root *fordern* (which means to summon, to demand, to challenge) and two adverbial prefixes: *her-* (hither) and *aus-* (out). No single element can be omitted if we are to grasp the full meaning. Thus, according to Heidegger, as a mode of revealing, challenging means "to come forth by challenge or demand"; this is a matter of putting to nature the unreasonable demand that it supply energy that can be extracted and stored.8 This contrasts sharply with that of nature whose revealing is *physis*. "*Physis* is also the arising of something from itself, a bringing-forth or *poiesis*,"9 as with the blossoming or fading of a flower according to the season. But in contrast, if a flower is cultivated and preserved in a greenhouse artificially, this is an excessive demand upon nature, hence, is revealing by challenge. The revealing of the ancient technology is basically within the realm of natural presenting, as for instance, the energy of the wind is revealed by an old windmill which is left entirely to the wind and does not unlock energy from the wind in order to store it. In modern technology, however, a tract of land is challenged to bring forth coal and ore, which in turn is to yield energy. Even agriculture today is a mechanized food industry; the field has come under another kind of ordering.

Second, Heidegger points out, this challenging that brings forth the energy of nature is an expediting.10 That is, what is revealed is directed towards something else, i.e., toward the maximum yield at the minimum expense. For instance, digging coal is not only for uncovering it but for using the energy, which is challenged to turn the wheels that keep a factory running. This determines the basic characteristic of the things revealed in modern technology: "Everywhere everything is ordered to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for a further ordering. Whatever is ordered about in this way has its own standing, namely standing in reserve (Bestand)."11
Standing in reserve is a different kind of being from that of object. Where an object is revealed mainly in human knowing what is standing in reverse is called to come forth in challenging and expediting. Its determination is according to its being a key link in the interlocking beings revealed in modern technology. In the age of modern technology, almost everything is standing in reserve which is a more essential determination than that of object. An airliner standing on the runway when seen as a sheer object conceals what and how it is; only when it is put into the air is it revealed as an airliner. On the runway every one of its constituent parts is standing-reserve; they are on call and ready to take off. Heidegger maintains further that in the age of modern technology not only artificial products stand in reserve, but even nature changes and is no longer an object as previously.

For example, to build a hydropower station on the Rhine River is much different than building a wooden bridge there. In the former case, the Rhine River is put into the interlocking process of modern technology as a waterpower resource. The difference is obvious if compared with the poem of Holdering entitled "The Rhine River". The Rhine River as natural landscape may be unchangeable, but in what sense is it now a landscape when it is on call for inspection by a tour group sent there by the vacation industry? Heidegger concludes: "Whatever stands by in the sense of standing in reserve no longer stands over against us as object;"12 "the object disappears into the objectlessness of standing in reserve."13

On the one hand, everything in the context of the interlocking of modern technology comes forth as standing in reserve. On the other hand, modern technology is a process in which everything is ordered, set into the interlocking context as a key link. Just as from the unfolding of the mountains we can see a mountain range or chain (gebirg) and from a person’s feeling, style etc., his disposition (gemut), so from the context of interlocking shown by standing-reserve we can see its direction or trend, called by Heidegger "Enframing" (ge-stell). Enframing describes the mode of revealing which challenges, orders and determines the standing in reserve: "The essence of modern technology lies in Enframing."14 To understand this seemingly strange statement, we should recall that by "the essence of technology", he is concerned not with "what modern technology is," but with a process or phenomenon.

THE HUMAN SITUATION:

STANDING IN RESERVE AS ALIENATION

What is the situation of man in the age of modern technology. Generally speaking, the theory of alienation discloses a situation in which man betrays his own essence. Hegel takes man as a link in the absolute spirit so that the alienation of the man is the alienation of self consciousness.15 As Marxism grasps the essence of human being in the light of its social relationship, the alienation of man lies in productive activity giving birth to the theory of alienated labor.16 As man’s essence lies in its to be, in Being and Time alienation is seen as forgetting one’s own Being. Later when he philosophizes on the problem of technology, he maintains that man’s standing in
reserve is the essence of modern technology. This theory of alienation might be called alienated technology, though he never mentions the word alienation here.

*Being and Time* see man as distinctive in that the human understands its own Being. This makes man a *Dasein* in which both man and the entities encountered in the world are revealed. As man’s distinctive Being is called existence, man’s essence "lies in his existence." 18

This means that man is essentially his own possibility or ability to exist. Without such ability, one would no longer be human. Its loss means death: "Death, as possibility, leaves Dasein nothing to be `actualized’." 19 Hence alienation is not the thorough loss of possibility in death, but the phenomenon or existential reality called facticity.

This is the realization of possibility in daily life. As representing the essence of man, the possibility is called authenticity. It entails realization as facticity, but possibility is more than facticity: With possibility there is room for man to choose this or that way to live; it inclines one to realize oneself in some facticity. *Dasein*, however, already has been thrown into the world, so that possibility as realized in some facticity is itself concealed. As a result, in daily life one is judged as who he or she is, mainly by his position, achievement, etc.

Heidegger sees man as being for the most part in his inauthenticity, not only because he already is his facticity in the world, but also because for the most part he would choose his way "to be" not according to his own possibilities, but as merely following others. As each one lives in the world together with the others, in choosing one’s way one cannot but care about others or the mode of Being-with. Fearing being isolated, one chooses a way of existence like that of the others; the popular way of existence is a strong temptation in which each one would tranquilize himself. In this way the human becomes "They", but in so acting loses his or her own possibility to be. This is a universal phenomenon in daily life and one can hardly transcend this existentiality even when one thinks one is pursuing a character or personality of one’s own. Such unauthentic existentiality conceals *Dasein*'s possibility or essence. "When *Dasein* is tranquillized and `understands’ everything, it compares itself with everything, and drifts towards alienation (*Entfremdung*) in which its own most proper potentiality-for-Being is hidden. Falling into Being-in-the-world is not only tempting and tranquilizing, but at the same time alienating." 20

In these terms in the age of modern technology man obviously is in the situation of alienation for he does not decide the goal of modern technology. Superficially, man conceives, designs and expedites the development of modern technology, but more basically the essence of modern technology lies in a mode of revealing as *Enframing*; modern technology develops according to its own ordering or challenging. As Heidegger writes: "Man can indeed conceive, fashion, and carry through this or that in one way or another. But man does not control the unconcealment itself in which at any given time the real shows itself or withdraws." 21 As we will see later this "unconcealment" is destiny.

More importantly one not only can one not control the way of revealing, but is oneself the standing in reserve in the context of interlocking modern technology. It seems that the human begins the process of technology, but actually he is challenged or ordered
to exploit the energies of nature from the very beginning. "If man is challenged, ordered to do this, then does not man himself belong even more originally than nature to the standing in reserve?" Heidegger points out that the current talk about human resources or the supply of patients for a clinic is evidence of this. Another example is that while the forester who measures a field of timber to all appearances walks the same forest path in the same way as did his grandfather, today he is driven by the profit-making of the lumber industry. He is subordinated to the necessity for cellulose, which in turn is challenged by the need for paper to be delivered to newspapers and magazines. The latter set public opinion, so that a set configuration of opinion becomes available on demand. This case shows how today even people in a traditional way of life are put into the context of modern technology, not to mention people now entering new professions of modern technology.

Of course, there is some difference between man and other entities in this interlocking context. Man is standing in reserve, but not sheerly so, for man is the first to be challenged in the ordering of technology and indeed is also "a way of revealing". But again, "The unconcealment itself within which the order unfolds is never a human handwork."

As we have mentioned, according to Heidegger’s Being and Time alienation is a situation in which man forgets his own possibility to be, but tarries and dwells in his inauthenticity. And, since in modern technology man is standing in reserve he must be in a situation of alienation.

It is no exaggeration to say that in modern technology man is in a situation of alienation. In modern technology, man does find many advantages. It is a means to improve the living standard; it strengthens the power to control nature; and it is taken even as a way to freedom. But as Heidegger indicates, as man behaves according to the way which modern technology reveals, he blocks other possible ways of existence. Before man grasps technology, he already has been grasped by it. Can man be said to be fully free when he enters the essence of modern technology? Indeed the more modern technology develops, the more difficult it becomes for individuals to live an average life without technological means for lack of the necessary training. Is not then the individual’s existence threatened in an age when modern technology holds sway? The average age when individuals begin their technological training is moved ever earlier, due to the ever more complex context of technology. Even the creating of fine arts could be substituted by the technological practice; the slogan that the school should let the students develop in all dimensions reflects some degree of awareness of the prevalence of technology in modern society. However, when technology holds sway and the other possible ways of revealing are concealed we can hardly conceive what the other ways are.

TECHNOLOGY AND DESTINY: THE PROBLEM

People might look back to the past, but this obviously is unrealistic. What then can we do? Let us look further into Heidegger’s theory. Heidegger does not mention the word
alienation in his dealing with the essence of modern technology, for through modern technology he wants to trace something beyond human existence, namely, world destiny or providence.

It is surprising that a contemporary philosopher would talk about this, for usually one finds such a theme only in the ancient Eastern philosophies. However, Heidegger does talk about destiny in his later philosophy, since *The Letter on Humanism* (1945). The theme is his supreme aim appearing not only in his papers on technology, but also in those on art, language, poetry, thinking and so on. He sees revealing as the basic meaning or feature for both Being and destiny. As these can be substituted one for another, he formally preserves the Western philosophical tradition and can say that he never changed the theme of his philosophy. Further, his understanding of truth is based on the Greek word *aletheia*, which means unconceal or unconcealment, so that for Heidegger truth is on the same level as Being and destiny.

Given that the essence of modern technology lies in *Enframing* or revealing as challenging and ordering, till now we have not asked what it is that is revealing. In fact, it is Being or destiny, but he never indicates that these are a subject; rather they are presented as the process of revealing as such. "As a challenging-forth into ordering, *Enframing* is a way of revealing. Like every way of revealing it is an ordaining of destiny. Bringing-forth, *poiesis*, is also a destiny in this sense."25

Further, since the essence of modern technology is from destiny, Heidegger sees not first of all alienated man, but a danger within the destiny itself. Man’s situation can be uncovered only by working out the above danger. Unfortunately, destiny, like revealing as such, is not something revealed, but conceals itself even while unconcealing. We cannot describe destiny as easily as we describe something revealed, for it is rather mystical. However, destiny reveals itself in various ways, as does Being. When the essence of modern technology holds sway, it blocks other ways of revealing as challenging to ordering; it even conceals technology as a way of revealing, because here everything seems to be revealed not by some mystic power, but in being challenged-forth by a certain order. Thus, "Where *Enframing* holds sway, the regulating and securing of standing in reserve marks all. They no longer even allow their own fundamental characteristic of revealing to appear." "Thus the challenging *Enframing* conceals not only a former way of revealing or bringing-forth, but it conceals itself and with it that wherein unconcealment, e.g., truth, comes to pass."26 One might question this as we are getting more and more knowledge by means of technology, but Heidegger distinguishes correct from true, maintaining that in technology "nature presents itself as a calculable complex of the effects of forces" which "can indeed permit correct determinations", but "in the midst of all that is correct the true will withdraw."27

Based on the above consideration, Heidegger concludes "The destiny of revealing is in itself not just any danger, but danger as such."28 "Thus, where Enframing reigns, there is danger in the highest sense."29

Since technology has a relation with destiny, we must consider the situation of man in the age of technology. First of all, regarding the relationship between man and destiny Heidegger says that "Man is rather `thrown` from Being itself into the truth of Being, so that existing in this fashion he might guard the truth of Being, in order that beings
might appear in the light of Being as the beings they are. . . . Man is the shepherd of Being." 30 Further, he maintains that "Man becomes truly free only insofar as he belongs to the realm of destiny and so becomes one who listens and hears (Horender), and not one who is simply constrained to obey." 31 Freedom means openness in which the unconcealing happens; when man listens and hears in the realm of destiny, he is in openness.

Because *Enframing*, which is the essence of modern technology, lies in destiny, everything seems to be all right for man in the age of modern technology, for there man is in destiny. However, as challenging and ordering, *Enframing* blocks the other possible ways of revealing, especially when it holds sway; otherwise, as the guard of destiny, "man might be admitted more, sooner and ever more primally to the essence of that which is unconcealed and to its unconcealment, in order to experience as his essence his need of belonging to revealing." 32 Furthermore, when *Enframing* reigns, it blocks revealing as such, and hence does serious harm to man’s freedom.

In the light of the relationship between man and destiny, Heidegger points out another phenomenon which is also a danger to man, namely, that it is of the essence of modern technology that man seems to become the lord of the earth because here the revealing as such is blocked. As a result, man no longer holds that destiny is the source of the beings being unconcealed, but on the contrary the impression prevails that everything man encounters exists only as his own construct. This leads to a final delusion: "It seems as though man everywhere and always encounters only himself." 33 This is taken as a disadvantage by Heidegger for the true "advent of beings lies in the destiny of Being." 34

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**TECHNOLOGY AND DESTINY: THE RESPONSE**

People usually think it not bad for man to be the lord of the earth. Man is supposed to be the center of the world; if he be subjected to nature he is alienated or reified. Although people have seen from man’s controlling nature some unexpected results, such as pollution of the environment, loss of ecological balance, and so on, usually they think that these unexpected problems resulting from technology can also be resolved by means of technology. But, will rectified nature be the same one in which human beings and other living things primordially came to be? If not, why in practice could man not prevent those results beforehand; perhaps man is driven by some unknown force.

If a disadvantage is caused by man’s fault, such as alienation, it could be corrected or remedied by man’s own effort. But when a danger comes from destiny it could not be avoided merely by man. What man could do is not to give up technology, but to "keep watch over the unconcealment -- and with it, from the first, the concealment -- of all coming to presence in the earth." 35 That is to say, man should take technology not only as an instrument at hand, but as a way of revealing. It is a way for human beings to recover their own dignity: man is the shepherd of the destiny of Being.
The above ideas of Heidegger seem full of enigmas. It must be asked, first of all, whether there is something like destiny and what is meant by keeping watch over it. If we follow the logical way of thinking, we cannot verify its existence. It is very difficult to understand Heidegger’s idea here against the background of traditional Western philosophy.

Fortunately, as far as I can see, it is easier to understand Heidegger’s thinking on destiny in relation with the traditional Chinese philosophy. If compared to Tao in Chinese philosophy, although Tao is not known by seeing or touching, nor can it even be named, most Chinese philosophers have thought Tao to be both nature and human society. They maintain that one can experience the Tao through everything and every event, despite differing in details as to which is the correct way to reach the Tao. We can read from Yi Jing: "That which goes ascending is what is called Tao. That which goes descending is what is called a ‘vessel’." Thus, as Chinese philosophers understand, Tao is in the metaphysical realm; Tao is the supreme aim of doing philosophy.

That does not mean that one should do nothing but philosophy, but since Tao pervades the world one can reach or experience the Tao through action in the world. The man who has reached or experienced Tao is called a saint or a sage. Throughout the long history, Chinese intellectuals looked down upon technology, so the word technique should replace technology. But they did not deny that doing technique is also a way to experience the Tao. So, they maintain, "Go through technique to the Tao". This has the same meaning as Heidegger’s saying "To keep watch over the destiny of Being" in the essence of modern technology.

The comparison between the two philosophies helps us to understand Heidegger’s philosophy on the problem of technology. Much can be said on this comparison, but is beyond the purpose of this paper.

NOTES


5. *Ibid*.

8. Ibid.
9. Ibid., p. 10.
10. Ibid., p. 15.
11. Ibid., p. 17.
12. Ibid.
13. Ibid., p. 19.
15. See Hegel, *Phenomenology of Spirit*.
18. Ibid.
20. Ibid., p. 222.
22. Ibid.
23. Ibid.
24. Ibid.
26. Ibid., p. 27.
27. Ibid., p. 26.
28. Ibid.
29. Ibid., p. 28.

33. Ibid., p. 27.


35. QT, p. 32.


37. Yi Jing, Great Commentary, section one (my translation).

38. See Zhuang Tzu.