WHY PROMETHEUS SUFFERS:
TECHNOLOGY AND THE ECOLOGICAL CRISIS

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Prometheus: Such are the inventions
    I devised for mankind,
Yet have myself no cunning wherewith
    To rid me of my present suffering.¹

Human beings have been puzzling over the suffering which arises from technology at least since the middle of the fifth century B.C. Rather than blame technology, I believe that we should look to philosophy to determine why Prometheus suffers and what should be done to respond to the current ecological crisis.

The benefits brought by Prometheus' "gift of fire" are well known. Because of him humankind has the knowledge of how to build houses "turned to face the sun," the ability to understand "the risings of the stars and their settings," the power to calculate with number and to combine letters in order to "hold all things in memory." Through this cunning we can "roam the sea," "mix soothing remedies" for illness, and bring precious metals from beneath the earth. "Hear the sum of the whole matter in the compass of one brief word—every art [techne] possessed by man comes from Prometheus."²

Why, then, does Prometheus suffer? Aeschylus is wonderful in presenting Prometheus' agony, but he offers little help in understanding the real source of the problem. We are told that Prometheus defied Zeus, who had decided that the human race was a mistake. He was about to replace it with another.³ But is it wrong to defy a willful, tyrannical ruler? It is hard to believe that the Greeks, who at that time were developing the world's first democracy, would settle for that explanation. We need to dig deeper.

Plato tells the story somewhat differently. In his dialogue, Protagoras,
the character Protagoras expands upon the ancient myth. After the gods created mortal creatures, they assigned to Prometheus (whose name means "forethought") and his brother Epimetheus ("afterthought") the task of giving each mortal creature the equipment it would need to live well. Epimetheus persuaded Prometheus to let him do the job, and he invited Prometheus to examine his work when it was done. So, it was Epimetheus who gave speed to some animals and strength to others; the power of flight went to a few, whereas others received underground habitation; some ate from the trees, others roots, and "to a certain number for food he gave other creatures to devour." In this way each was given the power to preserve itself. Protagoras continues:

Epimetheus, being not so wise as he might be, heedlessly squandered his stock of properties on the brutes; he still had left unequipped the race of men, and was at a loss what to do with it. As he was casting about, Prometheus arrived to examine his distribution, and saw that whereas other creatures were fully and suitably provided, man was naked, unshod, unbedded, unarmed; and already the destined day was come whereon man like the rest should emerge from earth to light. Then Prometheus, in his perplexity as to what preservation he could devise for man, stole from Hephaestus and Athena wisdom in the arts together with fire—and he handed it there and then as a gift to man.

Now we come to the part Aeschylus left out. "Although man acquired in this way the wisdom of daily life, civic wisdom [politike techne] he had not, since this was in the possession of Zeus."

The point of all this is that Prometheus suffers because he stole part of what humans need to live, but the most important part—civic wisdom—was lacking. Without civic wisdom human beings are a menace to themselves, to other creatures, and to the earth itself. This has since become clear in the current ecological crisis. Prometheus, the forethinker, should have known better. Technological mastery, without civic wisdom, spells disaster. Zeus was ready to do away with the whole human race, but Prometheus, out of compassion, interfered and left us with a problem that is still unresolved. That is why he was
chained to a rock and an eagle was sent to feast daily upon his liver. Zeus then sent Hermes to give human beings "civic art" [politike techne] "to bring respect and right among men, to the end that there should be regulation of cities and friendly ties to draw them together." But here things become complicated.

Hermes asked Zeus whether he should distribute civic wisdom to all people or whether it should be distributed as the other arts were dealt—with one person possessing medical art and treating many ordinary people, one person being a carpenter for many, etc. The answer was that it should be distributed to all alike: "Let all have their share; for cities cannot be formed if only a few have a share of these as of other arts." Here is the voice of the new democracy speaking clearly and eloquently.

Protagoras contends both that there is civic virtue [arete] and that it can be taught to all people. But another of Plato's characters, Socrates, has a few questions to pose concerning this bold vision of civic virtue and how it is to be distributed. Virtue seems not to be one thing, certainly not one upon which all people agree, but many things (knowledge, temperance, justice, courage, holiness, etc.), each distinct from the other, sometimes even in conflict. Rather than being distributed equally, certain people possess some of these virtues and lack others. Some have courage and lack knowledge, some possess holiness but not justice, and still others have knowledge but not holiness. If civic virtue is to be taught to all, it would seem that a great teacher like Protagoras should know what virtue is, be able to define it, and be able to teach it. Subsequent discussion in Plato's dialogue makes it clear that Protagoras is unable to answer Socrates' objections, and therefore, is incapable of defining civic virtue and unable to teach it to all people.

But is there no hope? Is there no such thing as political wisdom? Is it impossible to articulate and teach civic virtue? These are philosophical questions, so I think it is philosophers who bear the responsibility for answering them. The ecological crisis has spawned a series of attempts to link ecology and values, to correct the wrong-headed approaches to ethical and political values which have failed so miserably in the modern world. But perhaps the source of the difficulty is not confined to the modern world. Perhaps it is Protagoras himself who
pointed us in the wrong direction when he claimed that "man is the measure of all things" and wrongly tried to locate value judgments in human consciousness. To say that "man is the measure of all things" can mean (1) the individual person, (2) the consensus of any given society, or (3) the human race as a whole. All of those interpretations lead to some form of relativism.¹¹

Perhaps what is needed is a new way of thinking about values, one which places human beings in proper perspective. To say with Immanuel Kant that people exist as ends, not as means only, does not entail that only people exist as ends in themselves. Even to acknowledge universal human values does not adequately account for other beings which might be ends in themselves. Tom Regan and Peter Singer argue for including other animals in the ethical community.¹² J. Baird Callicott calls for "nothing less than a sweeping philosophical overhaul—not just of ethics, but of the whole Western world view."¹³ He counts himself among a group of philosophers called "ecocentrist" who advocate "a shift in the locus of intrinsic value from individuals . . . to terrestrial nature—the ecosystem—as a whole."¹⁴

If humanism is taken as a form of "human chauvinism," as some have claimed,¹⁵ it offers a subjectivist or a relativist ethic (or both). We need to go beyond humanism. In 1948 Aldo Leopold wrote that

there is as yet no ethic dealing with man's relation to land and to the animals and plants which grow upon it. Land, like Odysseus' slave girls, is still property. The land-relation is still strictly economic, entailing privileges but not obligations.¹⁶

Following Leopold, Callicott seeks to establish "the land ethic" which contends that "a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."¹⁷

This approach, however, seems to commit the so-called "naturalistic fallacy" which G. E. Moore identified in Principia Ethica.¹⁸ Moore argues that there is a common confusion between what is good, which is not a natural object, and any natural object. For example, when utilitarians equate what is pleasurable,
which is a natural phenomenon, with what is good, that is a common instance of the naturalistic fallacy. If one seeks to ground ethics in nature, in what is, then it would seem that one is guilty of that fallacy.

Moore contends that good simply cannot be defined. Good is good. It is a fallacy to equate pleasure, advantage, power, money, or self-interest with good.

Callicott responds directly to this objection, deflecting Moore's formulation as "so specifically tied to Moore's ethics . . . as to be of little moment" and concentrates instead upon Hume's version of the Is/Ought dichotomy. Rather than opposing Hume, Callicott embraces his theory of moral sentiments (which he links also to the ethical theories of Adam Smith, Charles Darwin, and Edward O. Wilson). There is no Is/Ought dichotomy, he argues, because all sentient creatures can participate in some version of moral or social sentiment which evolves in higher mammals into what we commonly consider to be rational ethics but which, originally, is grounded in feeling. What "is" and what "ought to be" have the same source—moral sentiment. This, he insists, results in a "holistic" ethic which avoids the Is/Ought dichotomy.

But there is a fatal flaw in Callicott's approach; in attempting to avoid the Is/Ought dichotomy, he creates an equally pernicious schism between feeling (sentiment) and reason, removing any hope that rational beings (such as humans) who do make choices on the basis of reason, can find genuine unity and harmony with creatures which lack reason. Once reason overrides feeling, takes priority over feeling, as it often does, any attempt to ground values in feeling fails. No matter how much pleasure I derive from unjust acts, no matter how "good" they make me feel, they should be avoided.

Callicott is right about one thing; it is important to establish a holistic approach to values so that human beings, other animals, and the land itself are incorporated into a vision of reality which makes it possible to respond intelligently to the ecological crisis (as well as a host of other value questions). Where are we to look for such a vision? Callicott suggests that we return to Plato for guidance, contending that "ethical holism" is supported by Plato's moral and
social philosophy. But his use of Plato's philosophy is misguided. He applauds Plato's "complete indifference" to the pain and suffering of individual human beings, praising Socrates' response to Ateimantus' complaint at the beginning of Book IV of The Republic that his proposed society ignores human happiness. It is the well-being of the community as a whole, not that of any person or special class, at which his ideal community aims. In light of what he takes to be the similarities between Plato's scheme and Leopold's, Callicott concludes that "the land ethic . . . is somewhat foreign to modern systems of ethical philosophy, but perfectly familiar in the broader context of classical Western ethical philosophy."

Unfortunately, Callicott misreads Plato on this crucial issue. Rather than proposing an ideal society of the sort Callicott outlines, Plato uses his characters to elaborate and then demolish that vision. Rather than offering a single theory of "the good life," in The Republic, Plato offers three separate, mutually contradictory concepts of the polis. The second, a society of the "love of luxury and wealth," is the one Callicott confuses with Plato's positive case. It is just the opposite, a society which Plato rejects. What emerges from this way of reading The Republic (and Plato's other dialogues as well) is a vision of ethics which is grounded in being and goodness, one far superior to that of modern philosophers who separate ethics from ontology and then seek to pull values out of a magic hat. To ground ethics in being does not commit the "naturalistic fallacy," because there is no such fallacy. This becomes clear when Moore explains what he means in "philosophic terminology." He says that "propositions about the good are all of them synthetic and never analytic." The naturalistic fallacy could exist only if we were to accept the analytic/synthetic distinction. I have argued elsewhere that the arguments against the analytic/synthetic distinction are convincing and that it should be abandoned once and for all. Plato embraced no dualism between "is" and "ought." On the contrary, the ontology which is developed in The Republic (and a variety of other dialogues) soundly rejects any such bifurcation. Knowing cannot be separated either from reason or from experience. Knowing, reasoning, and experiencing are grounded in being and goodness.

Socrates does not provide a positive and unified concept of civic virtue in the Protagoras. His task there is to show that Protagoras lacked such a vision
and, as a result, that his interpretation of the Prometheus myth was incoherent. Socrates points out at the end of the dialogue that he and Protagoras have traded places. Protagoras began by claiming that virtue can be taught, but his subsequent answers to Socrates' questions led him to the view that it cannot be taught—"for if virtue were anything else than knowledge, as Protagoras tried to make out, obviously it would not be teachable." Soctates, after having said at first that virtue cannot be taught, changes his mind and seeks "to prove that all things are knowledge—justice, temperance, and courage—which is the best way to make virtue appear teachable." Socrates concludes that dialogue by returning to the myth. He says:

I like the Prometheus of your fable better than the Epimetheus; for he is of use to me, and I take Promethean thought continually for my own life when I am occupied with all these questions.

The conversation with Protagoras ends at that point, but not before Socrates suggests a way out of our plight. Promethean thought serves as Socrates' guide, and I think it can do the same for us.

But what, pray tell, is "Promethean thought" as Socrates now uses the term? We can begin by saying what it is not:

1. It is not "Epimethean thought." It is forethought rather than afterthought. For example our thinking about the ecological crisis has tended to be "afterthought," especially when it comes to putting our thought into action.

2. It is not technology separated from civic wisdom (politeke techne). Contemporary human beings have acquired the bad habit of thinking either that there is no such thing as knowledge or that it is separated into compartments which are sealed off from each other. The techne of carpentry allows us to build houses, but then we thoughtlessly neglect to "turn them toward the sun," making it necessary to heat them with oil. We have the know-how to construct passive solar heat, but we lack the civic wisdom to incorporate it into our communities.

3. It is not manifested in rhetoric, the pseudo-art practiced by an "orator"
[rhetor] such as Protagoras. On the topic of teaching civic virtue, the character Socrates in Plato's Phaedrus points out that the real issue is whether the person speaking knows the difference between good and evil and is able to promote the good rather than the evil. Too often the political speaker does not know the difference but nevertheless attempts to "persuade the state which is equally ignorant... by praising evil under the name of good... and having studied the opinions of the multitude persuades them to do evil instead of good."

4. It is not analytic, synthetic, a priori, a posteriori, synthetic a priori, or any other permutation of these terms. Those distinctions emerged long after Plato's time, and they lead to a serious distortion of Plato's philosophy when we utilize them in interpreting his dialogues. This practice is responsible for many of the misleading interpretations of Plato's dialogues which pervade the modern world. For example, to say that the "forms" [ta eide] which are discussed in many of the dialogues are "a priori" is an anachronism leading many readers of Plato to think he was an epistemological dualist, a follower of René Descartes. Plato was not a follower of Descartes.

5. Contrary to Callicott, it is not feeling or sentiment separated from reason.39 Callicott formulates his argument against the rationality of ethics as follows:

Reason appears to be a delicate, variable, and recently emerged faculty. It cannot, under any circumstances, be supposed to have evolved in the absence of complex linguistic capabilities which depend, in turn, for their evolution upon a highly developed social matrix. But we cannot have become social beings unless we assumed limitations on freedom of action in the struggle for existence. Hence we must have become ethical before we became rational.40

It is true that the explicit use of reason by human beings is a relatively late development in the evolutionary process, but that does not mean ethics must rest upon some more primitive impulse. Callicott's argument is based upon the assumption that ethical action consists largely of imposing "limitations on freedom
of action in the struggle for existence." I question that assumption, along with the negative definition of freedom and the narrow concept of reason it entails. For human beings to be social, to live harmoniously with others, requires civic wisdom (one of the manifestations of reason). But this does not imply that other animals are irrational just because they lack "complex linguistic abilities." Promethean thinking, as Plato developed it throughout his dialogues, entails a much broader conception of reason than this, one which pervades being itself.

6. It is not the private property of professional philosophers. It belongs to all "lovers of wisdom."

This brings us to Plato's positive view of rationality. Full development of that notion requires a much longer treatment than is possible in this paper, but I shall characterize it briefly. In direct opposition to the rhetoric of Sophists such as Protagoras, Thrasy machus, Lysias, and Gorgias, Socrates cites "two principles, the essence of which it would be gratifying to learn, if art [techne] could teach it." What are these principles? The Greek terms are diairesis and sunagoge, which mean, respectively, "dividing" and "bringing together." Here we must be careful not to view Plato's meaning through lenses which have been polished by analytic philosophers in the twentieth century. Here is how Socrates uses these terms:

Now I myself, Phaedrus, am a lover of these processes of division and bringing together, as aids to speech and thought; and if I think any other man is able to see things that can naturally be collected into one and divided into many, him I follow after and "walk in his footsteps as if he were a god." And whether the name I give to those who can do this is right or wrong, God knows, but I have called them hitherto dialecticians.

The term "Promethean thinking," as Socrates used it in the Protagoras, is another name for "dialectic" as it is used in Phaedrus, The Republic, and a variety of other dialogues. It is the process which Socrates in the Protagoras demonstrated clearly that Protagoras could not employ. That explains why Protagoras could not properly respond to Socrates' questions about the nature of virtue, especially
about civic virtue and how it relates to other virtues (such as courage, temperance, justice, holiness, etc.).

What is most important about the dialectical method is that it is used to think about the nature of things, about being itself (in contrast to the Sophists who speak only about appearances). In "dividing by classes," we should search for "where the natural joints are, and not try to break any part, after the manner of a bad carver." Such metaphors about the natural forms of things abound in Socrates' explication of the dialectical process in Phaedrus. The art of medicine is one of those given to human beings by Prometheus. This is a genuine art, not the sort of pseudo-art favored by the Sophists. We must follow what is natural, in medicine, in poetry, and in civic virtue. The way this is achieved is through "discussion and high speculation about nature." Pericles is cited as the "most perfect orator in existence" because he supplemented his great natural abilities through conversation with Anaxagoras who "taught him the nature of mind and the lack of mind." Socrates constructs an analogy between the art of healing and the art of genuine rhetoric. "In both cases you must analyze a nature, in one that of the body and in the other that of the soul," the goal being through the one art to promote health and strength in the body by prescribing medicine and diet and through proper discussion to promote virtue in the soul. This is the "art of speaking" which can properly be called an art [techne]. This is the art which Socrates practices. Its highest form of development so far is to be found in the dialogues of Plato. It is there that we find Socrates trying to expand the arts brought by Prometheus (medicine, astronomy, carpentry, etc.) to include politike techne, the art required for human beings who naturally live in cities. That is the art nurtured by dialectic. It is through dialectic, through genuine philosophy, that civic virtue can be made available to mankind.

Zeus therefore, fearing the total destruction of our race, sent Hermes to impart to men the qualities of respect for others and a sense of justice, so as to bring order into our cities and create a bond of friendship and union.

Hermes asked Zeus in what manner he was to bestow these gifts on men. "Shall I distribute them as the arts were distributed—that is, on the principle that one trained doctor
suffices for many laymen, and so with the other experts? Shall I distribute justice and respect for their fellows in this way, or to all alike?"

"To all," said Zeus. "Let all have their share. There could never be cities if only a few shared in these virtues, as in the arts. Moreover, you must lay it down as my law that if anyone is incapable of acquiring his share of these two virtues he shall be put to death as a plague to the city."

NOTES

2. Ibid., pp. 504ff.
3. Ibid., pp. 234ff.
5. Ibid., 321b.
6. Ibid., 321c-d.
7. Ibid., 321e.
8. Ibid., 322d.
9. Ibid.
10. Ibid., 330b ff.
11. The first interpretation is the most common. Aristotle, for example, says that Protagoras "meant simply that each individual's impressions are positively true" (Aristotle, Metaphysics, trans. Hugh Tredennick [Cambridge, Mass.: Harvard University Press, 1957], 1106b13). Plato, in the Theaetetus, has his character Socrates attribute to Protagoras the second interpretation: "I claim that whatever seems right and honorable to a state is really right and honorable to it, so long as it believes it to be so" (Plato, Theaetetus, trans. Harold North Fowler [Cambridge, Mass.: Harvard University Press, 1967], 167c). The third interpretation is the one implied by those who object to "human chauvinism" in values. I think that Socrates already proposes this alternative implicitly when
he says that he does not see why Protagoras "does not say in the beginning of his book Truth that a pig or a dog-faced baboon or some still stranger creature of those that have sensations is the measure of all things" (ibid., 161c).


14. Kant himself expanded the notion of intrinsic value far beyond the ecosystem to include (a) persons, (b) "every rational nature generally," and (c) "the kingdom of ends" (Cf. Immanuel Kant, Grounding for the Metaphysics of Morals, trans. James W. Ellington [Indianapolis: Hackett, 1981], pp. 429-434). These approaches avoid the problem of "man as the measure," but they create new forms of relativism. Why stop with terrestrial nature? Might there not exist beings on other planets who should be counted as ends in themselves? Why are persons intrinsically valuable and not things? I find it difficult to deny that Rembrandt self-portraits (among other things) lack intrinsic value. They do have a price, so, by Kant's logic, they lack dignity and intrinsic value (ibid., pp. 434).

A similar difficulty emerges if we only accord intrinsic value to "rational nature," but then we need to defend the intrinsic value of rational natures as opposed to nonrational natures, and we must also find a way to distinguish the rational from the nonrational (a problem which has become even more challenging in this age of cybernetics). And, if there is a "kingdom of ends," then it would seem there must also be a "kingdom of means," and the dualism thus created needs defense not only on ontological but also on axiological grounds. Ecocentrists and Kantians may wish to wrestle with these and related difficulties, but I favor a different approach which will be developed below.


19. Ibid., p. 13. Consider also the following discussion in Chapter II: "The theories I propose to discuss may be divided into two groups. The naturalistic fallacy always implies that when we think 'This is good,' what we are thinking is that the thing in question bears a definite relation to some one other thing. But this one thing by reference to what is good is defined, may be either what I call a natural object—something of which the existence is admittedly an object of experience—or else it may be an object which is only inferred to exist in a supersensible real world... It should be observed that the fallacy, by reference to which I define 'Metaphysical Ethics,' is the same in kind, and I give it but one name, the naturalistic fallacy" (ibid., pp. 38-39).

20. "If I am asked 'What is good' my answer is that good is good, and that is the end of the matter. Or if I am asked 'How is good to be defined?' my answer is that it cannot be defined, and that is all I have to say about it" (ibid., p. 6).

21. Callicott, p. 120.

22. Ibid., Chapter 7.

23. Ibid., pp. 78ff.


26. "Indeed, two of the same analogies figuring in the conceptual foundations of the Leopold land ethic appear in Plato's value theory. This wording is meant to reflect Friedrich Rapp's observation that people power presupposes participatory democracy as its instrument. From the ecological perspective, according to Leopold, land is like an organic body or like a human society. According to Plato, body, soul, and society have similar structures and corresponding virtues. The goodness of each is a function of its structure or organization and the relative value of the parts or constituents of each is calculated according to the contribution made to the integrity, stability, and beauty of each whole" (Ibid., p. 28).
27. Callicott cites what he wrongly thinks are Plato's proposals in The Republic, e.g., for "requiring infanticide for a child whose only offense was being born without the sanction of the state, making presents to the enemy of guardians who allow themselves to be captured alive in combat, and radically restricting the practice of medicine to the dressing of wounds and the curing of seasonal maladies on the principle that the infirm and chronically ill not only lead miserable lives but contribute nothing to the good of the polity" (ibid., pp. 28-29).

28. Ibid., p. 29.

29. Ibid.

30. I agree with Joseph Uemura and Duane Cady who interpret The Republic as anti-utopian rather than as offering a blueprint for a totalitarian society. Uemura states this thesis clearly, distinctly, and bluntly: "Plato meant to cure us of utopias, not to create one" (Six Dialogues of Plato: An Interpretation [Denver, Colorado: Andy Cleary, Publisher, 1991], p. 87). Also see Duane Cady, "Individual Fulfillment [Not Social Engineering]," in Idealistic Studies, vol. XIII, no. 3 (September, 1983).

31. I first encountered this argument approximately 25 years ago in a paper by Joseph Uemura called "Plato's Republic: An Antidote to Any Future Utopia." In a piece published in 1988, Duskin Clay also identifies three cities in The Republic: (1) the healthy city, (2) the city that "is the product of the appetite for gain and self-aggrandizement," and (3) "the Kallipolis, the city of the Republic" (Duskin Clay, "Reading the Republic," in Platonic Writings, Platonic Readings, Charles L. Griswold, Jr., ed. [New York: Routledge, Chapman & Hall, 1988], p. 25.)

32. Uemura, Six Dialogues of Plato, p. 92.

33. Ibid., p. 93.

34. Moore, p. 7.


36. Plato, Protagoras, 361b.

37. Ibid.

38. Ibid., 361d.
39. "Good and evil are not, as we should say today, objective qualities; they are, in Hume's terms, neither 'matters of fact' nor 'real relations' among objects. We find them rather in 'our own breast'; they are feelings of approbation or disapprobation, warm approval or repugnance, which spontaneously arise in us upon the contemplation of some action or object" (Callicott, p. 120).
40. Ibid., pp. 78-79.
41. Plato, Phaedrus, 265d.
42. Ibid., 266b.
43. The Republic, especially 511b and 533c-d.
44. Plato, Phaedrus, 265e.
45. Cf. ibid., 268a-b.
46. Ibid., 269e-270b.
47. Ibid., 269e.
48. Ibid., 270b.