

THE PROMETHEAN TECHNOLOGY
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Before we leave the realm of Greek tragedy too far behind, in our two-thousand-year leap to Shakespeare, we might take a look at a drama that many authorities consider the earliest surviving tragedy, a work by Aeschylus--*Prometheus Bound*. This play has a god as its protagonist, not a mortal: but it demonstrates, perhaps better than any work we know, the way in which tragic suffering *originates*--and shows it to be of divine and not merely human origin. The conflict it represents seems to be built into the heart of existence.

You remember what it's about: Zeus, a relatively new ruler on Mt. Olympus, disgusted with the condition of humanity, plans to wipe the race out and begin anew. Prometheus, concerned for those "creatures of a day," as the gods scornfully call mortals, steals fire from Olympus and brings it to these mortals. He also teaches them *techne*, the useful arts that promote the development of culture, offering them "blind hopes," the ability to ignore the inevitability of death as they use their imaginations to create works that will outlive them. This is of course how human culture develops: in the passing on of

knowledge from one generation to the next. For his crime, Prometheus is staked out on a rocky cliff at the edge of the earth, where his lamentations bring him several visitors--among them, Io, the lovely young maiden, loved by Zeus, changed by Hera into a heifer and stung by gadflies, The final visitor, Hermes, comes as Zeus' henchman, blustering and threatening. Prometheus is adamant; he will not yield; and in his agony, recalls a prophecy that he had forgotten: there will be a time when Zeus will seek his aid; the two will come together in mutual amity. In the meantime, Prometheus will be consigned to Tartarus, the dark region under the earth, his liver daily devoured by Zeus' eagles and nightly regenerated. This agony is to endure forever, unless a hero can deliver him and a god take his place.

Now look back a moment: The coming of the reign of Zeus represents the coming of Mind (nous) to the universe. Not blind force but thought and justice are to rule under his aegis. Prometheus is not an Olympian, but he has sided with Zeus in the great rebellion against Cronos, persuading the other Titans to join him in the battle; so Zeus owes him one. Prometheus is the cousin of Zeus and Hera--their fathers were brothers. But Zeus's mother was also a Titan whereas Prometheus's mother, according to Hesiod, was only an

Oceanid--a lesser goddess, daughter of Oceanus, whom we meet at Prometheus's hideaway. Aeschylus, however, has Prometheus declare that his mother is Themis, one of the incarnations of the earth-goddess. In any event, Prometheus is in lineage fully as royal as Zeus. And Zeus is in his debt. Yet for mankind's sake, Prometheus has exceeded his authority, and Zeus must punish him.

Aeschylus has taken the old myth, hundreds of years old by the time he encounters it and made it into a tragic drama. We have evidence that the surviving play, *Prometheus Bound*, is part of a trilogy; the names of the other two plays are *Prometheus the Firebringer* and *Prometheus Unbound*. It seems to some of us that the drama we possess, *Prometheus Bound*, is the middle play, depicting the suffering that occurs after the ambiguously terrible deed has been done. The *Prometheus the Firebringer* would thus be the first of the series; *Prometheus Unbound* would be the last.

By the time the play begins, Prometheus has been sentenced by Zeus, and is being carried to the ends of the earth (when the earth was thought to have ends, edges from which one might fall off); Everything we see or hear about Zeus in this play makes him seem like a cruel tyrant. But we have to remember that

he is not himself present; we do not hear his actual words. He is represented only by his henchmen and his toadies. Nevertheless the impression we gain of him is not very favorable. We have to try to see into the insoluble *paradox of being* that Aeschylus embodies in a struggle between these two related gods.

Zeus-the-intellect is moving toward a realm of justice; but, as many voices in Prometheus Bound declare, he is a new god: and new gods tend to be tyrants. Yet his reign is of crucial importance in the working out of the destiny of the cosmos: for he possesses not only *dike*, but *nous*, the clear, limpid intelligence that recognizes forms. Karl Kerényi (in *The Religion of the Greeks and Romans*) notes: "With Zeus, the *Nous* shows itself pure and perfect . . . it discovers everything without seeking, indeed everything discovers itself to it . . . the object of *nous* is what really is." Zeus's mind, it seems, is a mirror of reality. The Greeks considered him the one who knows the pattern of things, who recognizes the right order. To go against him, then, as Prometheus did--to steal from Hephaestus's forge some of Zeus's divine fire--is a huge offense--even if it's done for a good cause.

There are many possible mappings of this

primordial conflict between gods; it is a conflict between *physis* and *nomos*, between nature and law, freedom and restraint, creativity and system. I want to set up Zeus and Prometheus (somewhat whimsically, of course) as representatives of two approaches to educational policy. Zeus, we shall say, is the patron of heroes. In the *Iliad*, for instance, he sits upon Mt. Ida looking down on the battle between Greeks and Trojans, admiring the valiant on both sides, controlling the flow of battle but not interfering with what fate has decreed. He grieves deeply that his own son Sarpedon must die but does not intervene. Zeus is the god of history, knowing that his role is to see that what is to come to pass *does* come to pass. His numerous infidelities to Hera could be defended by maintaining that he is following Destiny, or Fate, in the production of heroes (half-human, half-divine). And he stays busy at it.

Now, how would Zeus set up an educational scheme? Would he have an honors section, for instance, where the brightest could get the best education, then maybe set up a couple of educational tracks below the honors class where the difficulty of the material is adjusted to the level of the students? Would he have the students competing against each other in academic decathlons? set up an honor

roll?

How would Prometheus do on the same questions? His blood is as royal as Zeus': he is son of a Titan, accorded the respect due a titan and is indeed referred throughout the play as the Titan. He is great-hearted, loves to help, and teaches the practical arts to the human race. He instructs them in language, numbers, crafts of all sorts, how to apply herbs to heal wounds and cure sickness. "I taught them all arts," he will tell you--all techne'.

I am supposing you will join me in considering Zeus to be an elitist, seeking excellence--*arete* is the Greek word for it--in all things. Prometheus is a humanitarian, seeking to better the lot of ordinary people, to give them the ability to raise their station. Zeus is for individual intellect, Prometheus for communally shared creative thinking. If we are going to learn anything from these symbolic presences we will need to set up analogies: let's make Zeus the administrator, Prometheus the teacher. We can then imagine how each would act.

Zeus, the administrator, would set up standards and require accountability; and since he would not suppose the teacher had enough judgement to tell good from bad, would insist that students be given objective tests

made up and graded by some faceless bureau. Out would come a scroll of names and numbers that puts every student in the right place from brilliant to stupid. His way would give us certified failures and certified ordinary minds, as well as star performers. Actually, if we read the results of these tests rightly, however, there would be only one winner--the highest scorer; everyone else would be to some degree a failure.

Prometheus, the teacher, sits in the corner in pain, watching the poor little waif he had tenderly worked with being informed that he has scored low and is indeed virtually worthless. Well, that's the way life is, the conventional wisdom goes; you've got to learn to fail just as much as you learn to win. But Prometheus decides to do something about it. He sneaks into the sacred bureau and steals a copy of the next test. Now you make up the script from here in. (The way I have it, three of the dumbest students turn in perfect papers, thereby blowing the whole scheme. Prometheus beats his head and says, "I taught them everything, but I forgot to teach them how to cheat.")

I'm perhaps departing overmuch from the classical tone of these myths; but I wanted you to see that the same forces that drive the tragedy of *Prometheus Bound* drive us still

in our day--and are particularly relevant in our classrooms. If the divine fire Prometheus steals from Mt. Olympus is intellect--the capacity to know and distinguish and reflect, then is it a loss to the universe if he gives it to mortals and it spreads? Should the divine fire be for all, or should it be kept carefully guarded for the few worthies? Fire is a good symbol for the ability to know; for fire reaches out and catches objects, grows in scope, becomes larger and more formidable the more it spreads, including all things in its power. Contained in the sacred arena on Mt. Olympus, it was carefully guarded; Hephaestus made divine things with it on his forge; Zeus' mind comprehended it; he had his thunderbolts; Zeus alone had *dike*' (a just, accurate view of things). He alone could tell the right measure, the right proportion. Should so sacred a gift be shared with lowly mortals? What Prometheus does, then, is admirable/dishonorable, bold/cowardly; rebellious/deeply pious--just as anyone who makes something high available to anyone who will take it is both destroyer and preserver. Presented to us in Aeschylus' drama is the fundamental paradox of human existence. And it delineates a problem not likely to be solved until the reconciliation that Prometheus foresees comes about--in the far-off future, when Prometheus is freed from his suffering..

Now the value of coming to understand a myth, which we can confront only through *poiesis*--a great poet has to give form to it before we can apprehend its significance--is that it transforms our understanding. What do we mean by that statement? This Promethean story, dramatized in Aeschylus' work of art, evokes a myth and in so doing can solve a problem for us that we cannot solve by logic, induction, statistics, or any kind of philosophic or mathematical stratagem. It can look into the far future and see Zeus and Prometheus--law and freedom--reconciled. It can follow the suffering Io on her way to Egypt and foresee that there by a touch Zeus will engender within her Epaphos, the dark-skinned Ethiopian, whose lineage in thirteen generations will produce the acclaimed hero Herakles, who will free Prometheus. In some versions of the story, Chiron, the satyr who was Herakles' teacher, takes Prometheus' place. Is it not significant that it is a teacher who takes on the pain?--a former pupil who is the hero? Prometheus will be unbound--through the action of education; he and Zeus will be reconciled; justice and mercy, as Isaiah tells us, will kiss each other; the apparently irreconcilable opposites will be harmonized--as Prometheus' prophetic mind has foretold:

Zeus, I know, is ruthless,

And keeps law within his own will.
Nevertheless his temper shall in
time turn mild,
When my words come true and he is
broken.
Then at last he will calm his
merciless anger,
And ask for a pact of friendship
with me;
And I shall welcome him.

We cannot say how this accord will come about: it is impossible to foresee factually in what exact way quality and quantity, *aristos* and *demos* (aristocrat and democrat) may come together. But mythically we can see it happening. The Promethean gifts, which have been operating on their own, without either the wise adjurations of Zeus or the benevolent encouragement of Prometheus (for he has been bound all this time) will have both principles guiding them. I am proposing that what the myth foretells is not an apocalyptic vision, but a truly prophetic long look into human history. And I have come to think that in the post-technological age that you will see in your lifetime, the human heart and the human community will have its opportunity to be whole.

Now this is the great value of myth in our lives: whereas factual history tells us only

of injuries and defeats; only of things being fragmented and divided from each other, myths speak of wholeness, of future harmony, of a good that directs the flow of events in the cosmos. And in showing us how parallel lines can meet--and even in human history, not just in a beyond--myths make it *possible* for them to do so. Many authorities have emphasized the importance of a mythic awareness of the past--myths recover for us that sense of the "olden times," "in those days," etc. But few have remarked their recovering for us a future.

Because of their narrative structure, myths operate upon our imaginations differently from history, which seems to have no narrative, but to be a mere sequence of events. When we think historically, we tend to think in terms of determinism: that is, it seems that a trend once started will go on to its terrifying conclusion, of itself, intensifying its momentum as it goes--finally, it seems, taking down with it everything of value. History has to be redeemed by myth. For myths speak of deliverance and reconciliation; they tell us of sudden changes, unlikely rescues.

And so it is with the myth of Prometheus: in the far-off future (which we can interpret as NOW) a deliverer will come and will unbind

the suffering god. Then he can be with his people again, can guide them in their techne--and even more: Zeus, the arrogant, Zeus the aristocrat (who once thought of wiping out the human race) will be reconciled to Prometheus; he will have learned wisdom and mercy. He too will help mankind in its use of the technical arts and will direct humanity to more benevolent ends.

This is a mythic paradigm--like a fairy tale if you wish; but by personifying ideas and tendencies it shows us how opposed and intransigent attitudes may be softened--(by feelings and patterns of the heart). It thus instructs the imagination and helps *actually bring about* the reconciliation of which it speaks. Remember, in your imagination you are in charge of time, not time of you. A society unaware of mythical thinking has no such "blind hopes." It must watch, helpless, as grim necessities run their dreadful course.

Throughout our culture there is a growing confidence that *if we can conceive of something of benefit to society, we can also conceive of whatever technology is needed to bring it about.* And that conviction, I propose, is the identifying mark of what we now call technology. Our present epoch, as many of us know, is a transition time between two ages: the age we are entering will be,

I should like to maintain, a *post-technological age*, That is, it will be an epoch that technology brings about; but technology itself will play only a supporting, not a primary role.

But *is* this present era of such emphasis upon technological process really an intermediary stage? When I speak of the post-technological age, I do not mean we are likely to pass beyond the uses of technology but rather that we may reach a stage in which technology is fully exploited so that the technological way of thinking becomes the norm--becomes natural to us. (That will imply non-competitiveness, communality, the end of "jobs" as we know them, a more relaxed, intuitive way of life--all of which of course needs more discussion and more qualifying. My prediction is that it will take some twenty to thirty years more to reach that stage--just about the time that present high-school and college students will be taking charge. They are the ones who must make the crucial choices that determine the direction history will take.

With technology a kind of education is needed that is different from the utilitarian education which serviced crafts first and then automation--and serviced, too, the economy that supported that way of life. That economy was product-oriented with identifiable units

of goods and services. A new sort of economy will have to grow up to support and encourage the development made possible by technology, one that has aspects of a gift society and a noncompetitive market. (Poets, artists, philosophers, teachers, priests and ministers already live in a gift society: they are not paid for their work but are instead provided a living. They "give" their work to others.)

In the post-technological world, devices such as licensing, patents, and copyrights are likely to prove unmanageable or too restrictive for American ideals. Can someone own an idea? Right now a legal battle is going on about copyrights. If the present laws were strictly enforced it would pretty much kill internet and doom the information highway. We face a different world out there. Is socialized medicine exploring the way the economy will have to move when the product is generalized health, not specialized cures? We really do not want to forget everything Adam Smith taught us, the automatic adjustment toward the greatest good that the free market accomplished. Can the remarkable institution of capitalism that promoted widespread wealth based on real property and financed by future profits be reconstituted to promote "intellectual property " for the benefit of all? The education necessary to imagine and

establish this new kind of society is one that has as its end the development of the whole person: what has always been called a *liberal education*: of the sort that humanizes people and enables them to take part for life in that noblest of occupations, learning.

I have been speaking of the post-technological age that will begin thirty to forty years from now, when technology has accomplished its major expansion into most of the world's activities. The infrastructure of the global village will be fairly well underway by then and nationalism will continue to fade more or less imperceptibly into global combines. The political structure will still be in the process of adjusting itself to a global economy. How smoothly and justly these adjustments will come about depends on the *character and conscience* of the present crop of students. The technical developments needed will be handled by a diminishing corps of specialists. An even smaller set of visionaries will point the way for world society to move. *The questionable component of the whole matrix is the large body of ordinary people.* How this generation is educated will determine whether the grand experiment in democracy rises to its hoped-for triumph or shatters into failure.

For a long time we have been chiefly concerned with the education of what we have called "the best and brightest." This exclusive concern will change, is already changing. There is a turn toward community, toward compassion, toward concern. The human person is beginning to be conceived of as more important than abstract standards. We can hardly imagine a world without competition; we can hardly imagine a world in which people are not measured and evaluated. And yet, we are seeing such a new development under our very noses. Computers now are operated by all sorts of people, all manner of men and women, some bright, some slow. But all can master word processing. There is a vast sea of potential technological realizations out there, ready to support any one who falls into it---and is willing to swim a few strokes.

Just as measurable "intelligence" is not important in a community gathering, where cooking and folk arts, song and dance, story-telling and games are the focus of attention; just as comparative intelligence is not even thought about at a football game; so in the coming age, all human beings will be thought to qualify; and in the larger purposes being served, where none can conquer, all will be included in the festival. Some will be better at one thing, others at another.

But, as in a family, all will participate and all will be valued.

What Prometheus brought us then (however we think of him: as a symbol, a myth, a god, a psychic power) is a brand of the Promethean fire, the Zeusian intellect and *dike* (right judgment); in our mortal minds, this fire engendered imagination; for this is what imagination is: the movement of intellect through the things of sense, the finding of forms among the apparently formless. And hence arises our ability to see phenomena creatively, to understand each other, to shape the meaning of history into myth.

Our new myth, I would propose, is the myth of equality. "All men are born free and equal," then, is not just a pious statement. There is a sense in which people have been equal all along--in God's eyes. But there now seems the possibility that equality can be achieved in brute fact--approached asymptotically of course. We'll never quite get there. But in principle we must be there now. Some profound thought will be needed, a sort of refounding of America on expanded ideals made practical by technology. The achievement of that ideal will be made possible by the kind of education we offer *all* American children.

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