

# William Leiss, Hera, and the Fate of Science

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For thirty-five years, William Leiss has been discussing the insight of Max Horkheimer that reason has been eclipsed by the force of domination it has become in the guise of science and technology.

As Leiss cites Horkheimer:

If one were to speak of a disease affecting reason, this disease should be understood not as having stricken reason at some historical moment, but as being inseparable from the nature of reason in civilization as we have known it so far. The disease of reason is that reason was born from man's urge to dominate nature.... [Horkheimer, cited in Leiss, 1972, 148]

Leiss follows Horkheimer's division of reason into Objective Reason which seeks to understand how things are in and of themselves, and Subjective Reason, which seeks to master nature to serve human interests. [Leiss, 1972, 149.] It is the latter, which we take to be the enlightenment task of the progressive intellect, that has gone astray. The institutions that promote mastery of nature have become, as Leiss puts it, "vast, interlocking, public and private, bureaucracies of governments, corporations, military establishments, and university research groups." [Leiss, 1972, 171.] The energies produced by these institutions have reached a point where we serve those energies, or, rather, we depend upon their endless dynamic for our existence. We cannot envision an alternative.

I have argued that the negative aspects of this ideal [of unlimited expansion] introduce certain dangers whose potential dimensions are so vast that it may be impossible to deal with them effectively once their nature becomes evident. These negative elements of the dominant ideal are inherent in its very structure and are magnified in direct proportion to the success and prosperity of the high-intensity market setting. [Leiss, 1976, 110.]

Leiss's concerns of 1976 have hardly changed. The impossibility of envisioning a solution to these problems within any categories of thought we can accept remains his position, it seems.

Thus, Leiss, in 1990:

In China and elsewhere, people will face the bitter truth that they have no hope of escaping the age-old scourge of inadequate satisfaction for basic needs via the route mapped out by the richer nations, namely, by squandering fossil-fuel energy and dumping their wastes wherever they choose. Other crises will stem from the accumulated global residue of centuries of earlier industrial development and environmental degradation [...].

Moreover, many of these threats are of such a massive scale, and have such momentum driving them, that no action we take now, no matter how drastic, and no foreseeable political or technological remedy, no matter how sophisticated, can forestall their irresistible magnification. [Leiss, 1990, 147.]

Leiss believed in 1990 that we had already accepted a fatalistic attitude to things, but that we could attempt a cure by understanding the nature of risk assessment. His faith in radical socio-political change is less apparent than in the 1970s. In fact, *Under Technology's Thumb* places its hopes, slim as they are, in the bureaucracies that were the problem in the first edition of *The Domination of Nature*. The "Alachlor Review Board" and the "Law Reform Commission of Canada," he suggests, may provide the sort of reliable risk information that could be a guide to the

future.

The title of Leiss's recent paper "Modern Science, Enlightenment, and the Domination of Nature: No Exit?" continues his coy position regarding our hopes of surmounting problems posed by the Enlightenment and its dreams of reason. Within the enlightenment project there is an unresolved opposition between science as social transformation ("transformative science"), on the one hand, and science as technological mastery over nature ("inventive science"), on the other. The problematic character of this opposition is rooted in the uneven development of its two poles; more precisely, the hyper-development of inventive science and versus the pervasive under-development of transformative science. [Leiss 2006b, 2] After reviewing the familiar contours of his cultural pessimism, however, Leiss describes his new imaginative venture, the *Herasaga*.

*Hera, or Empathy*, published in 2006, is the first volume of a projected trilogy of novels that has the obvious ambition of presenting its readers with a dialectical resolution of some very important questions. Set in a not very distant future where everything is collapsing, the novel features hyper-articulate characters who explain themselves and their situation at length, and who are not averse to delivering theoretical lectures and position papers to their companions. Messages are hardly withheld from the reader; Leiss is an author who cries out to be understood. He wants to teach, delight, and persuade, the triple goal of rhetoric, so it makes little sense to expect the "purposeful purposelessness" that Kant attributes to art. *Hera* must stand its ground, nevertheless, as a utopian novel of ideas. As the novel progresses, however, it becomes harder to identify with the heroine, whom we take to be a spokesman for Leiss. It seems that the tale has taken on its own life, and that the reader occasionally sympathizes with the villains, or at least is repelled by the heroes. In short, the work becomes complicated, a true novel.

On a remote mountain in Indonesia, twelve sisters, genetically improved, grow up in isolation from the world. Educated by contact with the Internet, they quickly become capable of powerful thought. The creation of a British scientist (later a Nobel laureate), Franklin Peter Stone, and the eggs of his deceased Indonesian wife and co-researcher, the girls are intended to be the saviors of a mankind gone bad. In their mother's plan to "produce leaders strongly motivated by humanitarian aims..." [Leiss, 2006a, 32], they were intended to rise to positions of power, where they would show wisdom and foresight. Two sisters, *Hera* and *Io*, stand apart from the others. They are the leaders and polar opposites, the former showing reason and self-awareness, the latter, emotion and a bit of madness.

The serpent in this exotic garden is one Max Klamm, who handles business matters. He is a swindler and a fugitive, and he has a plan of his own. He intends to sell improved children to the super-rich, who will then dominate things more securely during the chaotic times plainly in sight. This new race will produce fabulous wealth for their makers as the bidding for these super-creatures proceeds. Klamm is a repulsive villain, but also a man of action, a rarity in the novel. *Hera* foils Klamm's plan to abduct all the girls (while their father is busy collecting the 2029 Nobel Prize) in order to force Stone to create sons, who will be different enough for the oafish super-rich to notice and pay for. The rich don't want girls. Klamm, however, has no such scruples, and rapes the precocious 15 year old *Io*. The escape, engineered by the intrepid *Hera* and assisted by "the nice missionary couple from Timika—they're Canadians" [Leiss, 2006a, 90] begins decades of adventure, as the girls flee and hide from the minions of their nemesis and his super-rich sponsors. After many displacements and attempts to live in various remote situations, *Hera* concludes that her "parents" ideals are impossible. Science has been corrupted, and playing the game ethically, as her father wants, won't help things. *Hera* comes to realize that she and her kind are a separate species and plans to withdraw her folk to a protected, remote colony, where they can remain, undisturbed, and bring forth a new race. This race will be the custodians of science, which will have been brought into the colony on videodisks, and retained, as though in a museum, for a very long time, while the rest of humanity destroys itself.

*Hera* and her sisters were genetically shaped for humanitarian ends; empathy was to be *Hera's* special gift. In an cited "article" from 1999, published in the *World Science Digest*, quoted in full, and given to *Hera* to read (she is a precocious eight years old), Smith and his graduate supervisor had worked out the biological basis of empathy, involving brain structures, mirror neurons, and the like. It must, therefore, be programmable through manipulation of DNA. Yet something has gone a bit off in the young woman. Her fellow-feeling hardly extends to other humans at all. Instead, she extends her emotional attentions elsewhere.

The engineering our parents carried out didn't have the result they intended, but it did have a tangential effect. What I'm getting at is that we did feel, quite intensely inside ourselves, an unusually powerful empathy, except that this feeling was oriented toward our primate cousins, not toward other humans! In other words, in us the sense of empathy had undergone a truly radical displacement. [Leiss, 2006a, 514]

The great apes, of which *Hera* will support a large colony, are the innocent, poor relations that *Hera* seems to favor.

The colony will accompany her wherever she may have to go. And yet, the sub-title of the novel, *Hera, or Empathy*, must be taken ironically. To a human reader, as opposed to an ape, Hera is no friend.

It is this lack of empathy, this willingness to damn all of humanity, that is striking here.

What seems original in *Hera*, at least in terms of the Frankfurt School venture that is its origin, is the lack of any residual nostalgia or romanticism in the solutions proposed. To be sure, the characters pretentiously stop from time to time to listen to whatever music they are reminded of. (In the midst of Hera's explication of Hegel, her nephew Marco exclaims: "That gives me an idea. Let's take a break and listen to one of our favorite pieces, Bach's cantata *Ich habe genug*." [Leiss, 2006a, 517]) The vegetarianism and bonding with apes may remind us of the romantics, as does the notion of the Bible as poetry. [Leiss, 2006a, 233] In a most basic respect, however, Hera ignores the greatest achievement of romanticism, its discovery of history. Hera believes we must either see ourselves as strands of DNA, as she does, or as timeless images of God, fated to enact the prophesies of Revelation, as her sister Io does. That human beings and their institutions might owe a great deal to a densely woven fabric of historical becoming, of a complexity far beyond what we know of DNA, scarcely occurs to the characters of the novel. Historical events, like the terrorist attacks of 11 September 2031, are simply expressions of the religious mindset. The sisters's dessicated sense of history shows itself when one remarks:

There isn't any coherent clash of ideologies anymore. It's not like it was early in the twentieth century, with two social ideologies battling it out for supremacy in the West, each of which—capitalism and socialism—could marshal great systems of ideas in its defense.

No, not anymore. What lurks behind the current crusade is the vision of Armageddon, the Apocalypse, the End of Days [...]. For the religious fundamentalists, whether they are Islamic or Christian, modern civilization itself seems to be the enemy. [Leiss, 2006a, 283]

To say that "capitalism and socialism," taken as quite ahistorical categories, have ideas, but that religious traditions, again seen as abstractions, do not, suggests that the Internet will be no way to get an education in the mid-21st century. Or rather, that ideas and history have little interest for the new race, which lives in its own social world. What is particularly missing is what used to be called civil society, the intricate web of social relationships that people are born into, form, and leave behind. These institutions are absent; indeed, their absence is the cause of social disorder, as gangs form to terrorize an increasingly feudal world. The absence of civil society is figured by the oddity of family relationships in the novel, and this in turn is figured by the device of the absent mother.

Frankenstein is often spoken of in *Hera*, and as allegory. To Hera it is the story of creation abandoned by its Creator, the same version of things espoused by Io, who is certain that Satan will win in the end, as God takes back his small forces and leaves the world and most in it behind. But Frankenstein is above all a world of absent mothers and odd relationships. Franklin Stone's name may remind us of Mary Shelley's mad scientist, but it is his daughter who decides that the world isn't good enough for the next generation of her kind.

I would have to find a way to make sure that the embryos were destroyed by pulling the plug on the cryopreservation units.

The alternative is unthinkable. How could I let a huge group of wonderful children arrive in the world, and then leave all of them at the whim of whatever interests happened to be controlling the foundation's affairs at that point in time? Monstrous! The results might cause us—all of us who helped set up this experiment—to be looked upon with horror and revulsion for as long as civilization endured thereafter. [Leiss, 2006a, 347.]

Hera is about control. Her talk about conscience involves what she is willing to allow others to do. She uses all sorts of violent and extra-legal forces to do what her conscience requires, including arresting her father and sister. The death of Max Klamm at the hands of her Indonesian relatives is notably gruesome.

No apocalyptic novel today can escape comparison with the sensationally successful *Left Behind* series of novels. In these books, the rapture, signifying the end of times, has caused vast numbers of Christian believers to vanish, having been taken up into Heaven, and the world enters a time of tribulations featuring the appearance of the Anti-Christ. These works and this ideology seems to occupy an antithetical position to the *Herasaga*; indeed, Leiss's work contains a demonized version of Christian apocalypticism in the figure of Io. The elements the novels have in common, however, offer us a purchase on the historical moment of their appearance. These are their sense that now is the conclusion of human life. We append the prefix *post-* to things for the simple reason that we lack the power to name what presents itself to us. We speak of late capitalism because we cannot bear to think that it

might be something new, deserving a new name, having never been vanquished by its timeless opponent. Tony Soprano, powerful, successful, yet depressed, tells his psychoanalyst that his forebears in the mob, although far less wealthy, seemed to have it better. They lacked Tony's forebodings that the best is past and that what lies ahead will be tribulation and catastrophe.

The fellow with a toga and a sandwich board proclaiming "The end is near." is a familiar cartoon type. What are the objective signs of our doom? Do Leiss and the authors of *Left Behind* believe we are uniquely sinful? The fellow with the sandwich board also carried the word "Repent!" Here is the strongest link between the Hera and *Left Behind*. They are both fundamentally rhetorical, intended to persuade. "Du muss dein Leben Ändern," as Rilke put it. So, we all must change our lives, but not, as Rilke intended, with a deep intensification of our aesthetic understanding. Rather, we must either become, or cease to be (depending on which book you choose to follow) homo religiosus. La Haye and Jenkins are teaching their theology, with its threat explicitly stated in the title of the series, "left behind." Leiss also posits, in Hera's great plan, a humanity left behind.

Why? Because these humans have hoisted themselves on the horns of an insoluble dilemma. They're torn between their unscientific faith in the miracles of religion and their unreligious faith in the miracles of science. They work themselves into a frenzy of self-loathing, because over time the contradiction between the two sides of the dilemma becomes obvious: In the end they'll have to choose, and I'm convinced that when the time comes, they'll opt for religion and abandon science. [Leiss, 2006a, 536]

By science, Hera means the rule of DNA, "that extraordinary molecule" that governs everything, making of her (and us all) "the random output of the evolution of species and of DNA's infinite recombinatory power." [Leiss, 2006a, 526] Clearly, for Hera, modern civilization is as much the enemy as it is for the religious fundamentalists.

Master narratives, much maligned in the postmodern discourse of the recent past, are on offer in both Hera and *Left Behind*; both narratives are scriptural. DNA for Leiss, supplants religious texts as the great story. When Hera finally explains her coming to consciousness, her awareness that she is an embodiment of science itself, she says: "We, on the other hand, aren't afraid to look through this lens, and when we do, the truth appears [...]" [Leiss, 2006a, 528] The truth she is so proud of, however, might have been acquired at any time from the Internet, where we can read Nietzsche even today. "Science is the means by which we comprehend who we are—a minor player among a cast of billions in a drama extending both backwards and forwards over eons." [Leiss, 2006a, 528] Both Hera and *Left Behind* subscribe to a grand narrative that is essentially non-human (DNA in one, divinity in the other), but Hera, for some reason, never attributes the breakdown of society and environment as the workings of genetic determinism, nor do LaHaye and Jenkins attribute the sins of mankind to God's will.

How to explain these current gestures toward the end of things? Why now?

Science, it seems, can no longer promise us anything we can hope for, so it must resort to threats. Although the processes of research and, presumably, progress in basic science and in the instrumental applications of new discoveries proceed apace, there seems to be a sense of exhaustion. The great miracle of a few decades ago, the moon landing, has led to boredom and carping about costs and utility. There is no colonization, even on our own nearby satellite. The case hasn't been made and cannot be sold. The cure for cancer that once fueled the imaginations of young researchers, and channeled resources their way, has become a meaningless phrase. Instead, we hear of survival rates, remissions, new drugs that may or may not be more effective and less destructive than the last generation, at huge cost. To speak of a cure is misguided; cancer isn't even one disease, we are told. A few years ago, sociobiology was going to explain simply everything about our so-called humanity. Evolution, better than history, could explain human nature. Selfish genes met naked apes and the result was books and conferences. Any current or prospective benefits to humanity, in the form of peace and happiness, are difficult to perceive.

Better to leave unmentioned the Nazi scientific promises, except to note that they used the same arguments heard today about human stem cells. Hopes and promises justified almost anything. Science knows best; the results are always coming. But the results aren't what we dreamed of—cures, colonies, mastery. What we got was discipline, utterly unexpected, a loss of freedom unprecedented in modern times because it touched our bodies and traditions. The pleasure of tobacco, adopted immediately by any culture that encountered it, was demonized, scientifically. The foods our mothers fed us — trans-fats (AKA margarine), milk, red meat, anything—are a danger. And, of late, the topic is climate change, about which little need be said, except to cite the following dialogue from Woody Allen's *Sleeper* (1973):

Dr. Melik: This morning for breakfast he requested something called "wheat germ, organic honey and tiger's milk."

Dr. Aragon: [chuckling] Oh, yes. Those are the charmed substances that some years ago were thought to contain life-preserving properties.

Dr. Melik: You mean there was no deep fat? No steak or cream pies or... hot fudge?

Dr. Aragon: Those were thought to be unhealthy... precisely the opposite of what we now know to be true.

Dr. Melik: Incredible.

Our hopes for science were infantile. Magic wish-fulfillment is what science promised. If Freud were writing today, his book *The Future of an Illusion* might have a different subject. Science isn't delivering.

But it can threaten. The threats, in fact, are closely related to the magical promises which science could never keep.

When magic is the prevailing system, it precludes the need for the rhetoric of Doomsday, at least as long as the magic works. When the magic fails, the rhetoric of Doomsday is ready and waiting to fill the void.

The principal advantage that the rhetoric of Doomsday has over magic is accountability. Magic must always prove itself more or less instantaneously with a cure, a windfall, a restored lover, or the ruin of an enemy. The rhetoric of Doomsday, on the other hand, needs only the inevitable calamities of nature, politics, and society to support its interpretation of the world; and its ultimate test can usually be postponed. [Borchardt, 1990, 226-7]

Crisis rules. What would Gandhi have thought of our "obesity crisis?" Why is spending on HIV/AIDS about 100 times larger per fatality than on stroke? How can a mayor tell New York chefs how to cook?

If the understanding of religion is exhausted by, on the one hand, the simple Hutterites, who are to be protected like the precious apes, and, on the other, the mad followers of Io, who seem to be modeled on the religious ceremonies in *King Kong*, the image of the "rich", usually prefixed with "super-" is similarly a caricature. The world of commerce is represented first by Max Klamm, swindler, abductor, rapist. Klamm describes them for us as "the rich who spend most of their days idling on beaches and their evenings gaming at the casinos." [Leiss, 2006a, 77] And yet, the sisters are themselves fabulously rich, having come in the first place from the wealthy Franklin Stone and his wife, whose family have large holdings in Indonesia. The various foundations and enterprises they found and run make lots of money; several of the girls even turn out to be financial wizards.

The rich operate by hiring "rogue" scientists like Dr. Jerry Bild to do their bidding; he kidnaps Hera and forces her to reveal her father's secret protocols, until a rescue mission saves her. Rogues are defined as scientists who do not obey the ethical protocols of science — Io has gathered a band of "rogue biologists." And yet, Hera and her sisters are obviously the product of "rogue" science. Their father won the Nobel Prize because the world did not know of his secrets (although the "super-rich" seem to know his talents). The distinction between good science (Hera's science) and bad science (the techno-applications of humanity, at their worst among the rich) are marked mainly by the self-assurance of Hera herself. Science is usually spoken of as "our" science; she sees her plan to take possession of this family property and retreat seems quite natural. The subtitle of the *Herasaga* as a whole is: "The Product of Intelligent Design." It underlines the great irony—Hera and her sisters are not the result of evolution and DNA's recombinatory powers; they are laboratory creatures.

With two more volumes of the *Herasaga* to come, it is risky to come to any but very preliminary conclusions about the argument of this enterprise. One speculates that the young hero, Marco, will return from his Mars voyage prepared, in archetypal form, to fight the battles between good and evil. Io, the mother who abandoned him, will lead her forces of superstition and darkness toward some final show-down, to hasten the day when all will be clear, the black and white she desires. The dead may even be resurrected. Characters like Ina Sujana, the scientist mother-egg donor of the girls, and even Klamm, whose reappearance and cloning so obsess Io, died off-stage and seem ripe for new action. Only the author knows these things. He cannot resist the temptation to explain himself at every point so he writes on the back of his book: "My objective is to draw a line in the sand between religion and science-in order to protect both." Fortunately, the text seems wiser than its author, who cannot control its reading. The clarity of the "line in the sand" is blurred throughout the work. Hera, or *Empathy* shows very little in the way of irony; this the reader must supply. Leiss has attempted a romance (like most science fiction), in which the good battles its opponents. His tale, however, veers again and again toward the truly novelistic, where all is "gray on gray." Goethe's Mephistopheles, a good Hegelian, commented in *Faust*, part I: "All theory is gray." This doesn't make it less

interesting, nor, in the case of Leiss's *Herasaga*, less intriguing. I look forward to the next volumes. The surprises will surpass the Sopranos conclusion. As things stand at the end of the first volume of the trilogy, however, the words of Bach's cantata, "Ich habe genug"—"I have enough"—define the viewpoint of Leiss's characters. Of science, they suggest, we have enough; the "limits of satisfaction" have been reached. It's time to take a breather, maybe a very long one. The argument for putting science on the shelf is what Leiss wants us to ponder.

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