On April 7, the United States Patent and Trademark Office announced that patents would be granted on forms of "non-naturally occurring, nonhuman, multicellular living organisms, including animals" engendered through genetic engineering techniques. This is a development of which I have long been in dread. It is sorely to be hoped that the coalition of major humane organizations established to resist this decision will be successful in overturning it.

Much is at stake. Jeremy Rifkin is quoted in the San Francisco Chronicle of April 18, 1987, as saying, "The new patent policy raises moral and ethical issues that are mind-boggling," and that the decision was arbitrary, capricious, "and a gross violation of the statutory intent of the patent laws." Rifkin is right. On Oakland's Channel 2 TV, the previous evening, Rifkin—who was being interviewed as part of a news story on the Patent Office's decision—said also that the decision is to be faulted because corporations ought not to be in control of the total gene pool. Rifkin is right about that, too, although I have never been much impressed nor made hopeful by what we might call the "argument from the danger of the destruction of the gene pool." For me, the species and individual organisms/persons are important in themselves, and not just for their function as carriers of genes the loss of which would limit humanity’s future capacity to call upon yet to be described properties of life. We are lucky that Rifkin has a strong sense of animal rights to go along with the gene pool argument. Frankly, with this Patent Office decision, we are already seeing the unfortunate consequence of this utility-oriented reasoning. When Henry Margenau and others first advanced the gene pool argument in place of what would better have been an outright animal rights argument, no ethical arguments against the extinction of species were extensively appealed to, and it was held that species should be protected from extinction because of the future benefits, perhaps crucial for human survival, some potentiality of nature might have in preserving or embellishing human life. Well, the patent Office says that time—the future in which the benefits are to be taken—has come.

A position paper by The Humane Society of the United States says that the patent decision will lead to "a dramatic increase in animal experimentation for agricultural, biomedical and other industrial purposes. In many instances, animals will . . . be abnormal at birth, and generations of animals will suffer." Very important considerations—and violations of the rights of animals.

BUT THE CRUCIAL ISSUE, which in my view is the replacement of natural species by patented ones, originates in the relation between the present mainspring of society, which is decision-making based on economic profit, and this growing technical capacity to modify life. Henryk Skolimowski has said, in Technology and Human Destiny (1983), that what "has actually happened is that during the 20th century our economic rights have eaten into the other rights. Patricia and Gerald Mische say, in Toward a Human World Order (1977), "Technology is not inherently a negative force. It is the social goals and application of technology that determine whether it has a positive or negative effect on the environment and human personality."

But the crucial issue, which in my view is the replacement of natural species by patented ones, originates in the relation between the present mainspring of society, which is decision-making based on economic profit, and this growing technical capacity to modify life. Henryk Skolimowski has said, in Technology and Human Destiny (1983), that what "has actually happened is that during the 20th century our economic rights have eaten into the other rights." Patricia and Gerald Mische say, in Toward a Human World Order (1977), "Technology is not inherently a negative force. It is the social goals and application of technology that determine whether it has a positive or negative effect on the environment and human personality." That may be ultimately true, but there are periods in history—and the present is one such—when the momentum of a particular wrongly directed technology is so great that it becomes industry that shapes the culture. I repeat, Marcuse and Illich have taught us that. It is because of this momentum of industrial society as at present organized that I questioned, in Between the Species (1985), 4, James Hillman's work of ensouling the world given the present massiveness of the existence of human constructions—a "Satanic demonstration" (Hillman's term). For me, the importance of what Hillman says about these matters is impossible to overestimate, but it remains true that there is this massive momentum of presently life-destroying culture with which we contend. The Patent Office's decision is no surprise. Michael W. Fox is an ethical heavyweight in his commit-
ted resistance to industrial society. He sees clearly what it is about and the damage done. As I said before (Between the Species II/2 (1986): 106), Evelyn Pluhar's suggestion in "On the Genetic Manipulation of Animals" (BFS I/3 (1985): 17) that the chance these new techniques will be abused is "exceedingly slim" (she is addressing fears that "batches of sub- and super-humans" will be produced) is too sanguine. It is far too sanguine. Abuse of the techniques will be rampant in their application to animals long before the industry turns to the potentials for profit in the manipulation of human characteristics. But applications of the techniques to shaping humanity will certainly come so long as industrial society remains as presently organized.

Commissioner of Patents and Trademarks Donald Quigg said during the Channel 2 story that his decision bars the patenting of new human genetic traits. Human culture, if its capacity to regret the loss of morally considerable characteristics is not spliced away, will come to rue the Patent Office decision. The day will come when human types are patented and therefore owned by corporations. Moral buffers intended to protect humans will not stand up in the face of economic decision-making. They will not stand up, because in the nature of the case, the attempt to limit moral considerability to humanity, an immoral goal, weakens the effectiveness of moral restraints in general. Patented human types will finally break the workers' unions, if some revolution of the dispossessed does not first overthrow the scientific establishment in its entirety. Human conflicts will proceed at the hands of private populations analogous to private armies—and even if peace is made, it will be a peace that is engineered, not a moral peace. Related developments are the advances in artificial intelligence and in organ transplants, these presaging the convergence of machine and organism and the further muddying of issues of patent.

No, the crucial issue is the replacement of natural species by patented ones. The purposes of industrial society, which despite the gains the animal liberation/rights movement has made far overshadow at present our movement efforts and which are not counterbalanced by the judgments of a moral community (see again the considerations raised by Habits of the Heart), and governed by the profit motive narrowly conceived as the accumulation of money and improvement of corporate position, are such that with this Patent Office decision the way is now open for the ever more rapid decimation of the planet's species precisely because patented organisms have the characteristic of being ownable whereas natural species are not, or are ownable only less directly through ownership of the lands that are their habitat and the "natural resources" of which species are widely believed to be part.

"It may be critical to relocate deep in our psyche the sense of community and integral relatedness to all life forms that was highly developed in our tribal parents but which has all but atrophied in modern individualism," write the Maches. It will never be the case that science serves nature, including humanity, until such a deeply ecological relocation occurs. Culture will never direct technology to respect life until a moral community has come into being of persons in whom such a relocation has taken place. While we are on our way, let us love, respect, and consider the interests of these other species and protect them from any creation of "superior" forms. In the Christian view, "For God so loved the world," not some ersatz replacement of it.

There are those who hold forth the hope that the new biotechnological techniques will give us the capacity to improve the lot of animals by, for example, giving them characteristics which will cause them to experience less suffering than at present in the non-natural situations we have increasingly constructed for animals. I have addressed aspects of this issue in BFS II/2 (1986): 105-107. In my opinion, such hope is entertained because no other attractive alternative to the abuse of biotechnological techniques seems imaginable. But there is another attractive vision. In fact, there are two. One is Hillman's ensouling of the world which to some extent—extrapolating from Hillman's remarks in BFS I/2 (1985): 8—offers the possibility of the Peaceable Kingdom as a "psychological experience readily available," and the other is the bioregional/reinhabitant ethic (see BFS I/2 (1985): 4-5 for a brief introduction to both). It is my intention to discuss both of these preferable (to a future of biotechnologically assisted animal welfare) alternative visions in succeeding issues of Between the Species.

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