

## THE PROBLEM OF THE DEFINITION OF BIOS\*

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### An analysis of the concept of Bios

The problem I wish to address in this paper is created by the large number of different contexts in which the concept of bios appears. From the philosophical point of view, we must ask the question: "what are the root ideas in the concept of bios?" Why can we not let the concept grow and develop at its own will? There are two kinds of answers to these sort of sceptical suggestions. One is that unless we are clear in our own minds as to the components of this high-level concept, we are likely to slip into all sorts of errors of reasoning by virtue of confusing one sense with another. The second concerns the adjacent or rival concepts that are comprehended under popular, general environmentalism. How can we distinguish the bios idea from that?

In thinking about bios, I am struck with one particular analytical problem with which one must begin, and that is to ask how do biological concepts enter into bios? Since bios is the Greek word for "life", this issue cannot simply be avoided. Somehow, bios is a biological concept, but the question is, of what sort? The problem is made more tantalising by the fact that the bios project includes the notion of bio-assessment, but the notion of assessment logically requires criteria, and that on pain of incoherence. There can be no such thing as the assessment of something unless there are standards by which an assessment can be carried out, and we must ask, what are the distinctly bios criteria for judging programmes, technologies, architectural schemes and the like.

One way in which biological concepts enter into the bios conception is, one might say, through the back door, via the concept "reverence for" or "respect for" life. This concept appears frequently in bios writing. Exactly what does this mean and what are its consequences? Now the problem is exacerbated by the fact that human beings and their considerations both do and do not seem to have certain priorities in bios thinking. Sometimes, it seems as if human concerns of a particular kind are to be protected in the bios framework; other times it seems that the reverence for life concept should lower human concerns in the general ranking of protective requirements. The problem is made still more difficult by the use of phrases like "Life is a precious gift." If we follow the usual gloss on this expression we get something like: "We did not ask for this, but nevertheless it must not be squandered." We are taken straight back to the reverence problem. What is it exactly that stands in the way of life being squandered?

I believe that unless we can get some clarity in these matters, bios is doomed to be absorbed into the current general environmentalism, and its unique character, which one can vaguely and intuitively recognise, will be lost.

We can begin the general analysis by asking the apparently frivolous question, what is so great about living nature? There are two answers, both of which tend to appear in environmental discussions. The first is that living nature is to be protected because it provides a biological support for humankind. Since we are unable to synthesise our food from inorganic materials, we must depend upon those beings which can. But this is a purely prudential aspect of environmentalism, though in the current political climate, it baulks very large. The second point is that it supplies spiritual or cultural support for humankind, and this in a great variety of ways. Now this duality of the prudential and the cultural appears throughout the discussions of the relationship between human beings and their necessary biology. I take it to be an article of faith in the bios movement that pollution and environmental degradation affects both of these.

Now one way that we can see that bios might be broader than environmentalism is by virtue of giving equal weight to the second consideration, that is that the protection of living nature other than humankind can be given a justification in human terms, which after all are the only ones that count with most of our legislators, by virtue of what one might call second-order prudentialism. First-order prudentialism reflects the need for a biological support; second-order prudentialism reflects the need for a spiritual, psychological or cultural support. It is at that level that we look for reminders in the poetry of William Blake and his successors in their attack upon "dark, satanic mills."

Generally speaking, the bios movement has not to my knowledge paid a great deal of attention to the history of environmentalism, and the reference to Blake and the Romantic poets raises the question for research as to why the bios movement failed in the transition from the 18th to the 19th century. I think there can be no question that there was a strong environmentalist, indeed bios-tinge to Romanticism, and yet it stands at the dawn of the rapid industrialisation of most of Western Europe and a good deal of the North American continent.

Before I turn to a detailed analysis of bios, one footnote needs to be entered. Given the duality of first- and second-order prudentialism, of biological and cultural support, don't the same arguments apply to non-biological matters, that is, the exhaustion of the earth's mineral resources is on the one hand, a demonstration of a lack of prudence and on the other, are not the often destructive mining operations which lead

to these kinds of things also a degradation of environmental features that provide support in a wider way. A concept of the sublime, what was popular in the 18th century, is a historical precursor, I believe, of a sense that it is not only living, but also inorganic nature that deserves our protection. Rubbish on the moon might be a case in point.

When we turn to the bios concept itself, I believe we can identify at least five strands in the kind of writings that have been published or promoted under the bios label. First of all, there is indeed a biological strand, otherwise how can we understand the very name of the movement? But biology is a complex and multi-faceted science and I want to draw attention for later use to two very different parts of contemporary biological sciences, namely the science of biological evolution and the joint sciences of anatomy and physiology. In the evolutionary model to which we are not so much accustomed, we need to identify two aspects which are relevant to our considerations. One is the importance of genetic diversity, which provides, so to say, the raw material for selection mechanisms. These mechanisms we can now say with confidence are pretty much as Darwin supposed them to be, that is, natural selection does not select the best adapted but the least, worst fitted for an environmental niche and it does so by the environmental discipline upon differential breeding often brought about by differential death of animals and plants considered as individuals. In this fact, biology celebrates thanatos. The second important theme in contemporary biology is that of integrated system dynamics. An individual organism is such a system in which integrity and stability are determined by interacting causal mechanisms exquisitely adjusted to maintain certain parameters of the organism stable. We now know that this system character is broader than organic individuals and extends ecologically deeper into the environment. It was not so long ago that the nitrogen and carbon cycles were discovered and it is only a few years since the GAIA hypothesis was first enunciated in which the system integration that sustains all life has been extended to include the sun: a rich repertoire of possibilities upon which to draw further to developing the bios idea. I have suggested that there are five strands: four are, at least at first sight, of non-biological character.

The second strand that is evident in bios writing is the idea of moral protection of the rights and worth of various beings and systems of beings. Bios, like most environmentalist movements, seems to me to be still indeterminate between the claim that life is morally protected and the claim that persons are morally protected. This raises philosophical issues of the utmost profundity, since when one comes to examine arguments for the moral protection of life, they seem in the end to turn on the moral protection of persons; we are, so to say, the source of value. This can be tested out in two ways: the kinds of arguments which are currently produced in favour of the rights of animals turn on the extent to which animal life and in particular, animal psychology, is similar to that of human beings. So animal rights are derivative rights. We can look also at the question of the rights of plants. Clearly the analogical argument to persons will not work. Plants are not some kind of person so we have to try to consider whether there is an intrinsic value to plant life which is independent of its role in the life of human beings. Usually one notices that genetic diversity is one of the grounds for the protection of species. A recent article I read on Madagascar argues exactly this point and it is made in everyday criticisms of the treatment of the rain forest, a loss of species. This loss might be and often is treated prudentially, that is, think of all the wonder drugs that might be lost if the plant species are not properly studied. But on the other hand, genetic diversity is preferred as an independent and organic criteria.

The third strand that strikes me as particularly evident is that of political individualism. In this way, bios seems to me to be sharply separated from both collectivist and aristocratic moralities. It is individual people who are cited as the beneficiaries of bio-good. The history of British environmentalism which runs right back to the early 18th century, is essentially aristocratic. It is built around the idea of an ideal life in which nature is managed for the delectation, amusement and spiritual benefit of refined or aristocratically defined human life. This point of view is not wholly lost and to my mind it surfaces frequently in those sorts of discussions which go beyond a mere prudentialist protectionism. However, much more needs to be said about this matter and I can only just open the debate in this short paper.

The fourth strand is the aesthetic: again, this plays a very large role in bios thinking. It is particularly noticeable that bio-authors came to find an aesthetic criteria in the biological aspects of the bios concept. Now, of course, the biological strand is composed of a double weave: various selectionist theories of evolution on the one hand, and the integrated systems theory of organic being on the other. It is as evident as could be that it is the latter rather than the former which forms the basis of bio-aesthetics. The trillions of dead creatures which litter the history of the evolution of life do not provide an attractive ground for anything other than a perverse sort of aesthetics of thanatos. It is the exquisite organisation of living things and their relation to one another in ecology that seems to me to spark the prime aesthetic drive. It is art deco rather than decadence that offers us a model. I think it important to work much harder on the aesthetic aspect. If one considers it in terms of the question of management, in what way does bios override the biological conditions for human life, which of course include the ruthless application of Darwinian principles?

We can see that these four strands which I have so far identified are by no means equal in the priorities. Bios seems to be concerned, not with the biological support of humankind, as a prime directive so as to say, but with its aesthetic good. For example, in my college there is a scientist who works on the regeneration of rain forests and he tells me authoritatively that the destruction of the rain forest poses no biological threat to human beings, since, in many cases, the farms which replace the forests are as effective in the production of biomass and the fixation of carbon dioxide as were the tree-covered slopes they replaced. Sophisticated replacement of nature by agriculture is quite acceptable biologically. The current outburst of outrage at the treatment of the rain forests does of course include a prudential element since the destruction that is being carried out in Brazil does not seem to be biologically viable and does indeed endanger aspects of the environmental cycles upon which our lives prudentially depend. But it is also plainly a matter of aesthetics. However, it is a special kind of aesthetics: it is drawn from only some biological metaphors, particularly those that can be rooted in the second aspect of the biological element in bios, namely the idea of integrated system dynamics. A rain forest is a remarkable system: it is a structure of unbelievable complexity, with

innumerable delicately adjusted components. The destruction of that, considered in this frame, is something like the breaking up of a Bugatti Type 33 or razorslashing the Mona Lisa.

So biological concepts appear both literally and metaphorically in bios. Neither in the literary nor the metaphorical sense do the two aspects of biology that selectionists and systematists have developed carry the equal weight that they do in biological science.

Finally, there was a fifth strand which is not so easy to identify. One can perhaps call it religious since it is clearly present in many of the remarks made in favour of the bios programme by those who are part of a religious establishment. The "life is a gift" epigram, which seems problematic in the general context, becomes determinate when considered in the religious framework. It is a gift, from whom? from God. If this idea could be sustained then the attitude that one finds in nature, or one should adopt to nature will commensurate with, indeed be an extension of, religious attitudes generally. If the universe is God's creation, then we are his agents and presumably we should look after it. But the trouble with this way of thinking has been evident at least since the debates in the 17th and 18th centuries concerning God's role in cosmology generally. Newton proposed that we should not only think of God as the builder of the universe, but also as the engineer who comes in to set it right when it runs off-track. Leibnitz objected and rightly to the low view of divine power that this proposal seems to imply. If God is all-seeing and all-powerful, surely he can make a universe which will look after itself? All kinds of ingenious scholastic arguments have been proposed to identify human responsibility and its promotion as moral agency as a kind of priority for God, but I think the 18th century dilemma as proposed by Leibnitz is as pressing on those who would theologise bios as it was on the English advocates of natural religion in the era of Newton. It seems to me just, then, to identify the bios enterprise without placing too much reliance on the fifth strand.

One could sum it up this way. The enterprise of bios is to mediate between technological development and societal values. What are these societal values? Well, they are certainly not the simple values of entrepreneurial capitalism. How are they engendered? Well, they must arise while in the course of the maintenance of the second, third and fourth strands, the moral protection of persons, the development of the sophisticated biopolitics and an aesthetics which celebrates at least one strand of contemporary biological science.

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