

Nicholas Rescher
Epistemological Studies

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PREFACE

The present book continues my longstanding practice of publishing occasional studies written for formal presentation and informal discussion with colleagues. They form part of a wider program of investigation of the scope and limits of rational inquiry in the pursuit of knowledge.

I am grateful to Estelle Burris for helping me to put this material into a form suitable for publication.

Nicholas Rescher
Pittsburgh PA
May 2009

Chapter 1

INTELLIGENCE AND EVOLUTIONARY INNOVATION

1. HOW DOES THE PRESENCE OF INTELLIGENCE CHANGE THE WORLD?

Certainty is hard to achieve in philosophical matters. But one thing looks to be for sure. The universe contains intelligent beings. Not, perhaps, *very* intelligent beings, but nevertheless beings who not only have the capacity for intelligent agency, but who do actually make use of it some of the time. Such beings do, or can, act on the basis of what they think, and do, or can, make an effort to align their thought with the world's realities.

How did such beings get to be there? Essentially by evolutionary processes. First there was cosmic evolution through the developing complexity and diversification of physical and chemical processes. Then came biological evolution by variation and natural selection. And ultimately intelligent beings emerged—presumably because there was a viable niche for creatures whose survival advantage came through intelligence rather than various alternatives such as the profuseness of ant's eggs or the swiftness of antelopes.

Evolution is nature's innovator. Cosmic, biological, and cultural evolution—all bring massive novelties in their wake. There were no laws of chemistry in the first nanosecond of the universe after the big bang—only a boiling soup of subatomic stuff in which chemicals had not yet emerged. And similarly, there were no laws of cellular biology in the first billion years of our universe's existence, nor laws of macroeconomics in its first ten billion. But with the emergence of new modes of process, new sorts of things continuously came into existence, and new modes of lawfulness arose in their wake.

Was the evolutionary emergence of intelligence fortuitous or unavoidable? Many theorists believe that it was inevitable because intelligence is so effective a survival mechanism in a complex and changeable environment. But be this as it may, once intelligence gains a foothold in the universe—by whatever mechanism or means—there arises the question of the

difference that its presence there makes? What dimensions of reality that would otherwise be missing came into existence in the world through the emergence of a cognitively aggressive and probing order of intelligence? This question sets the focal theme of the present discussion, which is predicated on the idea that nothing so fundamentally changes a world as the emergence of intelligent beings upon its stage.

So, how does higher-order intelligence change the universe? This is a philosophical issue which (somewhat surprisingly) rather few philosophers have addressed. It is a question that can be posed in many ways: What sort of significant novelty has come into existence with the evolutionary emergence of intelligence? What massive operational difference is there between an intelligence-containing universe and its intelligence-lacking variants? Such questions highlight varying aspects of one selfsame problem.

2. KEY INNOVATIONS

Some things that come into being only in the wake of intelligence are pretty trivial. For of course only intelligent, mind-endowed beings can play tic-tac-toe. But here we are not concerned with such minutiae. Only very significant, large-scale, and far-reaching macro-features are presently of interest. Our question is: What really big phenomena of portentous import and significance that were previously absent does the evolutionary emergence of higher-order intelligence on the cosmic scene bring into being?

(1) *Cognition: Awareness of Facts*

To begin with, a universe without intelligence is one from which *knowledge* as such is absent. Earlier on, there certainly were things to be known, but there was no knowledge of them. Absent intelligence, the world is a cognitive vacuum. But once thinking minds enter upon the scene, there now comes to be something rather different from the bare realities and facts, namely the thought-perspectives at issue with ideas, opinions, and views about them.

Intelligent beings—and they alone—are able to *understand* facts and features of the world about them. Indeed, intelligent beings can actually endeavor to realize a thought-created *model* of the universe. And not only is this something that intelligent beings can in theory do, it is something which they are, in the very nature of things, ultimately likely to endeavor to do.

It is perhaps not a leap beyond the bounds of imaginative conjecture to view an intelligence-containing universe as embarked on an endeavor to evolve a thought-controlled model of itself. Viewed in this light, nature might be seen as a self-modeling system, leading to something of a Hegelian vision of Nature as embodiment of an Intelligence (Geist) whose work—and perhaps even mission—it is to undertake a progressively developmental process in whose operation the world increasingly realizes a vast process of self-comprehension. But let us turn away from such flights of the imagination and restore our feet to more solid ground.

(2) *Imagination: Projection of Possibilities*

It should then be clear that not only is a mindless world bereft of a *knowledge* of actual facts, but it is even devoid of any *surmise* about possibilities. In such a world there will, no doubt, *be* possibilities, there can be no contemplation of nor even speculation about them.

Only intelligent beings can consider (unrealized) possibilities, and undertake the process of conditional (if-then) speculation and the mind-inaugurated projection of possibilities that will never be realized. The emergence of intelligence thus transmutes the universe from a manifold of fact into a theater of possibility-contemplation. It is only through the mediation of minds that unrealized possibilities can gain an ontological foothold of sorts in the domain of the world's actualities.

(3) *Evaluation: Assessment of Conditions*

Then too there is evaluation. In the intelligence-antedating era there is simply physical *eventuation*: actions and interactions of various sorts. But now *evaluation* comes on the scene—be it positive or negative. (And this evaluation goes beyond the existing realities to encompass the possibilities as well.)

Of course even a mind-bereft world has aspects that can be valued by a mind-possessing being who contemplates it from without, so to speak, by projecting hypotheses. But actual valuing is something that can go on only in mind-containing worlds. And the same goes for normative judgments regarding what ought to be in contrast to what is. No doubt, even in a world without minds there can be things that are *worthy* of being valued—that is, which *would* be valued *if* there were duly perceptive minds. But

there can be no recognition or acknowledgement of this prospect, and so nothing that is actively *being* valued.

Now it is tempting to maintain—though this is not the place to argue for it—that while in a universe without intelligent being there are circumstances of *conditional* value (in that various sorts of developments can be good for giraffes or elephants)—that it is only in a universe with intelligent beings there are circumstances of *categorical* value, because what is good for intelligent beings is good, period. The appreciation of value—so it would be maintained—is only and alone able to effect the transmutation from relative to unconditional.

(4) *Purposive Action and Free Decision*

All sorts of things can be going on in a mind-bereft world, but deliberate, thought-guided, purposive action is not one of them. Rational purposive choice requires both a cognitive apprehension of cause-effect relations (“If I do *A*, *B* will ensure”) and evaluation (“I prefer *Xs* happening rather than *Y*.”) In view of this circumstance, it happens that reason-guided choices made in the light of agent-inaugurated objectives—acts of free will as they are often called—are prospects that emerge only with the development of intelligence.

(5) *Morality*

Clearly, one of the key obligations of intelligent beings—be they humans or extraterrestrial aliens—is to satisfy the requirement, and indeed the *need*, for seeing oneself as something higher and worthier than mere animals—as beings who, being equipped with minds and spirits, thereby occupy a place of special worth and significance upon the world’s stage. And we do (and should!) incline to see immoral action as degrading and unworthy, as diminishing us in our own sight. In the face of unethical and unworthy action we can no longer see ourselves as the sorts of beings we would ideally like to think of ourselves as beings. Looking down upon oneself with disapproval is something no-one finds anything but distasteful. Psychopaths aside—and being one is clearly not an intelligent option—those who yield to the temptation of unethical, immoral, and antisocial behavior generally devote considerable psychic effort and energy to invent excuses—excuses which, by and large, do not succeed in convincing even themselves.

(6) Deliberated Creativity, Artifice, and Art

Serendipity aside, cognitive and aesthetic creativity is a matter not just of novelty, but of deliberate innovation through imaginative thought. And this too is impossible in a mind-denuded universe. For thought-guided artifice in the context of inauguration-projected end-products are all too clearly phenomena that can only arise in the presence of intelligent agents. And this means, in specific, that artifice and art—the purposeful creation of artifacts for the sake of use, enjoyment, enlightenment, or edification—is a venture that can only exist where intelligent beings are present.

(7) Spirituality

When we finite beings consider our own insignificance and impotence—our vulnerability in the face of the vast forces at work in the cosmos about us—we are bound to be struck by awe and wonder. Why are we here and what are we to make of the opportunities that our presence affords us are issues that any community of intelligent beings is going to confront sooner or later.

Spirituality as one shall understand it here invokes three components. (I) An affective appreciation of the vastness and power of nature and its operative forces—“awed wonder” as it might be called. (II) A sense of thankfulness, gratitude, and appreciation for one’s having some small share in the great drama of creation. (III) A hope and wish that the things one holds near and dear will be treated kindly by those vast forces of Nature that lie outside of one’s own meager powers of control. All this sort of thing can come into operation only with the emergence of intelligence and forms an important part of its constructive spontaneity.

3. THE DARK SIDE OF THE ISSUE

However, unfortunate though it is, there is also the other side of the coin. For with the emergence of intelligence, there also arises the prospect of its misuse. In fact, only intelligence-possessing beings are in a position to sin. Deliberate evil doing in all its forms—willful mischief, vandalism, envy, schadenfreude, the seven deadly sins and their myriad congeners—all become possible only with the emergence of intelligence. But these negativities can be sidelined for present purposes. And this is so not because we propose to take the line of a “see-no-evil” Pollyanna, but because one must