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# OPTIMALISM AND AXIOLOGICAL METAPHYSICS

NICHOLAS RESCHER

## I

**W**HAT IS PERHAPS THE BIGGEST METAPHYSICAL QUESTION of them all was put on the agenda of philosophy by G. W. Leibniz: “Why is there anything at all?” This question is not only difficult to answer but poses difficulties in its very conception. After all, it is—or should be—clear that such questions as “Why is there anything at all?” and “Why are things in general as they actually are?” and “Why are the laws of nature as they are?” cannot be answered within the standard causal framework. For causal explanations need inputs: they are essentially transformational rather than formational pure and simple. And so, if we persist in posing the sorts of global questions at issue, we cannot hope to resolve them in orthodox causal terms. For when we ask about everything there are no issue-external materials at our disposal for giving a noncircular explanation. Does this mean that such questions are improper and should not be raised at all—that even to inquire into the existence of the entire universe is somehow illegitimate? Not necessarily. For it could be replied that the question does have a perfectly good answer, but one that is not given in the orthodox causal terms that apply to other issues of smaller scale.

A more radical strategy is thus called for if rejectionism is to be avoided. And such a strategy exists.

But before turning in this direction, let us consider more closely of a rejectionism which holds that it is just a mistake to ask for a causal explanation of existence per se; the question should be abandoned as improper—as not representing a legitimate issue. The lines of thought at issue here hold that in the light of closer scrutiny the explanatory problem vanishes as meaningless.

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Such a dismissal of the problem as illegitimate is generally based on the idea that the question at issue involves an illicit presupposition because it looks for answers of the form “*Z* is the (or an) explanation for the existence of things.” Committed to this response schema, the question presupposes the thesis “There actually is a ground for the existence of things—existence in general is the sort of thing that has an explanation.” This presumption, we are told, is false on grounds of deep general principle inherent in the logical nature of the case.

Consider the following suggestion along these lines made by C. G. Hempel:

Why is there anything at all, rather than nothing? . . . But what kind of an answer could be appropriate? What seems to be wanted is an explanatory account which does not assume the existence of something or other. But such an account, I would submit, is a logical impossibility. For generally, the question “Why is it the case that *A*?” is answered by “Because *B* is the case.” . . . [A]n answer to our riddle which made no assumptions about the existence of anything cannot possibly provide adequate grounds. . . . The riddle has been constructed in a manner that makes an answer logically impossible.<sup>1</sup>

However, this seemingly plausible line of argumentation has shortcomings. The most serious of these is that it fails to distinguish appropriately between the existence of things on the one hand and the obtaining of facts on the other,<sup>2</sup> and supplementarily also between specifically substantival facts regarding existing things, and nonsubstantival facts regarding states of affairs that are bound to particular things. (Unlike saying that the sun is hot, saying that the day is hot does not ascribe that heat to an object of some sort.)

We are confronted here with a principle of hypostatization to the effect that the reason for anything must ultimately always inhere in the properties of things. At this point we come to a prejudice as deep-rooted as any in Western philosophy: the idea that things can only originate from things, that nothing can come from nothing (*ex nihilo nihil fit*) in the sense that no thing can emerge from an amorously thingless condition.<sup>3</sup> Now, this somewhat ambitious principle is perfectly unproblematic when construed as saying that if the existence of

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<sup>1</sup> Carl G. Hempel, “Science Unlimited,” *The Annals of the Japan Association for Philosophy of Science* 14 (1973): 200.

<sup>2</sup> Note too that the question of the existence of facts is a horse of a very different color from that of the existence of things. There being no things is undoubtedly a possible situation, there being no facts is not (since if the situation were realized, this would itself constitute a fact).

something real has a correct explanation at all, then this explanation must pivot on something that is really and truly so. Clearly, we cannot explain one fact without invoking other facts to do the explaining. But the principle becomes highly problematic when construed in the manner of the precept that things must come from things, that substances must inevitably be invoked to explain the existence of substances. For we then become committed to the thesis that everything in nature has an efficient cause in some other natural thing that is its causal source, its reason for being.

This stance is implicit in Hempel's argument. And it is explicit in much of the philosophical tradition. Hume, for one, insists that there is no feasible way in which an existential conclusion can be obtained from nonexistential premises.<sup>4</sup> The principle is also supported by philosophers of a very different ilk on the other side of the channel—including Leibniz himself, who writes:

The sufficient reason [of contingent existence] . . . must be outside this series of contingent things, and must reside in a substance which is the cause of this series.<sup>5</sup>

Such a view amounts to a thesis of genetic homogeneity which says (on analogy with the old but now rather obsolete principle that life must come from life) that things must come from things, or stuff must come from stuff, or substance must come from substance. What, after all, could be more plausible than the precept that only real (existing) causes can have real (existing) effects?

But despite its historic stature, this principle has its problems. It presupposes that there must be a type-homogeneity between cause and effect on the lines of the ancient Greek principle that like must

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<sup>3</sup> Aristotle taught that every change must emanate from a mover, that is, a substance whose machinations provide the cause of change. This commitment to causal reification is at work in much of the history of Western thought. That its pervasiveness is manifest at virtually every juncture is clear from William Lane Craig's interesting study of *The Cosmological Argument from Plato to Leibniz* (London: Macmillan, 1980).

<sup>4</sup> David Hume, *Dialogues Concerning Natural Religion*, ed. N. K. Smith (London: Longmans, Green, 1922), 189.

<sup>5</sup> G. W. Leibniz, "Principles of Nature and of Grace," section 8. Compare St. Thomas: "Of necessity, herefore, anything in process of change is being changed by something else"; *Summa Theologiae* I, q. 2, a. 3. The idea that only substances can produce changes goes back to Thomas's master, Aristotle. In Plato and the Presocratics, the causal efficacy of principles is recognized (for example, the love and strife of Empedocles).

come from like. This highly dubious principle of genetic homogeneity has taken hard knocks in the course of modern science. Matter can come from energy, and living organisms from complexes of inorganic molecules. If the principle fails with matter and life, need it hold for substance as such? The claim that it does so would need a very cogent defense, and none has been forthcoming to date.

Is it indeed true that only things can engender things? Why need a ground of change always inhere in a thing rather than in a nonsubstantial condition of things in general? Must substance inevitably arise from substance? Even to state such a principle is in effect to challenge its credentials. What is to say that substance cannot emerge from pure process? Why must the explanation of facts rest in the operation of things? To be sure, fact-explanations must have inputs (all explanations must). Facts must root in facts. But why thing-existential ones? A highly problematic bit of metaphysics is involved here. Dogmas about explanatory homogeneity aside, there is no discernible reason why an existential fact cannot be grounded in nonexistential ones, and why the existence of substantial things cannot be explained on the basis of some nonsubstantial circumstance or principle whose operations can constrain existence in something of the way in which equations can constrain nonzero solutions. Once we give up the principle of genetic homogeneity and abandon the idea that existing things must originate in existing things, we remove the key prop of the idea that asking for an explanation of things in general is a logically inappropriate demand. The footing of the rejectionist approach is gravely undermined.

There are also further routes to rejectionism. One of them turns on the doctrine of Kant's antinomy that it is illegitimate to try to account for the phenomenal universe as a whole (the entire *Erscheinungswelt*). Explanation on this view is inherently partitive: phenomena can only be accounted for in terms of other particular phenomena, so that it is in principle improper to ask for an account of phenomena as a whole. The very idea of an explanatory science of nature as a whole is illegitimate. Yet this view is deeply problematic. To all intents and purposes, science strives to explain the age of the universe as a whole, its structure, its volume, its laws, its composition, and so forth. Why not then its existence as well. The decree that explanatory discussion is by nature necessarily partial and incapable of dealing with the whole lacks plausibility. It seems a mere device for sidestepping embarrassingly difficult questions.

In the end, it must be acknowledged that rejectionism is not a particularly appealing doctrine. For its alternatives have the significant merit of retaining for rational inquiry and investigation a question that would otherwise be abandoned. After all, the question of the reason why behind existence is surely important. If there is any possibility of getting an adequate answer—by hook or by crook—it seems reasonable that we would very much like to have it. There is nothing patently meaningless or clearly improper about this riddle of existence. And it does not seem to rest in any obvious way on any particularly problematic presupposition—apart from the epistemically optimistic yet methodologically inevitable idea that there are always reasons why things are as they are (the principle of sufficient reason). To dismiss the question as improper or illegitimate is fruitless; try as we will to put it away, it comes back to haunt us.<sup>6</sup>

## II

*Optimalism and Evaluative Metaphysics.* From its earliest days, metaphysics was also taken to include axiology, the evaluative and normative assessment of the things that exist. Already with Aristotle the aim of the enterprise was not just to describe or characterize, but to grade (appraise, rank) matters in point of their inherent value. Such metaphysical evaluation has two cardinal features: (1) it is genuine evaluation that involves some authentic concept of greater or lesser value and (2) the mode of value involved is *sui generis* and thus not ethical, aesthetic, utilitarian, and so forth. Accordingly, it evaluates types of things or conditions of things existing in nature (not acts or artifacts) with a view to their intrinsic merit (not simply their value for man or anything else). The very possibility of this axiological enterprise accordingly rests on the acceptance of distinctly metaphysical values—as opposed to ethical (right/wrong) or aesthetic (beautiful/ugly) or practical (useful/unuseful) ones.

The paternity of evaluative metaphysics in philosophical practice can unhesitatingly be laid at Plato's door, but as a conscious and

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<sup>6</sup> For criticisms of ways of avoiding the question "Why is there something rather than nothing?" see chapter 3 of William Rowe, *The Cosmological Argument* (Princeton: Princeton University Press, 1975). Compare also *The Cosmological Argument*, ed. Donald R. Burrill (Garden City, N. Y.: Anchor Books, 1967), especially Paul Edwards's "The Cosmological Argument."



deliberate philosophical method it can be ascribed to Aristotle. In the *Physics* and the *De Anima* we find him at work not merely at classifying the kinds of things there are in the world, but in ranking and grading them in terms of relative evaluations. Above all, his preoccupation in the *Metaphysics* with the ranking schematism of prior/posterior—for which see especially chapter 11 of book 5, and chapter 8 of book 9—is indicative of Aristotle's far-reaching concern with the evaluative dimension of metaphysical inquiry. It was thus a sound insight into the thought framework of the great Stagirite that led the anti-Aristotelian writers of the Renaissance, and later preeminently Descartes and Spinoza, to attack the Platonic/Aristotelian conception of the embodiment of value in nature and the modern logical positivist opponents of metaphysics to attach the stigma of illegitimacy to all evaluative disciplines. Nevertheless, despite such attacks, evaluative metaphysics has continued as an ongoing part of the Western philosophical tradition as continued by such thinkers as Leibniz, Kant, Hegel, and Whitehead, all of whom envision will systems where some things have greater value than others.

A prime example of this methodological approach in recent philosophy is G. E. Moore's *Principia Ethica*.<sup>7</sup> For Moore taught that the realm of ethical values is not self-contained but rather roots in a manifold of metaphysical values. His celebrated method of absolute isolation invites us to make comparative evaluations of two hypothetical worlds supposed to be alike in all relevant respects except that in one of them some factor is exhibited which is lacking in the other. Thus Moore argues for the intrinsic value of natural beauty (that is, its value even apart from human contemplation) by the argument:

[A hypothetical] beautiful world would be better still, if there were human beings in it to contemplate and enjoy its beauty. But that admission makes nothing against my point. If it be once admitted that the beautiful world in itself is better than the ugly, then it follows, that however many beings may enjoy it, and however much better their enjoyment may be than it is itself, yet its mere existence adds something to the goodness of the whole: it is not only a means to our end, but also itself a part thereof.<sup>8</sup>

To espouse the project of evaluative metaphysics is thus to give Moore the right as against Henry Sidgwick's thesis that "If we con-

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<sup>7</sup> G. E. Moore, *Principia Ethica* (Cambridge: University of Cambridge Press, 1903). See in particular sections 50, 55, 57, and 112–13.

<sup>8</sup> *Ibid.*, section 50.

sider carefully such permanent results as are commonly judged to be good, other than qualities of human beings, we find nothing that, on reflection, appears to possess this quality of goodness out of relation to human existence, or at least to some [presumably animal] consciousness or feeling.”<sup>9</sup> (There is of course the trivial fact that if we do the considering, we do the evaluating. The point to be borne in mind is that this need not be done from a humanly parochial, let alone an idiosyncratically personal, and subjective standpoint.) Sidgwick to the contrary notwithstanding, man is neither the measure nor necessarily even the measurer of all things in the evaluative domain.

Moore was well aware of the salient difference which, despite some kinship, obtains between standard ethics on the one hand and evaluative metaphysics on the other, recognizing the *sui generis* character of the latter enterprise:

By combining the results of Ethics as to what would be good or bad, with the conclusions of metaphysics, as to what kinds of things there are in the Universe, we get a means of answering the question whether the Universe is, on the whole, good or bad, and how good or bad, compared with what it might be: a sort of question which has in fact been much discussed by many philosophers.<sup>10</sup>

Such an axiological position does not (as with Sidgwick) see metaphysical evaluation as rooted in ethics but insists on the very reverse relationship. For if “Maximize value!” is indeed a metaphysically grounded maxim of impersonal rationality and ethical conduct is, by its very nature, of greater value than its contraries, then ethics will ultimately be predicated upon evaluative metaphysics.

In the present discussion, however, it will not be ethics that concerns us but ontology, and the present deliberations will focus on exploring the role of value in the explanation of existence. The governing idea is to consider the prospect of giving a Leibnizian answer to that Leibnizian question, contemplating the prospect that things exist—and exist as they do—because that is for the best. Can such an optimalism be developed in a way that is at all plausible?

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<sup>9</sup> Henry Sidgwick, *Methods of Ethics* (London: Macmillan, 1874), bk. 1, chapter 9, section 4.

<sup>10</sup> G. E. Moore, *Some Main Problems of Philosophy* (New York: Macmillan, 1953), 40.



## III

*Axiological Explanation: How Optimalism Works.* Accustomed as we are to explanations in the mode of efficient causality, the idea of an axiological explanation of existence on the basis of an evaluative optimalism has a somewhat strange and unfamiliar air about it. Let us consider more closely how it is supposed to work.

The approach rests on adopting what might be called an axiogenetic optimality principle to the effect that value represents a decisive advantage in regard to realization in that in the virtual competition for existence among alternatives it is the comparatively best that is bound to prevail.<sup>11</sup> Accordingly, whenever there is a plurality of alternative possibilities competing for realization in point of truth or of existence, the (or an) optimal possibility wins out. (An alternative is optimal when no better alternative exists, although equal ones might.) The result is that things exist, and exist as they do, because this is for the (metaphysically) best.

It may be a complicated matter to appraise from a metaphysical/ontological standpoint that condition X is better (that is, inherently more meritorious) than condition Y. But, so optimalism maintains, once this evaluative hurdle is overcome, the question “Why should it be that X rather than Y exists?” is automatically settled by this very fact via the ramifications of optimality. In sum, a law of optimality prevails; value (of a suitable—as yet unspecified—sort) enjoys an existential impetus so that it lies in the nature of things that (one of) the best of available alternatives is realized.<sup>12</sup>

But why should it be that optimalism obtains? Why should what is for the best exist? What sort of plausible argument can be given on this position’s behalf? The answer to these questions lies in the very nature of the principle itself. It is self-substantiating, insofar as it involves seeing that it is automatically for the best that the best alternative should exist rather than an inferior rival. But this is just one of its assets;<sup>13</sup> it also offers significant systemic advantages. For of the vari-

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<sup>11</sup> The prime spokesman for this line of thought within the Western philosophical tradition was G. W. Leibniz. A present-day exponent is John Leslie. See section 7 of this essay. See also the present author’s *The Riddle of Existence* (Lanham, Md.: University Press of America, 1984).

<sup>12</sup> To make this work out, the value of a disjunction alternative has to be fixed at the value of its optimal member, lest the disjunctive bundling of a good alternative with inferior rivals so operate as to eliminate it from competition.

ous plausible existential principles, it transpires—in the end—that it is optimalism that offers the most attractive option.

The principle being, as it were, self-explanatory, it transpires that to ask for a different sort of explanation would be inappropriate. We must expect that any ultimate principle should explain itself and cannot, in the very nature of things, admit of an external explanation in terms of something altogether different. The impetus to realization inherent in authentic value lies in the very nature of value itself. A rational person would not favor the inferior alternative; and there is no reason to think that a rational reality would do so either.

To be sure, one could ask, “But why should it be that reality is rational?” This is a problematic way of proceeding, however. For to ask this question is to ask for a reason. It is already to presume or presuppose the rationality of things, taking the stance that what is so is and must be so for a reason. Once one poses the question “But why should it be that nature has the feature F?” it is already too late to raise the issue of nature’s rationality. In advancing that question the matter at issue has already been tacitly conceded. Anyone who troubles to ask for a reason why nature should have a certain feature is thereby proceeding within a framework of thought where nature’s rationality—the amenability of its features to rational explanation—is already presumed.

Yet what is to be the status of a law of optimality to the effect that “whatever possibility is for the best is ipso facto the possibility that is actualized.” It is certainly not a logico-conceptually necessary truth; from the angle of theoretical logic it has to be seen as a contingent fact—albeit one not about nature as such, but rather one about the manifold of real possibility that underlies it. Insofar as it is necessary at all it obtains as a matter of ontological rather than logico-conceptual necessity, while the realm of possibility as a whole is presumably constituted by considerations of logico-metaphysical necessity alone.<sup>14</sup> But the division of this realm into real versus merely specula-

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<sup>13</sup> Other principles can also be self-substantiating, seeing that, for example, the principle of pessimism (that the worst of possible alternatives is realized) also has this feature.

<sup>14</sup> The operative perspective envisions a threefold order of necessity/possibility: the logico-conceptual, the ontological or proto-physical, and the physical. It accordingly resists the positivistic tendency of the times to dismiss or ignore that second, intermediate order of considerations. This is only to be expected since people nowadays see this intermediate realm as predicted in value considerations, a theme that is anathema to present-day scientism.

tive possibilities can hinge on contingent considerations: there can be logically contingent laws of possibility even as there are logically contingent laws of nature (that is, of reality). The point might be raised: “But if it is contingent then surely it must itself rest on some further explanation.” Granted. It itself presumably has an explanation, seeing that one can and should maintain the Leibnizian principle of sufficient reason to the effect that for every contingent fact there is a reason why it is so rather than otherwise. But there is no decisive reason why that explanation has to be deeper and different—that is, no decisive reason why the prospect of self-explanation has to be excluded at this fundamental level.<sup>15</sup> After all, we cannot go on putting the explanatory elephant on the back of the tortoise on the back of the alligator *ad infinitum*: as Aristotle already saw, the explanatory regress has to stop somewhere at a final theory—one that is literally self-explanatory. What better candidate could there be than the law of optimality itself, with the result that the division between real and merely theoretical possibilities is as it is (that is, value based) because that itself is for the best—the principle being, as it were, self-explanatory?<sup>16</sup> To ask for a different sort of explanation would be inappropriate. We must expect that any ultimate principle must explain itself and cannot, in the very nature of things, admit of an external explanation in terms of something altogether different. The impetus to realization inherent in authentic value lies in the very nature of value itself. A rational person would not favor the inferior alternative; and a rational reality cannot do so either.

To be sure, the law’s operation here presupposes some value parameters, invoking certain physically relevant features (symmetry, economy, or the like) as merit-manifesting factors. The optimization at issue is—and should be—geared to a scientifically reputable theory

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<sup>15</sup> After all, there is no reason of logico-theoretical principle why propositions cannot be self-certifying. Nothing vicious need be involved in self-substantiation. Think of “Some statements are true” or “This statement stakes a particular rather than universal claim.”

<sup>16</sup> The reasoning at issue proceeds as follows: (1) The prevailing world order is the best that can be actualized—that is, the best that it is possible to realize; (2) The best possible order exists because that is for the best; (3) Therefore: The prevailing world order exists. What is self-explanatory here is not the existence of the world (whose explanation after all proceeds from this entire account). It is, rather, the principle of optimality reflected in the second premise that is self-explanatory—the fact that the best possible order exists. For this fact is part and parcel of the optimal order whose obtaining it validates.

of some suitable kind, coordinate with a complex of physically relevant factors of a suitable kind. After all, many a possible world will maximize a value of some sort (confusion and nastiness included). It is its (presumed) gearing to a positive value that is plausibly identifiable as physically relevant—contingently identifiable as such subject to scientific inquiry—that establishes optimalism as a reasonable proposition and ultimately prevents the thesis “optimalism obtains because that is for the best” from declining into vacuity.

Ontological optimalism is closely related to optimism. The optimist holds that whatever exists is for the best, while the optimalist maintains the converse that whatever is for the best exists. But at least when we are dealing with exclusive and exhaustive alternatives the two theses converge. For if one of the alternatives  $A, A_1, \dots, A_n$  must be the case, then if what is realized is for the best it follows automatically that the best is realized.

Optimalism has many theoretical advantages. Here is just one of them. It is conceivable, one might contend, that the existence of the world (that is, of a world) is a necessary fact while nevertheless its nature (that is, of which world is contingent). This would mean that separate and potentially different answers would have to be provided for the questions “Why is there anything at all?” and “Why is the character of existence as it is—why is it that this particular world exists?” However, an axiogenetic approach enjoys the advantage of rational economy in that it proceeds uniformly here. It provides a single rationale for both answers—namely that “this is for the best.” It accordingly also enjoys the significant merit of providing for the rational economy of explanatory principles.

However, a threatening difficulty seems to arise in the form of a possibility range that is evaluatively topless—that is, which does not have some alternatives that are optimal in the sense of not being bettered by any other. In such a range each alternative is surpassed by yet another that is better. As such, on optimalistic principles it would transpire that there are no real possibilities at all. Within such a range there is no optimum and thus no possibility of actualization. Here optimalism must take the bull by the horns. Insofar as situations can be imagined which—like that of a topless infinite alternative spectrum—could raise difficulties for the theory, it could and should simply be seen as part and parcel of optimalism to assert that such situations cannot actually arise: that a reality that is benign all the way through is thereby such as to exclude such a problematic situation. As

optimalism sees it, the very fact that toplessness conflicts with optimalism excludes it from the range of real possibilities.

But what if there is a plurality of features contributing to perfection, so interrelated that more of the one demands less of the other? Here it would result that nothing is straightforwardly best. This may be so, but matters need not be straightforward. In such cases one can—and should—resort to a function of combination that allows for the interaction of those different value parameters. For example, with two operative value-making factors, say cheapness (that is, inverse acquisition cost) and durability in the case of a 100 watt light bulb, one will use the ratio, cost of purchase divided by hours of usability, as a measure of merit. This ratio makes possible the reduction of the multifactor case to the situation of a single compound and complex factor so that optimization is once again possible. That this reduction is possible is guaranteed by optimalism itself; it is part and parcel of the best possible order of things that optimalism should be operable within it.

Yet is such a theory of axiological ontogenesis not defeated by the objection: If it were the case that value explains existence, then why is not the world altogether perfect in every regard?

The answer lies in the inherent complexity of value. An object that is of any value at all is subject to a complex of values. For it is the fundamental fact of axiology that every evaluation-admitting object has a plurality of evaluative features. Consider an automobile. Its parameters of merit clearly include such factors as speed, reliability, repair infrequency, safety, operating economy, aesthetic appearance, road-handling ability. In actual practice such features are interrelated, and it is unavoidable that they trade off against one another: more of *A* means less of *B*. It would be ridiculous to have a supersafe car with a maximum speed of two miles per hour. It would be ridiculous to have a car that is inexpensive to operate but spends three-fourths of the time in a repair shop.

In any multicriterial setting, absolute perfection is simply an impossibility. Perfection—maximum realization of every value dimension all at once—is simply unrealizable because of the interaction of parameters: in designing a car you cannot maximize both safety and economy of operation. Analogously the world is not absolutely perfect—perfect in every respect—because this sort of absolute perfection is in principle impossible to realize. Of course it makes no sense to ask for the impossible. Accordingly, the objection “If value is the



key to existence, the world would be perfect” collapses. All that will follow on axiogenetic principles is that the world will exemplify an optimal interactive balance of the relevant natural factors. An optimally realizable best need not be perfect in the naive sense of that term which unrealistically demands maximality in every relevant respect. Leibniz had the right approach here: optimalism does not maintain that the world is absolutely perfect but just that it be the best that is possible—that it outranks the available alternatives.

It is an inherently inevitable feature of the nature of things—an inevitable fact of life—that value realization is always a matter of balance, of trade-offs, of compromise. The reality of it is that value factors always compete in matters of realization. A concurrent maximum in every dimension is simply unavoidable in this (or indeed any other realistically conceivable) world. All that one can ever reasonably ask for is an auspicious combination of values.

Nevertheless how can sensible people possibly embrace the conception that the inherently best alternative is thereby automatically the actual (true) one? Does not the world’s all too evident imperfection stand decisively in the way here?

The matter is not all that simple, however, for the issue is going to pivot on the question of what “inherently best” means. If it means best from that angle of your desires, or of my interests, or even of the advantage of homo sapiens in general, then clearly the thesis loses its strong appeal. For such plausibility it is necessary that “best” be construed as looking to the condition of existence as a whole rather than one particular privileged individual or group. Optimality in this context is clearly not going to be a matter of the affective welfare or standard of living of some particular sector of existence; it is going to have to be a metaphysical good of some synoptic and rather abstract sort that looks to the condition of the whole. Accordingly the objection “Is not optimalism simply too Pollyanna-ish to be plausible?” can be met effectively. The optimalist need not simply shut his eyes to the world’s all too evident parochially considered imperfections. For what the optimalist can and should do is insist that because of the intricate inherent interrelationships among value parameters, an imperfection in this or that respect must be taken in stride because they have to be there for an optimal overall combination of value to be realized. There is, in fact, a point of view from which optimalism is a position that is not so much optimistic as deeply pessimistic. This view holds that even the best of possible arrangements is bound to exhibit



very real imperfections from the angle of narrowly parochial concerns or interests. As regards the sort of value that indeed is at issue, this is something that will all be dealt with in some detail below.

#### IV

*The Problem of How Value Can Have Explanatory Efficacy: Overlooking Some Objections.* A seeming obstacle to optimalism looms in the question “But how can value possibly exert a causally productive influence?” The answer to this good question is that it does not. What value conditions do is not to create anything (that is, productively engender its realization). Their *modus operandi* is not causal but modal: their role is to block or preclude certain theoretically conceivable possibilities from realizability. They serve an entirely restrictive function and only manage to preclude certain theoretical possibilities from qualifying as ontological (potentially achievable) possibilities. At this stage we contemplate a tripartite hierarchy of (increasingly substantive) possibilities: logical, ontological, and physical, subject to the control of logic, of axiology, and of physics, respectively. It is thus at the middle level of ontological possibilities that axiology does its work. The operative impetus of optimality does not express itself by way of causality in the realm of the real but rather by way of a determination in the realm of the genuinely possible—that is, of the metaphysically rather than logically possible. This metaphysical possibility should be seen as constraining the most fundamental laws of physics, the most basic of which would emerge as invariant with respect to those metaphysical possibilities.

The overall story that must be narrated here runs as follows: nature—physical reality as we have it—represents the actualization of certain possibilities. But underlying this existential condition of affairs is the operation of a prior sub- or metaphysical principle, operative within the wider domain of logical possibility, and dividing this domain into disjoint sectors of real and purely theoretical possibility. To put it very figuratively, logical possibilities are involved in a virtual struggle for existence in which the axiologically best win out so as to become real possibilities. Specifically, even when there are (mutually exclusive) alternatives that are possible in theory, none will be a real or ontological possibility for realization as actual or as true if some other alternative is superior to it. The availability of a better alterna-

tive disqualifies its inferiors from qualifying as ontologically available—as real—that is, metaphysical—possibilities. Thus, whenever there is a uniquely best alternative, this alternative is ipso facto realized as actual or true.

Optimalism is certainly a teleological theory; it holds that nature's modus operandi manifests a tropism toward a certain end or *telos* to wit optimization. The upshot represents a doctrine of final causes in Aristotle's sense; but this axiology is emphatically not a causal theory in the nowadays standard sense of efficient causation. It does not—and does not need to—regard value as a somehow efficient cause, a productive agency. On the contrary—value is not productive at all, but merely eliminative in so functioning as to block the way to availability of inferior productions. It does not drive causal processes but only canalizes or delimits them by ruling certain theoretical (or logical) possibilities outside the realm of real possibility. Consider an analogy. The English language allows double letters in its words, but not triple letters, but that does not mean that the double *S* of “pussy” causes that letter following the double *S* to be something different from *S*. It merely imposes a structural constraint of possibility. The lawful principle at issue explains the factual situation without any invocation of causality, and we see that an explanation via inherent constraints on possibility is not a causal explanation at all.

At this point a skeptical reader will doubtless ask, “Given a spectrum of possibility with a structure such as (1) (2) (3), what would be the difference between an elimination that excludes the *A* of actuality from compartment (3) and thereby impels it to the two left-most compartments numbered (1) and (2), and a magnetic attraction that that causes *A* to move toward the left and thereby out of compartment (3)? Is the effect not the same either way?”

This point is well taken—as far as it goes. However, it overlooks something important.

The fact is that an attractive force requires and involves a causal agency of some sort. Possibility exclusions, on the other hand, can simply root in the general modus operandi of things without any reference to causal agency. Consider an analogy. Suppose that a society exhibits a suicide rate of 1.2 per 100 per annum during a certain era of its existence. No positive force is at work in constraining it to meet its quota of suicides—no identifiable cause engenders this aggregate result. While it is literally impossible to have a suicideless year, this lies in the nature of things generally and not in the potency of some

suicide-impelling power or force. This result is not produced by some ad hoc force or agency or power—it is simply a feature of how things work in this context. Again, more than 5 percent of the letters on the first page of tomorrow's *Times* newspaper will be E's. Yet no force or power compels this effect. While it is literally impossible for no E's to occur, and the nature of the situation precludes this prospect, there is no force of attraction to constrain the presence of E's. It is inevitable that there will be more E's than Z's but this result is not the product of any power or force but resides simply and solely in the *modus operandi* of the language.

With the explanation of why physical objects and events exist we must indeed invoke causes and effects. But laws of nature themselves do not exist as causal products—they just obtain. Now when laws obtain, there is, no doubt, a reason for their obtaining (an axiological reason, as we ourselves see it), but this reason can presumably be provided by an explanatory principle that need not carry us into the order of efficient causality through the motivations of an agent. To insist upon asking how values are able to function causally in law realization is simply to adopt an inappropriate model for the processes involved. Value explanation just is not causal: values do not function in the order of efficient causality at all, and so the law of optimality yields those results not via the mysterious attractive power of optimal possibilities but because suboptimal possibilities are excluded through a displacement by their superior rivals which simply preempts their place in possibility space. Axiogenetic theory has it that even as the presence of light displaces darkness, so does the availability of better alternatives preclude the very possibility of any inferior so-called alternatives requiring the intervention of a productive agent or agency.

As such, in essence this line of reply concedes that value does not engender existence in the mode of efficient causation and that it would indeed be rather mysterious if values were asked to play a causal role in regard to laws. But this is to be seen as irrelevant. The real point is that while value does not efficiently cause existence it nevertheless explains it, precisely because causal explanation is not the only sort of explanation there is. As such the fact that axiology does not provide such an explanation is not an occasion for appropriate complaint. It does not stop value explanations from being explanations. They present perfectly good answers to "Why is something-or-other so?" type questions. It is just that in relation to laws, values

play only an explanatory role through possibility elimination and not a causally productive role through actual creation. This is no defect because a productive process is simply not called for.

Thus, while axiological explanations fail to address a question for which design explanations have an answer—namely the causal question “How do values operate productively so as to bring particular laws to actualization?”—this reflects no demerit. For this question is simply inappropriate in the axiological setting. Values do not operate in the causal order at all. They function only—and quite inefficiently—as constraints within the manifold of possibility. The issue of a specifically causal efficacy simply does not arise with axiological explanation.

What we have here, then, is not the operation of some rather mysterious force or agency but the preclusion (or rarefaction) of certain (theoretical) possibilities owing to the operation of natural law: a combination of the space of possibility from a wider range of hypothetical possibility to a narrow range of possibilities under the aegis of lawful principles—and the optimality principle in the present case. (Here “direct” preempts the prospect of a deeper explanation in terms of further principles relating to the operation of the powers or forces of some agent or agency.) The point is that the regress of explanatory principles must have a stop and that it is here—with axiology—that we reach a natural terminus by way of self-explanation. The long and short of it is that axio-ontology can be autonomous and nomic self-sufficient: it does not need to be seen as based in the operative power of some productive force or power or agency.

If such an axiogenetic explanation is to work, then since there is only one real world the manifold of real possibilities must ultimately be reduced to one. That is, a series of successively operable value considerations must reduce the manifold of theoretical possibilities more and more restrictively until at last, as with the little Indians of the story, there remains but a single one. And that one is, in a very real sense, necessitated: it is, so to speak, constrained by value.

Does this necessitation bespeak a Spinozistic determinism? Will it engender a block universe where every detail is deterministically necessitated? By no means. The necessitation at issue relates to the why of the universe and not to its what. It is not only conceivable but presumably actual that the best possible world whose existence is axiologically necessitated by value considerations is one which in its internal mode of functioning provides for the contingencies of chance

and free agency. The necessitation at issue here must emphatically not be construed as a matter of occurrence determinism as this is standardly construed in metaphysical deliberations.

V

*The Value Efficacy Objection and the Theological Aspect.* But what of the theological dimension? Optimalism must come to terms with the complaint “Values are inherently anthropomorphic: it is only through constituting the motives of agents that they can possibly obtain explanatory efficacy. Only by serving as some deliberate agent’s motivational repertoire can a value come into effective operation.” This line of thought leads to the disjunction: The axiological explanation of nature’s laws with reference to values is not really self-sufficient. Without recourse to the productive agency of a creator God, the question of how values secure their functional efficacy remains unresolved. For how can values in and of themselves ever acquire their modus operandi in the determination of laws? Only design explanations can offer us an answer here: Values are brought to bear on the world through the divine will which governs the productive agency of God.

This objection demands an answer to the question of how values can possibly figure in the realization of things save through the mediation of the purposes of a creatively active being—a finite agent with mundane things, and with the universe as a whole, who else but God. We may characterize this as a theistically based value efficacy objection. It clearly poses a challenge with which an axiological theory of explanation must come to terms.

Such a view of value explanation is nothing new—it has existed in embargo since Plato’s day thanks to his conception of demiurge. The basic idea is that the only way in which values can be brought to bear in the explanation of phenomena is through the mediation of a creative agent. Accordingly, thinkers from classical antiquity onward have defended (or attacked) the principle that explaining the presence of order in nature—the fact that the world is a cosmos requires postulating a creative intelligence as its cause. That nature manifests and exemplifies such cognitive values as order, harmony, and uniformity was thus explained by regarding these as marks of purpose. On this basis, the mainstream of Western thought regarding axiological

explanation has taken the line that there is a supernatural agent (God, demiurge, or cosmic spirit) and that values obtain their explanatory bearing by influencing the state of mind which governs his creative endeavors. This essentially purposive approach characterizes the traditional argument from design, which explains the creation with reference to a creator (as its *ratio essendi*) and infers the existence of this creator from the orderly structure of created nature (as his *ratio cognoscendi*).<sup>17</sup> The sequential explanatory slide from design to value to purpose to intelligence was historically seen as inexorable. As such, the idea of a recourse to an explanatory principle that is geared to values without any such mediation represents a radical departure. The guiding conception of the present deliberations—that value is the natural place to sever this chain—reflects a break with a longstanding tradition.

However, the justification of this break lies in observing the important distinction between values and purposes. Granted, a purpose must be somebody's purpose—it must have some intelligent agent as its owner-operator. It lies in the very nature of the concept that purposes cannot exist in splendid isolation; they must, in the final analysis, belong to some agent or other. For purposes as such, to be is to be adopted. Purposive explanations operate in terms of why conscious agent do things, and not in terms of why impersonal conditions obtain.

A value, however, can be altogether impersonal. To say that something is a value is not to say that anybody actually values it. A person can certainly hold a certain value dear but if it indeed is a value, then its status as such is no more dependent on its actually being valued than the symmetry of a landscape depends on its actually being discerned. Values admit of being prized, but that does not mean that they actually are, any more than a task's being difficult means that anyone actually attempts it. To be of value is to deserve to be valued, but that of course need not actually happen: the value of things can be underestimated or overestimated or totally overlooked. Neither the items that have value nor the facts of their being of value depend on apprehending minds for their reality. This holds in particular for

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<sup>17</sup> For a useful collection of relevant texts see Donald R. Burrill, *The Cosmological Arguments: A Spectrum of Opinion* (Garden City, N.Y.: Anchor Books, 1967). Two interesting recent accounts of the issues and their historical ramifications are William L. Rowe, *The Cosmological Argument* (Princeton: Princeton University Press, 1975), and William L. Craig, *The Cosmological Argument From Plato to Leibniz* (London: Macmillan, 1980).



ontological values like economy, simplicity, regularity, uniformity, and so forth, that figure in the axiological explanation of laws. The being of values does not consist in their being perceived—not any more than does the being of most other sorts of things.

When someone adopts a certain value, fostering or promoting that value can of course become one of his purposes. “Promoting friendship among the members” can function exactly as “getting elected president of the club” in regard to being someone’s purpose. But values as such (simplicity, for example) are not purposes any more than offices (“being president”) are—though, of course, their promotion or more ample realization may well function as somebody’s purpose. The crucial point is that the being a value does not necessarily entail being adopted by someone, any more than the being a truth necessarily entails being endorsed by someone.

Just here is where the shift from purpose to value explanation is decisively advantageous. A purpose must be somebody’s purpose, and if something has a purpose at all then it must be the case that it serves somebody’s purpose. In this regard purpose is different from value insofar as for value, less baggage is required. While people indeed can value things, something can be of value—can have value—without being valued by anybody—not even God. (To be sure it must be valuable for something or other but it need not be valued by somebody; in principle clean air can be valuable for mammals without being valued by any of them.)

In general, then, we need not embed values in purposes; axiological explanation can stand on its own feet. Axiological existence-explanation can thus proceed entirely outside the purposive order. In taking the axiological route, one is not saying that the realization of value is reality’s purpose. We need not personify nature to account for its features. To say that nature embodies value is a very far cry from saying that the realization of value is one of its purposes. That reality operates in a certain manner—that its *modus operandi* follows certain laws or principles—is in general an entirely impersonal thesis. The values involved in axiological explanation need not be somebody’s values. No element of personification, no reference to anyone’s aims or purposes, need be involved in axiological explanation. Purpose, on the other hand, necessarily requires a purposer—it must be somebody’s purpose. In this regard, value stands with order rather than with purpose. Order-seeking in nature does not presuppose an orderer, nor value-seeking a valuer. The maintenance of enhance-

ment of a value can be a matter of blind operation of impersonal forces or factors.

Given that it is values rather than purposes that function in axiological explanation, these explanations can be entirely impersonal. Values here function directly rather than via the mediation of agents. Values, in sum, can affect the constitution of reality directly through serving as possibility constraints rather than mediately through the aims and objectives of agents.

And so, from the angle of explanation, a final causality of value has substantial advantages over a final causality of purpose. To be sure, both represent modes of final rather than efficient causation, since in both cases we deal with tendencies toward the realization of some prespecifiable condition of things. But these two forms of teleology are altogether distinct. The former explains regularities in terms of their conduciveness to some purposive agent's aims and objectives ("he never mixes business with pleasure"). The latter explains them through an in-principle universal force that exerts an operative value-impetus such as efficiency or economy. Accordingly, an axiological ontogenesis can be a matter of nomological constraint based on values, and not a matter of efficient causality at all—it is a causality in name only.

In this respect, the present axiological approach differs decisively from that of Leibniz. He answered the question "Why is it that the value-optimizing world should be the one that actually exists?" with reference to the will of a God who chooses to adopt value optimization as a creative principle. Leibniz was committed to an idea that it is necessary to account for the obtaining of a principle in terms of the operation of an existing entity (specifically the agency of an intelligent being—namely God). Instead, our axiological approach sees the explanatory bearing of a principle of value as direct, without mediation through the agency of a substantial being (however extraordinary) as final and fundamental.<sup>18</sup> On grounds of explanatory economy, at least,

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<sup>18</sup> Our metaphysical invocation of a principle of value is akin to A. C. Ewing's theological application of similar ideas in an interesting article in which he propounds the argument that God's existence is to be accounted for axiologically: that he exists "because it was supremely good that God should exist"; A. C. Ewing, "Two 'Proofs' of God's Existence," *Religious Studies* 1 (1961): 35. This approach has the substantial merit of avoiding Leibniz's tactic of grounding the efficacy of value in a preexisting deity by contemplating the prospect that value is so fundamental that the deity itself can be accounted for in its terms.

purpose is thus something that we would be well advised to do without if we can actually manage to do so.

Altogether different explanatory processes are thus at issue in axiological and in purposive explanation, and the ontological requirements of the former are a great deal more modest than those of the latter. To hold that nature operates so as to minimize or maximize this or that evaluative factor does not commit us to presupposing a purposive agency as working in or behind nature. The rationale of value can be self-contained; it can stay clear of any involvement with matters of causality, agency, and purpose.

## VI

*Divorcing Axiological Explanation from the Argument from Design: Cosmic Value Without a Cosmic Valuer.* Since it is values rather than purposes that function in axiological explanation, these explanations can be entirely impersonal. We need not commit the pathetic fallacy in personalizing matters here. In metaphysics, values can function directly rather than via the mediation of agents. The idea is simply that the system in question is value-tropic (as it were) in that it inherently tends to realize certain value-endowed conditions, such as maintaining stability, achieving symmetry, prolonging longevity, operating efficiently, and so forth. Of course, the system that comports itself in this way need not overtly hold such a value—like a physical system that pursues the path of least resistance, it may well be the sort of thing for which the conscious adoption of values is simply not possible. To reemphasize: when its *modus operandi* establishes commitment to a certain value, nature need not seek value any more than water need seek its own level. Value can enter into an explanation simply by way of characterizing a tendentious, quasi-telic feature of its *modus operandi*, and thus is something very different from a purpose or aim that requires actual adoption. For a claim to end-directed transactions in the world (“Nature abhors a vacuum”) is without any presuppositions or implications with regard to a purposively operating mind. A system can be goal directed through its inherent natural programming (for example, heliotropism or homeostasis) without any admixture of purpose even as a conservation of energy principle need not be held on the basis of nature’s seeking to conserve energy. In sum the values at issue are impersonal and natu-

ral in relating to the physical and metaphysical status of potential existents. For there is no good reason why a axiology could not take the form of a value naturalism—and very good reason why it should do so.

In adopting the axiological turn with regard to explanation, we need not (and should not) take the step of supposing that a mind within or behind nature acts as the source of value. We need not implement the principle of axiology by way of personification. Indeed to do so would be self-defeating, since we ideally want to explain existence in a way that is self-sustaining (self-contained, ultimate).

Thus, confronted with the challenge “What if one is skeptical about theism? Would one then not have to reject optimalism?” the optimalist replies: “Not at all.” Optimalism does not require theism—one need not call upon God to institute optimalism. As we have seen, the doctrine is perfectly self-supportive: it obtains on its own basis, because that is for the best.<sup>19</sup> And here indeed lies one of the prime reasons for taking axiological explanation seriously: it enables us to avert the temptations and difficulties of theological explanation.

To be sure, why nature so operates as to implement the value *V* will require some explanation. Yet as we have seen, the prospect of self-invoking explanations is available here. For example, nature fosters economy (simplicity, harmony, and so forth) because that is the most economical of things for it to do. Or again, why do its laws exist as they do? Because that is for the axiological best in optimizing the systemic operations that obtain. Why does what is for the best obtain? Just exactly because that itself is for the best. The explanation of the operation of laws is axiological (value-referential). The explanation of the obtaining of values is self-referential—that is, is also axiological. The possibility of providing an explanation on its own basis—a reflexive explanation that is literally a self-explanation—is now before us. Value is, or can be, regress-stopping: it can be final by way of being self-explanatory in a manner purpose cannot be.

To reach outside the value domain itself to equip value with a purposive explanation that is theological in nature is unnecessary and counterproductive—it complicates rather than simplifies the explanatory process inasmuch as we then cannot avoid the question “Why does the putative creator adopt this purpose?” The response to this

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<sup>19</sup> Indeed an overenthusiastic optimalist could take the line that theism hinges on optimalism rather than the reverse because: “God’s own existence issues from optimalism: he exists because that is for the best.”

question must take the form that he deems (and of course, since it is God that is at issue, rightly deems) to be of value. And this response at once carries us back to axiology. Recourse to divine purpose merely adds a complex epicycle once the question of the rational validity of this purpose arises. We now have a two-factor explanation of creator plus value, where in principle a one-factor explanation in terms of value as such can accomplish the explanatory task.

Following the guidelines of Kant's *Critique of Teleological Judgment*, Archbishop Temple writes:

The chain of causes is not self-explanatory. . . . There is in fact only one principle which is self-explanatory; it is Purpose. When in tracing any causal nexus we read the activity of a will fulfilling a Purpose with which we ourselves sympathize, we are in fact satisfied.<sup>20</sup>

But this is very problematic because purpose clearly does not stand at the end of the explanatory line. A rational agent's purpose always has a rationale: the that of purpose leaves open the question why. It is altogether appropriate to inquire why an agent A adopts a particular purpose P: the question of the rationale for that purpose cannot be avoided. The good archbishop is simply wrong to think of purpose as an explanatory ultimate. However much we may sympathize with someone's purposes, they will still remain items on the explanatory agenda. If you are famished, then however thoroughly I may understand your plight, your purpose of getting food still needs (and is capable of receiving) an explanation—immediately in terms of hunger satisfaction, and ultimately in terms of the value of pain avoidance. The operation of a rationally adopted purpose must itself always root in a value of some sort: well-being in the present case. The explanation is doubtless eminently simple and straightforward, but its being obvious is something quite different from its being superfluous.

The cardinal difference between the present axiological approach and the traditional theological argumentation from design thus turns on keeping values apart from divine intentions and purposes. To say that reality is subject to an evaluative principle is emphatically not to personify nature or to personalize the productive forces that serve to explain it. There is enormous confusion in the philosophical tradition on this point. Early on, Anaximander of Miletus and other Presocratic nature philosophers were prepared to do

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<sup>20</sup> William Temple, *Contemporary British Philosophy, First Series*, ed. J. H. Muirhead (London: Allen & Unwin, 1925), 418.

without the idea that cosmic order requires an orderer. But Plato and especially Christian Neoplatonism entrenched this idea in Western philosophy almost beyond recall. Yet this stance is eminently questionable. For one simply need not locate the source of value in a personal creator, a divine mind or spirit that is an agent whose creative actions are animated by a desire for the good. Hume, Kant, and the countless post-Darwinian anti-teleologists to the contrary notwithstanding, the conception that order requires an orderer still continues to be deeply entrenched. Yet this temptation must be resisted—order no more requires an orderer or value a valuer than temperature demands a heat-sensitively sentient being. Value itself is taken to constitute a determinative force, capable on its own footing of providing a principle of explication without the mediation of a personal agent for whom it serves as a determining motive.

In the 19th century, William Whewell wrote:

The examination of the material world brings before us a number of things and relations of things which suggest to most minds the beliefs of a creating and presiding Intelligence.<sup>21</sup>

Many theorists from Leibniz to Einstein have held exactly this same view.<sup>22</sup> But the history of science—where God has been asked to do less and less explanatory work over the course of time—is such as to make it reasonable to contemplate and account for design without recourse to a designer.

The axiology at issue should thus be seen as a naturalistic one. The values at issue are to encompass factors like stability, symmetry, continuity, complexity, order, and even a dynamic impetus to the development of higher forms possessed of more sophisticated capabilities—perhaps even a sort of Hegelian impetus toward the evolutionary emergence of a creature possessed of an intelligence able to comprehend and appreciate the universe itself, creating a conscious reduplication model of the universe in the realm of thought through the artifice of intelligence. So in any event these values are mundane and nontranscendental and the axiology at issue is an altogether naturalistic one that can be posited on the basis of the world's observable features. After all, it is plausible to take the naturalistic line that in

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<sup>21</sup> William Whewell, *Astronomy and General Physics Considered with Reference to Natural Theology* (London: H. G. Bohn, 1852), 1.

<sup>22</sup> See Lewis S. Feuer, "Noumenalism and Einstein's Argument for the Existence of God," *Inquiry* 26 (1981): 251–85.



reasoning from the character of nature we should remain in the natural realm. Whatever values we may find to inhere in the operations of nature are still something natural—there is nothing supranatural (let alone supernatural) about it. A universe that functions under the aegis of value no more requires an underlying valuer than a universe that exhibits lawful order necessarily requires a lawgiver or a universe that has a start in time (such as a big bang) necessarily requires a creator. The value at issue can be entirely natural, reflecting an inherent aspect of the *modus operandi* of nature. Value-tropism requires the support of an intelligence no more than a principle of conservation or a principle of least action does. Our axiarchic theory is thus without theological demands or implications—and this is all to the good, for that nature is the product of the operations of a designing intelligence is not something we can learn convincingly merely from a study of the workings of nature itself.

Accordingly, axiology need not be tied to religion as this enterprise is usually understood.<sup>23</sup> It may be tempting for us anthropomorphizing humans to ground nature's elegant laws in the mathematized planning of an originative intelligence, but the merit of an axiological approach shows that this temptation can—and should—be resisted. From the days of Laplace and Darwin onward, it has become increasingly clear that design in nature does not entail a designer of nature, a purposing intelligence behind nature, a creator god. The axiological explanation of nature and its laws circumvents the cosmological argument rather than engendering some version of it.

To be sure, axiological explanation is not incompatible with theism—on the contrary, it is thoroughly congenial to it. (A benign Creator would certainly create a duly optimal world.) But a theory of axiological ontogenesis certainly does not require a further recourse to the theological domain. What is at issue here is not an *odium theologicum*—an aversion to theological considerations as such. It is

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<sup>23</sup> To be sure, some idealists envision a religion in which God plays so small a roll that even the present theory can count as “religious.” J. M. E. McTaggart, for example, defined religion as “an emotion resting on a connection of a harmony between ourselves and the universe at large”; J. M. E. McTaggart, *Some Dogmas of Religion* (London: E. Arnold, 1906), 3. But, of course, since we humans are ourselves an evolved part of nature, some degree of affective harmony is pretty well inevitable in a way that need not have much of religion about it on any ordinary understanding of the matter.

rather the idea of the medieval dictum *non in philosophia resurrexerit est ad deum*—that we should not ask God to pull our philosophical chestnuts out of the fire. Questions like “Why is there anything at all?” are philosophical questions and they ought ideally to be answered by philosophical means.

On the other hand, it must be stressed that axiological explanation is altogether congenial to theism—even though it does not require it. After all it is only to be expected that if the world is created by a God of a sort that the tradition encourages us to accept, then the world that such a God creates should be one in which values play a role. Thus it would seem that theism requires axiological explanation distinctly more than axiological explanation requires theism.

But what of the epistemic dimension? What sort of evidence speaks for axiogenesis? What sorts of grounds are there for claiming that what is for the best actually exists?

In general we verify abstract theses by monitoring the acceptability of their concrete consequences. There is no reason not to apply this general principle in the present case as well. Of course it all depends—specifically, on the standard of merit or value that we employ. Clearly if the standard is one of such specifically human-advantage value as comfort, peace of mind, security of existence, or the like, then this claim becomes very problematic and questionable. But if the values at issue are less blatantly anthropomorphic and more metaphysical—if they look to such factors as nomic order under the aegis of natural laws congenial to the progressive development of life and intelligence—then matters appear in a less problematic light. Axio-genesis has to be seen as a confirmable thesis whose evidentiary hinges on the systematizing of our knowledge of nature’s ways. The crux would now be a framework of natural law engendering a course of progressive development whose successive phases of cosmic, biological, and rational evolution provide for the emergence of intelligent life forms able not only to understand nature under the aegis of science but also to appreciate it under the aegis of religion. What is pivotal here is thus not just a lawful order in nature but a lawful order able to provide an effective pathway akin to a scientific understanding and an aesthetic appreciation. Yet these are matters that have to emerge from inquiry. Philosophical deliberations can do no more than show that the theory is available as a plausible prospect that has certain theoretical advantages over its alternatives. Its acceptability will ultimately hinge on the progress of science itself.

## VII

As already noted, the axio-ontological position set out here is clearly indebted to the teachings of G. W. Leibniz. More recently, a kindred position has been defended by the Canadian philosopher John Leslie.<sup>24</sup> There are, however, substantial differences between Leslie's approach and that of the present discussion.

Leslie's position is predicated on the idea that the values at issue are specifically ethical values, so that for him "the world's existence and make-up" are products of "a directly active ethical necessity" with the result that "ethical requirements are creatively powerful."<sup>25</sup>

On this basis, Leslie contemplates a productive agent or agency which, while not necessarily identifiable with God, is nevertheless a being whose creative action is thereby appraisable in the category of right/wrong. As Leslie sees it, ethically guided dutiful agency is the crux, and reality is the creation of a power or agency, subject to the impulse of ethical considerations. He has little alternative to this, since to be productively effective ethical considerations must be the link between producer and product.

No such anthropomorphism invades the present axiological account. It sees the real as emerging from a *modus operandi* inherently natural to the manifold of possibility itself. That is to say it sees this manifold as subject to value oriented principles of operation that serve to condense a plurality of possibilities down to a unique alternative, so that among a multitude of logical possibilities only a single real (or physical) possibility remains, which is actualized in virtue of this very fact. The world thus exists of necessity; however, the necessity in question is not logical but rather metaphysical or axiological in nature. The aspect of productive agency which is crucial to Leslie's deontological ontogenesis—as it was to that of Leibniz—is altogether absent from the present axiological ontogenesis.

The values contemplated in the present discussion are ontological rather than ethical values—that is, values that lie in the spectrum

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<sup>24</sup> He initially expounded it in a paper entitled "The Theory that the World Exists Because It Should," *American Philosophical Quarterly* 7 (1970): 286–98, and subsequently developed it more fully in his book *Value and Existence* (Oxford: Clarendon Press, 1979). See also his paper "The World's Necessary Existence," *International Journal for Philosophy of Religion* 18 (1980): 207–23, and his book *Universes* (New York: Routledge, 1996).

<sup>25</sup> John Leslie, "The Theory that the World Exists Because It Should," 268.

of good/bad rather than in that of right/wrong.<sup>26</sup> Accordingly, the present position prescind from the requirement of a productive-creative-active agency or power, instead viewing the effect of value not in terms of productive exigency but rather in terms of exclusion. Its operative principle is not the magnetic attraction that a consideration of the good exerts upon a creative agent, but the eliminative impetus within in the range of real possibilities.

Leslie's axiological ontology pivots on the idea that ethics somehow requires existence. The present theory moves in the reverse direction to stipulate that existence does (and axiologically must) have a nature that paves the way to ethics: to the evolutionary emergence of a creature capable of recognizing its duties in relation to the furtherance of the good. Thus, as in big bang cosmology, the universe of cosmic evolution begins with physics and gives rise to biology—let alone anthropology and psychology—only late in the game. On its telling it transpires that ontological values are basic in ontogenesis. They are aporetic from the very first, while specifically ethical values emerge on the world stage only in due course with the evolution and emergence of intelligent agents.

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<sup>26</sup> Recall the Moore-Sidgwick controversy discussed in Section 2 above.