The Dialectic of Teleology

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Teleology is a central concept in Hegel’s philosophy, but, as is too common in his writing, exactly what he understands under that concept, what role within his philosophy it plays, and how he defends his position remain obscure. Hegel did not come to his position on teleology in a vacuum; it was a topic of major concern to his predecessors as well. Then as now, debate focused both on the question of the status of teleological judgments—whether they are objective and fit candidates for membership in a scientific theory—and on the problem of the proper analysis of teleological judgments—what exactly is being asserted by such a judgment. These are not entirely separate questions, for the analysis one gives of teleological judgments inevitably affects the status one attributes to them.

Let us begin this exegesis of Hegel’s treatment of teleology with the question of the status of such judgments, and then proceed to the more fundamental issue, the question of analysis.

I

TELEOLOGY AND OBJECTIVITY

The question of the status of teleological judgments is ultimately the question of whether teleological forms of explanation have a legitimate
role to play in comprehending the world, whether they constitute proper forms of scientific explanation. By "scientific" explanation, however, I do not mean only those forms of explanation found in the canonical empirical disciplines, but more broadly those forms of explanation, empirical or otherwise, that are a part of any rigorous and comprehensive understanding of the world. And just as the status of teleology really concerns explanation, so too the analysis of teleology is fundamentally the analysis of teleological explanation.

The ancients saw no problem about the status of teleological judgments or explanations. Final causes were one of the four Aristotelian "becauses," so questions about teleology were always in order in the Aristotelian system. But with the rise of Galilean-Newtonian science, teleological explanations fell into general disrepute, being explicitly rejected by Bacon, Descartes, and many others of the time. Teleological explanation and scientific explanation were taken to be mutually exclusive. This extremely harsh view of teleology was combated, with only small success, by Leibniz, but by the time Hegel encountered the problem the debate had been rejuvenated and its terms recast by the "all destroying" Kant.

KANT: THE SUBJECTIVITY OF TELEOLOGY

Kant's position on teleology is, as one might expect, a sophisticated balancing act. He does not believe that teleological explanations belong in the body of science nor that they articulate objective structures of the world. He expresses this by saying that teleological concepts are not constitutive. The constitutive principles necessary to any objective experience of the world are, in essence, the principles behind Newtonian mechanics; the experienced world is a Newtonian world, a grand mechanism. This means that there are no objectively justifiable attributions of purposive behavior in a world the structure of which is fixed by the Kantian list of categories alone. For it is one of the purposes of the "Transcendental Logic" to argue that all appearances fall under the laws of nature, which are only specifications of the categories themselves. But as Kant says,

In order to see that a thing is only possible as a purpose, that is, to be forced to seek the causality of its origin, not in the mechanism of nature, but in a cause whose faculty of action is determined through concepts, it is requisite that its form not be possible according to mere natural laws... (CJ, sec. 64; Ak. 369-70; Bernard 216).

One point of the "Transcendental Logic" is that we can never be forced to seek a causality outside the mechanism of nature.

Unlike Descartes, Bacon, and others, Kant did not reject teleology as entirely senseless or bogus, and this is expressed within his system by giving it the status of a regulative principle. Teleological concepts play a necessary heuristic role in scientific endeavor. That is, it is an important fact
about the constitution of our cognitive faculties that we need to regard the world as if it were the product of design. This tells us nothing about the objective nature of the world, however. Attributing teleology may be an essential stratagem in our psychology of discovery, but it cannot constitute a satisfactory scientific explanation of an objective reality, for it presupposes the givenness of a totality which in its very nature could not be fully given. Attributions of design to nature are merely heuristic and provisional, ultimately to be discarded in favor of mechanistic explanations which tell us how the objective world is actually constituted. Yet Kant also held that in fact some attributions of design would never finally be cashed out in mechanical terms, and that therefore certain phenomena would forever remain beyond the grasp of science. Clearly one such phenomenon is the world-whole itself; another more immediately interesting example that Kant took to be beyond the grasp of science is the natural organism.

Kant turned to this problem explicitly in the third Critique, where he characterizes an organism as something that is “both cause and effect of itself.” Organisms have an internal natural purpose or end (Naturzweck); they are not only organized, but also self-organizing.

An organized being is then not a mere machine, for that has merely motive power, but it possesses in itself formative power of a self-propagating kind which it communicates to its materials though they have it not of themselves; it organizes them, in fact, and this cannot be explained by the mere mechanical faculty of motion. (CJ, Sec. 65; Ak. 374; Bernard 221)

The upshot of this is that our application of the term ‘organism’ is not objective, for it is not founded upon the constitutive employment of the categories, but upon the regulative employment of an idea of reason. This means that although we may have to believe that we live in a world which is populated by organisms, among which we count ourselves, we can never know this to be the case, for the concept of an organism is not a scientific, objective concept.

HEGEL: THE OBJECTIVITY OF TELEOLOGY

Hegel finds Kant’s position fully unacceptable. We can isolate two arguments against the Kantian position in Hegel’s works. The first is that Kant’s position makes hash out of the biological sciences, which had gained a new vigor around the turn of the century.

Even according to Kant’s own exposition, there would have been an obligation to admit, in the case of natural productions, a knowledge not confined to the categories of quality, cause and effect, composition, constituents, and so on. The principle of inward adaption or design, had it been kept to and carried out in a scientific application, would have led to a different and a higher method of observing nature. (Enz., §58)
We do know that many of the things we encounter in the world are organisms, among which are ourselves, and a properly conducted science of biology will take account of this. Kant’s position makes the scientific treatment of any essentially teleologically characterized phenomenon as such impossible, and Hegel holds that this simply is not the case. Put in slightly different terms, our attributions of purposes and functions to the objects we encounter are as thoroughly objective (in any usable sense of that term) as our attributions of causality in general.3

The other, and I believe deeper, argument Hegel aims at the Kantian position is that it makes it impossible for knowledge to be self-reflective, for knowledge to know what knowledge is. This objection can be generalized into the assertion that Kant’s position makes any knowledge of spiritual (that is, intentional or psychological) phenomena impossible, for all spiritual phenomena, including the process of knowledge, are essentially teleologically characterized.4 Not only our knowledge that there are other spirits in the world, but also our very knowledge of ourselves as spirits or as knowers is inexplicable on the Kantian model. Kant acknowledges this when he admits that our recognition of ourselves as persons is no more than a fact of moral consciousness, not a piece of objective knowledge.

Kant’s position was constrained by his belief that mechanical and teleological explanations, though not contradictory, could not compatibly be applied to the same facts, or as he says, “one method of explanation excludes the other” (CJ, sec. 78; Ak. 412; Bernard 260). Hegel rejected this belief, however. First of all, he correctly saw that there is no conflict between the two forms of explanation, probably because Hegel had studied his Aristotle carefully.5 And he further saw that not only is there no conflict, but teleological explanation presupposes mechanical explanation, for an end is that for which a mechanical chain occurs. Ends work through an agency, but the agency itself is effected by efficient causation. There being organisms and spirits, purposiveness in nature, depends upon there being law-governed efficient causation in nature as well. Thus, in contrast to Kant, Hegel believed that teleological notions could be objectively applied to phenomena in the world, and, further, that there were phenomena in the characterization of which teleological notions essentially occurred and for which science itself must employ teleological patterns of explanation.

II

THE ANALYSIS OF TELEOLOGY

The most interesting aspect of the teleology debate between Kant and Hegel, however, is the fact that Hegel believed that Kant’s analysis of teleology was faulty, or at best one-sided. Whereas Kant heavily emphasized
what I shall call the “intentional” model of teleology, recognized by Hegel as “the subjective end,” Hegel believed that a different model, which I refer to as the “functional” model, was more basic. In distinguishing the two models, Hegel shows a depth of insight that we have only lately regained.

This section begins with an exposition of the intentional model of teleological explanation. I then argue that the first stages of Hegel’s dialectical examination of teleology are an exposition and critique of this model. Via this critique, Hegel proposes a more adequate model for teleological explanation, a form of functional explanation.

THE INTENTIONAL MODEL

Variations on the first, “intentional,” model of teleological explanation have occupied center stage in philosophical discussions of teleology since pre-Kantian times, and lately analyses of teleology in this vein have been offered by Taylor, Bennett, Woodfield, and others. The basic idea is straightforward. When we say that S did A in order to G, we are attributing to the subject, S, a complex intentional state (complex in that it involves both beliefs and desires, cognitive and evaluative elements) which is causally sufficient for S’s doing A. The goal, end, or telos enters into this account only in the description of the intentional state, so we are neither committed to its existence nor to its possessing a (backwards) causal efficacy.

Some such account handles the teleological description and explanation of human action, as well as a great deal of animal behavior, but we do not limit teleological ascriptions to these cases alone. Traffic lights change color in order to control traffic flow, for instance. The intentional model of teleology has the advantage of being able to account for the ascription of purposes to artifacts, for their purposes are bestowed upon them by us and depend upon our purposes and intentions.

This model begins to run into trouble when it confronts ascriptions of purpose to things that have no intentional states and are neither artifacts nor commonly given an artifactual use. For instance, consider the fact that the heart beats in order to circulate the blood. At this point the intentional model fails. There is a strong intuition that natural functions are teleological in some way, but they are not within the reach of the intentional model. If the teleology of natural functions is to be explicated, it must be through some other model of teleology.

THE SUBJECTIVE END

Hegel’s analysis of teleology in the Science of Logic and the Encyclopedia occurs at the end of the middle section of the last third of the Logic: The Doctrine of the Concept, Section Two: Objectivity, Chapter 3: Teleology. It employs his usual triadic arrangement, beginning with something
he calls "the subjective end," moving through a second stage he calls "the means," and concluding in "the realized end." A careful reading of these sections shows that while Hegel recognizes the plausibility and usefulness of the intentional model, he does not believe that it provides an adequate understanding of teleology. According to Hegel, this model does not reveal teleology in its truth: that is, it affords us a partial understanding of teleology under certain specific conditions but does not cut through to the heart and reality of teleology, for it reduces final causation to the form of efficient causation without respecting what is peculiar to final causation per se.

In the initial form in which teleology appears in Hegel's analysis, the "subjective end," the end has a merely subjective, ideal being external to the objective world; it "is the subjective Concept as an essential effort and urge to posit itself externally" (WdL, II:391/740). What Hegel means by calling something "subjective" could itself be the subject of a book. In its current standard use, calling something subjective classifies it as mind-dependent, or perhaps better, mind-determined in some important way, in explicit contrast to what is mind-independent or objective. Hegel gives the term a broader usage, retaining the contrast to objectivity but generalizing the connotations of mind-determination: the subjective is inner, hidden, not fully realized, in contrast to explicit, external, public, and fully determined objectivity. This breadth of use allows Hegel to make sense of the application of his model of teleology to organisms and other natural objects even without the postulate of a personal deity designing them.

Everything points to the fact that Hegel's analysis of the subjective end is an analysis of the intentional model of teleology. We find here and elsewhere in his discussion of the subjective end mention of both its cognitive and evaluative aspects. For instance, in Encyclopedia §207 Hegel asserts that the subjective end "not only particularizes or makes into a determinate content the still indeterminate universal, but also explicitly posits an antithesis of subjectivity and objectivity . . . ," which means that it is present in the mind (the indeterminate universal) as a specific intentional content with objective reference. This assures the cognitive aspect of the subjective end. He then goes on to say that "at the same time [it] is in its own self a return to itself, for it stamps the subjectivity of the concept, presupposed as against objectivity, with the mark of defect. . . ." And this assures the evaluative aspect of the subjective end.

Hegel constantly emphasizes the distinction between the inner, subjective, intentional realm and the external, objective realm toward which it aims. The subjective end is, according to Hegel, an "internality . . . confronted by an objective, mechanical and chemical world to which its activity relates itself as to something already there" (WdL, II 392–93; 742). Further,

subjectivity in determining itself makes itself into particularity, gives itself a content which, enclosed within the unity of
the Concept, is still an inner one; ... and in the same moment in which the subject of the end determines itself, it is related to an indifferent, external objectivity which is to be equated by it with the said inner determinateness, that is to say, is to be posited as something determined by the Concept. ... (WdL, II 393; 742–43)

Here Hegel again describes the subjective end in terms of the presence of a particular intentional object within the mind with a specific “direction of fit” to objective reality.

Although Hegel claims that the intentional model of teleology is inadequate, this does not mean that it should be discarded as simply wrong. It is a partial model, according to Hegel, plausible and useful only when applied within certain boundary conditions. These conditions by and large match those of individual human action and its intended products. But because the intentional model is limited in its scope and application, it can neither cover all proper instances of finite teleology nor serve as a “world principle.”

Note that the subjective end or intentional model of teleology, according to Hegel, is finite in two ways. First, it is a determinate content opposed to other determinate contents. That is, subjective ends are particular purposes of particular persons. There is nothing necessary or self-justifying about them; the specific purposes people have themselves or bestow upon objects are largely contingent and do not spring from the nature of the objects or people themselves. Subjective ends are individualized, multiple, independent, arbitrary, and thoroughly contingent. Nothing in the explanatory form itself requires otherwise, but Hegel holds that a fully adequate explanatory form would not allow for arbitrary or contingent elements at the fundamental level. Thus the intentional model of teleology does not offer us an ultimate explanatory form, for it necessarily leaves unanswered fundamental questions.

Second, insofar as the subjective end is confronted with an external, objective world, it is not itself an objective reality, and this leaves its efficacy within the objective causal order unexplained. (This is a form of finitude because the subjective end stands over against an other that limits it.) The intentional model of teleology can stand up only to the extent that we understand how the intentional, subjective realm connects with the objective, causal realm. Hegel shows here that he has a good grasp of the dilemma facing the Cartesian: the mind-body, subjective-objective split imposes an obligation to explain the connection between the two.

Secondly, because its determinateness has the form of objective indifference, it has the shape of a presupposition, and from this side its finitude consists in its being confronted by an objective, mechanical and chemical world to which its activity relates itself as to something already there; . . . To this extent end still has a genuinely extramundane existence—
to the extent, namely, that it is confronted by this objectivity, just as the latter on the other hand confronts it as a mechanical and chemical whole not yet determined and pervaded by the end. (WdL II, 392–93; 742)

The subjective end is standardly thought of as connected to its ultimate realization via a chain of means-end links. But in any such chain there seems to be an inevitable gap separating the subjective order from the objective world. How can a subjective state be objectively efficacious? Hegel focuses on this problem and what it reveals about teleology by asking what kind of a means could bridge this yawning gap. It is thus to the notion of a means that Hegel turns in order to explore teleology more thoroughly.

Throughout his discussion of teleology Hegel insists that it is crucial to keep the peculiarity of teleology in mind: namely, that the end, the final cause, is productive of itself. This entails that final causation is of a quite different kind from mechanical causation. In mechanical causation the cause and effect must be capable of intrinsic characterizations under which they are logically independent. The connection between the two logically independent event kinds is given through a law that licenses an inference from an occurrence of the one kind of event to the occurrence of the other. In final causation, however, the explanatory burden is not carried by a law. In teleological explanations, “cause” and “effect” are so described that the connection is intrinsic, though the connection is not necessarily in any simple sense merely logical. The basic idea here is that the descriptions of the cause and the effect used in proper teleological explanations carry an explanatory burden because they are not accidentally true of the object involved but rather reveal its very essence. A teleological explanation reveals something about the internal ontological structure of the object in a way that no mechanical explanation can. Mechanical explanation enables one to understand how something interacts with other things; teleological explanation enables one to understand what something is in the first place. Hegel expresses this in both the Greater and Lesser Logics:

In teleology, on the contrary, the content becomes important, for teleology presupposes a Concept, something absolutely determined and therefore self-determining, and so has made a distinction between the relation of the differences and their reciprocal determinedness, that is the form, and the unity that is reflected into itself, a unity that is determined in and for itself and therefore a content. (WdL, II, 386; 736)

The end . . . is expressly stated as containing the specific character in its own self,—the effect, namely, which in the purely causal relation is never free from otherness. The end therefore in its efficiency does not pass over, but retains itself, i.e., it carries into effect itself only. . . ." (Enz., §204)
The contrasts between the explanations employed by a mechanist and a teleologist run deep, in Hegel’s view. The intentional model of teleology, Hegel’s “subjective end” model, minimizes these contrasts, however, by assimilating teleology to mechanical causation. It differs from standard mechanical causation only in that the cause is confined to a special, inner, subjective realm. The conceptions that Hegel thinks are most crucial to teleology—self-production, realization of one’s essence—are quite absent. Rather than attack the subjective end conception of teleology from that standpoint, however, Hegel turns to analyze more closely the Cartesian dilemma of connecting the subjective and objective realms. When mechanists are faced with apparently non-accidental correlations between events, but no true law-like correlations among the events seem to hold directly, they look for an intervening cause, a third thing that causally ties together the original events or objects. Attempting to use this strategy to explain the connections between the subjective and objective realms imposes significant requirements on the intervening cause, the means, an examination of which, Hegel believes, leads us to a deeper insight into the nature of teleology. Thus Hegel turns to examine the notion of a means by which a subjective end is realized.

III

THE MEANS

While Hegel grants that the intentional model of teleology has a useful sphere of application—the explanation of human action and the purposiveness of artifacts—he insists it has also been misused to try to explain phenomena that escape its grasp. The phenomena that cannot be explained through this model of teleology are those to which the notion of inner design applies, and these fall into two categories: the purposiveness of the world, supposedly a divine purposiveness, and the purposiveness of organisms in nature.

Hegel felt the former misuse, understanding divine purposiveness (Zwecke der Natur), in terms of the intentional model, was one of the worst mistakes a philosopher could make, for it presupposes the idea of an extramundane God, which he argues would be a concept of a finite God, a contradiction. The implications of applying the intentional model to the understanding of divine purposiveness are quite pernicious. “The more the teleological principle was linked with the concept of an extramundane intelligence and to that extent was favored by piety, the more it seemed to depart from the true investigation of nature . . .” (WdL, II:385/735). Even Kant’s attempt to use this model to understand the nature of Naturzwecke
cannot be tolerated, for in acting as if organisms were artifacts of a possible intelligence, we should once again have to suppose the conceptually impossible, namely, a finite God.

Should Hegel, in all consistency, maintain that the intentional model of teleology is incoherent, that it could not have application, since whether applied to God or to humans, it seems to presuppose an extramundane intelligence that is nonetheless effective in the world, something he insists is absurd? This is the problem that Hegel addresses under the heading "The Means." His answer is that the intentional model of teleological ascriptions is an abstraction from a more complex, more fundamental form of teleology, an abstraction which is useful under certain conditions.

More specifically, given an explanatory model that sets an extramundane, non-mechanical (and non-chemical) intelligence apart from an objective, mechanical world, there is no way to understand the efficacy of that intelligence. There must be something to bridge the gap, a means to the end. The metaphor Hegel uses throughout his discussion is that of the three-termed syllogism: the subjective end, the intention, is the minor term and the goal to be achieved the major term; to get them together there must be a middle term, a means. It is through the analysis of the properties such a means must have that Hegel leads us to his ultimate conception of teleology.

The means is not dictated by the intention or goal. There are different ways to realize a goal, and the same course of action can serve different goals. However, it is clear that the means must itself be mundane: Like the goal, the means must belong to the causal order, for otherwise its efficacy would remain mysterious. But the means must also be something that is immediately subjected to the intention:

\[ \text{Universal} \text{ity is the relation of the activity of the end and the means. . . . To the end [the intention], therefore, which is the posited Concept, it [the means] is absolutely penetrable, and receptive of the communication, because it is in itself identical with the end. . . . Consequently the object has the character of being powerless against the end and of serving it; the end is the object's subjectivity or soul, that has in the object its external side. (WdL, II:396/745) \]

It may appear that Hegel wants to have his cake and eat it too, demanding that there be certain things that are both mechanical and somehow under the immediate control of mind. But his point is solid, and it parallels some points made in recent action theory. For example, I want to break a window; seeing a stone in front of me as a means to employ in shattering the window, I pick it up. Do I see my arm as a means, a tool to use in carrying out my intention? I certainly could regard my arm that way, but, then, would I regard my muscles as tools to use in raising my
arm? Somewhere we reach a point where we are no longer manipulating external things, but rather, as animate bodies, we simply act, and our intention is embodied in and expressed through our movement. When the intention, subjective end, is no longer thought of as causing the action, and therefore as being external to the action, but is thought of as embodied in the action, as inhabiting and informing the movement, the relation between the objective event or movement and the subjective end or intention is, Hegel would claim, a form of identity. The analysis of the concept of a means mediating between the subjective end and the objective world brings us to realize that there are certain special objects in the world, without which the intentional model of teleology could not have application.

The point here is fundamental, for it embodies the rejection of the traditional Cartesian distinction between mind and body. Hegel insists that we must abandon that fruitless distinction and see the relation between thought and action, mind and body, in terms of expression and embodiment, not in terms of the interaction between two substances.

Further, Hegel sees that exactly where we draw the line between means and end is in any particular instance fairly arbitrary. Someone may go to school in order to learn and learn in order to get a job and get a job in order to live. There are no clear-cut divisions of these things into means and ends, however, for is working merely a means to or (for most of us, anyway) a part of life itself? Which are the means and which the ends ultimately depends on what will make the best sense of the whole course of a life in its environment and social context. We can break such patterns down and assign subjects subjective ends, intentions, but they are abstractions from, or perhaps today we would prefer to say theoretic terms applied to, the total behavior of the organism in its context. Though the ultimate justification of intention attributions rests on their explanatory power relative to the whole of the organism’s behavior, which itself still underdetermines the intention attributions we choose from, this does not prevent us from having a great deal of skill in correctly attributing intentions on the basis of small amounts of behavior (particularly if we are very familiar with the context of the behavior).

The Cartesian tradition is incapable of dealing satisfactorily with the objective existence of organisms, yet the concept of an intention (central to the Cartesian philosophy of mind) presupposes that of an animated body, an organism, for only in such beings is the objective reality rich enough to support and be supported by a subjectivity dwelling within. If there were no animated bodies, the concept of a subjective end, an intention, would be a useless dangler. Since it exemplifies his entire anti-Cartesian approach, let us turn to consider Hegel’s treatment of organisms in greater depth.
IV
ORGANISMS AND FUNCTIONAL TELEOLOGY

Organisms provide Hegel with the best examples of the fundamental structures of teleological process, though even organisms, because of their finitude, are not perfect examples. Organisms exhibit the core characteristic of teleological process: self-production. They do so not in the weak sense in which intentional purposiveness also is a case of self-production, but in the strong sense that an existent being produces itself, maintains itself, even to a degree creates itself, though certainly not ex nihilo, as the existent it is. Using Hegel's syllogistic model, the organism is at one and the same time the mean and both extremes of the syllogistic structure of teleology.

There has been a good deal of attention devoted to the kind of explanations offered in biological contexts in recent years—i.e., functional explanations. Does Hegel's analysis offer any real insight into the structure of this more fundamental teleology?

We can use the same descriptive format to attribute purposiveness in both intentional and functional teleology: S does A in order to G. But in functional teleology it cannot be the case that this is a one-time event. It makes perfect sense to say that last night John went to the convenience store in order to see Mick Jagger, even if John has never and will never perform that action again. But to say that last night at 10:20 my heart beat in order to circulate my blood is odd. It is not, of course, false, but whereas the intentional model attributes purposiveness directly to event-tokens, in functional teleology, event-tokens must inherit their purpose from their respective event-types. My heart is beating now in order to circulate my blood only because it is generically the case that hearts beat in order to circulate blood. It is certainly not the case that people generally go to the convenience store to see Mick Jagger—we have to suppose a bit of a special story to prop up that attribution. Is this type-specificity of functional teleology what Hegel is getting at when he claims that "in contrast to the subjective end, the means, as immediate objectivity, has a universality of existence that the subjective individuality of the end still lacks" (WdL II 395; 744)?

Besides the fact that function-attributions are type-specific, not token-specific, the other obvious difference between functional and intentional teleology is that functional teleology does not attribute any intentional states, beliefs or desires, to the subject of the attribution. The explanatory power of a functional explanation arises not from the ill-understood causal efficacy of inner, subjective states, but from an orchestration of individually normal interactions directed at some ultimate goal. In particular, for Hegel, if S does A in order to G, then S does A because A contributes to achieving the goal G, and G must either contribute to or itself
be the self-realization of S, an interpretation of this structure considered in
greater detail in a moment.

Such explanations presuppose some sort of inherent goal-structure for
the organism or object we apply them to. An object’s possession of some
goal-structure might itself need to be explained, in which case the teleo­
logical explanation cannot be counted complete. For instance, natural
selection explains why there are numerous objects that inherently aim at
survival (or at least species survival)—but natural selection was not an
explanatory device available to Hegel, nor one he would have found very
congenial. Another common way to explain why S aims at G is to say that
G is good, or at least good for S. Movement toward a good is often sup­
posed to be directly intelligible—the connection between being good and
being a goal may be analytic. But, as we have seen, Hegel’s own candi­
date for the ultimate goal of any teleological activity is self-realization.
His insistence that the ultimate goal of any teleological activity is a form
of self-realization puts teleology at the very heart of metaphysics, for it
amounts to an assertion that things being what they are is itself ultimately
a teleological affair.

TELEOLOGY AND THE CONCEPT

To see how self-realization, teleology, and the being of things coa­
lesce, we need to take a brief excursion to ponder Hegel’s concept of the
concept. Kant focused on the notion that the idea of the organism and its
form are explanatory of the parts and the processes of the organism. In
talking about the “form” of the organism here, Kant does not seem to
have meant solely its spatial configuration. In this use, “form” has richer,
more Aristotelian tones. Hegel picks up this influence, for he emphasizes
heavily the role that the concept of the organism plays in explaining its
parts and processes. It is the concept of a thing that dictates its goal, that
indeed is its goal.

Hegel’s notion of a concept is related to the Aristotelian concept of
an essence, an entelechy. Just as Aristotle’s paradigms of entelechies are
organisms, Hegel often uses organic metaphors to illuminate his interpre­
tation of the role of concepts in the world.

Hegel does not conceive of the natural good of an organism as a mat­
ter of its mere survival or even the survival of its species.11 Rather, he
believes that for each thing-kind there is an ideal paradigm of that thing­
kind—its concept—of which all the individuals of the kind are approxi­
mations. (Recall the Aristotelian dictum that to know something as it is
“by nature” is to know it at its best.) Natural organisms (unlike artifacts)
seek to realize their ideals on their own, with more or less success in indi­
vidual cases. Kant holds that organisms have in themselves a “formative
power of a self-propagating kind” (CJ, Sec. 65; Ak. 374; Bernard 221),
and Hegel believes that this formative power can be understood only in

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terms of the internal activity of the concept of the organism. The organism is what it is because of the ideal—the concept—it strives to embody, and this ideal is teleologically effective within the organism. An organism is ensouled by its concept.

If Hegel is right, then natural teleology, such as the heart’s beating in order to circulate the blood, somehow always aims at self-realization. How does circulating blood contribute to the self-realization of a heart? If the answer is that hearts are defined as circulators of blood, and thus that it is the case that without circulating the blood the heart wouldn’t be a heart, the connection has become trivial and analytic, incapable of performing an explanatory function. The proper answer, however, may look superficially similar: the heart beats in order to circulate the blood, the blood circulates in order to feed and oxygenate the cells, which is necessary for the organism to continue living, and only in the context of a living organism is the heart a heart. The parts of an organism realize themselves by maintaining the organism, which realizes itself by maintaining its parts. These complex real-world interactions are mirrored in the conceptual realm as well: the concept of a heart is intrinsically connected with the concept of an organism in complex ways. The differentiation of the organism into relatively autonomous functional subsystems is inherent in the concept of an organism, however, for the higher the organism, the more thoroughly differentiated is its internal structure. Higher organisms are better embodiments of the ideal type constituted by the concept of an organism.

The understanding of thing-kinds as implying ideal types generalizes, in Hegel’s view, to inorganic entities as well. But an inorganic entity has no internal source of movement toward the ideal; or, as Hegel might say it, the concept or ideal is not active within the inorganic thing. The inorganic thing is merely material, soulless. A merely material thing is self-external, that is, no appeal to the concept of the thing, to its essence as dwelling within it (as ‘soul’), is necessary in order to explain the individual thing, for it is determined in all its aspects by other things outside. It is for this reason that the only form of teleology that can apply directly to inorganic things is the external, intentional form. Inorganic things are not self-realizers, and their teleology is strictly derivative from the fundamental teleology of self-realization. Nonetheless, material things do belong to natural kinds, and natural kinds are defined via ideals, and ideals presuppose a teleological structure. It is the overarching teleological structure within which material nature can gain its definition that Hegel considers in his treatment of the Realized End, as we will soon see.

But before we turn to the Realized End, let us return briefly to Hegel’s transformation of Kant’s resuscitation of the notion of form in the Critique of Judgment. Hegel accepts Kant’s second criterion for a Naturzweck, namely, “that its parts should so combine in the unity of the whole that they are reciprocally cause and effect of each other’s form” (CJ §65,
Bernard 219, Ak. 291). While Kant admits that the whole is there because of its parts and the parts are there because of the whole, Kant also believes that these two "becauses" are radically different. The first is objective, capable of clear justification; the second "because" is at best subjective, regulative, useful in spurring further scientific research. But in Hegel's view both "becauses" are equally objective. Teleological explanations appeal to the paradigm of the relevant thing-kind, whether biological or not, but this ideal is not subjective: it is what defines that thing-kind. It is not something we dream up; it is there, objectively present and explanatorily unavoidable. Since Hegel connects the concepts of thing-kinds and teleology, a threat to the objectivity of teleological explanation is also a threat to the objectivity of things. To say that the ideals definitive of different kinds are merely subjective is to subjectivize the world entirely, to make the ontological structure of the world an artifact of our point of view alone. Hegel refuses to do this.

The ontological structure of the world, its articulation into natural kinds, is intrinsically teleological, according to Hegel. The kind of fundamental comprehension of the world that comes from understanding its internal structure essentially calls for teleological modes of explanation and understanding. This is not a realm for mechanical explanations or efficient causation; mastery of the world at this level requires taking formal and final causation seriously. Hegel makes his case for this in his treatment of the Realized End.

THE REALIZED END: WORLD TELEOLOGY

At the time Hegel was writing, human action and natural organisms were not the only important candidates for teleological explanations. A major unresolved question was the purposiveness of the world as a whole. Does Hegel maintain that purposiveness is correctly and objectively attributed to the world? Prior to Hegel, such purposiveness had been conceived as stemming from the divine designer, who from his seat outside the world bestowed order and divine purpose upon the world. As Hegel described it:

Purposiveness shows itself in the first instance as a higher being in general, as an intelligence that externally determines the multiplicity of objects by a unity that exists in and for itself, so that the indifferent determinatenesses of the objects become essential through this relation. (WdL, II 386/736)

Hegel immediately adds that "The formal disadvantage from which this teleology immediately suffers is that it only goes as far as external purposiveness" (loc. cit.). He does not even think it would make sense to think of the world as if it had such purposiveness. The only design which could apply to the world would be inner design, understanding the world on the analogy of an organism. This, however, Hegel takes to be fruitful and
worthwhile. In fact, he believes that the loose ends that trouble the application of inner design to organisms can be overcome at the level of the world whole.

Roughly speaking, Hegel thinks that even organisms do not exhibit the perfect coincidence between end and objectivity that teleology calls for: The goal of the organism, even the goal of realizing as perfectly as possible its natural kind, is still something finite. Because no finite object can achieve perfect coincidence between end and objectivity, no finite object is ever itself a fully realized end. Hegel employs a variation of the third-man argument to demonstrate this:

If we consider one of the *premisses*, the immediate relation of the subjective end\(^{12}\) [in this context, the implicit goal striving to realize itself] to the object which thereby becomes the means, then the former cannot immediately relate itself to the latter; for the latter is no less immediate than the object of the other extreme, in which the end is to be realized *through mediation*. Since they are thus posited as *diverse*, it is necessary to interpolate between this objectivity and the subjective end a means of their relation; but this means is likewise an object already determined by the end, and between that object’s objectivity and the teleological determination a new means must be interpolated, and so on to infinity. Thus there is posited the *infinite progress of mediation*. The same thing takes place in respect of the other premiss, the relation of the means to the as yet undetermined object. ... The conclusion or the *product* of the purposive act is nothing but an object determined by an end external to it; *consequently it is the same thing as the means*. In such a product, therefore, *only a means*, not a realized end, has resulted, or the end has not truly attained an objectivity in it. (WdL II, 401; 749–50: cf. *Enz.* §211)

This is, on the surface, a peculiar argument for Hegel’s position: In order to argue for the need to consider the world-whole teleologically, he argues that teleology cannot be applied in a fully satisfactory way to anything less than the world-whole. But why not then infer the general illegitimacy of teleology? The inadequacy of teleological explanations of finite objects and events is not a form of illegitimacy, according to Hegel; rather, such explanations are inadequate because they are essentially *incomplete*, pointing to an infinite set of prior and posterior conditions that cannot be grasped within the explanation.

This same inadequacy besets mechanical and chemical explanation forms as well. But Hegel believes that mechanical and chemical explanations are condemned always to remain incomplete, for they cannot be applied to the *totality* of things to which they apply, because they always presuppose further links in the causal chains. That there are things ordered by mechanical and chemical principles remains beyond their competence to explain. Teleology, however, can apply not only within the infinite field
of finite objects, but, because of its inherently self-reflexive structure, it can apply to that field as a totality. Indeed, it exemplifies its essential structure without external excrescences only when applied to the totality. That there are things to which mechanical, chemical, and teleological explanatory forms apply is itself capable of teleological explanation. That is the sense in which teleology is the "truth" of mechanism and chemism: That is, teleology is the sole adequate foundation from which the latter phenomena can be understood.

The fully realized end, Hegel concludes, can be nothing less than the entire system of subsidiary ends, means, and objects. We cannot construct the whole out of independent and autonomous parts linked in means-ends relations; we must recognize the priority of the whole and see the subsidiary parts as subsequent analysanda distilled out of the whole.

The movement of the end has now reached the stage where the moment of externality is not merely posited in the Concept, where the end is not merely an ought-to-be and a striving to realize itself, but as a concrete totality is identical with the immediate objectivity. (WdL II 405; 753)

We have briefly discussed Hegel's notion of a concept and its involvement in our understanding of things in the world. Such concepts are subordinate to the concept of a concept, according to Hegel; it is their soul, which they "embody" and by which they are informed. The particular concepts are the realization of the concept of a concept, just as individual things are realizations of particular concepts. There are differences in these relations, since relations between concepts are not thoroughly contingent like relations between individuals and concepts are, but the concept of a concept is teleologically responsible for the particular concepts. The concept of a concept is a peculiar kind of thing: It is self-reflective, and it is one of its own realizations; it is, Hegel believes, self-explanatory, purely intelligible. The concept of a concept, which Hegel also calls the Absolute Idea, is the concept of the absolute totality and provides us with the ultimate goal of goals, which is the final cause of the world-whole itself. If we ask why-questions as opposed to how-questions about particular events or things in the world, we are asking for an explanation that situates them within and accounts for them by reference to the totality. This explanatory strategy will never allow us to predict a particular event, nor to explain any event in its full particularity, any more than an understanding of the purposes of an automobile would allow one to predict whether it has disc or drum brakes or explain just how the fuel injectors work. World teleology will not in general say why that particular event took place at that particular time; it explains, rather, by putting the particular event into a larger context of historical trends, goals, and mechanisms and by classifying the event as of a certain kind. Once we have understood the nature
of the totality, the essence of the world, such an explanation is legitimate and respectable. Hegel’s grandest claim is that the totality, the worldwhole, necessarily has a certain essential structure. Uncovering the nature of the totality is, indeed, the fundamental project of the Hegelian system.13

V

HEGEL TODAY

We have here been fellow travelers along the dialectic of teleology. Before ending, let me now take a moment to step back, summarize, and reflect upon what we have seen.

For Hegel, self-realization is an intrinsic good, movement toward which needs no further explanation, and those of you familiar with Hegel’s ethics will recognize this position on the nature of the good. Indeed, we could say that our examination of teleology has shown us another way in which self-realization is the fundamental value in his thought.

Hegel has made room in his system for intentionality, but he believed that true final causation is formal causation. Teleological explanations in their strong form appeal to what the thing is. Insofar as all explanations, including mechanical ones, depend upon things having certain intrinsic properties, belonging to a kind, Hegel believes all explanations presuppose teleological explanation. That is to say that if I enquire about why a certain event happened, there is a point in the chain of questions where my question about why X A’d can only be answered by telling me that X is the kind of thing that behaves that way. Many would want to say that such an answer is not genuinely explanatory, that it falls beyond the bounds of explanatory competence and constitutes a merely trivial pseudo-explanation. But in the Hegelian view such an answer is genuinely explanatory, explaining the part by reference to a whole, for the kind attains its identity within a system of thing-kinds, and pointing out the kind to which a thing belongs situates it in the conceptual economy of the world. Nevertheless, Hegel offers little argument for the assumption that at the limiting case, the world-whole, this strategy of explanation by functional situation also reaches the limit where explanans and explanandum unproblematically coincide.

Although much of the metaphysical underpinnings of Hegel’s system now strike us as quaint, rash, or simply wrong, in my reading of Hegel I am constantly struck by the sensitive insight he exhibits into the structure of our concepts. His Absolute Idealism may stand everything on its head, yet again and again he illuminates deep interconnections among our concepts, connections neglected by other philosophical greats. His analysis of the interrelations between intentional explanation and functional explanation is a striking case study of this.
Twenty years ago the debate about the status and nature of teleological explanation focused heavily upon the intentional model, just as Kant had. Hegel argued that taking this model seriously drives one back toward the more fundamental functional model of teleology, and indeed I believe we can see just such a trend developing over the last two decades. Besides an increased interest in the philosophical problems of biological and social explanation, the development of the field of so-called artificial intelligence and the elaboration of a functionalist solution to the mind-body problem have been responsible for an increased interest in the concept of a function. Some of the most interesting work in the philosophy of mind today focuses on the conditions of intentionality, the presuppositions and status of attributions of intentionality to objects. Much of this recent work seems to be pointing in the direction that Hegel took, namely, taking the complex functioning organism to be a fundamental unit, which from at least one standpoint is prior and irreducible to its parts.

NOTES

1. Citations to works of Kant and Hegel are given in abbreviated form in the body of the text, citing both the German and the English translations. The full citations are as follows:


2. That the natural world is for Kant a Newtonian world, and that a Newtonian world is ultimately a set of attractive and repulsive forces, cannot be escaped once one has looked at the *Metaphysical Foundations of Natural Science*. The extent to which Kant took the Newtonization of nature seriously is heavily (and rightly) emphasized by G. Martin, *Immanuel Kant: Ontologie und Wissenschaftstheorie*, 4th ed. (Berlin, W. de Gruyter, 1969), ch. 3, 75–114.


4. Teleology is involved in our intentional states at several different levels. Desires obviously aim at various satisfactions. As knowers we aim at truth. But even in characterizing internal states as intentional states we imply that, however imperfectly, they are responsible to some ideal of rationality.

6. There are different versions of the details here. Bennett talks of the evaluative component as a greatest preference for a certain course of events in contrast to others, while Woodfield talks of it more straightforwardly as a desire for G. The cognitive component is described by Bennett as "registering that A/G," where the "f" notation is read as "A is instrumental for G." Woodfield simply talks of the belief that A contributes to the achievement of G as the cognitive component. The differences are not important for our purposes.

7. Hegel believes there is an important place for contingency and the arbitrary in the world, but not at its very foundations. Contingency is always within a larger framework that determines the possibilities. The classic treatment of Hegel's view of contingency is Dieter Henrich's "Hegels Theorie über den Zufall" in his Hegel im Context, Frankfurt am Main, Suhrkampf, 1971.

8. Hegel explicitly acknowledges that mechanical explanations utilize a law-like correlation of independently describable events: "In mechanism they [determinatenesses (i.e., properties) of objects] become so [essentially related] through the mere form of necessity, their content being indifferent; for they are supposed to remain external, and it is only understanding as such that is supposed to find satisfaction in cognizing its own connective principle, abstract identity" (WdL, II, 386; 736). The references to the "contents" being indifferent and remaining external are Hegel's way of insisting on logical independence. Like the positivists, Hegel also believes that the laws used in mechanical explanations are mere correlations noticed and formulated by investigators for their own purposes and without any ontological force of their own. This is the point of his references to the mere form of necessity (and not its full reality) and to understanding's finding satisfaction in cognizing its own connective principle.


10. There is insufficient space here to spell out Hegel's anti-Cartesian argument, but Charles Taylor has discussed this shift in his article "Hegel and the Philosophy of Action" in Lawrence S. Stepelevich and David Lamb, eds., Hegel's Philosophy of Action (Atlantic Highlands, N.J.: Humanities Press, 1983).

11. This and the next paragraph are slightly emended from my book, Hegel's Theory of Mental Activity (Ithaca: Cornell University Press, 1988), 8-9. I said it there as compactly as I could.

12. By the time we get to the discussion of the realized end, the notion of a subjective end has been generalized beyond purely internal, mental states. Hegel is worried here about the prospect for any teleological process to achieve the complete coincidence between the goal-to-be-achieved and the goal-as-achieved that he believes is demanded by the concept of teleology.

13. I discuss how Hegel's understanding of teleology influences his general philosophical methodology in chapter 1 "Science, Teleology, and Interpretation" of Hegel's Theory of Mental Activity.


15. A much earlier version of this paper profited greatly from the helpful comments of the Five Colleges Propositional Attitudes Task Force in Amherst, MA: Herb Heidelberger, Murray Kiteley, Jay Garfield, John Connelly, Tom Tymoczko, and Chris Witherspoon. W. E. Kennick at Amherst College also contributed his insights. More recently I have profited from comments by my colleagues Ken Westphal and Charlotte Witt at the University of New Hampshire as well as the members of the philosophy department at Dartmouth College.