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Dooyeweerd's Gegenstand Theory of Theory

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THERE IS A SIMPLE, widely shared traditional model philosophers use to represent what goes on when people know something. We say that there is someone who knows, a knowing subject, as well as something that is known, a known object. The subject relates to the object in knowing it, while the object is related to the subject in being known. We may write this as S-O. In this formula, S and O are on either side of a hyphen; S on the one side, O on the other. They are, we say, on opposite sides of the relation. The one is over against the other. If we want to express this in German, we can say that since the object "stands over against" the subject, the object is a *Gegenstand* to the knower or subject. Following this train of thought we could be tempted to see Herman Dooyeweerd's well-known *Gegenstand* theory of theory as just another one in the long line of theories of the knower-known relation conceived as a subject-object relation. However, it would be a mistake to say this. Dooyeweerd used the German *Gegenstand*, which as a term is no more than a German translation of the Latin *objectum*, in order to be able to distinguish this *Gegenstand* of theoretical thought from the *object* of naive experience.

Dooyeweerd made this distinction because he wanted to place great emphasis on the difference between the abstractive character of theoretical knowledge and the contextual character of everyday knowledge. In a theory, Dooyeweerd maintained, we have a splitting up of reality, a dissection of the world into its various parts and aspects (*NC* 1:38). We concentrate on segments of the world in conceptual disjunction. We indicate this character of theory by using words with prefixes denoting separation—*dis*tinctive, *ab*stractive, *ana*lytic, *ex*planatory. Reality resists being severed and separated in this way and, as a result, what is known in theory shows us this.[1] This, in turn,

leads to resistance within theory in the tension between concept and reality. Dooyeweerd tried to capture the sense of such theoretical resistance in the term *Gegenstand* (*NC* 1:39). By contrast, the knowledge of everyday experience is contextual and the conceptually known object remains embedded in the coherence of all of its real relations.[2] We indicate this by using terms with unitive prefixes—*in*tegrative, *co*herent. In short, *theoretical* knowledge for Dooyeweerd grasped what he called a *Gegenstand*, an abstracted, isolated aspect of reality which, because of its theoretical isolation, exists in tension with the reality to which this conceptual *Gegenstand* refers. Everyday knowledge, by contrast, maintains the integrality of our experience which we appropriate by means of what he called a *naive* concept of an *object* of our thought.[3]

We may enhance our description and clarification of the *Gegenstand* theory if we briefly identify what problems Dooyeweerd hoped to resolve with his theory and what historical circumstances set the context for these problems. I shall not deal, however, with the technical philosophical relations of Dooyeweerd to the neo-Kantians or to Edmund Husserl nor with the intricacies of the debates over the *Gegenstand* theory.[4] I will limit myself to a broadly stroked sketch of a general nature. So before I present a summary of the theory, I will first provide some background.

The Context

When Dooyeweerd developed his *Gegenstand* theory, it allowed him to make helpful approaches to the following problems. How do we get at the role played by the thinker in the process of thought?[5] If science is unified in its method, how do we account for the many different scholarly disciplines and how do they relate?[6] Is scientific knowledge a specific kind of knowledge with a character of its own?[7] Is theoretic thinking unprejudiced, objective, or autonomous?[8] With the *Gegenstand* theory in hand, Dooyeweerd was able to formulate some resolutions of these problems. But why was he interested in them?

The need to face these problems arose out of a complex background with religious, social, and philosophical components. Dooyeweerd's roots in the Calvinian tradition provided him with the conviction that human life in its totality is integrally religious, that our choices and decisions are molded and motivated by religious forces, by our relationship to what we believe to be ultimate.[9] Dooyeweerd's Calvinian confession of the sovereign rule in creation by God in Christ implies the need for subjecting all of our lives, in-

cluding our life of scholarship, to Christ. If scientific knowledge is not guided by such faith, if science develops out of a different set of convictions, then science must be reformed.[10] In the footsteps of Abraham Kuyper, he worked on a specific theory to give scholarly expression to the need for spiritual redirection in the world of science.[11] This entailed resisting any attempts by science to dominate or rule all of life in the place of God. Thus, he insisted that in the world at large and from an ultimate point of view science is not the final arbiter of questions of truth, the nature of reality, or even the understanding of matters of fact. For Dooyeweerd, spiritual reform in science began by recognizing that science has a special and relative character of its own that should be respected and developed. Science is just one area of our lives and not the ruler.

Stimulated religiously by these beliefs, Dooyeweerd highlighted the need for academic freedom in two senses: freedom of conviction *in* the academy, that is, to keep it ultimately open, unobstructed by false notions of objectivity; as well as freedom *of* the academy, that is, to be itself in its relations with other social institutions.[12] He thought that the proper character of theory must be investigated with these points in mind[13]—all the more so because the Free University of Amsterdam, where he was professor, was still concerned to establish its viability both as a religiously open institution among the religiously closed universities of that time and as a religiously free institution in relation to the church and its theologians of that day.

Philosophically these religious and social impulses come into focus in Dooyeweerd's lifelong struggle with the philosophical dogma, as he referred to it, of the pretended autonomy of theoretical thought.[14] What is often called foundationalism today, which Dooyeweerd referred to as the autonomy of reason, was really, he argued, an uncritically adopted prejudice.[15] Long before that tradition of centuries became widely untenable for philosophers in general—as it has for the last two decades—Dooyeweerd developed the *Gegenstand* theory in order to expose the fallacies of this unexamined dogma.[16] Michael Polanyi's theory of the scientist's indwelling in his framework of commitment, Jürgen Habermas's theory of the role of the human interest in science, Gerard Radnitzky's theory of steering fields internal to science, and Thomas Kuhn's theory of the role of paradigms in the natural sciences are all prefigured in the way Dooyeweerd worked out his theory.[17] He not only saw the problems connected with belief in rational autonomy very early, but he also was one of the first to formulate a comprehensive theory to deal with these problems.[18]

Herman Dooyeweerd circa *1960 [photo: Merkelbach]*

Summary of the Theory

Briefly stated, Dooyeweerd approached these problems by means of the *Gegenstand* theory as follows. In order to overcome the dogma of rational autonomy, we begin by seeing that any rational thinking is a human function, something people do. By reflecting on our role in the process of theoretical rational thinking, we will detect that theory is not closed to our subjective selves.[19] By then reflecting on how our subjective selves are present in theorizing, we will discover our underlying philosophical assumptions. This discovery occurs when we notice that our everyday naive thinking is different from our theoretical thinking. In our naive thought, the world is usually an intellectually unproblematic *given*. If naive thought does have problems, they are usually not conceptual in kind. In our science, by contrast, some aspect of the world must be made into a *Gegenstand* as a product of human intelligence.[20] As such, this *Gegenstand* is encountered only in scientific knowing. This implies that it is not simply a direct and neutral given of observation,[21] but, once again, is in part a subjective cultural *product* of our subjective selves with all our underlying philosophical assumptions. Our philosophical assumptions are notably those which provide overall integration and push us toward concepts of totality and interrelationship. In this way, we supply what the individual sciences lack, namely, a point of view for overall integration. Each science has its own *Gegenstand* which is different from each other individual science. No scientific field holds any primacy in this respect. Thus to produce a coherent scientific view of the whole of reality, we need our underlying philosophy to integrate these functionally irreducible and diverse approaches. In turn, our underlying philosophical assumptions demand philosophical self-reflection; they demand self-critical investigation in order to learn their origin. And self-reflection has nowhere else to go in philosophy than to the presence of the self in its reflection.

How does the *Gegenstand* theory lead to these insights? To understand this, we need a sketch of its main concepts and contours. Dooyeweerd stated his theory in his *New Critique of Theoretical Thought* as part of the "Prolegomena" to the entire work (*NC* 1:38-55). Thus, we find it in the context of Dooyeweerd's description of his transcendental critique of theoretic thought, for which his magnum opus is named. His "new critique" shows that theory,[22] via the theorizing person, originates in religious commitment, in our self's

deepest ultimate motivation. It will be helpful to summarize the theory in the very sequence in which Dooyeweerd developed it.

It is essential for an understanding of Dooyeweerd that we remember his stress on the ordered wholeness of our world.[23] He referred to the empirical universe as an integral totality, whose order gives that universe the reality of cosmic coherence (*NC* 1:4). In that cosmic coherence we find two foci for our awareness: the one of individually existing entities, such as rocks, birds, tools, people, governments, and churches, in their relations (*NC* 3:passim); the other of the many kinds of properties which these individuals have, such as material, emotional, social, and moral properties, in their relations (*NC* 2:passim). Thus, Dooyeweerd's theory is a version of a classical theory of "particular substances" and the "attributes" they have. The attributes, which Dooyeweerd mostly called the functions which things have, can be categorized in terms of a number of irreducible levels of functions according to him. There are many attributes (properties, qualities, functions) which things have. But all of them are of some kind or other. And these kinds finally yield a number of mutually irreducible ultimate kinds. Dooyeweerd called these ultimate kinds the irreducible modal aspects of our universe (*NC* 1:3-4).[24] These modal aspects are the focus for theoretical knowledge, while the individual entities in their interrelations are the focus for ordinary knowledge (*NC* 1:38). Thus theoretical thought or science is functionally oriented, while everyday thought is focused on actual wholes or concretely interrelated individual entities.[25]

Another way of drawing attention to this functional focus of theory is to refer to that focus as antithetic (*NC* 1:39). Dooyeweerd called it antithetic because he wanted to draw attention to the fact that, in his view, theory typically juxtaposes functions of one irreducible kind (namely, the logical functions in the analytic aspect of our thinking) to abstracted functions of another irreducible kind (e.g., organic functions if the field of inquiry happens to be biology). Unlike everyday thought which is contextual,[26] this antithetical attitude in theory creates that tension which we noted at the beginning of this essay between our conceptual operations and their *Gegenstand*, that is, between our analysis and the functional field on which we conceptually operate. The functional field enters into our theory as an abstraction even as the functions of the mode on which we concentrate theoretically "resist" being separated from their original coherence (*NC* 1:40).[27]

In order to overcome the opposition (*Gegenstand*) between our logical functions on the one hand and the functions of another ir-

reducible mode on the other, we construct synthetic concepts; that is, we overcome conceptual antithesis by conceptual synthesis. But, argued Dooyeweerd, that synthesis cannot possibly come from just one of the synthesized poles. The theoretical concept of a cell, for example, is neither a purely logical reality nor a purely organic reality. It is, as we say, a *bio*logical concept (*NC* 1:45). How is such a concept possible? Since theoretical thought is essentially antithetical and lacks internal integrators, any synthesis will have to originate outside of that *Gegenstand*, that is, outside of theory (*NC* 1:46).[28]

Dooyeweerd went on to argue that, within theory, we need a theoretical view of the whole of reality from which we make the abstraction. Only the availability within theory of the original coherence provides us with a viewpoint from which we can make the synthesis that occurs in a theoretical concept.[29] A theoretical total view is required. The construction of such a view is the responsibility of philosophy (*NC* 1:49). Philosophy, according to Dooyeweerd, is theoretical reflection directed toward the totality of cosmic coherence (*NC* 1:4).[30] This, however, will not become really clear to us unless we become aware of the fact that theoretical analysis is not just the presence of logical functions in concept formation.[31] Rather, theoretical analysis is a real, actual, concrete act of a person. As a concrete act, analysis has many more functions of different kinds besides logical functions, and it is performed by an individual person whose functions these are. Only in the unity of the person does theoretical thought become unified.[32] If in philosophy we engage in critical self-reflection by centering thought on ourselves who think, we will enable ourselves to direct thought to its underlying unity (*NC* 1:50-51, 55).

At this point in the argument, Dooyeweerd wanted to make a case for the fact that theoretical concept formation requires self-knowledge which is achieved by knowing one's origin, religiously speaking.[33] To do this, he analyzed the consequences of his view that theoretical thought is bound to an antithesis of logical and nonlogical functions. In order to overcome this antithesis (i.e., the synthesis needed to form a *logical* concept of a *non*logical *Gegenstand*), we require a theoretical view of the unity and totality of the world. That totality view requires self-awareness in philosophy. Self-awareness, in turn, requires religious awareness of our own and the world's origin. Both self-awareness and religious awareness, however, lie outside the boundaries of theory.[34] And so Dooyeweerd concluded that the theoretical enterprise has religious roots (*NC* 1:7-12, 15-16, 52-55).

Evaluation of the Theory

Of course, this brief summary cannot do justice to Dooyeweerd's elaborate treatment of the *Gegenstand* theory in various contexts. But enough of it has emerged here to allow us to make some general evaluative comments. From our contemporary point of view, it must immediately become evident that Dooyeweerd's *Gegenstand* theory is relevant to many crucial issues in today's thinking about theory. Present-day reflection on the relativity or limitations of a priori logical procedures,[35] on the role of extraconceptual factors in theoretical inquiry,[36] and on the relation of rationality and nonrational elements in our experience[37] can benefit from a consideration of many of Dooyeweerd's cogent arguments on these themes. In that sense, his fifty-year-old theory is still a contemporary theory. The theory also provides arguments for the necessary relation of theory to practical issues of relevance in a culture.[38] Insofar as our present climate calls for the social relevance of theory we can say that the *Gegenstand* theory fits that climate. More than that, Dooyweerd has clearly laid bare connections between theory and the ultimate commitments of the people who theorize.[39] In that way he has provided theoretical articulation for a Christian idea about the dependence of theory on religion which prior to his work had remained largely intuitive. At the same time, he contributed to the reemergence of Christian reflection on the religious roots of our culture and on the need to act on the basis of one's fundamental convictions.[40]

A brief statement of the philosophical contributions of Dooyeweerd's *Gegenstand* theory is in order. By putting great stress on the analytic character of conceptual inquiry, that is, by showing that analysis is essentially a process of taking something apart into its elements, Dooyeweerd provided an explanation for why theory, if left without philosophical integration, tends toward a disintegrative view of reality. His theory allows us to understand the fragmenting character of contemporary scholarship.[41] At the same time, by identifying philosophy as the discipline which provides the means by which science can achieve integration, his theory provides a rationale for the rehabilitation of philosophy itself as a necessary component of authentic science. His theory provides concepts that can help us contribute to such a recovery of philosophy. When, under the pressure of positivism and the analytic tradition, philosophy as a totality discipline gave way to philosophy as analytic technique and as method for the precise determination of isolated abstractions, the philosophical task of providing a general picture of the total

framework of empirical existence seemed to fall into disrepute. Dooyeweerd's theory shows that such a defeatist attitude toward philosophy is not necessary.[42]

Besides emphasis on the analytic character of theory as abstractive and antithetical, Dooyeweerd's *Gegenstand* theory also places emphasis on the synthetic character of theory as creatively productive. And this, too, strikes one as a lasting contribution to thinking about theory. In his theory we find an elaborate ontological framework for an implication of Kurt Gödel's incompleteness theorem, namely, that theoretical systems as formal systems are in principle incomplete. From within theory we cannot satisfactorily complete the theoretical picture.[43] Such an insight undermines the idea that in theory we have a view of reality as it really is, as well as the idea that theoretical truth is truth par excellence.[44] Further, armed with the conviction that the theoretical enterprise as a whole is synthetic, we are challenged to look for the extratheoretical factors needed to complete theory. Over twenty years before Michael Polanyi's important book *Personal Knowledge* made its appearance in 1958, Dooyeweerd forcefully advanced the conviction that knowledge, including theoretical knowledge, is personal. And in that conviction he included the notion that persons can only be themselves in commitment.[45]

Dooyeweerd's contention tha theoretical synthesis thus requires extrarational factors reinforces the concept of the relativity of the rational aspect of human experience. Dooyeweerd never subscribed to the view which treats our conceptual faculties as autonomous, isolated and substantivized, so characteristic of all who trust in reason. The rationalist tradition of what Richard Rorty has called the mental mirror of nature was not attractive to Dooyeweerd. He rejected the notion of mind or of reason as an independent mental substance. His examination of the uncritical dogma of the autonomy of reason led him to a theory of the relativity of our rational knowing. By demonstrating this relativity, he showed that reason is neither the origin of truth and reality nor the autonomous measure of the truth about the rest of the world. He also showed that rational procedures can be authentic only in integral relation to the other aspects of human experience and to the world about which we reason. By engaging in such rational criticism and exposure of the pretended autonomy of reason he did not engage in contradiction or unwittingly act as if reason had the last word. Instead his rational criticism pointed to the extrarational factors about whose operation we may become all that more aware.

These important and lasting contributions to our reflections on the nature of theory as well as to our broader cultural concerns do not depend on the precise conceptual manner in which Dooyeweerd worked them out. A critical evaluation of his conceptual formulations discloses many difficulties and evokes a sense of the need for more successful theories to support his general contributions. In fact, to my knowledge, no philosopher who admits to having been influenced by Dooyeweerd's thought now subscribes to his statement of the *Gegenstand* theory.[46] In the next few paragraphs, I will summarize some of the more outstanding problems that have surfaced.

Perhaps the single most serious problem pertains to Dooyeweerd's view that there is a significant structural difference between theoretical thought and everyday thought. Dooyeweerd insisted that the deployment of our conceptual functions in the context of theory differs *in principle* from their use in everyday contexts.[47] Dooyeweerd apparently never questioned either this view or his formulation of it, even though other parts of his general philosophy were in tension, if not in direct contradiction, with his articulation of the difference. We may detect one such conflict when we critically question his view of philosophy as theory. As theory, philosophy is bound to the antithetical attitude of abstraction. As philosophy, however, it is occupied with coherence and even totality, the opposite of abstraction. Dooyeweerd never satisfactorily resolved this discrepancy. The conflict is very crudely present in Dooyeweerd's concept of a structural *Gegenstand*, that is, a *Gegenstand* which is the abstracted grasp of the typical structure of a totality or whole (*NC* 2:469). Thus, his view in volume one of the *New Critique* that the *Gegenstand* is by definition modal in character (*NC* 1:39-40) is contradicted in later volumes.

Dooyeweerd also did not carefully develop his concept of naive experience. He never made it clear whether there is a difference between naive *thought* and naive *experience*. As a result, he seldom examined naive thought as *thought*, that is, as conceptual in nature (but see *NC* 2:434). He did not consider the notion that all thinking may be conceptual and necessarily abstractive and therefore characterized by tension. As a further result, he did not bring to light the inner connections between his notion of the "object" of naive thought and the *Gegenstand* of theoretical analysis.[48]

There are occasional hints that Dooyeweerd may have distinguished between knowing and thinking (e.g., *NC* 2:467), although he seems to have made no clear distinction between thought, experience, and knowledge. He only introduced a really

sharp distinction when he spoke of matters having to do with theorizing. When thought is not theoretical, however, there seems to be no difference for him between naive experience, knowledge, naive thought, and our cognitive activities (*NC* 2:560-63, 573, 594-96).[49] It is perhaps this problem which contributed to Dooyeweerd's difficulties in trying to decide whether or not he had succeeded in proving the religious dependence of theory (*NC* 1:56-57). He was confident of his claim that he had proven that theory rests on extra-theoretical foundations, but then he left open, as a matter of religious choice, which content one should give to these foundations.[50] It did not occur to him that if the choice in our theory of theory is to make the theoretical attitude itself the foundation—as is the case in scientism—his argument makes no sense. More than that, the point he made would be invisible.[51] One needs to share Dooyeweerd's point of view in order to see what he saw. In this respect, Michael Polanyi's view of indwelling—the view that we dwell within our theories when we theorize—is an advance over Dooyeweerd's.[52] To accept the far-ranging implications of Gödel's incompleteness theorem for all theory requires much more than having an eye for Gödel's argument.[53]

Moving On

These problems, however, do not negate or even undermine the chief positive insights which I have noted Dooyeweerd has to offer: that philosophy may be the integrator of theory; that the theoretical enterprise is personal and, therefore, religious at the core; and that theoretical thought and pretheoretical thought are to be distinguished structurally. In order to make these insights more fruitful and to gain wider acceptance for them, however, they require a different conceptual articulation.

Dooyeweerd's own conceptual framework contains, I think, most of the elements needed to conceive of different constructions which are consistent with his overall views. The most important element is his hint of a distinction between knowing and thinking. In knowing, generally, rational-conceptual functions join with all other functions and occupy a role which varies according to what kind of knowing it is. Thus in thinking, which may be regarded as only one kind of knowing, rational-conceptual functions always dominate. Following this line of analysis, we may treat all cognitive experience as multifunctional and understand the rational-conceptual functions as only one of the many kinds of functions of cognitive experience. This hint occurs both in his view that naive experience has rational-conceptual functions which are fully contextualized by other func-

tions, and in his view that even in theoretic thought, in which rational-conceptual functions dominate, all other functional modes are operative. This latter view, though not fully worked out, is clearly suggested in a difficult passage on the role of intuition in thinking (*NC* 2:473), in which the main point is (as suggested in the heading) that conceptual analysis presents us with a complexity which exceeds the complexity of the rational-conceptual mode of functioning.

This is not the place to present an elaboration of this approach. But one can anticipate what insights may emerge from such an elaboration. One insight is that the character of theorizing as the function of persons could be maintained while also doing justice to its abstractive, synthetic, and general nature: theory as characterized by the rational-conceptual functions would have certain abstractive qualities, while as a kind of knowledge it would also have clearly personal qualities. Another emerging insight is that if not all knowing is predominantly rational-conceptual in nature, not all forms of knowledge need to meet the criteria for rational-conceptual knowing. The need for justification and verification of knowledge can become a specific need only for theoretic knowledge in its explicit forms. And this will allow us to speak of other valid, though formally unproven and unjustified, kinds of knowing.[54]

Even when we specifically distinguish rational-conceptual forms of knowing from other kinds of knowing, we can still distinguish between theoretic thought and naive thought while regarding both as rational-conceptual ways of knowing. And we can do this without connecting theory to modality and ordinary analysis to individuality as Dooyeweerd did. An alternative way to work this out is as follows. Dooyeweerd himself hinted that what he called the theoretical *Gegenstand* is actually no more than the theoretically isolated and abstracted logical object of ordinary thought (*NC* 2:471-72).[55] If that is the case, there is really no reason to bind theoretic thought to modal aspects. It can then be argued that, as Dooyeweerd later said himself, structures of totality may also be made into a *Gegenstand* (*NC* 2:469). At the same time there would be no reason to limit ordinary naive analysis to individual wholes. Naive concepts of functional individuality will also be possible.[56]

If the figure of modal abstraction need no longer be taken as characteristic for theory, then how might the difference between theoretic thought and ordinary thought be characterized? That, too, was hinted at by Dooyeweerd himself. When he admitted that wholes and totalities can also be grasped in a *Gegenstand*, he made it clear that it is not the actual individual wholes and totalities which we

grasp in theory, but only their typical structures (*NC* 2:469). Furthermore, when Dooyeweerd wished to characterize theoretical inquiry into the nature of theory, he made it clear that such an inquiry indeed concerns the *nature* of theory, not its concrete actuality. Theory of theory inquires about universal conditions and structures of theory (*NC* 1:37). Consequently, we can leave Dooyeweerd's characterization of ordinary thought (as individuality oriented) as it is. However, we then do need to clarify that individuality is both the individuality of centered wholes and of their functions (*NC* 2:414ff.).[57] And we can then say that theory is oriented to general structures which Dooyeweerd referred to as the law side of the law-subject relations of reality.[58] We then need to recall that such structures are both the structures of modal realities as well as of typical total realities.[59]

This preview of how Dooyeweerd's theory of theory and cognition in general might be worked out more consistently with some of his other views and more in keeping with the realities concerned also allows us to maintain his view of philosophy as theoretical integration and his view of the other disciplines as theoretical specialization. Accordingly, we may assign to philosophy the task of providing a framework for general theoretical coherence as well as an articulation of how our theoretical knowledge fits the broader cognitive context.[60]

In summary: the fruitful insights which Dooyweerd acquired in the course of developing his *Gegenstand* theory can by and large be preserved by changing the focus of that theory from the modal and individual horizons of Dooyeweerd's cosmology to the law-subject relations. We may say that the concept we have of something is always a grasp of its law side, its general structure, whether that be a theoretical or an ordinary concept. Further, the structure that is grasped can be either the structure of a function of a whole entity or the typical structure of a whole entity. What distinguishes a theoretical concept from an ordinary concept is that the theoretical concept remains focused on the law side of reality, since it is intended for no other reason than to understand that law side in abstraction from—though obviously also in relation to—the subject side. The ordinary concept, on the other hand, functions contextually to produce individual insight into an individually concrete subjective reality. Once this adjustment is made, all the helpful contributions Dooyeweerd made by means of his *Gegenstand* theory may be taken up within a new stage of theorizing. And it is gratifying to see that the whole of Dooyeweerd's thought is rich enough to provide hints from other parts of his philosophy for alternative constructions of his theory of theory.

Notes to Chapter 6

1. What Dooyeweerd identified as the tension of theoretical analysis is the difficulty we experience when we abstract something from the whole to which it belongs. That tension is produced by the stubborn protrusion of the meaning of the whole into the meaning of the abstracted aspect. This protrusion creates the ever-present awareness of what Michael Polanyi has called the "tacit dimension" of all knowing. That dimension makes it impossible for us to know an abstract concept except in relation to what that concept was abstracted from. In ordinary knowing we do not abstract in this sense. We do have a specific focus, but that focus is left in its original context. In theoretic thought we do our best to abstract what we focus on from its surroundings. The relation between our abstractive pull on reality and reality's stubborn refusal to be abstracted is what Dooyeweerd referred to in terms of tension and resistance. See Michael Polanyi, *The Tacit Dimension* (New York: Doubleday, Anchor Books, 1967).

2. Dooyeweerd held that in ordinary knowing the conceptual functions of this knowing do not stand out in their conceptual nature. We are not at all aware that we are thinking of concepts or of generalities. Instead we experience our knowing and thinking as knowledge and thought of concrete realities.

3. Technically speaking, the object of ordinary thought for Dooyeweerd is the logical object function of something, that is, the concept we have of the thing (see *NC* 2:366ff., esp. 386-91 and 434). But his point is that via this concept we focus on the whole thing in its own integral context. For the meaning of "object" and "object function," see Paul Marshall's essay in this volume.

4. See the opening essay by Albert M. Wolters in this volume; especially see D. F. M. Strauss, "An Analysis of the Structure of Analysis," *Phil. Ref.* 49 (1984): 35-36, who discusses these matters extensively.

5. For Dooyeweerd, thought does not think. Nor does mind. A person thinks. No thought is possible without someone thinking. What consequences does this have for our view of thinking? What happens to our concept of thinking when we include the presence of the thinker in that concept?

6. In some schools of thought, theory is treated as essentially physical and mathematical. By contrast, Dooyeweerd was a radical pluralist. He rejected the idea that one discipline or some disciplines could be the model for all others or even that all others could be reduced to them.

7. Dooyeweerd not only rejected the domination by one scientific discipline over all the others, he also rejected the domination of knowledge by scientific knowledge. Scientific knowing was important for him. And it was also important for him to grant that scientific knowing displayed its own nature. But he did not regard science as in some way more truthful, more reliable than other kinds of knowing.

8. Though Dooyeweerd certainly subscribed to a normed idea of truth and though he also subscribed to the universal or general character of scientific theories, he never subscribed to the idea that, therefore, a theory is itself not subjective. As the historical product of an actual community of thinkers, science can never escape its own subjectivity. And the presence of subjective factors in principle prevents science from being fully objective, as well as from being autonomous or without prejudice.

9. Religion, for Dooyeweerd, is never an aspect, function, division, or part of our experience. All of human experience is religiously rooted. All aspects of human experience have their own specific way of relating to the ultimate origin of the world. Prayer is no more religious than calculating the square root of some number. For the difference between faith and religion in Dooyeweerd, see James H. Olthuis's essay in this volume.

10. The inner reformation of the sciences became an aim of Dooyeweerd's philosophical program. What he meant by it was that if science is in fact deeply influenced by hidden prejudices, then these prejudices need to be made conscious. After that the edifice of science needs to be reexamined in the light of the influence of the now exposed prejudices. Needless to say, the prejudices themselves also need critical examination and, if need be, replacement by other assumptions when present ones appear to be defective. See Hendrik Hart, "The Idea of an Inner Reformation of the Sciences" (Mimeo, Institute for Christian Studies, 1978).

11. Dooyeweerd believed that the modern history of our culture could be understood as the history of the presumed emancipation of humanity from God and of secularization, as the history of our rejection of authority outside of ourselves and of reality outside of nature. In this spiritual climate he saw the intellectual history of our culture as an attempt to present reason as the locus of human autonomy. Dooyeweerd believed this to be idolatrous and, consequently, saw a need for the redirection of the intellectual enterprise. He wished to translate the spiritual need for this redirection of science into actual scientific concreteness so that this redirection would have actual scientific significance and effect. A spiritual need that remains spiritual only would, in his view, be disembodied and, therefore, could never be addressed in fact.

12. Dooyeweerd characterized the rationalist and positivist positions of his day as imperialist. They prevent scientists from being honest about their prejudices because these positions have the major prejudice of denying that science has any prejudice. For a discussion of the relation between religious openness and academic freedom in the world of theory, see Hendrik Hart, "The Idea of Christian Scholarship," in *Christian Higher Education* (Potchefstroom: IAC, 1976), 69-97. See also Hendrik Hart, "The Marxist Challenge to Christians in Education," in *The Challenge of Marxists and Neo-Marxist Ideologies for Christian Scholarship* (Sioux Center, Iowa: Dordt College Press, 1982), 251-58, for a more elaborate discussion of relevance.

13. Dooyeweerd was never satisfied with external arguments. If he was interested in talking about certain features of theory, he always wanted to do

that in terms of a theory of theory which showed that theory actually did have the properties he claimed it had.

14. No single philosophical problem so engaged Dooyeweerd's attention as that of rational autonomy. What truth is there to this claim of autonomy? What are its excesses? What role does dogma play? Where does it come from historically? Is this dogma, like most dogma, evidence for an underlying religious position? Kant critically examined the dogmatic rationalism of his day in the *Critique of Pure Reason* (1781). In relation to that very venture, Dooyeweerd saw his major project as *A New Critique*. For a more extensive discussion of how this project fits Dooyeweerd's intellectual milieu, see Wolters's essay in this volume.

15. If we characterize foundationalism as the doctrine that true knowledge is achieved by unaided reason simply by following its own nature in operating without prejudice on a foundation of objective sense data or on an evident certitude of rational intuition, then for Dooyeweerd foundationalism is one strand in a centuries-long process of Western worship of reason. He saw foundationalism as far more than a dominant and influential theory of theories. It was no less than a core doctrine of humanism in the intellectual world (see note 11 above and notes 51 and 53 below). He saw this doctrine as a dogma of humanist religion. He was persuaded that this dogma was self-referentially incoherent, that is, that it could not apply to itself and still be true knowledge according to its own criteria. That this incoherence was not discovered by those who subscribed to the doctrine proved for Dooyeweerd that it was an uncritically adopted dogma, unconsciously adopted in faith.

16. It would not be fair to say that Dooyeweerd was alone in his time in attacking the excesses of uncritical faith in reason. It would be fair, however, to say that he alone subjected the autonomy doctrine to a radical critique. Others have, of course, contributed to a relativized sense of the role of reason. But they have never espoused the conviction that, even though reason has a nature and task of its own, reason is in no sense autonomous, that is, is not a law unto itself nor unto its object. In our time, perhaps Richard Rorty is the most incisive critic of the traditional concept of reason. See Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979).

17. Dooyeweerd (in 1935) prefigured the work of all these authors insofar as they worked on ways of demonstrating that reason within science is relativized by being encapsulated within other frameworks of a nonrational character. To my knowledge, no one besides Dooyeweerd has broken more radically with the dogma of rational autonomy that Michael Polanyi, especially in *Personal Knowledge: Towards a Post-Critical Philosophy* (London: Routledge & Kegan Paul, 1958). On Polanyi, see Clarence Joldersma, "Beliefs and the Scientific Enterprise" (M. Phil. thesis, Institute for Christian Studies, 1982). However, in my opinion, he remains true to the rationalist influences of our culture in his essential characterization of knowing as predominantly rational. For Dooyeweerd, knowing as rational knowing is no more than one form or sort of

knowing. See Jürgen Habermas, *Knowledge and Human Interests* (Boston: Beacon, 1972); Gerard Radnitzky, *Contemporary Schools of Metascience* (Chicago: Henry Regnery, 1973); and Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

18. What I mean by a comprehensive theory in this context is not just a comprehensive theory of knowledge, but also an ontology, a philosophical anthropology and sociology, a philosophy of history, and a history of philosophy. Dooyeweerd's own view of the radical reorientation needed in philosophy has the doctrine of the autonomy of reason as its main focus. But the comprehensive attack he launched against this doctrine *required* the development of the other fields. The *Gegenstand* theory itself is not so much an epistemology as a theory of theory.

19. If, because of a prejudice of rational autonomy, I abstract thinking from myself in self-reflection, I make that act of reflection impossible. In self-reflection it is impossible to eliminate myself. So this requires that I reflect on who I am and on how I am present in my reflection. This is at the core of Dooyeweerd's argument in the introduction to the "Prolegomena" of the *New Critique* (*NC* 1:3-21).

20. This way of putting it shows the problem. If we take "human intelligence" as itself an independent actor, next to other "actors" like it (faith, the will, sensitivity), we might easily be tempted to view these "actors" as independent from one another, simply because they are in fact all different. But if we take "human intelligence" as a noun indicating a specific functional aspect of some acting person, we need to look at the person who acts. And the person acting intellectually, simultaneously acts in other ways. These other ways, in turn, influence the intellectual activity.

21. Dooyeweerd himself took this point to be such a fundamentally primitive "given" that he never critically examined it: what we encounter in science is not the unproblematic given of ordinary experience, but the skillfully designed result of human abstraction from some point of view.

22. When I use "theory" in this paper, I refer to everything called *Wissenschaft* (scholarship, scholarly disciplines) in German: mathematics, physics, psychology, logic, sociology, theology, and so on. Dooyeweerd viewed theory as taking a specifically and predominantly rational-logical point of view in getting to know the universe.

23. It is very likely that the modern intellectual factor which especially prepared the way for much of the reorientation of contemporary thought and its conceptual frameworks was the move away from dualism, especially the body-soul, mind-brain, ghost-machine varieties. If it is true that René Descartes (1596-1650), the father of modern rationalism, is mainly responsible for the way in which we perceive rational autonomy, then it is likely to be true as well that Descartes's rational soul-mechanical body dualism was so closely connected with the prevailing views of rationality that before we could give up rational autonomy we would need to be delivered from that dualism. The

attacks on that dualism certainly preceded Dooyeweerd's work. His insistence on wholeness, integrality, coherence, and totality represents a "mood" in philosophy that had become well established since Hegel. The connection between rationality and dualism is extensively explored in the first part of Richard Rorty's *Philosophy and the Mirror of Nature* (cited in note 16 above).

24. Calvin G. Seerveld's contribution in this volume deals with Dooyeweerd's modal theory.

25. This view of the difference between science or theory, on the one hand, and naive or ordinary knowing, on the other, is fairly well developed and defended by Dooyeweerd, even though it exists next to his underdeveloped view that naive knowledge is oriented to individuality, while science concentrates on the universal law-structures which individual reality has. It is interesting to note that the latter point of view shaped his own theoretical practice. But it is the former view which he elaborated and defended. The tension between these two points of view leads to an elaborate discussion in the *New Critique* (*NC* 3:53-66).

26. Ordinary thinking doesn't merely respect the integrality of the world and of our experience of that world, but is itself integral. It experiences neither distance nor separation from the familiar world. In theory, by contrast, distance is essential. The advantage of theoretical distance is that we can reflect on the general states of affairs without becoming embroiled in the actualities of present realities in their peculiar variety and with their peculiarly individual problems.

27. See note 1 above. If the fundamental character of reality is integral, then abstraction, for Dooyeweerd, is inherently problematic. This point is reminiscent of one of the keys to John Dewey's thought. Dooyeweerd differs from Dewey, however; for Dewey thinking (all thinking) originates in problems and attempts to solve them, whereas for Dooyeweerd theoretical thought creates problems that are not real outside of theory.

28. If the synthetic joining of conceptual and nonconceptual elements in a theoretical concept (e.g., a biological concept) is to be nonreductionist, the concept cannot be regarded as purely conceptual, according to Dooyeweerd. But since it is also in some sense conceptual, it cannot by definition be just organic either (*NC* 2:429-72). It should be noted that Dooyeweerd's use of terms such as "synthetic" and "analytic" is a more Cartesian flavor (i.e., combination and resolution) than a modern logical one (i.e., experiential and purely logical).

29. The point Dooyeweerd made here needs to be appreciated precisely as he intended it. Theory as such does not create its reality, even though the theoretical *Gegenstand* is the product of theory. Rather, there is first of all an original coherence. And only our knowledge of that originally coherent reality can help us construct the synthetic whole of the theoretical concept. However, that original coherence is not as such known theoretically. Nevertheless, the original wholeness, in order to be serviceable theoretically, must be

theoretically represented. And for that reason Dooyeweerd called for a theoretical vision of reality in its coherence and totality.

30. Philosophy is a strictly theoretical discipline for Dooyeweerd. It is a theory directing the entire theoretical enterprise to the integral, coherent totality from which all theory abstracts. So philosophy is not visionary meditation. Philosophy must provide a theoretically constructed view of the world. Its total picture is a theoretical total picture, a synthetic conceptual product. All this is possible if philosophy is open to the religious concentration of all human functions (in the human heart) on the religious core of reality (the root of creation). Philosophically this concentrated openness to our real selves occurs via three fundamental conceptual ideas, namely, the idea of the origin of the world, the idea of the concentrated fullness of the meaning of our world, and the idea of how the diversity of our world coheres (*NC* 1:506-8; see also *NC* 1:68-113).

31. Theoretical reflection is not the rational act of an agent called "reason." What has been called reason is no more than the absolutization or reification of human intellectual faculties. But Dooyeweerd held that no such agent exists. There is instead a rational person who in being rational exercises many more functions besides the conceptual ones.

32. Via the unity of the person Dooyeweerd effectively referred to the role of those other aspects that function in our act of analysis besides the logical aspect which is in special focus. When theorizing we especially act in an especially rational-conceptual way. If theorizing were only that, however, theorizing would not be merely an act of abstracting, but would be itself an abstraction. For Dooyeweerd, however, an act of abstraction must be seen as a full act which cannot itself be an abstraction.

33. In a formal sense, religion for Dooyeweerd is one's stand, in community with others, in relation to the ultimate issues of existence. One of these ultimate issues is the question of the ultimate origin of all things, including ourselves. By accepting a view of reality which is *ex origine*, one gains the right perspective for getting to know the truth about reality.

34. In making this move Dooyeweerd tried to achieve at least two goals. One was to have a theory of theory in which the theoretical enterprise does not need to be compromised. Theory can be theory. Even for religiously self-aware people, theory ought not to become confession or doxology. At the same time, theory by its own inner nature cannot theoretically solve its own problems without paying close attention to its relationships to other matters of human experience. And thus the second goal can be achieved, namely, to relate theory to our religious roots by way of necessary, inner connections.

35. See, for example, D. M. Armstrong's repeated rejection of all forms of realism about universals in which formal logical argument alone serves to establish both the necessity of universals and what universals there are. Curiously, Armstrong does believe philosophy is an a priori discipline. D. M. Armstrong, *Universals and Scientific Realism*, 2 vols. (Cambridge: Cambridge University Press, 1978), especially the introduction to volume one.

36. Such reflection is not new, of course. Empiricism has a long and distinguished history of challenging rationalistic apriorism of an abstract intellectual nature. Nevertheless, the combination of logicism and empiricism in logical empiricism has long lent prestige to paying mere lip service to the actual empirical elements in theory. The desire for reducing all science to formal mathematical statements is hardly a great example of empiricism. The works of philosophers of science such as Thomas S. Kuhn, Norwood R. Hanson, and Stephen Toulmin have served to renew reflection on the topic once again. See Kuhn, *The Structure of Scientific Revolutions* (cited in note 17 above); Norwood R. Hanson, *Patterns of Discovery* (Cambridge: Cambridge University Press, 1972); and Stephen Toulmin, *Human Understanding* (Princeton: Princeton University Press, 1972) and *Knowing and Acting* (New York: Macmillan, 1976).

37. Especially Michael Polanyi's *Personal Knowledge* (cited in note 17 above) has provided stimulus for investigation of this relationship.

38. The survey of this relationship in Radnitzky's *Contemporary Schools of Metascience* (cited in note 17 above; see esp. pt. 3), and the influential book by Habermas, *Knowledge and Human Interests* (cited in note 17 above), indicate the extent of contemporary reflection on this relation. Its contemporary culmination in what may be called theories of the socialization of rational truth (see Rorty, *Philosophy and the Mirror of Nature*, cited in note 16 above) is causing a considerable stir in traditional analytic circles in North America. Nicholas Wolterstorff's interpretation of the neo-Calvinist view of this relation in the thought of Kuyper and Dooyeweerd does not appreciate adequately their notion of scholarly reform as a species of social reform rather than as running parallel to social reform. He pays too little attention to their view of sphere sovereignty according to which the social task of academic work differs considerably from the social task of politics. See Nicholas Wolterstorff, *Until Justice and Peace Embrace* (Grand Rapids: Eerdmans, 1983), 165ff.

39. Not unlike Polanyi, Dooyeweerd theorized that in a transcendental direction all empirical reality is grounded in human commitment (faith). That commitment is itself grounded in a world transcending ultimate. Thus, theory has religious roots.

40. Dooyeweerd's contribution so far has been mainly to Calvinian thought; see Hendrik Hart, Nicholas Wolterstorff, and Johan van der Hoeven, eds., *Rationality in the Calvinian Tradition* (Washington, D.C.: University Press of America, 1983).

41. According to Dooyeweerd, any dismissal of the active role of philosophy within the sciences leads to the fragmentation of the sciences. Dooyeweerd believed that it took a conscious effort in order to counterbalance this abstractive impulse and the resulting fragmentation of information. Most contemporary scholarship does not seek philosophical integration and by and large would not know how to pursue it. Here Dooyeweerd's philosophy would be especially helpful.

42. The necessary counterbalance mentioned in note 41 above can come from a variety of sources. One of those sources would be an awareness of the extrarational factors in our cognitive experience, such as proposed especially in the work of Polanyi. But if we are looking for an integrative force within the theoretical enterprise itself, we are asking for a theoretic form of integration. This is what philosophy has to offer and Dooyeweerd's philosophy in particular. Dooyeweerd pointed to a long tradition in Western thought in which philosophy is seen not only as an exploration of the foundations of theory, but also as a construction of the most general theoretical framework of reality. Moreover, if the *Gegenstand* theory is at all near the mark in its understanding of the theoretical cognitive attitude, it undermines the claim that philosophy is essentially analytic in character and not also synthetic.

43. Dooyeweerd in fact claimed that the theoretical enterprise is incomplete in either of its two major attitudes by themselves. The reductive-analytic attitude and the synthetic-totalizing attitude must be integrated with one another in order to have a wholesome practice of theory. In addition, Dooyeweerd claimed that the synthetic attitude is incomplete—impossible even—without placing theory in contact with the rest of human experience and with reality outside of theory, as well as with the religious roots of all that exists. For Gödel's theory, see Kurt Gödel, *On Formally Undecidable Propositions of Principia Mathematica and Related Systems* (Edinburgh: University of Edinburgh Press, 1962).

44. The impact of relativizing the rational-logical nature of truth is probably not yet fully understood in our culture. From within the camp of those who regard truth as essentially related to justified belief in correct propositions, the undermining of the idea of truth as rational inevitability seems like relativism. Consequently, views such as those of Hillary Putnam, in *Reason, Truth, and History* (Cambridge: Cambridge University Press, 1981), are characterized as relativist. It appears that one element needed in contemporary reflection is a more precise determination of how we can conceive of truth as having more aspects than logical ones while recognizing, at the same time, that the logical aspects put us in touch with what appears constant and invariant in the universal order of things.

45. I refer to the first edition of Dooyeweerd's *Wijsbegeerte der wetsidee* which appeared in 1935. In a formal sense, Polanyi's notion of the personal has much in common with Dooyeweerd's notion of the religious.

46. Published critical analyses of the *Gegenstand* theory by students of Dooyeweerd's thought exist, but generally not in English. The journal *Philosophia reformata* has carried articles on this subject by Hendrik van Riessen, Jan Dengerink, and D. F. M. Strauss within the last two decades. Stenciled papers on the topic written within the same period are also available from the Philosophical Institute at the Free University of Amsterdam. Dooyeweerd's colleague and close coworker D. H. T. Vollenhoven never subscribed to the *Gegenstand* theory at any time in his career. Strauss's article (cited in note 4 above) gives an excellent overview of criticisms offered by those

inclined toward Dooyeweerd's system of thought. His own suggestions for improvement parallel many I will suggest later. It is unfortunate that his article couches the discussion in a conceptual framework inaccessible to persons unfamiliar with Dooyeweerd's thought. This creates the impression that the matters in discussion are abstract consequences of formal-conceptual consideration, rather than contributions to our understanding of realities. Since the latter is in fact the case, a more accessible mode of language is to be recommended even for discussions among those conversant with Dooyeweerd's system.

47. To refer to the difference as structural implies that the difference cannot be successfully explained in terms of differences in purpose, degree, or sophistication. Dooyeweerd meant to say that in spite of both being some kind of thought, each differs from the other in principle. The one is irreducible to the other. The best known statement of this distinction by a student of Dooyeweerd is the essay "Scientific and Pre-Scientific" by H. Evan Runner in his book, *The Relation of the Bible to Learning* (Toronto: Association for Reformed Scientific Studies, 1967; reprint, St. Catharines: Paideia, 1982).

48. I think this is the case in spite of the fact that Dooyeweerd did appear to have some intimations of such a connection (*NC* 2:471-72). The objection by some students, namely, that Dooyeweerd mistakenly claimed that in theory we abstractly isolate a mode of reality opposite our own logical mode of experience, is not an objection I fully share. Though it is doubtlessly true that Dooyeweerd's literal formulation of this (*NC* 1:39-40) is crude and seems to lack a basis in our examination of theoretical experience, an interpretation is possible which does considerable justice not only to Dooyeweerd's intentions, but also to the nature of theory in the modern age. If it is true that theory tends to be functionalistic, then we can take Dooyeweerd to be saying that in theory we concentrate conceptually on an isolated field in which we try to see reality in terms of functions of one kind. Since much theory is a functional-rational isolation of phenomena, I think Dooyeweerd's characterization is quite empirical.

49. Thus, it does not seem that Dooyeweerd had room in his thought for seeing what he called naive *thought* as *one kind* of naive *experience* along with other kinds of naive experience, such as, sense experience, social experience, moral experience, and so on.

50. It becomes apparent at this point that the integral relation of theory to the religious roots of all knowing is structurally formal for Dooyeweerd. The fact that his theoretical formal argument depended on knowing the content of the foundations of his argument seems to elude him.

51. An ultimate commitment to the autonomy of reason makes it impossible for a theory based on that commitment to separate the structure of the commitment-theory relation from its believed content. As a result, the difference between commitment and theory is not noticed, and the unity of commitment and theory in commitment to theory is interpreted as uncommitted, unprejudiced, objective rational judgment (see note 15 above). But it is only

the same integrality of theory and commitment in both structure and content that allows Dooyeweerd to distinguish the two in his theory.

52. Polanyi contends that from within our theories we cannot articulate the assumptions on which we build them and which are part and parcel of them. See, for example, Polanyi, *Personal Knowledge* (cited in note 17 above), 59.

53. It is probably unavoidable that those who are committed to the ultimacy of the rational point of view in theory only see Gödel's theory as having limited application. Such a commitment cannot tolerate the basic incompleteness of all rational systems as a matter of principle. Once the rationalist commitment is given up, however, Gödel's theory is seen to have wider implications than just for our interpretation of simple and formal systems of arithmetic. Bas van Fraassen, in his oral presentation to the symposium on Scientific Realism at the Seventeenth World Congress of Philosophy (Montreal, 1983), argued that all rational systems are not only now incomplete, but are in principle incompletable. It seems to me that this thesis would gain in depth if we would add that the incompletability in question is rational incompletability. In our commitment we do in fact complete the systems we use. As a result, commitment to rationality considers a theory to be rationally completable.

54. Whether or not such valid knowledge could be accepted as valid once it began to play a role in theory or whether in that context it would require the support of justifying arguments or verifying evidence remains a matter for investigation. And it is by no means clear that this issue needs to be decided one way or another. Perhaps some knowledge can simply be accepted as valid, while other such knowledge does need further support. Analytic philosophy has stimulated recent discussions that are of great value to research in this area. On this see, for example, Alvin Plantinga and Nicholas Wolterstorff, eds., ***Faith and Rationality: Reason and Belief in God*** (South Bend: University of Notre Dame Press, 1983).

55. See note 3 above.

56. There seems to be no reason at all why we could not have a concept of, say, color which is not a theoretical concept of it. In order to have such a concept it would not seem necessary to have reference to the actual individual color of some individual thing. Surely our everyday conceptual experience is not that limited. On this see also Strauss, "An Analysis of the Structure of Analysis" (cited in note 4 above).

57. Using more traditional philosophical language, we may say that properties, relations, and particular things which have properties and stand in relations without themselves being either properties or relations can all be individual. See Hendrik Hart, *Understanding Our World: An Integral Ontology* (Washington, D.C.: University Press of America, 1984), especially chapters 2 and 3.

58. See the discussion of law-subject[a] relations in the preceding essay by Marshall in this volume.

59. If properties, relations, and particular things can all be individual (see note 57 above), they all can also be related to universal conditions.

60. One might say that the philosophical attitude in all theory is the concern for integration and wholeness, while the attitude of specific scientific analysis is that of specialized and differentiated insight.