

Stefano Di Bella, *The Science of the Individual: Leibniz's Ontology of Individual Substance*. Dordrecht: Springer, 2005. Pp. xii + 413.

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The publication in 1999 of Reihe VI, Band 4 of the Akademie edition of Leibniz's writings was a landmark event in the history of Leibniz studies. For the first time, it allowed scholars unrestricted access to the dazzling array of seminal work carried out by Leibniz during the years 1677-1690. Stefano Di Bella's book is one of the first to take full advantage of the resources of Akademie VI.4. Drawing on it and earlier volumes in the series, he constructs a nuanced interpretation of Leibniz's thought on the central metaphysical topic of substance, up through its presentation in the *Discourse on Metaphysics* and the correspondence with Arnauld. Di Bella is concerned both with the historical development of Leibniz's views and with the contentious philosophical issues raised by them. On both scores *The Science of the Individual* makes a significant contribution to our understanding of Leibniz's thought.

I

As its title indicates, Di Bella's book is principally a study of Leibniz's conception of individual substance and of the conditions he imposes on an adequate knowledge (or science) of the individual. For Leibniz, these two sets of issues — what individual substance is and how it can be known — come together in the hypothesis of a “complete concept,” in which God sees “at the same time the basis and reason for all the predicates that can be said truly of” an individual. Di Bella introduces his book with an illuminating discussion of the Leibnizian text most closely associated with this doctrine: *Discourse on Metaphysics*, sec. 8. Here we encounter for the first time one of book's central theses: that Leibniz's theorizing about individual substance should be seen as proceeding on two parallel tracks, one logical or conceptual, the other ontological. Leibniz works against the background of Aristotle's *Categories* account of substance, but his position is distinguished from Aristotle's by his aim of defining a substance's individual nature and by his rejection of “second substances” (or species essences). At the same time Di Bella insists that in “conceptualizing the individual” (10), it is not Leibniz's intention to downplay substance's identity as a concrete particular. On the contrary, the complete concept theory presupposes

a prior ontological notion of substance as a subject of predication. On the account developed throughout the book, we are to think of individual substance neither as a mere bundle of qualities, nor as a bare substratum supporting qualities. Rather, substance is a concrete thing-with-properties: an individual whose qualitative aspects can be distinguished conceptually from the subject but in which, ontologically, subject and predicates are one.

The body of Di Bella's book is divided into three parts, each consisting of three sections. Part I, "The Genesis of a Complete Being," explores the roots of Leibniz's views on predication, substance and individuation in writings dating from his 1663 dissertation *De principio individuationis* through the 1679 *De affectibus*. One of the strengths of this part of the book is its portrayal of Leibniz's method as primarily aporetic. From his earliest days Leibniz confronts a host of questions concerning traditional oppositions of universal and particular, subject and predicate, substance and property, attribute and mode, essence and existence—generated through his engagements with a wide range of authors (including, but not limited to, Plato, Aristotle, Suarez, Nizolius, Hobbes, and Spinoza). These engagements drive the development of his own philosophy, which emerges gradually as advances are made on a variety of fronts. Some of the highlights are: the overcoming of the "conceptual atomism" of *De arte combinatoria* through a recognition of the polarity of the predication relation; the reinterpretation of the traditional "ontological square" to emphasize the existential commitment of particular propositions alone; the influence of Hobbes' *De corpore* on his nascent theories of meaning and truth; the appropriation of Spinoza's model of causation as a relation of determination among a series of states, which in turn is "profoundly reshaped by reference to active and conscious mind-like subjects" (112). The upshot of these developments is that by his first years in Hanover Leibniz has settled on the soul or mind as the paradigm of a individual substance, whose nature is both *dynamic*, involving an inherent tendency to act on itself, and *complete*. The second of these characteristics identifies substance's nature as a fundamental explanatory principle, which is sufficient to account both for the production of all of its own states and for its existence as an individual qualitatively distinguishable from every other substance.

Part II, "A Logico-Ontological Framework for Substances," focuses on the contribution of the category studies of the 1680s to the development of the complete concept theory. Di Bella stresses two main points. One is the confluence of semantic and ontological ideas that moves Leibniz toward the articulation of the idea of a complete individual concept. A "complete concept" is one that "contains

everything that can be said of the same subject.” As such, it represents a concrete thing as a substance in the strictest sense: an ultimate subject of predication, from whose concept a reason can be derived for everything that is truly predicable of it (201-2). The second important contribution of the category studies is their elaboration of the notion of a “requisite,” the key ingredient in Leibniz’s definition of “cause.” Here the crucial innovation is his understanding of causation as a determination relation distinct from conceptual necessitation, thereby making room for the contingency of the dynamic development of a substance’s states.

The formulation of the complete concept theory signals Leibniz’s coming of age as a philosopher. As is well known, however, the theory gives rise to as many questions as it answers. In Part III, “*Notio Completa: Complete Concept and Individual History*,” Di Bella tackles the complex set of issues confronted by Leibniz in his correspondence with Arnauld. According to Di Bella, Leibniz operates with two distinct views of the complete concept: one theological, which identifies it with the content of God’s knowledge of an individual substance, the other ontological, which identifies it with a substance’s individual nature or essence. The two perspectives give rise to diverse problems, which are explored at different points in the correspondence. One of the most widely discussed concerns the modal status of a substance’s properties: if Leibniz accepts, on the basis of the complete concept theory, the counterfactual non-identity of substances (roughly, if any individual were to lack any of the properties it has, then that individual would not have existed), can he avoid the conclusion that a substance has all of its properties necessarily? Di Bella’s insightful analysis of this problem stresses the centrality for Leibniz of the doctrine of possible divine free decrees and the nomological-causal structure of a complete concept. On his account, Leibniz can consistently embrace a denial of transworld identity and the contingency of a substance’s states, because he identifies a substance’s individual nature with a law that expresses God’s free decree for the contingent causal order of its world. Since any individual substance is identical with its law, and its law is sufficient to determine all of its states, any putative difference in the content of those states would imply a different substance. Nevertheless, a substance’s states exist contingently, as determined by the laws of its world.

Following two short postscripts that discuss the relation of the complete concept theory to the doctrine of infinite analysis and Leibniz’s “metaphysics of history,” the book ends with 30 pages of “Concluding Remarks” in which Di Bella draws together—sometimes more explicitly than he does in earlier sections—the central

theses of his book. This conclusion is helpful in allowing the reader to focus on the main contributions of the work, but it also points to a weakness of organization. Di Bella presents his results here as if they were discovered in the course of writing the book. I suspect, however, that most readers would be aided by having those results set out more clearly in the introduction, so they might guide their study of the rest of the book.

The foregoing is only the briefest summary of the contents of *The Science of the Individual*. In the rest of this review I want to focus on three sets of issues on which Di Bella has advanced the discussion of Leibniz's views, if not perhaps resolving all the problems they raise.

II

If there is one lesson to be learned from Di Bella's book it concerns the central place of the particular in Leibniz's thought. To this day it remains common to think of Leibniz's philosophy as concerned exclusively with general concepts. The priority given to the concept-containment theory of truth, whose paradigm cases are analytic necessary truths, has encouraged the assumption that his philosophy is exhausted by the attempt to represent reality through increasingly complex conjunctions of general concepts, whose limit is the complete concept of an individual substance. I shall return later to Di Bella's critique of standard readings of the structure of the complete concept. Initially, I want to consider the more basic question of the ontological presuppositions of Leibniz's thought.

Leibniz's starting point in theorizing about the world is the idea of a *particular* thing: a countable, non-instantiable *this* or *that*. His commitment to the exclusive existence of concrete or particular things, often described as his "nominalism," can be observed in several contexts. In the domain of ontology, Leibniz leaves no doubt that the created beings that enjoy an independent or *per se* existence, substances, are particular things, as are their accidents (to the extent that these are granted a separate existence at all). By contrast, abstract beings—forms, universals, instantiable properties—do not exist in their own right, as dependent or independent beings. For Leibniz, they are only "modes of conceiving," or the contents of a mind's representations of the world. An ancillary point that needs to be stressed is that Leibniz does not limit the class of particular things to substances. There are also *substantiata*: aggregates or collections that are likewise concrete things, whose existence is dependent upon the prior existence of substances. The

bottom line, though, is that the only things that are even candidates for existence, as constituents of the created world, are particular things (24).

The coextensiveness of the actual and the particular is reflected in Leibniz's semantic theory. He is well known for holding that in an ideal language we could dispense with abstract terms. In place of abstractions like 'humanity' or 'heat,' we would refer only to 'human beings' or 'hot things.' Preempting the objection that adjectival terms by themselves pick out only qualities of things, Leibniz insists that such terms should be understood as involving an implicit predication. When we use a term such as 'hot' (*calidum*), a thing (*res*) or subject is tacitly understood. In their ordinary usage, then, terms such as *calidum*, which are understood as conveying a qualitative feature of the world, are also understood of a thing. They signify a subject-with-a-predicate (*subjectum cum praedicato*). Thus, although Leibniz does not explicitly adopt a referential theory of meaning, he assumes that in ordinary circumstances we use terms to refer to things, which are understood to have the properties conveyed by the term.

Leibniz's views about language have important consequences for his theory of cognition. First, it is necessary to note the equivocacy of the word *terminus*, which can mean either an item of speech or an item of thought (181). In the case of the former, we have seen, Leibniz's program for the systematic replacement of *abstracta* by *concreta* brings with it the assumption that our ordinary use of terms carries an implicit reference to particular things. This assumption carries over to the role of terms in cognition. Just as our use of concrete words carries an implicit reference to particular things in the world, so our employment of concrete terms in thought directs the mind toward the world—and thought directed toward the world is thought of particular things. Again, we discover the error of interpreting Leibniz's philosophy, and especially his theory of knowledge, as focused exclusively on general concepts. His position, on the contrary, is that the mind naturally directs its attention toward the properties of concrete things, which are understood abstractly via the content of the terms. When I think of a *cat*, I think of a furry, four-legged, living *thing*, not simply a bundle of its properties.

Di Bella maintains that Leibniz's use of the terms *res* or *subjectum* should not be taken as committing him to a view of substance as a bare substratum. This is undoubtedly correct as a point about ontology; however, it does not apply to the role played by this notion in Leibniz's theories of language and cognition. When we employ a concrete term like *cat*, we really are just thinking of an indeterminate thing-with-qualities, without taking any stand on what it is to be a substance

or whether what we are referring to is, in fact, a substance.¹ Leibniz takes it for granted that it is a basic feature of our cognitive repertoire that we are able to make judgments about the coincidence and change of qualities, and that these judgments presuppose a primitive notion of identity, represented by the idea of an unqualified and unchanging thing or subject.²

All of this, I suggest, pertains to a level of theorizing whose conclusions are independent of the answers given to fundamental ontological questions, such as those concerning the nature of individual substance. In the latter context it clearly is a mistake to suppose that Leibniz regards substance either as a bundle of properties or as a bare substratum. Nevertheless, in formalizing his definition of individual substance in DM 8 and related texts, Leibniz proceeds within the framework of his semantic theory, exploiting the notion of a concrete term as an implicit predication of a *res* or *subjectum*. As we have seen, a concrete term, in general, signifies a thing-with-a-quality; and from the point of view of thought or language, this “thing” is wholly indeterminate: it is the idea simply of some thing or other of which certain (general) properties are understood. From this perspective, Leibniz’s implicit question in DM 8 is just this: is it possible to define a concrete term in such a way that it would represent some subject *as* an individual substance?

An answer to this question obviously will depend upon certain prior assumptions about what it is to be an individual substance. DM 8 open with the idea of created substance as a principle of action; however, Leibniz quickly turns from this to the conception of substance as an ultimate subject of predication: that of which other things are predicated which itself is not predicated of anything else. Di Bella convincingly shows how Leibniz transforms Aristotle’s *Categories* definition, first, by bringing substance as a particular within the scope of conceptual knowledge, and, second, by rendering its individual notion, through the concept-containment theory of truth, a “principle of deduction,” from which any of a substance’s properties could be derived (201). Thus we arrive at the famous conclusion of DM 8: “la nature d’une substance individuelle, ou d’un Estre complet, est d’avoir une notion si accomplie, qu’elle soit suffisante, à comprendre et à en faire deduire tous les predicats du sujet à qui cette notion est attribuée” (A VI.4, 1540).

Di Bella appears to follow Leibniz in regarding this definition as pregnant with philosophical consequences. Here, I believe, some skepticism is warranted. As DM 13 confirms, Leibniz’s concern in DM 8 is with a special sort of “notion or idea”—an item of knowledge—to which the “nature or form” of an individual substance is assumed to correspond (A VI.4, 1547). Yet Leibniz’s definition of this

“individual notion or haecceity” is of minimal help in illuminating the nature of an individual substance. In addition to its role as an ultimate subject of predication, Leibniz stresses substance’s function as a principle of action and its possession of an internal principle of individuation. All three of these properties plausibly lay claim to part of what he means in describing substance as a “complete being.” As a complete being, individual substance contains within its nature a sufficient reason, or explanation, for all its properties, for the changes that occur in those properties, and for its uniqueness as an individual, distinct from every other substance. The complete concept theory by itself, I submit, offers no insight into the spontaneous activity of substance or the conditions for its individuation. Leibniz’s understanding of these properties depends upon independent metaphysical theses about what it is to be a substance and an individual. Nevertheless, it might be argued that, granting these theses about a substance’s intrinsic activity and individuation, a complete concept is an apt way of *representing* the nature of an individual substance; for Leibniz’s view, roughly, is that the nature of any substance “contains” in some way the entire history of its existence, which follows from its spontaneous action, and its unique relation to the rest of the world, which is the basis of its individuation. So, it looks as though a complete concept—one that contains *everything* that can be truly predicated of the same subject—gives us precisely what is needed to account for the essential properties of an individual substance.

On further reflection, I believe, it is apparent that Leibniz’s initial definition of a complete concept—the definition presented in DM 8 on the basis of his theory of terms—fails as an adequate representation of the individual nature of a substance. As Leibniz himself recognizes in DM 13, the connection between a substance and its contingent properties must be understood differently from the analytic necessities that are determined by relations of concept inclusion. Given that the changes in a substance’s properties and its individuation are both understood in terms of its contingent relations to the rest of its world, any adequate representation of its nature must be capable of capturing the modality of these relations; however, there is no reason to think that a model based on a standard conception of concept inclusion can do this. Although Leibniz may believe that the model can be extended to include the changeable, contingent properties of substance, there is little evidence to support this belief.

If there is a criticism to be made of Di Bella’s interpretation here, it is not that he fails to recognize the limitations of the DM 8 account (for he does), but that he does not distinguish as clearly as he might the pre-theoretical idea of individual

substance as a complete *being* and the definition of a complete *concept*, which is directly traceable to the category studies; and, further, that he accepts too readily the identification of this concept with what is more helpfully seen (*pace* Leibniz) as the alternative strategy of representing a substance's nature by an individual *law*.

III

Di Bella's subsequent reflections on the "structure" of a complete concept leave behind the framework of Leibniz's semantic theory in favor of an understanding of substance's nature as essentially nomic. In his words, an individual "law/concept is constitutive of the identity of the subject, and inherence is reinterpreted as production from a causal-nomological structure" (377). Thus, to say with DM 8 that the "quality of king" inheres in Alexander, or is contained in his complete notion, is shorthand for the claim that certain relevant properties are produced in Alexander through the spontaneous action of his substance. The permanent pattern (or law) of this action, fixed eternally in God's knowledge of Alexander, is the foundation of Alexander's identity. To be Alexander, is to be the substance whose life history is expressed in his particular "law of the series."

Accepting this as the culmination of Leibniz's efforts to think through the nature of individual substance, a number of conclusions follow. As Di Bella emphasizes, when we ascribe properties such as "king" or "man" to Alexander, we are dealing with abstractions, rather than with the accidents themselves that modify Alexander's substance. Those accidents, in fact, are every bit as concrete as the substance itself. Alexander is not simply a victor; he is the victor over Darius *at a particular time and place as a consequence of a particular series of prior events*. Only in this way is Alexander individuated as "our" Alexander, as opposed to some qualitatively similar but non-identical counterpart. The ineliminable role of spatiotemporal relations and causal history (in general, "relations of connection") in the individuation of substances and their accidents bears emphasis. As Di Bella argues, Leibniz's mature position preserves and extends the view of individuation defended in the Paris-period *Confessio philosophi*. Substances are individuated through their spatiotemporal and causal relations to the other individuals in their world. The crucial innovation of Leibniz's later works is that whereas this connection had been treated as a brute fact about a substance's external relations to other things, it now "has to be grounded *within* the thing itself" (98). In short, Alexander is the individual he

is in virtue of how he is related to the other things in his world; yet, ontologically, the relevant individuating accidents are modifications of Alexander's substance alone—modifications that arise as a result of the internal, law-directed activity of that substance.

The sum of these commitments points unmistakably toward the soul or mind as the paradigm of an individual substance. Di Bella notes that already in DM 8 Leibniz slides without comment from a consideration of the properties of Alexander to what God recognizes in his soul: “des restes de tout ce qui luy est arrivé, et les marques de tout ce qui luy arrivera, et même des traces de tout ce qui [se] passe dans l'univers” (A VI.4, 1541). It is difficult to see how any other model of substance could accommodate Leibniz's commitment to the doctrine of universal spontaneity: that a substance's individual nature is responsible for the production of *all* its states or properties. Taken in conjunction with the previous point, this implies that the modifications relevant to the individuation of a substance should be understood as perceptual states that express its unique relation to the other individuals in its world. Thus, Alexander is the individual he is by virtue of *representing* himself as the victor over Darius at a particular time and place as a consequence of a particular series of prior events; and likewise for all the other events that make up his life history and that of the rest of the world.

In stressing a conception of Alexander's nature as an individual law, as opposed simply to a complex conjunction of properties/predicates, Di Bella is especially concerned to emphasize the *causal* structure of this nature. By nature, any substance is modified by a series of states, where the relation between those states is one of causal, rather than logical or metaphysical, necessity. In general, a substance's properties (e.g. being the victor over Darius...) belong to it contingently, because, logically, any state could be understood to follow any other. That some particular state is determined to follow a given state is a function of God's free decrees, or the laws chosen for this world.

Di Bella's discussion of the articulation of the idea of a “requisite” in Leibniz's category studies provides a useful framework for thinking about the dynamics of intrasubstantial causation. Nevertheless, two significant problems stand in the way of a full understanding of the topic. One concerns the content of the laws according to which one state of a substance is understood to determine other. Among the options are: i) the substance's individual law of the series; ii) general laws governing relations among intrinsic properties of its states (e.g. their degrees of perfection); iii) general laws governing relations among the phenomenal contents

of those states. The first of these, I assume, cannot be the right law to appeal to, since the relation between any two states of a substance is not contingent on the choice of this law; rather, as Di Bella argues, the law is identical with the substance whose states they are. Although the second option might seem the most plausible, Leibniz nowhere gives an indication of the form such laws might take. Thus, we are left with the third possibility: contingent relations of determination among the states of individual substances are defined in terms of the contents of those states, i.e. the physical and psychological phenomena represented by them. On the face of it, this is an attractive way of accounting for the progress of a substance's states, since any state will, in general, be followed by states whose contents are related to those of the previous state in the ways stipulated by the appropriate general laws, which are ascribed to God's free decrees. Obviously, though, much more needs to be said about this.³

The second problem broached by Di Bella's reading involves the relation between the causal determination of a substance's states and their temporal order. Conceiving of a substance's individual nature as a permanent, unchanging law points toward a tenseless (or "B-series") theory of time: all of a substance's states are equally real, those that we regard as being in the past and future as much as those that we regard as occurring now. Among these states there are nonetheless relations of causal determination on the basis of which we can define a quasi-temporal linear ordering of prior and posterior states. While this seems the most coherent way of reconstructing Leibniz's position, it comes at the cost of downplaying, or even rejecting, the idea of *becoming* that is implicit in his conception of the "dynamic." A force is a "tendency" or "inclination" toward a future state, which it realizes unless prevented by some contrary force. Although one might interpret this tendency as nothing more than an unchanging property of a prior state that explains (timelessly) the existence of a subsequent state, it is unclear whether this fully captures Leibniz's intuitions on the topic.⁴

IV

Di Bella frames his final position on the "nomological and relational structure" of the complete concept in terms of the twin theses of "ontological autonomy" and "conceptual holism" (346). The first thesis closely tracks the nomic model of a substance's individual nature. The nature of any substance is sufficient to produce all its own states independently of the action of any other created substance. Fur-

thermore, since a substance is taken to act only on itself, there can be no influence of one created substance on another. Each is, in Leibniz's famous words, "comme un Monde à part, independant de tout autre chose hors de Dieu" (A VI.4, 1550).

Restricting our attention to this dimension of Leibniz's metaphysics, we can infer little about the putative relations among substances. Through its perceptual states each substance represents itself as related to the other things in its "world," but it does so from the perspective of a phenomenal object (a living body), subject to the constraints of space and time and the causal order determined by the laws of motion. On the basis of ontological autonomy alone, we can conclude nothing about a given substance's relations to the other substances in its world. Nor can we conclude that *that* substance could exist in only one world. If its individual nature is identified with a productive law, a law that is necessary and sufficient to account for the generation of its unique series of perceptual states, then there is no obvious reason why that law could not be realized in different worlds, in which the resulting substance would be accompanied by different "world-mates."⁵

Di Bella firmly rejects this interpretation of Leibniz's metaphysics, opting instead for the view that any substance should be viewed as a "world-bound individual" (WBI). The driving intuition here is that the relational properties of a substance are as much a part of its identity as its non-relational properties. Hence, a hypothetical Alexander imagined to exist in a different world with different world-mates would not be *our* Alexander. Di Bella presents this as the thesis of conceptual holism:

The framework for a world of existing things—be they actual, or only possible—is structured by a network of relations of connection (*relationes connexionis*). Though rigorously separated from the ontological viewpoint, individuals are conceptually connected. Finally, this conceptual dependence has within the individual thing a real counterpart, which has to be conceived in the strong sense of the thesis of changing relata. Thus, quite independently from the causal autonomy of each individual, relational properties seem to be constitutive of their individuality. (386)

As far as I understand Di Bella's account, any individual substance is identified by a complete concept, which does "not simply imply general relational properties, but a precise reference to determinate individuals" (ibid.). Thus, Alexander's concept contains a reference to *Darius*, and not simply to a Persian king defeated in battle, etc. Since being related to Darius in this way is "constitutive" of Alexander's individuality, no individual who lacked this property would be Alexander. Yet were Alexander to exist in any world except the one in which "our" Darius exists,

he would lack this property. Hence, Alexander is a world-bound individual.

I have space here for only a few brief comments, which I hope will provide Di Bella with an opportunity to expand on his view.

(1) With the addition of the thesis of conceptual holism, a distinction seems to emerge between a substance's individual nature, elucidated as a productive "law of the series," and the complete concept, understood to include everything that is true of the individual, including all its relational properties. As I have interpreted it, the nature-as-law account fits squarely with the thesis of ontological autonomy: it specifies the determinate progression of a substance's perceptual states, but it implies nothing about the substance's relations to its world-mates. By contrast, if I understand Di Bella correctly, the "complete concept" does contain this information: it involves a complete representation of the properties of a substance as it would exist in a world related to a multitude of other substances. The precise form of these relations still needs to be specified (are they to be taken, e.g., as relations among the contents of the perceptions of different substances?). Here, though, I am mainly pointing to what appear to be two competing models of the "complete concept": one a law constitutive of the nature of the substance, the other a perfect (divine) representation of its connection to a world.

(2) As the quoted passage above indicates, Di Bella links the individuality of a substance to its relational properties, properties it has in virtue of its relations to the other substances in its world. In at least one passage, however, Di Bella appears to allow that the individuality of a substance can be spelled out adequately in terms of its unique perceptual point of view, or how it represents its relation to the rest of the world: "What is relevant for the individuation problem, as Leibniz conceives of it, is the fact that these intra-monadic relations are essential to the individual Paris—however things stand as regards the existence of their inter-monadic counterparts" (346). So far as I can see, this is exactly the right stance to take. It is consistent with the explanation of individuation offered by Leibniz in DM 14, and it meshes nicely with Di Bella's claim elsewhere that the later writings preserve the *Confessio's* account of individuation in terms of spatiotemporal and causal relations, while grounding those relations within the substance itself. On this view, a substance is the individual it is by virtue of its unique point of view on a phenomenal universe—a point of view that includes its representation of its own place (as a phenomenal thing) within that universe. But if this is correct, a solution to the problem of individuation by itself tells us nothing about a substance's connection to the other substances in its world. Thus, I wonder about the relation

of this problem to the thesis of conceptual holism.

(3) The strongest support for the doctrine of WBI is found in Leibniz's rejection of "purely extrinsic denominations." As he writes in the *Principia Logica-Metaphysica*, "there are no purely extrinsic denominations that do not have any foundation at all in the denominated thing itself" (A VI.4, 1645). Given this claim, the modifications of any substance must reflect its connection to the other substances in its world. If we imagine Alexander transported to a different world, where he would be related to other substances, then these new relations would have to be expressed in Alexander's intrinsic denominations, which is to say, his perceptual states. The "no purely extrinsic denominations" thesis clearly tells against trans-world identity and in favor of WBI. What is less clear, I think, is how to account for the thesis within Leibniz's philosophy. Di Bella argues that it is best understood as a consequence of Leibniz's theory of individual substance: because the complete concept of any individual substance includes its relation to the other individuals of its world, were those individuals to differ, so too would the complete concept, and therefore the substance itself, whose essence is represented by the complete concept. Yet there is another way of approaching the issue, which transfers our attention from the nature of substance to God's conception of the connection of substances within a world. Suppose that the nature of an individual substance is, in fact, given by the productive law that is responsible for its unique series of perceptual states. Given this understanding of substance, logically speaking, any arbitrary set of substances could be created by God. However, not just any set of substances would be conceived by God as constituting a *world*. For this it is necessary that the substances in question be united by relations of connection; in particular, they must be locatable within a common spatiotemporal order (relations of coexistence and succession) and they must mutually condition each others' actions (relations of *commercio* or ideal causation). In Leibniz's philosophy, the members of a world are connected in the requisite way by virtue of representing themselves as belonging to a common universe of phenomena.⁶ Given this constraint on worldhood, the no purely extrinsic denominations thesis is trivially satisfied. The only world in which an individual could exist is one in which its intrinsic denominations (the content of its perceptions) track in the relevant ways those of its worldmates. The thought experiment of imagining an individual like Alexander transported to a world in which the requisite connection fails to be realized is blocked not because we would *ipso facto* be thinking of a different substance, but because the scenario we describe does not pick out a Leibnizian possible world.

V

In a book as stimulating as this one, it seems almost churlish to pick on points of presentation. For the most part, Di Bella's English is adequate for his purposes, but the whole book would have benefited from a more thorough editing by a native speaker, who could have smoothed out some of the prose and avoided a number of unfortunate word choices ('monography,' 'intrinsicity,' 'phenomenistic,' 'derivate,' 'alternance'). Another minor annoyance is the lack of a subject index, which would have helped readers navigate what is unquestionably a dense thicket of issues. Finally, there is the price: at \$179 (€140) it is hard to believe that many readers will be moved to purchase the book for their own libraries. These, though, are small complaints about what is otherwise a rich and provocative text. I recommend it to anyone with serious interests in the foundations of Leibniz's metaphysics.

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Notes

¹In the category studies Leibniz sometimes applies the term *substantia* to whatever is picked out by a concrete substantival term. In this sense, however, it lacks its usual ontological import. See, e.g., A VI.4, 572, quoted by Di Bella on 191.

²On this see Leibniz's response to Locke in the *New Essays*: "And we have no need to 'accustom' ourselves to [a *substratum*], or to 'suppose' it; for from the beginning we conceive several predicates in a single subject, and that is all there is to these metaphorical words 'support' and 'substratum'.... [W]hat comes into our mind is the *concretum* conceived as wise, warm, shining, rather than *abstractions* or qualities such as wisdom, warmth, light, etc., which are much harder to grasp. (I say 'qualities', for what the substantial object contains are qualities, not ideas.)" (NE 217).

³Relevant here are "laws of efficient causation" (laws of motion) and "laws of final causation" (laws of appetite). I offer some further thoughts on this issue in

REVIEW OF DI BELLA

“Leibniz on Spontaneity,” in *Leibniz: Nature and Freedom*, ed. Donald Rutherford and J.A. Cover (New York: Oxford University Press, 2005).

⁴ The difficulty of doing justice to the temporal dimension of Leibniz’s theory of substantial activity is illustrated by some of Di Bella’s own remarks. In section 6, he writes: “Talking about temporal parts would be, admittedly, anachronistic; but the changing continuant of the standard view is replaced by the unfolding of a tenseless structure that is already somehow present” (261). Returning to the topic in section 9, he adds: “So, marks and traces give psychological concreteness to the ontological framework illustrated in section 6 above: a tenseless program embodied within the individual as a latent structure which is fulfilled in time as the corresponding dispositional facts burst into activity.” (338)

⁵ For a development of this reading, see J.A. Cover and John O’Leary-Hawthorne, *Substance and Individuation in Leibniz* (Cambridge: Cambridge University Press, 1999).

⁶ I defend this view in ch. 7 of *Leibniz and the Rational Order of Nature* (New York: Cambridge University Press, 1995).