METAPHYSICA

International Journal for Ontology & Metaphysics

Editors: RAFAEL HÜNTELMANN (Frankfurt)
UWE MEIXNER (Regensburg) • ERWIN TEGTMEIER (Mannheim)

Volume 5 (2004) • No. 1

Articles

Discussion

Authors' Addresses: *Sacha B. Gironde*, Institut Jean-Nicod, 1 bis, avenue de Löwendal, 75007 Paris, France, sbgironde@hotmail.com; *Dr. Peter Alward,* Department of Philosophy, University of Lethbridge, 4401 University Drive, Lethbridge, Alberta T1K 3M4, Canada, peter.alward@uleth.ca; *Dr. Timothy J. Nulty*, University of Connecticut, Department of Philosophy, 344 Mansfield Road, U – 54, Storrs, CT 06269-2054,Timothy.Nulty@uconn.edu; *Dr. Jean-Baptiste Rauzy*, Université de Provence, Département de Philosophie, 29, avenue Robert Schuman, 13621 Aix-en-Provence Cédex 1, France, jean.rauzy@wanadoo.fr; *Dr. P.X. Monaghan*, Department of Philosophy Simon Fraser University, 8888 University Drive, Burnaby, BC Canada V5A 1S6, patrick_monaghan@sfu.ca; *Dr. Ryan J. Wasserman*, Department of Philosophy, Rutgers, The State University of New Jersey 26 Nichol Avenue, New Brunswick, NJ 08901-2882, ryanwasserman@yahoo.com; *Adolf Rami*, Technische Universität Dresden, Institut für Philosophie, Lehrstuhl für Theoretische Philosophie, Zellescher Weg 17, 01062 Dresden, aramis@gnom.kfunigraz.ac.at; *Prof. Dr. Donald W. Mertz*, University of Missouri – St. Louis, 8001 Natural Bridge Road, St. Louis MO 6321-4499, U.S.A. dmertz@umsl.edu; *Dr. Janine Jones*, University of North Carolina at Greensboro, Departement of Philosophy, PO Box 26170, Greensboro, NC 27402-6170, U.S.A. jcjones2@uncg.edu; *Dr. Käthe Trettin*, Johann Wolfgang Goethe-Universität, Institut für Philosophie, Grüneburgplatz 1, D-60629 Frankfurt a.M., Kaethe.trettin@t-online.de.

Editorial Office: METAPHYSICA, Frankfurter Str. 39, D-63150 Heusenstamm
phone +49(6104)66 57 33; fax +49(6104)66 57 34
e-mail: redaktion@metaphysica.de

Guidelines for submitting articles: Articles should be written on a computer (compatible with WinWord 2000 or lower, line spacing 1.5; type-size 12 pt) and submitted with an e-mail attachment to the Editorial Office of the Journal METAPHYSICA. The text should be no longer than 30 pages, including an abstract in English. The languages of publication are English and German. For previously published articles, the authors must ensure that no copyright is infringed. All articles submitted will be refereed on an anonymous basis. We cannot accept any liability for unsolicited manuscripts. They will not be sent back unless the author makes an explicit request and provides return postage. This journal does not publish reviews.

Website: http://www.Metaphysica.net
http://www.Metaphysica.de

Frequency of publication: METAPHYSICA is published in two volumes annually. The price of a single volume is EUR 25,00, in subscription (two volumes) EUR 45,00 plus postage and handling. Order from: ontos verlag, P.O. Box 15 41, D-63133 Heusenstamm nr. Frankfurt, GERMANY, Tel. +49-6104-66 57 33, Fax +49-6104-66 57 34, mailto: order@ontos-verlag.de

www.ontos-verlag.com

ISSN 1437-2053

METAPHYSICA

International Journal for Ontology & Metaphysics

ARTICLES

SACHA B. GIRONDE

On Zalta's Notion of Encoding in Conceivability-Contexts

A clear-cut distinction is needed between abstract and ordinary objects for the sake of clarity of our ontology. Even though we decide that our variables uniformly range over individuals, some formal distinction must select apart abstract and concrete objects within a unified domain of quantification. A fine way of putting the required ontological difference is Zalta's proposal that abstract objects *encode* their properties while concrete ordinary ones *exemplify* them (Zalta 1988: pp. 15-32). The difference is then captured by distinct modes of predication and is notationally rendered as: 'xF' for x encodes the property F and 'Fx' for x exemplifies this same property; the position of the variable indicates on which kind of objects it ranges. In principle no ordinary object encodes a property and no abstract object exemplifies one.[1] The extent of this neat distinction in some particular intensional contexts is what will be critically discussed here. This discussion will hopefully lead to a finer attunement of our intuitive understanding of the ways we intentionally relate to all sorts of objects with the spelling out of logical features of intensional contexts.

I. The Modal Axiom of Encoding and Its Intuitive Consequences

The intuitions underlying each of the two modes of predication and the chosen terminology are clear. There is no other way to identify abstract objects but by knowing their properties. Properties had by ordinary objects are, generally, less identificatory. Abstract objects encode their properties in the sense that the latter form crucial pieces of information in view to be able to mentally grasp those very objects, while concrete objects merely exemplify properties which they could, in other circumstances, fail to. Or,

[1] Which does not exclude relations relating abstract and concrete objects.

again, abstract objects are such as we define them – that is as we predicate something of them – which is not the case for ordinary objects. The constructive element in the ontology of abstract objects seems to motivate a specific logical behaviour, as expressed by Zalta's following Modal Axiom of Encoding : '◊xF → □xF' (Zalta 1997). Properties possibly encoded by an abstract object are encoded by the same object in every possible world. Concrete objects do not similarly behave in modal contexts, unless we wish to say that every possibly exemplified property is part of their essence, which would ruin the idea of an object possibly being otherwise altogether. It is clear that we do not tend to reject this same counterintuitive conclusion in the case of abstract objects.

Let's note first that there is a possible double reading of the Modal Axiom of Encoding. One reading, just indicated, merely states that abstract objects essentially possess their properties. What we have here is a static characterization of the rigid extension of encoded properties across logical space. On the other reading, we pay closer attention to the antecedent of the conditional: if it is possible that an abstract object encodes a given property, then it encodes it necessarily. If we bear in mind the fact that abstract objects depend for their existence on acts of stipulation – as the very notion of encoding inclines to think – we can make the antecedent reflect this constructive aspect of our intentional relation to abstract objects. Every act of stipulation deemed acceptable essentially defines an abstract object. What the Modal Axiom of Encoding intuitively means, then, is: if we envision the possibility of an abstract object encoding a certain property, then we have essentially characterized this abstract object. According to this reading, unlike what our sense of alternative makes intuitively congenial to ordinary objects, it is vain to think of an abstract object as being otherwise than it is, and even otherwise than it could be.

This reading of his axiom is not indicated by Zalta, but it naturally correlates a distinctive logical behaviour of abstract objects in intensional contexts with the way we intentionally stipulate their existence.[2] On this reading what the axiom states is that possible encoding is necessary encoding. And however we define possible encoding, once we get it and the corresponding abstract object, there is no more possibility to make the

[2] If the role of the Axiom were simply to express the fixed extensions of encoded properties across logical space, 'xF → '□xF' would suffice, in the kind of models for modal logic, with no actual world designated, which Zalta prefers.

latter otherwise. What is possible encoding? As we have already emphasized, the notion of possibility, for an abstract object, involves no comparison between possible worlds wherein the concerned abstract objects would clothe different guises. So either possible encoding means that the encoded property is consistent with other properties of the same object (internal possibility) or, in a looser way, that the stipulative act targeting the abstract object is not empty: it actually targets an abstract object encoding a certain property (intentional possibility). Internal possibility is an extranuclear property of abstract objects which can exert more or less lax constraints over the individuation of abstract objects[3]. Intentional possibility is, similarly, accompanied by degrees of representational constraints over the targeted object. It is not a neutral matter to define in a precise way what to admit as possible encoding, but we more exclusively focus on one common aspect to all putative definitions: acts of stipulation or intended encodings (and intuition lends them a large amount of freedom), when possible, are creative, in the sense that they yield an object, and they give direct access to its essence.

This immediately points to a major intuitive difficulty for the Modal Axiom of Encoding. If its constructive reading reflects how we mentally individuate and grasp abstract objects and accurately reflects the behaviour of abstract objects in intensional contexts, it also egregiously fails to account for the way we latch onto the same abstract objects, or at least think we can do, across more than one act of stipulative encoding. If each possible encoding of a property to an object freshly individuates a new denizen of the realm of abstracts, there is no way to express something counterfactual about some previously individuated abstract objects that we wish to keep in mind. The problem is clearly that with abstract objects counteressentiality comes too soon – every act of encoding about an intended abstract object shifts the identity of what we are thinking about. Creativeness entails systematic shiftiness. However, we can easily imagine cases where stipulative encoding would rather not be creative or shifty, like when we try to discover some as yet unknown property of a given abstract object, or like when we merely add, substract or substitute one of its properties. In a sense, even if we change the essence of such an object, we, at least so may we think, did not intend to change its intentional identity. A

[3] Talk of extranuclear properties belongs to the neo-Meinongian tradition. See in particular Parsons 1980. Extranuclear properties define constraints on first-order or nuclear properties, more or less stringent conditions of consistency can be defined.

given straight line remains self-identical, for us, when we consider it, alternatively, in Euclidean and in Lobatchevskian spaces, although it comes to encode significantly distinct properties. Barring shiftiness while preserving the intuitions of free stipulation and creativeness seems sometimes required.

II. Counteressential Conceivability

A parallel can be drawn with the way we may intend to counterfactually negate some essential properties of ordinary objects. In spite of the fact that, contrary to abstract objects, essence is only a subset of an ordinary objects's properties, shiftiness and creativeness have been all the same pointed out by authors defending the Modal 2-Dimensionalist account of conceivability, as Yablo concisely puts it.

Very often one finds a statement E conceivable, when as a matter of fact, E-worlds cannot exist. (…) the failures always take a certain form. A thinker who (mistakenly) conceives E as possible is correclty registering the possibility of something, and mistakenly the possibility of that for the possibility of E. (Yablo, 2000: 98).

Modal 2-Dimensionalists contend that when we try to conceive of water as not being H2O, for instance, we conceive nothing about ordinary water itself, but perhaps something about another substance in its epistemic vicinity. Shiftiness and creativeness are not, then, specific behaviours of abstract objects in intensional contexts. They arise, more generally, when negations of essential properties of any kind of objects occur. Shiftiness and creativeness form two grades of a common phenomenon which consists in change of intentional identity. Shiftiness means that the intended object of our thoughts has been modified; creativeness that our intentional state is not empty and is immediately specified by the predicative content of our act of conceiving. Modal 2-Dimensionalists accept both shiftiness and creativeness, while a Kripkean approach to counteressential conceivability rejects both. A Kripkean would retort to an epistemic agent that she has conceived nothing about water and nothing about anything else in the vicinity either, when she pretends that water could have chemically differed. If she persists in thinking that she actually intends to conceive something about ordinary water, then both the Modal 2-Dimensionalist and the Kripkean, for their different reasons, will

diagnose serious modal self-delusion. We propose a solution in the between.

One can reject the diagnosis of modal illusion and tries to make sense of the persistent, if not fully justified, feeling by the agent that she intends to think something, albeit counteressential, about ordinary water. Two ways in view to make sense of this feeling can be suggested. One, which we leave undevelopped here, is to hold that, while the agent does not bear in mind any possibility concerning ordinary water, she nonetheless seriously entertains an impossibility about this very substance, rather than a possibility about an epistemically close substance. Another interesting elaboration of the agent's epistemic situation is to say that, although ordinary water exemplifies not being H2O in no possible world, it – i.e. ordinary water – possibly encodes this same property. As no ordinary object encodes any property, according to Zalta's neat basic ontological distinction, we'd better rephrase this suggestion in more cautious terms and describe the agent's intuition by saying that, in such a particular conceivability-context, she makes as if ordinary water encode not being H2O or, plainly, that she considers the state of affairs of ordinary water not being H2O *in abstracto*. One can also introduce a term of art and characterize the particular intensional context at stake as ordinary water possibly *quasi-encoding* one of its counteressential properties.

Now, even if we judge useful to adopt a Modal Axiom of Quasi-Encoding, in order to reflect the freedom and creativeness of our counteressential stipulations about ordinary objects, we will not be exposed to systematic shiftiness, as we were with abstract objects. Whereas it is certainly true that quasi-encoded properties always essentially determine some quasi-abstract objects or, more precisely, some states of affairs consisting of *an ordinary object being in a certain counteressential way*, we, obviously, do not lose track of the original ordinary object through such a stipulative act, nor along its iteration. The original object continues to be nominally present in the successive descriptions of the intended states of affairs. Moreover every property quasi-encoded by an ordinary object is a property which does not belong to its essence and, by definition, which is not possessed in every possible situation. These features of quasi-encoding explain why, whereas we mentally strip an ordinary object of its essential properties, this object may remain intentionally self-identical, and how we can feel

epistemically entitled to think that we continue to think and conceive about it what we think and conceive.

Quasi-encoding preserves intentional identity of ordinary objects across sequences of counteressential predication. From an epistemic point of view we do not have to ascribe to the agent any form of radical ignorance of what water essentially is while she engages in such sequences. Two cognitive tracks can be pursued in parallel: one keeping hold of the essential properties of ordinary water and its identity, the other following it across counteressential settings. A typical prejudice of the two aforementionned approaches to conceivability is to postulate too close limitations to an agent's epistemic capacities. We keep the Kripkean notion of rigidity since 'water' continues to designate the same substance in every conceived situation, and the Modal 2-Dimensionalist import in considering that the predicative content or our act of conceiving determines a situation and possibly a new object in this situation.

III. Quasi-Encoding and Hypothetical Stipulation

The notion of quasi-encoding might contribute a solution to the problem of systematic shiftiness met with abstract objects. When we hypothetize about some property possibly encoded by a given abstract object, because we ignore whether this object actually encodes this property, it is expedient, in order to reflect our current epistemic state, not to immediately entail that the intended object essentially possesses the hypothetized property. More precisely, it is useful to be able to express the fact that – although we have individuated, so to say unwittingly, a new abstract object which, in accordance with the Modal Axiom of Encoding, essentially possesses the hypothetized property – our attention has not shifted towards this new abstract object but holds back on the object we had previously in mind. It appears that the way we intentionally proceed with abstract objects reciprocates situations of counteressential conceivability involving ordinary ones. In those latter cases we direct our attention to an object whose essential properties we know and continue to be aware of while we negate one of these properties. Reciprocally, in the case of hypothetical stipulation, we ignore whether an essential property belongs to an intended abstract object. So we individuate a fresh new abstract object of which we ignore whether it is identical or not with our intended object. Again, in the case of ordinary objects negation of an essential property does not make us

lose track of the original object, while in the case of abstract object predication of an essential property does not necessarily imply that we shift our attention to this newly characterized object.

There are intentional states, thus, in which we deliberately engage, directed towards abstract objects whose behaviour does not fully comply with Zalta's Modal Axiom of Encoding. Even if a given abstract object A possibly encodes a certain property F, and then necessarily encodes F, we can also consider the epistemic situation in which we wonder whether A possibly encodes F or not. In this situation, we wish to refrain either from a necessary or essentialist conclusion or from a too hasty identification of A with its hypothetical characterization as encoding F. Such acts of hypothetical stipulation are better explained in terms of our notion of quasi-encoding through which we do not essentially apply F to A. In a similar way as for ordinary objects in counteressential contexts, we give a name to the object that we have in mind and it remains nominally present across sequences of hypothetical stipulations. The difference between the two cases is that while we knew by definition that the property quasi-encoded by the ordinary object was not part of its essence, this fact is precisely what we ignore when an abstract object quasi-encodes a property in contexts of hypothetical stipulation. Ignorance makes us mentally split between two intentional objects as a measure of cautiousness, while knowledge produces the same effect in case of ordinary objects.

Our critical point is that the Modal Axiom of Encoding captures logical features of encoding in relatively uninteresting intentional contexts, or at least in contexts that reflect only partially our actual dealings with abstract objects. When we consider possible encoding, as the antecedent of the Axiom invites to do, the Modal Axiom of Encoding concludes that we have pinpointed an abstract object which is in every situation as it is in this specific possible one. As soon as we have attached a property to an abstract object, it is true that we have defined it essentially. However this might capture a deep truth about the ontological nature of abstract objects, we are often led to consider abstract objects in a less static and more creative way, namely in contexts of discovery or inquiry, that is in contexts where possible encoding is precisely a case in point, still unsolved. In such contexts the Modal Axiom of Encoding must be weakened. However, as this axiom reflects a deeply entrenched intuition about the way abstract objects essentially have their properties, it is preferibly complemented by

other principles describing the ways objects, both concrete and abstract, may hypothetically possess some properties.

Complementation of the Modal Axiom by principles of quasi-encoding is the most conservative way of preserving the basic distinction between the two modes of predication which tell apart abstract from ordinary objects in extensional and most intensional contexts. Quasi-encoding only applies in those contexts where predication either negates or putatively adds an essential property to a given object. As every property of an abstract object is essential to it, those contexts are typical of our creative and speculative relationship with abstract objects. In contexts where essence is negated or hypothetized, modes of predication to ordinary and abstract objects seem to collapse in a single one – quasi encoding – and to share modal behaviour – non necessity of the predicated property. The difference between abstract and ordinary objects in those particular contexts is primarily epistemic: we know the essence of an ordinary object in contexts of counteressential conceivability while we ignore the essence of an abstract object in contexts of hypothetical stipulation.

This finally suggests two far less conservative ways of accounting for the limited application of the Modal Axiom of Encoding in conceivability-contexts. One way is to contend that ordinary and abstract objects differ as far as epistemic differences arise in intentional contexts. Contexts of counteressential conceivability and hypothetical stipulation, under this contention, are paradigmatic, to the extent that a single mode of predication applies to both kinds of objects in these contexts while our knowledge of their identity may differ. A second way of revising the Modal Axiom of Encoding is to loosen up the connections between essence and intentional identity. If we lift the constraint exerted by essence on identity, we can accept the necessary consequent of the Modal Axiom of Encoding without presupposing anything about the identity of the agent's intentional object. This is, to a certain extent, what we have hinted at through our main argument, but we have avoided to vindicate the complete disconnection between essence and identity, by rather postulating, quite natural at our eyes, epistemic capacities to mentally keep track of more than one object at the same time.

References

Parsons, T., 1980. *Nonexistent Objects*, New Haven: Yale University Press.
Yablo, S., 2000, Textbook Kripkeanism and the Open Texture of Concepts, *Pacific Philosophical Quarterly*, 81 (1): 98-122.
Zalta, E. 1988. *Intensional Logic and the Metaphysics of Intentionality*, Cambridge, Mass.: MIT Press
Zalta, E. 1997. The Modal Object Calculus and Its Interpretation. In *Advances in Intensional Logic*, M. De Rijke (ed.), Dordrecht: Kluwer: 249-279.

PETER ALWARD

Is Phenomenal Pain the Primary Intension of 'Pain'?*

David Chalmers, in his recent book *The Conscious Mind*,[1] presents an argument for property dualism, which mobilizes the two-dimensional modal framework introduced by Evans[2] and developed by Davies and Humberstone.[3] This framework provides Chalmers with a powerful tool for handling the most serious objection to conceivability arguments for dualism: the problem of *a posteriori* necessity. But in order to solve the problem of a posteriori necessity in this way, he needs to appropriately imbed his argument within the two-dimensional framework. And to do this he needs to make substantial assumptions linking thought and talk with elements of the framework. My project in this paper is to identify and critically evaluate the assumptions along these lines Chalmers makes in order to facilitate his argument.

A central assumption of Chalmers' argument is that conscious sensations serve as both the "primary intensions" and "secondary intensions" of sensation terms. And what I want to argue is that not only Chalmers has offered no good reason to think this is true, there are grounds to be suspicious of this thesis. This paper consists of four parts. First, I present a simple version of the conceivability argument for dualism and explain the problem posed for it by *a posteriori* necessities. Second, I introduce the two-dimensional modal framework and show how Chalmers attempts to utilize it to rescue the conceivability argument. Third, I engage in an examination of the putative general link between thought and talk on the one hand and primary intensions on the other. And fourth, I argue that the assumptions Chalmers requires to make his argument for dualism go through are untenable. There is no good reason to think that phenomenal pain is the primary intension of 'pain'.

---

[1] Chalmers, D., *The Conscious Mind*, Oxford: Oxford University Press, 1996.
[2] Evans, G., "Reference and Contingency", *The Monist*, 62:161-89, 1979.
[3] Davies, M. K., and I. L. Humberstone, "Two Notions of Necessity", *Philosophical Studies*, 38:1-30, 1980.

The conceivability defense of dualism proceeds roughly as follows: (i) circumstances physically indiscernible from our own but differing in some mental respect are judged to be conceivable; (ii) the possibility of such circumstances is inferred from their conceivability; and (iii) the independence (in some sense) of the aspect of mentality in question from the physical domain is inferred from this possibility. One version of this argument might proceed in terms of "Pain-Zombies". Pain-Zombies are physical duplicates of us whose states of psychological pain occur unaccompanied by phenomenal pain. (I am going to simply assume here that, ordinarily, phenomenal pain is a property of brain states/ events that occupy the functional role of psychological pain). Let '$pain_{ps}$' denote psychological pain and '$pain_{ph}$' denote phenomenal pain. On this version of the conceivability argument, what is of interest are circumstances in which pain-zombies exist, that is, circumstances in the sentence 'There exist physical duplicates of us whose $pain_{ps}$ states lack $pain_{ph}$' is true.[4] And the argument in question invokes such circumstances as follows:

1) The existence of pain-zombies is conceivable.
2) Conceivability is sufficient for metaphysical possibility.
3) The existence of pain-zombies is metaphysically possible.
4) If phenomenal pain is a physical property then the existence of pain-zombies is not metaphysically possible.[5]
C) Phenomenal pain is not a physical property.

The problem of *a posteriori* necessity undermines this argument by establishing the falsity of (2). A judgement concerning identity or supervenience relations between a pair of properties is *a posteriori* just in case the criteria of application of the property terms used to express the judgement —or the corresponding concepts, if you prefer—are not "conceptually linked." That is to say, the criteria for applying the terms in question are not so related that the application of one term either requires or precludes the application of the other. Consider, for example, the judgement that water is H_2O. The term 'water' is (or, perhaps, was)

[4] This sentence can be represented more formally as '$(\exists x)(Dx \ \& \ (\forall y)[(P_{ps}y \ \& \ Syx) \supset \sim P_{ph}y])$' (where 'Syx' abbreviates 'y is a state of x').
[5] This is, of course, because of the supervenience relations required by physicalism.

correctly applied to a certain liquid on the basis of its surface characteristics, whereas 'H_2O' is correctly applied on the basis of the chemical structure of its constituent molecules. Because these criteria are not conceptually linked, the judgement in question is *a posteriori*. Moreover, this fact suffices for the conceivability of circumstances in which the judgement obtains*, as well as those in which its negation obtains*. But some such *a posteriori* judgements are true, and if the terms used in its expression are rigid designators, the judgement will be a metaphysically necessary truth. The judgement that water is H_2O is a case in point. It is metaphysically necessary that water is H_2O, despite the fact that circumstances in which water is not H_2O are conceivable. As a result, the metaphysical possibility of the existence of pain-zombies cannot be inferred straight away from its conceivability.

II: Two-Dimensional Modal Logic

Chalmers' attempts to rescue the conceivability argument form this problem by mobilizing the framework of two-dimensional modal logic. Central to this framework is the notion of an intension. The intension of a semantically evaluable item is a function from worlds (and, perhaps, other indices) to appropriate extensions at those worlds. So, for example, the intension of a singular referring expression is a function from worlds to individuals, and the intension of an n-place predicate is a function from worlds to sets of n-tuples. According to the two-dimensional modal framework Chalmers deploys, expressions (and other semantically evaluable items) have two intensions, not one: a primary intension and a secondary intension. This distinction maps reasonable well onto Kripke's distinction between a theory of referring and a theory of meaning, as well as Kaplan's character/ content distinction.[6] The primary intension of an expression plays the following role: for any *context* in which the expression is (or could be) used, it determines the (actual) extension of the expression. So, for example, the primary intension of 'I' is a function

[6] Kripke, S., *Naming and Necessity*, Cambridge, Mass.: Harvard University Press, 1980; Kaplan, D., "Demonstratives", in *Themes from Kaplan*, J. Almog, J. Perry, and H. Wettstein, eds., New York: Oxford university Press, 1989. In more recent work, Chalmers severs the link between primary intension and linguistic meaning in favour of a more epistemic conception of the former notion. See, e.g., "Does Conceivability Entail Possibility?" in *Imagination, Conceivability, and Possibility*, T. Gendler & J. Hawthorne, eds., Oxford University Press, forthcoming.

whose value in a context is the speaker in that context. And the primary intension of 'water' is the function whose value in a context is roughly the dominant clear, drinkable liquid in the oceans and lakes (or "watery stuff") in the vicinity. This notion differs from that of character in the following respect: non-actual contexts are included in the argument-range of an expression's primary intension, but not its character.

The secondary intension of an expression is its *content*, in Kaplan's sense. Unlike its primary intension, the secondary intension of an expression can vary with the context of utterance. It is, perhaps, helpful to think of the secondary intension of a *sentence* as the proposition expressed by the sentence. A proposition is (or determines) a function from worlds to truth-values, and exactly which proposition a sentence expresses varies with the context of utterance.[7] More generally, the secondary intension of an expression in a (actual) context of utterance will depend on such things as the value of the primary intension in said context and whether the expression is rigid or non-rigid in Kripke's sense. So, for example, given that 'I' is a rigid designator, the secondary intension of 'I' in a context in which Mary is the speaker is the function whose value at a world (in which Mary exists) is Mary. And, in a context in which H_2O is the watery stuff in the vicinity, the secondary intension of 'water' is the function whose value at a world is H_2O. (Of course, in Twin-Earth contexts in which a different substance is the watery stuff in the vicinity, 'water' has a different secondary intension).[8]

Slightly more formally, both the primary and secondary intension of an expression can be defined in terms of a function—F(w1, w2)—from pairs of worlds to an appropriate extension. The first member of the pair corresponds to the context of utterance and the second to the circumstances of evaluation. (Strictly speaking, it is a function from a pair consisting of a world + other contextual features, and a world). The primary extension—$f_1(x)$—can be defined as follows:

$f_1(x) = F(x, x)$

while the secondary intension—$f_2(x)$—can be defined as

$f_2(x) = F(a, x)$,

---

[7] A terminological note: the proposition expressed by a sentence in some context counts as the (or a) secondary intension of the expression only if the context in question is an actual world context.

[8] Putnam, H., "The Meaning of "Meaning"", in *Mind, Language, and Knowledge*, K. Gunderson, ed., Minneapolis: University of Minnesota Press, 1975.

where ‘a’ denotes the actual world. Characterizing things in this way helps to clarify the distinction between *deep* and *superficial* necessity and possibility that Chalmers (borrowing from Evans, and Davies and Humberstone) makes so much of. A sentence is deeply necessary just in case the value of the primary intension is T in (every context in) every world,

$(\forall x)(f_1(x)\ [= F(x, x)] = T)$,

and a sentence is deeply possible just in case the value of the primary intension is T in at least one world,

$(\exists x)(f_1(x) = T)$.

So, for example, ‘water is watery stuff’ is necessary in this “deep” sense, while ‘water is not H_2O’ is deeply possible. And a sentence is superficially necessary just in case the value of the secondary intension is T in every world,

$(\forall x)\ (f_2(x)\ [=F(a, x)] = T)$,

and a sentence is superficially possible just in case the value of the secondary intension is T in at least one world,

$(\exists x)(f_2(x) = T)$.

So, in a context in which H_2O is the watery stuff in the vicinity, ‘water is H_2O’ would be superficially necessary and ‘water is not watery’ would be superficially possible.

Underpinning Chalmers’ use of this formalism to resuscitate the conceivability argument are the following three assumptions:

(a) The primary intension of a property term is (or is determined by) its criterion of application (or the corresponding concept).

(b) The secondary intension of a property term is the property denoted by the term.

(c) The primary and secondary intensions of phenomenal property terms coincide.

These assumptions enable Chalmers to argue from the conceivability of the existence of pain-zombies to its metaphysical possibility as follows:

i) Circumstances in which ‘There exist pain-zombies’ is true are conceivable.

ii) ‘There exist pain-zombies’ is deeply possible.[9] [from (a)]

---

[9] It is worth noting that Chalmers casts things here as the failure of consciousness to be *reductively explained* by physical phenomena. He justifies this claim as follows: “…for a concept of a natural phenomenon, it is the primary intension that captures what needs explaining. If someone says, “Explain water”, long before we know that

iii) 'There exist pain-zombies' is superficially possible. [from (c)]
iv) Circumstances in which 'There exist pain-zombies' is true are metaphysically possible. [from (b)]

Note: one can move from (i) and (iv) above to (1) and (3) in the original argument and *vice versa* using the relevant instances of the T-schema. It is also worth noting that Chalmers does not rest his case entirely on assumption (c). In addition, he says, "…whether or not the primary and secondary intensions coincide, the primary intension determines a perfectly good property of objects in possible worlds. … If we can show that there are possible worlds physically identical to ours but in which the property introduced by the primary intension is lacking, dualism will follow."[10] I will address this line of argument, along with the central line, below.

III: Primary Intensions Revisited

Before tackling the issue of the primary intensions of sensation terms in particular, it is worth pausing for a moment to reflect in general upon assumption (a): the link Chalmers posits between thought and talk on the one hand and primary intensions on the other. There are three interrelated questions I wish to take up in this regard. First, what exactly are the bearers of primary intensions? Second, what is the nature of the relation between the bearers in question and their primary intensions, that is, what is it that determines exactly what the primary intension of a given bearer is? And third, does this relation in general yield a determinate primary intension for a given bearer?

There are (at least) two bearers of primary intensions at issue: concepts and linguistic expressions.[11] Chalmers' focus is on the former. He says that concepts "determine" doubly indexed functions from pairs of worlds to extensions of the requisite sort and, hence, determine their primary intensions.[12] Chalmers does not explicitly discuss the relation between the intensions of expressions and concepts, but the most obvious approach would be to suppose that expressions get their primary intensions

---

water is in fact H_20, what they are asking for is more or less an explanation of the clear, drinkable liquid in their environment." (Chalmers, 1996, p. 57).

[10] Chalmers (1996), p. 132.

[11] Presumably both public language expressions as well as expressions in a private "language of thought" could have primary intensions.

[12] Chalmers (1996), p. 61.

derivatively via their association with concepts. For simplicity, I will usually just assume this to be the case, but nothing I say will depend on it.

A first suggestion concerning the relation between primary intensions and their bearers is to take it to be some kind of meaning relation.[13] We might, for example, take the primary intension of an expression to be determined by the linguistic rules governing its use—rules which govern the interpretation of the expression relative to the contexts in which it is uttered.[14] It is worth noting that insofar as we think of primary intensions in this way, they are first and foremost associated with expression types rather than tokens.

Now on this picture, at least certain expressions will have determinate primary intensions. The linguistic rules governing the use of indexicals, such as 'I' and 'tomorrow', for example, are robust enough to determine their referents in actual and non-actual contexts.[15] But in the case of other expressions things are less clear. For some terms, proper names and natural kind terms, for example, the extension in given context arguably depends, in part, on causal relations between the uttered token and features of the environment. And there are good grounds for thinking that as a result they lack determinate extensions in non-actual contexts. First, there are serious difficulties for any account of trans-world identity of words. This is especially troublesome if we cannot avail ourselves of some notion of the linguistic meaning of the word in such an account. And since primary intension presupposes trans-world word identity in the cases currently at issue, we cannot so avail ourselves. Second, even if an adequate account of trans-world word identity could be developed, the fact remains that no word occurs in every context of utterance in every possible world. This raises the possibility that there will be innumerable centred worlds for which the primary intensions of proper names and their ilk are undefined.[16]

More recently, Chalmers has suggested that the relation between primary intensions and their bearers is epistemological rather than some

---

[13] This is in the spirit of Chalmers' original discussion (1996), pp. 59-65.

[14] We might even go so far as to take concepts to be the meanings of linguistic expressions, on this picture.

[15] For a nice account of such rules, see Nunberg, "Indexicality and Deixis", *Linguistics and Philosophy*, 16:1-43, 1993.

[16] Stalnaker suggests that the solution to this problem is to determine what the extension of the term would have been had it occurred in the context in question. (Stalnaker, R. "Semantics for Belief", *Philosophical Topics*, XV:177-90, 1987). But it is far from clear that such counterfactual questions have determinate answers.

kind of meaning relation.[17] The idea is roughly that the primary intension of an expression is determined by the speaker's "mode of presentation" of the extension of the expression.[18] Given that different speakers—and individual speakers at different times—have distinct ways of conceiving of the objects of thought and talk, the primary intension of an expression varies with the context in which it is uttered. Because the link between primary intension and linguistic meaning has been severed, it is expression tokens and not types that are the bearers of primary intensions on this picture.

It is far from clear, however, that the epistemic account of relationship between primary intensions and their bearers avoids the indeterminacy that infected the linguistic account. The reason is that typically the descriptive/inferential aspects of one's modes of presentation—or ways of conceiving—of the objects of thought and reference do not by themselves determine these objects. The speaker/thinker's causal, or more generally, non-conceptual, relations to things in the world often play an essential role in the determination of the objects of thought and reference. This is clearest in the case of singular thought, but arguably is a more general phenomenon.[19] But as a result, for reasons similar to those discussed above, many expression tokens will lack determinate primary intensions. The problem is that there are good grounds for thinking that they will lack determinate extensions in non-actual (and even some actual) contexts. And the reason is that thinker/speaker's simply do not exist in every context in every possible world. As a result, the extension of an expression in some such context will depend on the truth of counterfactuals to effect that were the speaker to be properly situated in said context, s/he would stand in such-and-such relations to such-and-such things. And such counterfactuals are typically false (although the corresponding "might" counterfactuals presumably are often true).

I am not denying here that expression types have linguistic meanings or that speakers, on occasions of use, have modes of presentation or ways of conceiving of the extensions of these expressions. What I want to point out is that this by itself is no guarantee that expressions—tokens or types—have determinate primary intensions. Moreover, I do not want to claim that

---

[17] See Chalmer's, forthcoming. It is worth noting that this idea is also implicit in his earlier work wherein he claims that deeply necessary statements are knowable *a priori*. Chalmers (1996), p. 64.

[18] Chalmer's used this idiom in correspondence.

[19] See, e.g., Putnam, 1975.

I have shown that no expressions can be assigned determinate primary intensions. My point is simply that we should be suspicious of the notion, especially when it is taken to be a general and elucidating feature of language and thought.

IV: Problems in 2-D Paradise

My focus in this section is going to be on assumption (c)—the thesis that the primary and secondary intensions of phenomenal property terms coincide. My strategy here will be two fold. First, I am going to argue that Chalmers needs assumption (c) in order to rescue the conceivability argument from the problem of *a posteriori* necessities. And second, I am going to argue that there is no good reason to believe that (c) is true and at least some reason to be suspicious. But an important preliminary matter that needs to be addressed is whether or not 'pain_{ph}' is rigid in Kripke's sense. And what I want to suggest is that if we take the extension of this predicate to consist of Davidsonian events—spatio-temporal particulars—then Chalmers ought to suppose that it is non-rigid.

Suppose that 'pain_{ph}' is a rigid expression. One way of capturing this idea would be by analyzing 'x bears pain_{ph}' as 'x is one of *dthose* (pain_{ph} things)', where '*dthose* (pain_{ph} things)' is a version of Kaplan's *dthat* operator.[20] On this analysis, the secondary intension of 'pain_{ph}' is a function from worlds to extensions such that an object, **o**, at a world, **w**, falls within the extension of 'pain_{ph}' at **w** just in case either (i) **o** is a member of the actual extension of 'pain_{ph}' or (ii) **o** is of the same kind as the members of the actual extension. But if the actual extension of 'pain_{ph}' consists of Davidsonian events, these events will have functional and other physical properties (such as brain properties) as well. And insofar as the members of the extension form a kind at all, it will presumably be a functional or physical kind. Now the secondary intension of 'pain_{ph}' should be identical (or necessarily equivalent) to the property of phenomenal pain; otherwise the sentence under consideration does not assert the existence of pain-zombies. As a result, unless phenomenal pain supervenes on or is identical to the aforementioned functional or physical properties, the secondary intension under consideration just is not equivalent to phenomenal pain. If Chalmers wants to show that phenomenal pain is a non-physical property, he will have to assume that 'pain_{ph}' is non-rigid.

---

[20] Kaplan, David, "Dthat", in *Syntax and Semantics*, P. Cole, ed., New York: Academic Press, 1979.

Now suppose that the primary and secondary intensions of '$pain_{ph}$' are distinct. There are two relevant possibilities: (i) phenomenal pain is the primary intension of '$pain_{ph}$'; and (ii) phenomenal pain is the secondary intension of '$pain_{ph}$'. And neither possibility is adequate for Chalmers' purposes. If phenomenal pain is the primary intension of '$pain_{ph}$', then its secondary intension must be a distinct property. But if this is the case, then our sentence—'There exists a physical duplicate of us whose $pain_{ps}$ states lack $pain_{ph}$'—does not assert the existence of pain-zombies. And if phenomenal pain is the secondary intension of '$pain_{ph}$', then the deep possibility of the aforementioned sentence corresponds not to the conceivability of pain-zombies, but to the conceivability of physical duplicates of us whose states of psychological pain lack whatever property (or properties) we use to correctly apply the term '$pain_{ph}$', where this is distinct from phenomenal pain. And while this might establish the falsity of materialism, it could do so only on the basis of the irreducibility of perspectival properties, or something of this ilk, and not on the irreducibility of phenomenal properties. Moreover, once the link between such perspectival facts and phenomenal facts has been severed, there seems to be little objection to rescuing materialism by treating the former as a species of run of the mill indexical fact. At least one would be immune from the charge of failing to take consciousness seriously in so doing. Chalmers does claim that "…if someone insists that the primary and secondary intensions differ, however, the argument still goes through."[21] But if the considerations raised here are correct, he is just wrong on this point.

So it seems that in order for his argument to succeed, Chalmers must assume that the primary and secondary intensions of '$pain_{ph}$' coincide (and are both the property of phenomenal pain). The question that remains is whether or not he is entitled to this assumptions. Now I simply take it for granted that it is reasonably plausible to suppose that phenomenal pain serves as the secondary intension of '$pain_{ph}$'. What I want to argue is that Chalmers has offered no good reason for thinking that the primary intension of '$pain_{ph}$' is the very same property. One consideration Chalmers raises in this regard is to suppose that in the case of non-rigid expressions, the primary and secondary intensions of the expression coincide:

> "[with] "descriptive" expressions such as "doctor," "square," and "watery stuff," rigid designation plays no special role: they apply to

[21] See Chalmers (1996), pp. 133-134.

> counterfactual worlds independently of how the actual world turns out. In these case, the secondary intension is a simple copy of the primary intension (except for differences due to centering)."[22]

So, on Chalmers' view, all he needs to do is to show (i) that the secondary intensions of mentalistic expressions such as '$pain_{ph}$' are phenomenal properties and (ii) that these expressions are non-rigid, in order to show that the very same phenomenal properties serve as their primary intensions.[23]

The trouble with this suggestion is that it is not, in general, true that the primary and secondary intensions of non-rigid expressions coincide. Consider the following example. Suppose Fred is asked, "What does Mary do for a living?" And suppose Fred replies, "Mary is one of those" while gesturing towards Jane, a doctor. In this context, the demonstrative 'those' is a non-rigid expression. After all, the truth-value of (the proposition expressed, in the context under consideration, by) 'Mary is one of those' in possible circumstances of evaluation depends not on whether or not Mary does what Jane does in those circumstances, but on whether or not Mary is a doctor in those circumstances. And the primary intension of 'those' (or 'one of those') is not the property of being a doctor. It is the function from contexts of utterance to the class of objects bearing the intended property of the demonstrated individual in the context at issue. More generally, if an expression is indexical, then its primary and secondary intensions simply cannot coincide. The secondary intension of an indexical expression will vary from context to context. And, so, even if we ignore the "differences due to centering"—that is, the fact that primary intensions are functions whose arguments are not worlds, but ordered n-tuples of contextual features—two (or more) distinct secondary intensions cannot both be copies of a single primary intension.

A rejoinder that could be made on Chalmers' behalf is that the mentalistic expressions under consideration, such as '$pain_{ph}$' are not indexical; that is, they have the same secondary intensions in at least all actual contexts of utterance. And, hence, he needs only to establish that the primary and secondary intensions of non-rigid, non-indexical expressions coincide. But even this more modest claim is untenable. There could, after all, be an expression which has the same secondary intension in all actual contexts of utterance but whose secondary intension differs from its

---

[22] Chalmers (1996), p. 62.

[23] And Chalmers engages in exactly this sort of reasoning in his discussion of *a posteriori* necessity (p. 133).

"actual" intension in at least some non-actual contexts. For example, suppose the primary intension of an expression 'D' is given by 'the most respected profession at t in a', where 't' denotes a specific time and 'a' is an indexical whose value in a context of utterance is the world in which the utterance occurs. And suppose that in the actual world at t, doctors are the most respected professionals. In all actual world contexts, the secondary intension of 'D' would be the property of being a doctor (and its actual extension would be the class of doctors). But in a world, w, in which the most respected professionals at t were lawyers, or, perish the thought, philosophers, the secondary intension of 'D' when used in contexts of w would be the property of being a lawyer, or a philosopher.

Chalmers also offers the following reason for thinking the primary and secondary intensions of sensation terms coincide:

> "What it takes for a state to be a conscious experience in the actual world is for it to have a phenomenal feel, and what it takes for something to be a conscious experience in a counterfactual world is for it to have a phenomenal feel. The difference between the primary and secondary intensions for the concept of water reflects the fact that there could be something that looks and feels like water in some counterfactual world that in fact is not water, but merely watery stuff. But if something feels like a conscious experience, even in some counterfactual world, it *is* a conscious experience."[24]

It is far from clear, however, what if anything this argument shows. It is reminiscent of Kripke's argument for the rigidity of sensation terms such as 'pain_{ph}', but such considerations hardly seem to the point here. [25] The most charitable interpretation of this passage that I can come up with is that Chalmers is trying to establish that, in contrast to terms like 'water', the secondary intension of a sensation term—that is, the property denoted by it—is just the property of having a certain phenomenal feel. And he is simply presupposing that the primary intension of the term—its criterion of application—is the having of this very feel. Now I have no complaint with Chalmers' claim that the secondary intension of 'pain_{ph}' is a certain phenomenal feel; in fact, I would have assumed this to be obvious and (relatively) uncontentious. The trouble is that the presupposition I have

[24] Chalmers (1996), p. 133.

[25] Kripke (1980), pp. 146-7. Whether or not Kripke's argument actually does show sensation terms are rigid is, in my view, fairly contentious, especially if, as above, we take the bearers of phenomenal properties to be Davidsonian events.

attributed to him is contentious and cannot be simply taken for granted. This is, after all, exactly what is at issue.

Finally, there is some reason to be suspicious of the hypothesis that the primary and secondary intensions of '$pain_{ph}$' coincide. First, let's suppose again that the secondary intension is a certain phenomenal property.[26] Insofar as the primary intension of '$pain_{ph}$' corresponds to criterion of application of the term, this very same phenomenal property could at best serve as its primary intension only in the case of first person '$pain_{ph}$' ascriptions (and, perhaps, only present tense 1st person ascriptions). The reason for this is that most of us, at least, are rather poorly placed to make '$pain_{ph}$' ascriptions to others on the basis of our detection of the phenomenal properties of their internal states. If the criterion of application of '$pain_{ph}$' were the detection of the requisite phenomenal feel, it would never be appropriate to apply the term to other people. In the case of third person attributions of phenomenal properties at least, the primary and secondary intensions of the corresponding terms simply will not coincide. And given that the attributions at issue in the version of the conceivability argument we have been considering are third person attributions—to pain-zombies—Chalmers defense of said argument is inadequate.

V: Conclusion

Chalmers' argument for dualism has always seemed to me to be something of a conjurer's trick. The problem of *a posteriori* necessity constrains inferences from conceivability to possibility. Chalmers simply shunts such worries aside, in the first order, by focusing on primary intensions and deep possibility. But then he declares that the primary and secondary intensions of sensation terms coincide; and when the smoke clears, dualism emerges. All conjurers, however, need a bag of tricks: steal their bags and they cannot work their magic. And in Chalmers' bag we find his two-dimensional modal framework. Consider this paper an attempt to snatch it from him.

---

[26] Presumably a number of distinct phenomenal properties, even relative to a single person, count as $pain_{ph}$. Moreover, it is worth noting that presumably we learned to apply the term '$pain_{ph}$' to the property (or properties) in question in virtue of the causal connections between the events which instantiate the property and observable conditions in the world, such as tissue damage.

ABSTRACT

David Chalmers, in his recent book *The Conscious Mind*, defends a conceivability argument for property dualism. In order to avoid the difficulties for such arguments posed by a posteriori necessities, he invokes a two-dimensional modal framework. But in order to do this, he needs to make substantial assumptions linking thought and talk with elements of the framework. In particular, he needs to assume that phenomenal qualities serve as the primary intensions of our sensation terms. In this paper, I argue that this assumption cannot be sustained.

TIMOTHY J. NULTY

The Fourth Option: Avoiding Sosa's Trilemma

(0) Introduction

Ernest Sosa's "Putnam's Pragmatic Realism," is meant not only as a reply to Putnam, but much more broadly as a summary of the available metaphysical options to the question: "what exists?" Sosa claims that "by extending Putnam's reasoning, we reach a set of options in contemporary ontology that presents us with a rather troubling tri-lemma" (1993, 624), namely, the choice among eliminativism, absolutism, and conceptual relativism. Sosa argues each option has "disastrous" consequences, and further that there are no other options currently available. In this essay, I don't dispute the difficulties Sosa attributes to each option since I believe he's correct. What I will argue is that Sosa is overly pessimistic with limited number of options he uses to characterize contemporary metaphysics. There is in fact at least one other tenable position that can meet the difficulties collectively confronting the original three positions.

Part of what I find surprising about Sosa's claim is that what I will call the 'Fourth Option' can be found in both analytic literature, as well as contemporary continental philosophy. I'm assuming the Fourth Option is not a single theory, but instead represents a family of theories as radically different as Ruth Millikan's historical/functional account of kinds and Martin Heidegger's hermeneutic phenomenology of ready-to-hand entities. I'll discuss each of these versions of the Fourth Option in this paper.

(1) Sosa's Troubling Triad

Sosa asks us to consider the existence of a snowball. The existence of a snowball requires a time t at which it exists, the location l where it exists, and some quantity of snow (matter) in the shape (form) of a ball that is distinct from other snow. For the snowball to continue to exist for some interval I of time requires that there are corresponding sequences of snow Q1, Q2, …, for each division of I into subintervals I1, I2, …. Sosa claims to have given us the criteria for the existence and perdurance for snowballs.

An entity of any sort "exists if and only if its criteria of existence are satisfied at t, and perdures through I if and only if its criteria of perdurance are satisfied relative to I" (1993, 619). Entities perdure through time by having successive links that satisfy the existence criteria relative to some interval. What Sosa has in mind by "criteria of existence" is that an object is constituted by the combination of matter and form (1993, 620). Criteria of existence are intrinsic properties of objects.

Now consider our ordinary concept of a snowball in relation to the concept of snowdiscalls, "defined as an entity constituted by a piece of snow as matter and as form any shape between being round and being disc-shaped" (1993, 620). Sosa's criteria for being a snowdiscall are inclusive, meaning that every snowball is also a snowdiscall. Not every snowdiscall is a snowball however since not all snowdiscalls are round. Furthermore, snowballs are distinct entities from snowdiscalls since flattening a snowball destroys its requisite shape, but not its matter as a portion of snow. So, destroying a snowball does not destroy the portion of snow, and if the remaining shape still meets the criteria of existence for a snowdiscall, then snowdiscalls are certainly distinct from snowballs.

Once we agree to the previous criteria we are faced with the "explosion of reality" problem. Since there are infinitely many gradations or shapes between roundness and flatness, there are infinitely many entities with distinct criteria of existence. If we think G1 is slightly less than round and more flattened than a snowball, and G2 is even more flattened, and G3, G4, G5, and so on, all represent the least possible variation from the previous stage's roundness, we can destroy G1 through G5 by flattening the portion of snow to extent X but still leave G6, G7, and so on. What Sosa believes this shows is that there are an infinite number of distinct entities (snowdiscalls) within a snowball. They are distinct entities since they all have differing points at which they cease to exist. In this example, all the entities require the same matter (snow) but their forms vary. Sosa concludes, "whenever a piece of snow constitutes a snowball, therefore, it constitutes infinitely many entities all sharing its place with it" (1993, 620). Sosa contends there are currently three disastrous solutions: conceptual relativism, absolutism, and eliminativism.

The conceptual relativist's solution to the oddity of positing an infinite number of snowdiscalls is to make existence itself relative to some conceptual scheme. The move here is to deny that constituted supervenient entities of our ordinary world do not just objectively supervene on their requisite matters and forms "with absolute independence from the catego-

ries recognized by any person or group" (1993, 620). Our conceptual scheme does not afford the shape of snowdiscall sufficient status for objects that have this shape, with snow as their matter, to be separately existing entities. Conceptual relativism prevents the explosion of reality, but the price is costly.

The first difficulty is explaining the existence of the scheme itself, as well as the framers and users of the scheme; do they exist relative to that or some other conceptual scheme? This leads to a vicious circle. The circle is sidestepped by distinguishing between existence *relative* to a scheme from existence *in virtue of* a scheme. But this leads to a further difficulty. If there are entities that exist not in virtue of our present conceptual scheme but are merely unrecognized in our scheme, what are the criteria for their existence? If the answer is the in-itself criteria of existence, that is, an answer solely in terms of intrinsic matter and form, we are confronted with the explosion of reality. We also need an explanation of why our scheme doesn't recognize entities that already exist. The most significant problem, according to Sosa, is that there is no satisfactory account of how entities we have yet to discover from the past, present, or in the future exist prior to our recognition of them in our conceptual scheme.

We could reject conceptual relativism and simply admit the existence of an infinite number of snowdiscalls all existing in intimate proximity to each existing snowball. To admit there are an infinite number of entities all satisfying absolutely independent criteria of existence is to accept absolutism. This option is strongly counter-intuitive and any proponent of such a view is burdened to explain why we so narrowly focus on the limited number of objects we typically attend to. There is an infinite number of objects in the very same place as the objects we currently recognize; why do we recognize such a small percentage of them and why this set of objects as opposed to some other? The burden here for the absolutist is to explain away our intuition that there aren't an infinite number of entities in the very same place by explaining why we only acknowledge some of them.

The third and last option is eliminativism. This position denies full ontological status to most of our everyday world. The terms of our ordinary speech such as: 'chair,' 'snowball,' 'tree,' and so on are viewed as convenient abbreviations - not as "seriously representing reality and its contents" (1993, 622). There are two main problems with this position pointed out by Sosa. First, it is strongly counter-intuitive that the objects that we are most intimately familiar with and that nearly everyone believes exist don't really exist. Second, assuming our ordinary terms are merely

abbreviations, we are left wanting a coherent account of what these terms are abbreviations for, and to whom they are convenient for what ends.

(2) Dependent beings and belief independence

In this section I want to provide brief accounts of metaphysical theories that I contend are representative of the Fourth Option. I'll begin by presenting Ruth Millikan's discussion of "real kinds" and substance concept acquisition. Following an explication of Millikan, we will leave analytic philosophy and examine Heidegger's hermeneutic phenomenology to show that it too falls under the heading of a Fourth Option. In section three, I'll explain why these approaches meet the shortcomings of Sosa's options and why they should be considered a distinct type of option.

Millikan's account of how human beings acquire empirical concepts – what she calls 'substance concepts' - provides a realist ontology that posits various real kinds that are more than just occurrent swarms of microparticles.[1] These real kinds are in many cases dependent on human practices, but are decidedly not constituted by our beliefs. Millikan argues that substances are those things that allow non-accidental inductive inferences. These substances or real kinds are subjects over which predicates are projectable. Real kinds are not merely clusters of properties, but instead require a real ground that explains that presence of similar sets of properties across members of the same kind. Natural kinds, the stuffs typically referred to in the assertions of physics and chemistry, involve 'ahistorical' or 'eternal' kinds. The members of an eternal kind belong to that kind **not** in virtue of their historical relation to other members of the same kind; there is some other form of causal interaction that makes each member belong to a kind. The historical relation is primarily a causal one in which previous instances of members of a kind have a causal role in the existence of new members of the same kind. Two pieces of gold for example do not belong to the same kind in virtue of their historical relations to other pieces of gold; there are other causal mechanisms that explain why all pieces of gold exhibit similar properties.

Millikan does not limit her ontology to eternal kinds however; she argues that historical kinds are equally real. The similarity between members of an historical kind such as biological species is not accidental; the similarity between members of a species arises out of their historical rela-

[1] See chapters 2 and 3 of Millikan's Clear and Confused Ideas for a thorough development of her ontology.

tionship to other members of the species (2000, 20). Millikan's account of historical kinds can be extended, most interestingly from the perspective of this paper, to explain the non-accidental similarities of cultural artifacts.

There are three sorts of causal historical relations that explain why members of an historical kind share similar properties:

(1) Some form of copying or reproduction has occurred.
(2) Various members have been produced by, or in response to, the very same ongoing historical environment.
(3) Some "function" is served by members of a kind such that this function raises the probability that the kind's cause will be reproduced (2000, 20).

Millikan claims chairs and even 1969 Plymouth Valiants satisfy all three types of causal relations previously mentioned and thus belong to rough historical kinds respectively. Even entities such as schoolteachers, doctors, and parents form historical kinds since the similarity shared by members of these kinds is the result of training (a form of copying or reproduction), or a result of custom, or even social pressures to conform (each of the latter is also a form of copying). Schoolteachers, doctors, and parents all have certain properties in common, such as various behaviors, because these behaviors are the result of some form of copying.

Millikan offers us a theory explaining the ontological status of species, chairs, teachers, and social groups that is causally based in historical relations. The beliefs of members of a culture do not determine the ontology of their living reality. In fact, by Millikan's account, the existence of such kinds is a necessary prerequisite for our having such concepts as chair, teacher, and so on. Millikan argues against the traditional view of what determines a concept's extension – a view she calls "conceptionism:"

> Conceptionism is the view that the extension of a concept or term is determined by some aspect of the speaker's conception of its extension, that is, by some method that the thinker has of identifying it. I am fully in charge of the extensions of my concepts. (2000, 42)

One of the main differences between Millikan's view and what she sees as the traditional account is in making the locus of an extension's determination in the ability to identify, rather than in the act of classifying.

Classification is first of all an act of the individual – what the individual has in mind determines the reference of a class term. Secondly, clas-

sification presupposes that the individual already can identify what it is he wants to classify. Millikan states the organism's capacities to re-identify "are not the purposes of individuals, but the biological functions – the unconscious purposes – of their inborn concept-tuning mechanism that connects substance concepts with certain extensions" (2000, 49). In order for organisms to have concepts they must have the ability to identify real kinds – kinds not determined by the psychological act of classification, since such acts require the prior ability to re-identify kinds.

Another version of what I've referred to as a Fourth Option is Martin Heidegger's account of equipmental beings. Where Millikan offers us a biologically based and modeled theory of proper functions and historical causal relations, Heidegger provides a phenomenological analysis of beings. Heidegger draws the distinction between nature and worldliness; the former category corresponds to the entities posited by physics and chemistry, while the latter category contains things that comprise much of our daily involvements in the world. Like Millikan, Heidegger rejects the traditional role of the subject in the determination of particular beings. Millikan replaces the view of a conceptualizing subject setting the parameters of a term's extension by making the re-identification of substances a biological function. Heidegger likewise diverges from the tradition via his treatment of Dasein, or being-in-the-world. The important question is: how does Heidegger explain the particular being of objects such as chairs, hammers, pens, and other instances of cultural artifacts?

Prior to the polarity of subject and object, Heidegger argues that our relationship to the world is characterized by a special kind of intimacy; this intimacy is *being-in-the-world*. We are not first detached subjects imposing meaning and significance on a purely objective world. Instead, we achieve the subjective perspective already in the midst of coping in a public space with other people and things. The subjective perspective is the point of self-awareness characterized by inner dialogue; it was taken to be foundational by Descartes. The various beings of our everyday world are predetermined prior to our ability to detach ourselves and ask theoretical questions about their existence. In fact, in order to ask theoretical questions about objects in our daily lives assumes we have already recognized these objects as autonomous things – autonomous in the sense that we relate to objects as kinds of things independently of our beliefs about them. We have a pre-theoretical understanding of objects such as chairs, sidewalks, toys, house, and so on through our active use and skillful manipulation of these entities. Moreover, we don't first discover ourselves through some

Cartesian meditation, but by continually realizing our abilities to interact with our environment. Hence, being-in-the-world or Dasein is not to be understood as the unification of two distinct elements – subject and object – but as a phenomenologically unified process of coping that gives rise to the possibility of such a duality.

This phenomenological unity is not merely a developmental stage that is eventually surpassed for more advanced modes of understanding and interpretation. A good example of this phenomenon would be learning how to ride a bicycle or play a musical instrument. One may initially read books and articles in an attempt to understand a particular activity and the objects involved in the performance of that activity, but the highest or most accomplished form of understanding of the activity and the object is mastery of use. Trumpets and bicycles are most properly understood as objects of their respective kinds when they are effectively used. Regarding the being of these types of "worlded" objects, Heidegger states:

> This being is not the object of a theoretical "world"- cognition; it is what is used, produced, and so on. As a being thus encountered it comes pre-thematically into view for a "knowing" … Thus, this phenomenological interpretation is not a cognition of existent qualities of beings; but, rather, a determination of the structure of their being… Phenomenologically pre-thematic beings, what is used and produced, becomes accessible when we put ourselves in the place of taking care of things in the world. (BT, 63)

A bit of explication is necessary at this point regarding the previous passage. The beings of the everyday world are not the products or objects of a subject imposing a theoretical structure or conceptual scheme (a theoretical "world" cognition). The being of these objects is understood in its use or function; through socialization into specific uses for tools, furniture, and the like, we not only discover the kinds of objects for what they are, we participate in an ongoing determination of the structure of their being; that is, our activities are a necessary part of the particular type of equipmentality each piece of equipment has. Moreover, what we are able to "care" about is determined by our biological needs and abilities, as well as various social roles that we are thrown into.[2]

---

[2] "Thrownness" plays an important role in Heidegger's claim that worldly objects are not subjective projections. All individual Dasein are thrown into a context; that is, by the time we are self-aware we have been using or coping with chairs, spoons, mama, etc. Hence, as subjects we can discover things about the world because the everyday

Heidegger argues that the being of everyday objects is not subjectively determined. One of Heidegger's main arguments is that for everyday beings to be "subjectively interpreted" would require two things: (1) an autonomous subject standing apart from a purely objective world and (2) an "objectively present world-stuff" (BT, 67) that subjects could then interpret. Heidegger denies that either condition obtains. No subject has a non-historical and non-contextual perspective on the world; the world is presupposed in the achievement of subjectivity. Descartes could never have thought he was if he hadn't been a language user in a public world with other language users.

Heidegger does not deny that what he calls "nature" exists in-itself independent of human activity and understanding. However, our access to this mode of being is secondary. "To expose what is merely objectively present, cognition must first penetrate beyond things at hand being taken care of" (BT, 67). Because we are always engaged in using and producing objects to serve our activities, a failure of such objects is inevitable. Equipment tends to break down or wear out. These failures force us to recognize that there are features of nature that affect the efficacy of our tools or even the health of our bodies. Thus, Heidegger posits two modes of being: the in-itself existence of nature and the objects characterized by "handiness." Although the latter do not exist in the same way as natural entities, they are not simply subjective projections as we have seen.

(3) Why Millikan and Heidegger Offer a Fourth Option

To see why Millikan offers a distinct option, we need to ask if snowballs are a real kind on Millikan's account and, if so, what type of kind are they – eternal or historical? Real kinds are kinds that support non-accidental inductive inferences and it seems we can make non-accidental inductive claims about snowballs. Now we need to decide what grounds these inferences; that is, what explains why snowballs share certain properties in common? The answer to this question will show that snowballs are historical kinds that have human activities as part of their causal histories.

Snowballs do not occur naturally without human intervention from any non-accidentally recurring causal factors. Hail, for example, may at times look like a snowball but is structured differently than a snowball. Moreover, even assuming hail shared an identical structure with snowballs,

---

world has been pre-theoretically disclosed. Thrownness is one way in which Heidegger sees the determination of beings as a fundamentally temporal/historical process.

hail has an entirely different causal origin. Each instance of hail, such as an individual piece, is caused by various atmospheric conditions that join water molecules together in a certain pattern. Thus, each piece of hail has no causal relation to other pieces of hail. Snowballs have a different causal origin that involves a common pattern of copying in response to similar ongoing environmental pressures. Children are taught how to make snowballs by parents and older children so that they can be thrown with ease and, with a bit of practice, accuracy. Given the common shape and ability of the human hand and arm, along with the function of being an object for throwing, there is a causal pattern of copying that explains the similarity among snowballs.

One may want to ask about poorly made snowballs, ones that are slightly flattened. After all not everyone makes a perfect sphere every time; shouldn't these cases count as snowdiscalls? The most plausible answer on Millikan's account is that there are no snowdiscalls, only less than perfectly made snowballs. However, if the shape of a snowdiscall came to serve some function, much like snowballs do in snowball fights, and these disc-shaped pieces of snow are copied or reproduced because of this function, they could perhaps evolve into a distinct kind.

Sosa's example of a snowball containing an infinite number of snowdiscalls exemplifies what Millikan calls "conceptionism." Sosa has given us a definition of snowdiscalls – a means of classifying – but Sosa hasn't given us a reason to believe there are such entities that belong to this class. There is no causal ground that would explain why nearly all snowdiscalls have certain features in common other than the fact that we have stipulated that there is a class of object with a certain set of properties. On Millikan's view, just because we can classify a group of imagined objects does not make the objects in that class a real kind.

Snowdiscalls are not historical kinds and nor are they eternal kinds on Millikan's account. Eternal kinds exists because members of a particular eternal kind share some inner structure resulting from some "natural necessity in a certain selection of surface properties, or results in given selection under given conditions" (2000, 18). Water is an eternal kind because the atomic structure of all water molecules is the same as a result of the natural necessity involving one oxygen and two hydrogen atoms. Stars, planets, asteroids, also are eternal kinds not because of an identical inner structure but because they "are formed by the same natural forces in the same sort of circumstances out of materials similar in relevant ways"

(2000, 19). Hail is an eternal kind, snowballs are an historical kind, and snowdiscalls satisfy neither set of conditions.

Heidegger also offers a distinct response to the explosion of reality problem. Let us begin by trying to understand how Heidegger might articulate the being of a snowball. Snowballs are characterized by their "handiness" or their equipmentality in a broad sense. Equipmental kinds are characterized by their functions – what Heidegger calls their "in-order-to." What we've come to know about snow as a natural kind is derived from snow's significance or meaning in terms of how we can appropriate it to meet some practical ends. Snowballs are analogous to other types of equipment:

> In the environment certain entities become accessible which are always ready-to-hand, but which, in themselves, do not need to be produced. hammer, tongs, and needle, refer in themselves to steel, iron, metal, mineral, wood, in that they consist of these. In equipment that is used, 'Nature' is discovered along with it by that use… (BT, 66).

Snowballs are a kind of equipment that fit into a holistic network that refers to various natural kinds; part of a snowball's existence involves reference to the material from which it is made. But, equipment as equipment is more than mere matter. This "more" relates to the equipment's function or usefulness.

In *Poetry, Language, and Thought* Heidegger states: "The equipmental quality of the equipment consists indeed in its usefulness. But this usefulness itself rests in the abundance of an essential being of the equipment. We call it reliability." (PLT, 34) To be a type of equipment such as a snowball requires that the object reliably perform some function. It is the equipment's reliability that leads to its continued use and production. Any particular function must be understand relationally: hammering makes sense only if there are nails and wood; nails and wood are related by the task of building shelters; shelters are related to the harsh weather they shelter their inhabitants from.

The function of snowballs is to be thrown with reliable accuracy. The being-thrown as the in-order-to of the snowball makes sense only in relation to various social practices such as snowball fights. To be a snowball, or any piece of equipment, is to reliably fulfill some function within a network of practices. Snowdiscalls do not fulfill any function, reliably or otherwise, there is no holistic network of practices of which snowdiscalls are a part. Hence, unless we have reason to think snowdiscalls play a causal role

in the strictly independent physical world apart from human affairs, we have no reason to suppose they exist in the way that snowballs do.

Sosa's trilemma, when viewed from a Heideggerian perspective, results from a failure to distinguish distinct ways of existence; in this case, Sosa fails to consider the ontological difference between ready-to-hand and present-at-hand entities. The trilemma assumes that a ready-to-hand entity, such as a snowball, can be defined ontologically in terms of its present-at-hand constituents.

It is clear from the brief discussion of Millikan and Heidegger that they are not eliminativists. Both philosophers' ontologies have a central role for most of the everyday objects that occupy our world. Our concepts and terms have meaningful content because the world contains certain mind-independent entities, whether our approach is biological or phenomenological. Our ordinary talk is not "so much convenient abbreviation," as Sosa describes the eliminativist position; moreover, our ordinary talk couldn't exist as it does to a large extent if it were some type of abbreviation for a more fundamental ontology.

It should also be evident that neither Millikan nor Heidegger is a conceptual relativist. True, cultural kinds do depend on human practices, so the being of these kinds is relative but not *conceptually* relative. What determines the particular being of these entities is not the imposition of a conceptual scheme or theory. Sosa describes conceptually relative existence as an application of criteria of existence and perdurance. The problem is in explaining the existence of things currently unrecognized in our scheme. Both Millikan and Heidegger can admit that entities that have "ahistorical" or a purely "natural" existence are waiting to be discovered; their existence has nothing to do with our concepts and theories. Cultural kinds don't typically have to be discovered since we are intimately familiar with them, but this familiarity isn't because our beliefs are constitutive of their being. Many cultural kinds could exist even if we did not have beliefs about them.

(4) Conclusion and Further Considerations

The main goal of this paper has been to show there is in fact a fourth option not explored by Sosa. Particular theories that exemplify a Fourth Option will not be without their own problems; however, Sosa claims his three options all have disastrous consequences, so at least the two examples of a Fourth Option explored here can't be much worse off. More im-

portantly, I've tried to show that Millikan and Heidegger have ways of avoiding the disastrous consequences Sosa sees looming over his options.

One potential objection is that although entities like snowdiscalls do not exist in infinite number, snowballs, pens, and similarly legitimate kinds do. The claim here is that within legitimate entities there is infinite number of the very same entity in the same place constituted by an ever so slightly different molecular arrangement. So, for every snowball there is contained within it an infinite number of snowballs with different criteria for existence and perdurance.

It then appears that Millikan and Heidegger are forced to adopt either an eliminativist or absolutist stance with regard to this possibility. Since snowballs are a legitimate entity the eliminativist position is not available. Although Millikan and Heidegger could admit that *some* terms or phrases in our language are in fact abbreviations for groupings or classifications of real kinds; this by itself does not make their theories eliminativist since Sosa contends such a position denies full ontological status to *most* of the everyday world. Their responses to the push toward absolutism will be similar; we should also remember that both Millikan and Heidegger could at worst be classified as moderate absolutist since not just any combination of form and matter counts as real. I'll briefly sketch the response.

The challenge that there is an infinite number of snowballs, pens, or other legitimate kind within any single legitimate kind is a metaphysical mistake that fails to recognize the ontological nature of such entities. For Heidegger, individuation of "worlded" objects (as opposed to purely natural kinds) is not based solely on arrangements of micro-particles. In fact, recognizing that a "single" pen may contain many because of micro-particle arrangements, presupposes that the pen has been individuated pre-theoretically by how it fits into a network of activities. Then the mistake is to disregard the pre-theoretical criteria of individuation and speak primarily in terms of micro-particles. If I'm holding a "single" pen in my hand I can't very well lend it to anyone else – especially not an infinite number of people. In Sosa terms, the criteria for existence and purderance are determined by practical comportment.

Millikan likewise would challenge the assumption of the absolutist description. The organism's concept acquisition abilities – the abilities to re-identify real kinds – do not depend on determining a single set of micro-particles. Very few organisms, if any, perceive the micro-particle structure of medium sized objects. So, the role real kinds play in concept acquisition is determined at the macro-level; the vagueness of the boundaries of such

objects is irrelevant. In terms of the ontology of the objects themselves, cultural/historical kinds are individuated functionally through production and use, not through possible ways of classifying or describing micro-particle structures. Much like the Heideggerian response, the absolutist challenge presupposes we, as human organisms, have already identified pens or snowballs. Such objects have been individuated at a certain level by our biology and activities. Once we have certain concepts we can then construct hypothetical situations using those concepts, but these constructions don't necessary tell us anything about the being of particular entities.

Admittedly more could be said here. However, I've only attempted to sketch one type of response available to a certain line of objections. When we take seriously the philosophy of Millikan and Heidegger, we see that Sosa has missed a promising option in contemporary ontology. As a fourth option, Heidegger and Millikan share a recognition of non-mentalistic dependent being; "non-mentalistic" because the being of many entities is not determined by the psychological act of classifying or imposing linguistic/conceptual schemes; "dependent" because the existence of these entities is not satisfied by the in-itself criterion of matter and form. More broadly, Millikan and Heidegger both offer unique ways of overcoming the Cartesian view of subjectivity, which may explain some of the similarities in their metaphysical orientations.

REFERENCES

Elder, Crawford, "Realism, Naturalism, and Culturally Generated Kinds," *Philosophical Quarterly,* Vol. 39 No. 157 (1989) 425 – 444

Heidegger, Martin, Being and Time, trans. Joan Stambaugh, State University of New York Press (1996). Originally published in 1953.

Luntley, Michael, "On the Way the World is Independently of the Way we Take it to Be" *Inquiry 32 (1988) 177 – 194*

Millikan, Ruth Garrett, On Clear and Confused Ideas, Cambridge University Press (2000)

Nagel, Thomas, The View From Nowhere, Oxford University Press (1986)

Putnam, Hilary, "Truth and Convention: On Davidson's Refutation of Conceptual Relativism," *Dialectica 41(1987)*

Sosa, Ernest, "Putnam's Pragmatic Realism," *Journal of Philosophy 90 No. 12 (1993)*

Van Inwagen, Peter, Metaphysics, Westview Press (1993)

ABSTRACT

Ernest Sosa has argued that there are only three options available to contemporary metaphysicians – eliminativism, absolutism, and conceptual relativism. He further claims that all three options have disastrous consequences. I argue that Sosa fails to recognize a fourth option in contemporary metaphysics, a theoretical option that is exemplified in both the analytic and continental traditions. More specifically, I argue that Ruth Millikan's account of historical kinds, and Martin Heidegger's account of ready-to-hand entities cannot be subsumed under the initial three options, and both potentially avoid the negative consequences.

JEAN-BAPTISTE RAUZY

AN ATTEMPT TO EVALUATE LEIBNIZ' NOMINALISM[1]

1. Introduction

Many commentators and historians take it for granted that Leibniz's ontology is "nominalist." Leibniz himself, especially in his early texts, declared that he felt strong sympathies for that school of philosophy. The republication of Nizolius' *De veris pincipiis* in 1670, for example, was partially motivated by a desire to reinstate nominalism, about which Leibniz wrote at the time that it was "the best Scholastic school" and "the most neglected one among recent authors." Affirmations of this sort are frequently found in the earliest texts, as they are in certain fragments contemporary with the *Discourse on Metaphysics*. It seems to me, however, that the most these declarations allow us to say, from a historian's perspective, is:

(1) At least during the first part of his intellectual career, Leibniz defended the philosophical school that was called the "nominalist" school at that time.

These declarations are, on the other hand, utterly inadequate to justify a thesis such as:

(2) The ontology of Leibniz is nominalist.

Further, Leibniz carried out a very staunch critique of relativism, and that not only concerning the relativism he attributed to Hobbes, but more generally all the philosophies that made the substantial content of truth

---

[1] This paper is drawn from a lecture at Rice University, in april 2003 ("Young Leibniz Conference"). I wish to warmly thank Jean-Pascal Anfray, Herb Hochberg, Mark Kulstad, and also an anonymous referee, whose suggestions allowed substantial improvements..

depend on the assigning of names. We know that he affirmed at that point (in the preface to the 1670 publication) that Hobbes was a "super-nominalist," or, to be more precise, that he was "more than nominalist" ("*plusquam nominalis*").[2] This famous declaration has encouraged many commentators to reach the following conclusion:

(3) The ontology of Leibniz is a moderate form of nominalism.

The move from (1) to (3) seems to be quite damaging. I shall attempt to explain why. In recent ontology, "moderate nominalism" has a very precise meaning. What is called "moderate" nominalism is the position according to which, in statements of the type *a is F* (where *F* is a property and *a* a particular), (i) the predicate *F* does entail an ontological commitment, but (ii) it stands for a particular. The first condition differentiates moderate nominalism from a more radical position (such as that of Quine), the second distinguishes it from an equally moderate but more realist position, according to which *F*is a shared entity, a "character" (Bergmann) or a "universal" (Armstrong). "Moderate nominalism" is then one name for ontological particularism. More precisely, "moderate nominalism" designates the type of ontological particularism that is defended in a state of metaphysics issuing both from the debate between Moore and Stout and from positions defended by Russell on universals. It seems altogether legitimate and important to ask whether Leibniz's ontology is particularist or, rather, universalist. On this point, the fact that the problem is not posed in exactly the same terms in the seventeenth century and today does not constitute an insurmountable obstacle for the historian. On the other hand, it seems equally important to note that, in the texts concerning the criticism of Hobbes, the use of definitions and the status of characters, the problem of ontological particularism *is not precisely what is debated*. Accordingly, we must recognize that, when we use the expression "moderate nominalism" to qualify the philosophy of Leibniz (and when we have the phrase *plusquam nominalis* in mind), either we are misinterpreting the texts or we are taking "moderate nominalism" in a broad rather than a precise sense.

It seems to me that there is currently a flawed consensus among specialists of Leibniz. How did such a consensus concerning such a thorny problem arise? One reason might be linked with the recent history of

---

2 "[…] ut credam ipsum Ockamum non fuisse *Nominaliorem*, quam nunc est Thomas Hobbes, qui, ut verum fatear, mihi plusquam Nominalis videtur" (A VI ii 428).

commentary on Leibniz. In his 1986 book, Benson Mates devoted a whole chapter to Leibniz's nominalism. He emphasizes in this chapter the passages concerning rational grammar and the *lingua philosophica*, where Leibniz claims that philosophers should change their ordinary way of expressing themselves. It is undeniable that Leibniz attempts in this group of texts to promote use of a philosophical language that would respect as much as possible a strong principle of ontological economy. For example, one is not to say "the heat of x has been doubled," but rather "x is twice as hot as it was."[3] Likewise, one is to avoid using the term "*animalitas*" and is to use instead the unsaturated infinitival expression, "*to aliquid esse animal*." The linking of the texts concerning the *lingua philosophica* and the passages where Leibniz claims to be a nominalist creates a striking effect. One cannot help but think that, during the 1680s, Leibniz tried to carry out a reductionist program, the first outlines of which appeared in 1670, when he wrote concerning Nizolius: "The nominalists are those who think that, individual substances excepted, there are only mere names; consequently, they eliminate the reality of universals and abstracts."[4] I believe, however, that this view of Leibniz is erroneous.

The project of rationalizing grammar, like the program for reforming the philosophical language, cannot be reduced (and far from it) to the application of certain number of nominalist principles. The project in question is simultaneously more ambitious and more specific. Leibniz wanted to lay down his own version of rational grammar. This text was to stand alongside the *Grammaire de Port Royal*, the rigor and precision of which Leibniz would have imitated, and alongside Vossius' *Aristarchus*,[5] in which he admired the scholarly mix of *a priori* and empirical considerations and the light that the discussions of "natural" grammar (common to all languages) and "artificial" grammar (unique to each individual language) shed upon each other.[6] It is certainly true that Leibniz indicates, in the various versions of this text, that it is necessary to do without abstract terms and that it is even necessary to avoid distinguishing between adjectives and substantives. This means that there really was a project to eliminate abstracts and that this project was, of course, part of a broader endeavor to compose a grammar. That is insufficient, however, to

---

3 GP VII 403 (L105); Mates (1986), p. 174.

4 "Nominales sunt, qui omnia putant esse nuda nomina praeter substantias singulares, abstractorum igitur et universalium realitatem prorsus tollunt" A VI ii 417.

5 *Aristarchus sive de Arte Grammatica libri septem*. The book was published in Amsterdam in 1635. Leibniz worked on the second edition (1662).

6 A VI iv n°. 146 (1685).

affirm that nominalism would have been the result (or the aim) of the completed grammar. Indeed, other equally important issues (the analysis of adverbs, of different verbal forms, of mass terms, etc.) were to be treated within the framework of this project.

2. Three Different Questions

If we cannot identify the nominalism of Leibniz with his project for linguistic reform, we can still try to evaluate it. The difficulty that the historian faces in this undertaking does not reside solely in the assembling of a corpus of relevant texts. Above all, the difficulty consists in reconstructing the question to which each text aims to provide an answer. Not only has the nominalism/realism debate taken different historical forms, but it has also been motivated by different questions. A question-mistake is to the historian what a category-mistake is to the metaphysician: something that is often difficult to perceive and correct. I distinguish three questions that seem to be interesting in the specific case of Leibniz.

In its most common meaning (to which I have already alluded), nominalism is another name for ontological particularism. Knowing whether Leibniz is a nominalist in this sense means asking whether or not he recognizes shared entities that are dependant. Thus, it means asking what he puts on the right side of the "ontological square."

N 1 Nominalism 1 is the negative answer to the question: "do the shared names refer to shared entities?"

A more recent meaning of nominalism is that of the position defended by Nelson Goodman in order to justify his "calculus of individuals." Goodman's critique of classes does, in fact, meet a more general requirement according to which there must not be an inflationist source in the way in which entites are generated. Two entities having exactly the same constituents must also be the same entities. Some, such as Dummet, have claimed that this nominalism is typically post-Fregean, in that it could be expressed only in a certain (post-Fregean) state of logic[7]. Nevertheless, if we keep to the informal version of the requirement given above (two entities having exactly the same constituents must also be the same

---

7 Dummett insists on the concept-object distinction. He claims that this distinction, inheritated from Frege, doesn't in itself involve a determinate ontological position, but deeply modifies the questions to which the ontologist must answer. Cf. Dummett, M.(1981) p. 472-475.

entities), we immediately see that this requirement shares at least a family resemblance with Leibniz's principle of the identity of indiscernibles, or, at the very least, with at least one of Leibniz's interpretations of his principle.

N 2 Goodman-like nominalism is the negative answer to the question: "may two entities with the same constituents be different?

An easy way to see that this criterion is very different from the preceding one is to note that, by this (N 2) criterion of nominalism, a realist like Bergmann would be classified as a nominalist, since Bergmann takes it to be a "fundamental principle of ontology" that two complex entities must differ in a constituent in order to "be two." We note equally that, in the metaphysics of today, a positive or a negative attitude towards the mereology of Goodman does not at all imply a parallel attitude relative to the identity of indiscernibles. These two questions are taken as independent, all the more so in that the second (the position on indiscernibles) rests in part on a posteriori considerations. The bringing together of the two questions arises only from the point of view of the historian, in the framework of the intensional mereology of Leibniz.

Finally, the medievalist Calvin G. Normore has emphasized another kind of nominalism, what he calls "medieval nominalism." Let us grant for a moment that truth is a relationship between a truth-bearer and a truth-maker. This way of seeing things is currently confined to the circles in which ontology is practiced, and, even within such circles, it is often contested. It was much more widespread in medieval metaphysics and late Scholasticism. I believe to have demonstrated that it was still fully present in what I called the "Leibnizian doctrine of truth" and that, within this doctrine, Leibniz's *notions* play the role of truth-makers. If we allow that truth has such an ontological foundation, writes Normore, nominalism is the position according to which the set of truth-bearers is larger than the set of truth-makers, since there are more truths than truth-makers[8] and more

---

8 By Abaelard, as Normore notices, this position is linked to the relation between ontology and philosophy of language. "In his ontology, Abelard seems prepared to admit two kinds of things – individual substances and individual forms. But in his philosophy of language, he is prepared to talk about statuses, dicta and natures. Statuses, dicta and natures are not things, and there can be changes in the status a thing has without any change in the thing itself. […] Abaelard does not indicate exactly whitch differences in grammatical form reveal differences in dictum or status, but what he does say suggests that differences in consignification in general would not reveal such differences. Thus, changes of gender, like changes of tense, would leave

true sentences than truths[9]. "Medieval nominalism" thus concerns the mapping (one-to-one or many-to-one) of sentences onto the states of affairs they describe:

N 3 Medieval nominalism is the negative response to the question: "do two different truth-bearers necessarily have different truth-makers?

The most reliable way to evaluate the nominalism in Leibniz is to seek out texts that could provide an answer to each of these three questions. The idea that I aim to defend here is that the third of the questions relative to nominalism has been the most neglected, even though it is certainly the most important of the three.

3. Was Leibniz a Particularist?

It seems to me to be very difficult to affirm that Leibniz was a particularist in his conception of properties. It is true that certain aspects of his metaphysics lead to this conclusion, especially the fact that he often mentions individual accidents such as *the wisdom of Socrates*.[10] Conversely, however, we may note that there are also passages in which references to individual accidents do not appear, and yet these passages incontestably provide a version of the ontological square.[11] Furthermore, the mention of individual accidents is not a sufficient condition for making one a particularist. The particularist affirms that individual accidents exist and that universals do not exist, or that universals are comprised of individual accidents. We do not find anything of the sort in Leibniz. He recognizes individual accidents because doing so is altogether ordinary for a mind trained in Scholastic metaphysics. Let us add that, in his early

---

the dictum or status unaffected. Distinct sentences can express the same dictum ; there are more true sentences than truths." Normore, C. G. (1987) p. 208.

9 "The claim that there are more truths than truth-makers is then the claim that distinct dicta can correspond to the same item in the ontology." (ibid.).

10 See, for example, *De abstracto et concreto*, A VI iv 992-993.

11 "ENS est possibile positivum, ut homo, sphaera, calor, magnitudo. REALE est phaenomenon congruum, ut iris. CONCRETUM est ens quod a se sustentatur seu quod in altero non est, tanquam in subjecto, ut calidum. ABSTRACTUM contra, ut calor. Substantia est concretum completum, ut homo aliquis, verbi gratia, Caesar. Accidens est abstractum incompletum. Abstractum completum est ipsa essentia substantiae, verbi gratia Lentuleitas ; concretum incompletum est ens aliquod Mathematicum quod instar substantiae concipimus, ut spatium, tempus" (A VI iv 400).

years Leibniz tended to defend universals, when they were strongly contested by the likes of Nizolius, for example.

A different, but more fruiful way of approaching this question would be to ask whether Leibniz might not have been a "hidden nominalist," in the sense in which Gustav Bergmann takes this expression. In a famous article published in 1958, Bergmann wrote that the profound difference between the nominalist and the realist concerns, above all, predication. The realist thinks that verbal form of predication reflects a veritable *nexus* between two equally unsaturated or equally satured kinds of entity (an individual and a "character")[12]; conversely, the nominalist tends to treat predication not as a *nexus* but as a mapping, in accordance with Frege's functional explanation of the nature of concepts.[13] Now, in section 138 of *Generales inquisitiones*, we have a whole passage attesting to the fact that Leibniz attempted to express predication in a quasi-functional manner. Let A and B be "terms" designating "notions":

(4) A's being B ↔ the B-ness of A

This way of proceeding seemed preferable to him because it made it possible to provide a simple explanation for hypothetical propositions:

(5) if A is B then C is D ↔ the B-ness of A is (contains) the D-ness of C

Finally, in cases where we have an "indefinite term" (Y) in the place of A, (a variable ranging over the set of "notions" of the sort that A and B were said to stand for), there can be an expression containing an argument-place:

> "In general, if it is said that something is B, then this 'something's being B' is simply 'B-ness'. Thus, 'something's

---

12 "The two notions of an individual and of a character, containing or presupposing each other to exactly the same extent, are equally "satured" or "unsatured" (Bergmann, G. (1959) p. 211). Bergmann points out, in connection with the specific claims about Frege, that one could take names in a perspicuous language in the form "Φa" just as one can take predicates in the fregean form "Fx".

13 "Nominalism is a thesis about characters. […] Frege calls them *concepts*. What, then, does he have to say about concepts ? The realist construes functions in terms of characters (concepts). Frege, proceeding in the opposite direction, as it were, construes concepts as a kind of function. In this way, the nominalism I have shown to be implicit in any analysis that starts from mapping is spread to concepts (characters)." (Bergmann, G. (1959) p. 212).

> being animal' is simply 'animality' whereas 'man's being an animal' is 'the animality of man' (*Logical Papers*, p. 78)

What Leibniz writes:

(6) something's being B ↔ the B-ness of Y (*GI* §139)

Leibniz probably did not invent this way of presenting syllogistics, but simply developed a suggestion in Hobbes' *De corpore*.[14] Thus, he found his quasi-functional approach to predication in the work of the very thinker who was "more than nominalist."

There is a difficulty when one tries to evaluate the degree of Leibniz's functionalism starting from this passage and from others of the same type. This difficulty arises from the fact that we are in the prehistory of quantification. Incontestably, the indefinite terms of Leibniz (Y) are variables. But are they bound or free variables? One is sometimes tempted to insert an existential quantifier, as here in the right-hand part of (6), and certain commentators do not hesitate to do this (see W. Lenzen 1982). But it seems to me that this modernisation is not good; in part, because Leibniz himself, even in introducing these variables, continues to quantify over "terms" according to medieval practice; and, in part and most importantly, because in introducing an '∃' one introduces also something in relation to the distinction between concept and object, whereas it is precisely this distinction that is in question here. We add that the passage cited from the *Generales Inquisitiones* was, in the mind of Leibniz, a sample of "characteristic" more than metaphysics: it had to do with the possibilities of a system of notation for concepts, a system that he had invented using the language of algebra. This system of notation no doubt answered a need for functional expressions which stemmed from his mathematical research. But Leibniz was a metaphysican. In general he himself drew the metaphysical conclusions that he viewed as consequences, in the metalanguage, of what Bergmann would have called his "ideal language" (and which was still something quite unstable for him).

The point does not have to do with the question of knowing whether Leibniz's ontology is Fregean, in whatever way one understands this, nor whether it is Fregean in the sense constructed by Bergmann in his article of 1957. The question is rather this: if there is in Leibniz's logic, as the passage cited from the *Generales Inquisitiones* attest, a functional expression (*the B-ness of* ...) intervening in what is considered an

---

[14] A VI iv 400 and Hobbes *De corpore*: I ch. 3, §3.

acceptable expression, and perhaps even preferable, of an atomic proposition (*the B-ness of A*), does this have metaphysical consequences and if it does, are these consequences analogous to those that Bergmann detects in Frege when he speaks of "hidden nominalism"? I must admit that I am not sure how to answer that. Despite the passages I have just cited, the response to this question that can be drawn from the texts is rather negative**.** Three arguments in fact go in the direction of a negative answer. 1) According to (4) and (6) it appears that, where something is B, we have a function (*B-ness of ...*) that for an argument, (Y), yields a predicative element (*B-ness of Y*). So it is true that something is B if and only if there is such a predicative element. But this leaves entirely open the question of knowing whether this predicative element is constructed in functional terms, or whether, on the contrary, it is the functional dimension which is solely a derivative reality. (One is reminded that it is the direction of the analysis – from characters (concepts) to functions or, inversely, from functions to concepts – that is here philosophically pertinent.) Now Leibniz insists on the fact that this expression of propositions (A, E, I, O) of syllogistic logic must allow for the elimination of the "abstractions of the tradition" (B-itas) in favor of other abstractions, which seem to him to be metaphysically more innocent, and which he names "logical or conceptual" ("that something is B"). This latter expression (which recalls the ancient *dictum*) remains therefore the *terminus a quo* and the functional expression that which is aimed at or constructed.[15] 2) A characteristic trait of nominalism as Bergmann conceives it is that its defenders (hidden or overt) insist on "of-ness". [16] This of-ness receives from them a primitive and central role in predication. However, this is rather the inverse of what holds true for Leibniz. An important part of the grammar of logic for him is dedicated to the elimination of obliquity (*obliquitas*), not in the sense in which this refers to indirect discourse, but rather in view of a suppression, pure and simple, of the genitive and, in general, of the oblique cases. Now an oblique case is found by Leibniz *both* in the expression of the argument of a function ("Beitas *ipsi* A") and in the predication of abstractions ("The

---

15 If this line of argument is conclusive, it means that what allowed Leibniz to claim a form of "nominalism" is rather a form of realism, according to Bergmann's distinctions.

16 "Quine is fond of the formula that while sentences are either true or false, a predicate is either true or false *of* something. For Frege, we remember, the predicative 'is' is merely a clumsily disguised 'of'. Ofness, if I may coin a word, thus plays a crucial role in both systems". Bergmann, G. (1959) p. 224.

wise person *possesses* wisdom").[17]. 3) Final point: this attempted *reductio* has resulted in failure. Leibniz ultimately preferred a very different procedure wherein syllogistic propositions are expressed through the terms *ens* or *res*.

Nevertheless, this functional mode of expression left traces in the metaphysics itself. It also entailed an extremely strong reductionism, resulting in a metaphysics from which would have been excluded not only universals, but also all types of accidents, including individual accidents. We find an expression of this metaphysical position in the following passage (from slightly after 1686):

> "I affirm, therefore, that the substance is changed, that is, that its attributes are different at different moments, for there is no doubt about this. […] There is no need to raise the issue of whether there are various realities in a substance that are the fundaments of its various predicates (though, indeed, if it is raised, adjunction is difficult). It suffices to posit that only substances are real things (tamquam res) and to assert truths about these" (A VI iv 996, Grua 547).

I consider this passage very important. In some respects, the metaphysics of monads is simply an extension of it. There is, in this view, a very strong tendency to reism — to speak like Bergmann once again — and this tendency does not fit well with the factualist interpretation which I myself have undertaken. For the time-being, let me simply express my perplexity, but I will come back to this point later.

4. Was Leibniz Goodman-type nominalist?

As concerns the consequences of applying the principle of the identity of indiscernibles to ontology, things do not seem as clear-cut to me. It was around 1676 to 1677 that Leibniz recognized the validity of the identity of indiscernibles and declared that, henceforth, "*summa similitudo*" was identity in the strict sense. Already at this point in time, he grants that the identity of indiscernibles makes for a more rigorous metaphysics, but he is also forced to recognize that it leads to a less parsimonious ontology. Indeed, the principle entails that any numerical diversity must correspond to qualitative diversity, whether apparent or hidden. That is why, for example, in cases where we are dealing with two concrete figures that are exactly alike, we must attribute a memory or a "mind" (*mens*) to them in

---

17 Once more, what Benson Mates considered a thesis in favour of nominalim goes, in Bergmann's framework, in the opposite direction.

order to be able to distinguish them intrisically.[18] The identity of indiscernibles is, thus, an ambivalent principle: on the one hand, it guarantees a certain economy in the *construction* of entitites, but, on the other, it tends toward another form of ontological prodigality.

We can observe an evolution, concerning the scope of the identity of indiscernibles, from the period of the *Parisian notes* to that of the *Discourse on Metaphysics*. This evolution, which has not (as far as I know) been the object of much commentary, can be designated as the shift from an ontology of *requisita* to an ontology of *notiones*. I would like briefly to describe this shift.

In the texts from the Parisian period, Leibniz provides an explanation of reason in God through analysis. The reason of a thing is the existence of "all of its requirements." The will of God has certain requirements in God and others in the idea of the object. In God, the requirements of the will are omniscience; in the idea of the object, they are "goodness, that is, the aptitude for the ends proposed by God." He concludes that the will of God can be analyzed into three different concepts and is, therefore, not *ens per se*. And he goes on to say:

> "I do not see where the difficulty resides in this opinion. For, I confess that God always chooses what is most perfect, when there is something more perfect in that which may be chosen, and when he does so *salva sua libertate*. We affirm, therefore, that one cannot find two things that are equally remarkable by comparison with other things, but that one is always more perfect than the others. This hypothesis is not at all impossible or absurd. It is even quite probable, since the essences of things are like numbers, and there are no two equal numbers" (A VI iv 1389).

If two things are different, they are not equally remarkable. If two things are different, they are likewise different *as reasons*. That is the hypothesis that is deemed probable here. It is easy to notice that this hypothesis is supported in this passage by the underlying ambiguity of the notion of "requirement". The requirements of a thing are simultaneously that in which (the notion of) the thing can be analyzed, that which determines its existence – like "*esse extra causas*," to take the expression of Suarez – and that by virtue of which the thing can potentially please a mind and finally be chosen. So long as the reason is conceived as the "sum of the requirements,"[19] Leibniz accordingly finds himself forced to accept

---

[18] *Meditatio de principio individui* A VI iii 490-491 and Rauzy 2001, pp. 303-308.

[19] A VI iii 515.

or reject the identity of indiscernibles and has no means to formulate a more nuanced position. In this respect, the *notiones* represent a considerable advance. Notions are, in God, that in which consists His understanding. They are also, for us, that which is designated by the *termini* of logic. But the relationship of notions to existence requires a special analysis, an analysis on which Leibniz has his sights set when he indicates in the *Generales Inquisitiones* what "pleases a mind":

> "So, if there are several things, *A*, *B*, *C* and *D*, and one of these is to be chosen, and if *B*, *C* and *D* are alike in all respects (*per omnia similia*), *A* alone being distinguished from the rest in some way, then *A* will please any mind which understands this" (GI §73, *Logical Papers*, p. 65).

A, *B*, *C* and *D* are terms expressing notions. How can *B*, *C* and *D* be "alike in all respects" to *A* if, according to the identity of indiscernibles, terms that are exactly alike express the same notion? In this case, *B*, *C* and *D* should be considered as identical to *A*, and, if they are identical, it is hard to see what the basis could be for the mind in question to choose *A*. The passage is much clearer if we suppose that *B*, *C* and *D* are not the same, but that there is nothing distinguishing them from the standpoint of the situation of choice. If it is a question of choosing among possible worlds, for example, *B*, *C* and *D* will designate equally perfect worlds: they are not identical, but none of their differences is *interesting* for making the choice. In other words, *B*, *C* and *D* belong to a single class of equivalence, but this shared membership does not render them, for that, utterly identical. In some certain respect (*quatenus*), different entities are not distinguished from each other in the order of reasons. But that does not mean that every difference among *B*, *C* and *D* can be left out of account. Indeed, it remains important that a numerical difference can be identified among them, even if we do not know what qualitative difference founds or extends this numerical difference. For, the mind must know that there are three notions on one side and a single one on the other in order to make its choice. If the mind had to situate itself exclusively at the abstract level of interesting differences, it could not choose according to the procedure suggested here, namely by establishing an order among classes of equivalences and privileging the most remarkable classes (the class that is a singleton). It is this flexibility that characterizes the ontology of *notiones* and makes it possible to distinguish more clearly an order of reasons and an order of things. In the 1680s, the identity of indiscernibles is rather a principle set in the background, against which appear various pragmatic situations that are so many exceptions to this principle.

5. Conclusion: Leibniz Was a "Medieval Nominalist"

I have not been able to provide a clear cut answer to any of the questions considered here. Leibniz seems simultaneously particularist and universalist, functionalist and realist. The consequences of his principle of the identity of indiscernibles likewise seem to lead towards realism in some instances, towards nominalism in others. It is, perhaps, to this ambivalence that we are awkwardly pointing when we speak of "moderate nominalism." According to Normore's criterion ("medieval nominalism"), on the other hand, the situation is much clearer. To see how clear the situation is in this case, however, we must grant one of the theses[20]: (i) Leibniz's doctrine of truth is a correspondentist doctrine, (ii) correspondence itself is guaranteed by the relation of expression, (iii) concepts or notions are truth-makers. With this three points in mind, let us return to the difficult passage of Grua 547. It is in this passage that Leibniz likewise specifies that he is a nominalist *saltem per provisionem*.

This is a typical case of a text that is linked with the wrong question. In his nominalist program, Leibiniz indicates that he is going to get rid of all abstracts, or, better still, replace all "metaphysical" abstracts with "logical" abstracts, which seem ontologically harmless to him. One question is whether or not he managed to carry out this replacement completely (I think that he did not manage to do so). But there is another question, one that is probably more important, concerning the metaphysical meaning of this replacement. Given that the abstracts in the tradition (wisdom, heat) generally designate shared entities (universals), it was natural to take this nominalism *per provisionem* to be a form of particularism. Accordingly, the conclusion has been drawn that the passage at Grua 547 provided the answer to the question that I have called Nominalism 1.

Let us summarize the passage in its entirety. In this fragment Leibniz analyzes several manners of conceiving the reality of accidents and for each he explains why there is a difficulty. If one assumes real accidents, then either the reality is a part of that of the substance, or it adds a new reality to the substance. If they are a part of the substance, then, strictly, the substance loses its identity at each change, even if, for external reasons, it keeps its denomination. If one prefers to distinguish between an immutable and a changeable part in the substance, then the whole is itself changing and one encounters the same difficulties as if one takes the accident as an addition. If, finally, one assumes that the substance perishes

---

20 This theses are defended in Rauzy (2001).

and is reborn with each change, it is exactly as if one suppressed the substance itself, because there are in nature minute changes – change is as divisible as time – and one falls into the error of those who, like Spinoza, reduce created substance to the status of a mode.

Several arguments against the interpretation in terms of "nominalism 1" can be adduced. (1) The larger passage as a whole does actually concern the reality of accidents, but accidents do not appear as universal entities. It is altogether possible to read this text with the supposition that accidents are particulars. Accidents are entities that we need, so it seems, in order to explain the *mutatio*, the change. It is this that is the object of the question. (2) Leibniz thinks that, if he can do without abstracts in predication, he can also forego accidents in ontology. "It suffices to posit that substances alone are real things and to assert truths about these" means: we do not need the reality of accidents to account for the truth of statements, including when what is stated is a *mutatio*. Explicated in this way, the Grua 547 passage clearly tends toward medieval nominalism. We have things that are substances. The notions of these substances are sufficient to account for a very great variety of truths concerning them. We do not need to add to the ontology an entity for each new truth (an accident). A notion, in the sense in which Leibniz uses it, is the truth-maker common to a whole series of truths. It is also a sufficient truth-maker. Between truths and notions, there is, indeed, a relationship of many-to-one. This is, it seems to me, the purest kind of medieval nominalism.

It seems that this "medieval nominalism," contrary to appearances, is more factualist than reist. The argument is as follows. Consider a sort of entities, *M*, such that an entity *m* of this sort is sufficient to be the ground of truth for truths expressed by "m is Φ", as well as for more complex truths which express a relation or a change. For Leibniz, the entities that satisfied this condition were, successively, "notions" and then "monads." If the *m*'s are things (res), it is quite clear that this necessary condition is not satisfied. One who takes the *thin* object, or substance, and not the substance together with something else (the unity of different states, a 'law of development,' etc.) to be the ground of truth for the truth expressed by "m is Φ" will need different truth-makers. It is this demand for economy that guided Leibniz in the construction of his ontology and not a possible position in the famous debate over universals.

To appreciate the significance that a position of this type can have for us, let us close by emphasizing the coherence of the metaphysical theses defended by Leibniz. Concerning the identity of indiscernibles, the point

is that qualitative identity and non-qualititative identity are not separable. It is not a question of asserting that the one is superior to the other or more significant or even prior to the other. The *notions* and, later, the *monads*, are entities that are constructed in such a way that one cannot separate their *haecceitas* and *quidditas*. It is the same entity that is described now by means of the one, now by the other – often also by means of both at once, as for example in moral judgments. The intuition is that we must have *one* type of entity in our ontology that supports this and that is sufficient. It is this intuition which, according to the thesis of the present paper, is profoundly nominalist. An analogous remark applies as well to the usage of the intensional mereology and possible functionalism of Leibniz. The algebra of concepts furnished *one* type of unique and differentiated entity. The distinction of complete and incomplete seemed very important to him because it allowed him to distinguish two types of notions while nonetheless affirming: (i) that complete and incomplete notions are equally *notions*, and (ii) that, in "metaphysical rigor," only that which is complete exists. This nominalism should rather therefore be designated as a form of monism. This is why the reference to Spinoza, even if negative, has remained very important.

Bibliography

Bergmann, Gustav (1959), *Meaning and Existence*, The University of Wisconsin Press.

Dummett, M. (1981) *Frege. Philosophy of Language* (second edition) Duckworth, London.

Hochberg, H. (2001) *The Positivist and the Ontologist, Bergmann, Carnap and Logical Realism*, Rodopi, Amsterdam.

Leibniz, (1943) *Textes inédits*, d'après les manuscrits de la bibliothèque provinciale de Hanovre, publiés et annotés par Gaston Grua, P.U.F., Paris.

— *Sämtliche Schrifften und Briefe, herausgegeben von der deutschen Akademie der Wissenschaften zu Berlin,* (A).

— (1966) *Logical Papers*, A Selection Translated and edited by G. H. R. Parkinson, Clarendon Press, Oxford.

— (1989) *G. W. Leibniz*, *Philosophical Papers and Letters*, Loemker, L. E. (ed.); Dordrecht (L).

Lenzen, W. (1984) « Unbestimmte Begriffe bei Leibniz », *in* : *Stud. Leibn.* 16/1, p. 1-26.

Mates, B. (1986), *The philosophy of Leibniz. Metaphysics and language,* O.U.P. Oxford.

Normore, Calvin G. (1987), "Medieval Nominalism" in : *Studies in Medieval Philosophy*, Wippel John F. ed., pp. 201-218.

Rauzy, J.-B. (2001) *La doctrine leibnizienne de la vérité. Aspects logiques et ontologiques*, Vrin, Paris.

P.X. MONAGHAN

"Vague Objects and Existence" [1]

How are vague objects relevant to one's thinking about the truth-conditions for assertions of existence (e.g. 'God exists')? According to the standard account today, any assertion of existence 'x exists' is true just in case x is self-identical. But I have become dissatisfied with this account, and not merely because it seeks to pin the existence of a thing onto one of its other features, or because it seeks to identify existence as something else, something other than existence. Still, it is one thing to be intuitively dissatisfied with some view, and quite another to refute its essential conjecture. But that is why vague objects are important. For if there are vague objects, then something exists that is not identical to anything whatsoever.

The plan of the paper is as follow. In the first section, I examine Gareth Evans' influential argument against vague objects[2]. In section II, I show why his argument is unsound. In section III, I argue that the relation of indeterminate identity is reflexive for the domain of all and only vague objects. In section IV, I argue that if there are vague objects, then there is something that is not identical to anything whatsoever. And, lastly, in section V, I will argue that if there are vague objects, then vague objects exist. (In fact I will argue that anything that is, exists.)

I.

Gareth Evans was an early and influential proponent of the view that vague objects are in some sense impossible. He argued that if we assume that there are vague objects, then that assumption will eventually have to be

[1] I would like to thank the reader for *Metaphysica*, Andrew Scott Buchan, Derek Hyatte, Corey Maley, Andrew Newman, and Jackie Wilwerding for talking with me about these ideas.

[2] See his paper "Can There Be Vague Objects?" (1978, p. 208). Since this paper is a mere one page in length, this one page will serve as the citation for any reference I make to any one of Evans' views or claims.

discharged as false, because it is incompatible with the claim that all objects are self-identical, which he took to be obviously true.

His argument is as follows. Assume that there are some x and y that are vague objects in that x is indeterminately identical to y. If x is indeterminately identical to y, then y has the property of being indeterminately identical to x. At the same time, it is not the case that x is indeterminately identical to x. If x is not indeterminately identical to x, however, then x lacks the property of being indeterminately identical to y. But if x lacks a property y has, then (by the indiscerniblity of identicals) x and y are distinct from each other. And if they are distinct from each other in fact, then they are not indeterminately identical to each other after all.

In his argument, Evans assumed that 'is indeterminately identical to', 'is identical to' and 'is distinct from' are incompatible binary predicates. That is to say, he assumed that for any x and y, they satisfy exactly one of those predicates. I agree with Evans on this point, and I will assume as much throughout the course of this paper, though I will expand on it a bit in section IV.

II.

Gareth Evans begged the question when he assumed that it is not the case that x is indeterminately identical to x. Why not say, instead, that indeterminate identity is the relation any vague object bears to itself in virtue of which it counts as a vague object in the first place? We would then be able to speak of indeterminate identity as being a reflexive relation insofar as it is understood that the relation is defined only for the domain containing all and only vague objects. This interpretation of indeterminate identity as a reflexive relation implies that if any x is indeterminately identical to anything whatsoever, then x is indeterminately identical to x. In the remainder of this section, I will argue that if indeterminate identity is reflexive for the domain of all and only vague objects, then Evans' argument is unsound.

My argument is as follows. Evans assumed that x and y are indeterminately identical to each other. If x is indeterminately identical to y, then y has the property of being indeterminately identical to x. Now if indeterminate identity is reflexive, then since x is indeterminately identical to y, x is indeterminately identical to x. If x is indeterminately identical to x, however, then x also has the property of being indeterminately identical to

x.[3] Now any additional assumption would have to be rejected as false, if it implied that x lacks that property. In that case, Evans' additional assumption (i.e. that it is not the case that x is indeterminately identical to x) must be rejected as false, because, as we've seen, it implies just that.[4] Hence his argument is not sound.

III.

In this section I will argue that indeterminate identity is reflexive in the sense that if there are vague objects, then any one of them is indeterminately identical to itself.

My argument is as follows. Assume that there are vague objects, and let x and y be any such objects, such that x is indeterminately identical to y. If x is indeterminately identical to y, then y has the property of being indeterminately identical to x. Now, for the purpose of reduction, assume that it is not the case that x is indeterminately identical to x. If it is not the case that x is indeterminately identical to x, then either x is identical to x, or else x is distinct from x.[5] Let's take the first disjunct first. Assume that x is identical to x. If x is identical to x, then x lacks the property of being indeterminately identical to x. But if x lacks this property, which y has, then x and y would be distinct from each other. But x can't be distinct from y, simply in the sense that they have already been assumed to be indeterminately identical to each other. Hence the first disjunct is rejected as false. Now let's take the second disjunct. Assume that x is distinct from x. If x is distinct from x, then x lacks the property of being indeterminately identical to x. But if x lacks this property, which y has, then x and y would be distinct from each other. But, again, x can't be distinct from y, simply in the sense that they have already been assumed to be indeterminately identical to each other. Hence the second disjunct is rejected as false, too. Hence x is indeterminately identical to x.

---

[3] I assume that if anything is indeterminately identical to anything at all, then it has the property of being indeterminately identical to it.
[4] See his argument in section I of this paper.
[5] See the last paragraph of section I of this paper.

In this section[6], I have appealed to the principle of the indiscernibility of identicals whenever I claimed that x and y can't be discernible and, therefore, distinct from each other, if they have already been assumed to be indeterminately identical to each other. [7] This appeal is in line with the assumption I made in section I, according to which 'is identical to,' 'is indeterminately identical to' and 'is distinct from' are incompatible binary predicates. Now I would like to say something a bit more about this assumption, but I would like to put off doing so until section IV, where the picture will be more clear.

IV.

In this section, I will argue that if there are such things as vague objects, then there is something that is not identical to anything whatsoever.

My argument is as follows. Assume that x is a vague object indeterminately identical to some y. If x is indeterminately identical to y, then x is indeterminately identical to x.[8] If x is indeterminately identical to x, then it is not the case that x is identical to x.[9] And if it is not the case that x is identical to x, then it is not the case that x is identical to anything whatsoever. Hence, if there are vague objects, then there is something that is not identical to anything whatsoever.

To support the claim that for any x, if it is not identical to itself, then it is not identical to anything, one might appeal to Kripke's principle of the necessity of difference.[10] But I don't think we need to go that far. Again[11], it seems as if 'is identical to', 'is indeterminately identical to' and 'is distinct from' are incompatible binary predicates, just as 'is red all over', 'is white all over' and 'is blue all over' are incompatible monadic predicates.

---

[6] I would like to thank the reader for *Metaphysica* for flagging this point and expressing concern.

[7] That is to say, I have assumed that if x and y are discernible from each other, then they are distinct from each other, and that if they are distinct from each other, then it is not the case either that x and y are identical to each other, or that x and y are indeterminately identical to each other.

[8] See section III.

[9] See section III.

[10] See his (1980, p. 114).

[11] See the last paragraph of section I of this paper.

Why think that these relevant predicates are incompatible? To sketch out one possible answer, I will say the following.[12] Objects that are identical to themselves possess clear identity and difference conditions. That is to say, we can clearly specify what makes, for example, a set the same set or what makes two sets distinct from each other. On the other hand, any vague object possesses clear difference conditions, on the one hand, but lacks clear identity conditions, on the other. That is to say, we can clearly specify what makes any two vague objects distinct from each other (e.g. not being at the same place at the same time, not sharing all properties, etc.). But a vague object is any object for which we have no clear criteria by which to determine its identity in the way that we can determine the identity of the set.

V.

Thus far it has been shown that if there are vague objects, then there are some things that are not identical to anything whatsoever. In this section I will argue that if there are such things as vague objects, then vague objects exist. More generally, I will argue that anything that is, exists.

Over the years a number of philosophers have thought that there are things that nevertheless do not exist.[13] The following passage from the writings of R.M. Sainsbury is typical. He wrote:

---

[12] My interest in this paper has been with the relationship between vague objects, or objects that are not identical to anything whatsoever, and truth-conditions for assertions of existence. I'm not terribly concerned with the issue of what makes vague objects vague. I provide this sketch for the benefit of the reader who is not familiar with the literature. One might also look at Michael Morreau's paper "What Vague Objects are Like."

[13] Notoriously, Meinong thought that even impossible objects have some kind of being, namely, Aussersein. For a much more sympathetic treatment of Meinong's views that he tends to get, see Reinhard Grossman's (1974, pp. 106-121). But other, much more mainstream, philosophers than Meinong also have thought that there are some things that nevertheless do not exist. Rene Descartes thought that some things, namely, finite substances, have less reality than other things, namely, infinite substance. See his (1996, pp. 24-36). Even Bertrand Russell in *The Problems of Philosophy* wrote of some things as having mere being and not full-fledged existence. See his (1988, p. 57). I argue against all of these views at once. There are no degrees of being. There are no kinds of reality. Everything that is, exists.

> One attempt to meet [difficulties encountered if one treats existence as a first-level predicate or property] involves distinguishing between being and existence. The category of being is wider, embracing plenty of non-existing thing, like Pegasus, The Golden Mountain, round squares, as well as the existing things like Ronald Reagan and Italy. The existential quantifier, expressed in English by 'There is', relates to the category of being, 'exists' to the narrower category of existence.[14]

Such a philosopher, then, might accept that there are vague objects in some sense, while denying that such objects exist. Vague objects, they might say, have not existence, or full-fledged existence, but vague existence. In my opinion, however, everything that is, at all, exists.

My argument is as follows. My uncontroversial first premise is that there are some things that exist. Let x be any one of them. Now, for the purpose of reduction, let us assume that there is some y that does not exist. So x exists and y does not. Let that be all that is meant when it is said that x and y are ontologically distinguishable from each other. Now if there are such things as x and y, then there is such a thing as the mereological sum of x and y (call it S). If S is the mereological sum of x and y, then there are the following four options to choose from. Either S is ontologically indistinguishable from x and y, which is absurd, for then S would be ontologically distinguishable from itself. Or S is ontologically distinguishable from both x and y, which leaves us on the slippery slope down to where everything is ontologically distinguishable from everything else. Or S is ontologically distinguishable from x alone. Or else S is ontologically distinguishable from y alone. But I submit that for anything that can be said in favor of either one of these latter two options, there is something equally valid that can be said in favor of the other one.[15] Thus, we face the following intractable situation. If we admit that there are such things as y that nevertheless do not exist, then we face four options, none of which are appealing, the two most plausible of which are impossible to chose between. Not surprisingly, in my opinion, the best option is simply to reject the original assumption that led us to the quandary in the first place, namely,

---

[14] See his (2001, p. 197).

[15] For instance, one might say that S is ontologically distinct from x but not y, because mereological sums are precisely the kinds of things that are ontologically distinguishable from existing things. But if that were so, then the world, that is, the mereological sum of everything would not exist.

the assumption according to which there is such a thing as y that nevertheless does not exist. Accordingly, I reject that assumption and conclude that everything that is, exists.

(One potential objection to my argument is that we cannot form mereological sums out of some things that are ontologically distinguishable from each other. But I can't imagine why this argument is not simply ad hoc. That is to say, if we admit things that nevertheless do not exist into our ontology, then we will want to refer to them, reason about them, etc. But mereology is just a logic for reasoning about things and their parts. Whose to say that non-existent things can't have parts, or can't be reasoned about using mereology? It seems that to open the door to such things, allows that they may be reasoned about in the same way we reason about other things.)

Everything that is, exists, then. So if there are vague objects, then vague objects exist. Similarly, if there are chairs, tables, people, quarks, numbers, possible worlds, winged horses, golden mountains, and round squares, then they exist, too. They may not exist around here, or they may be fictional or abstract. But, then again, location is a relation, being fictional or abstract are properties, whereas existence is a thing. Existence is everything and to exist is to bear a relation to it: to exist to is be a part of everything.[16]

[16] For more on the account of existence as the mereological everything, according to which to exist is to be a part of everything, see my unpublished paper "The Real Thing: an account of existence and the truth-conditions for assertions of existence." A copy can be made available upon request.

REFERENCES

Descartes, Rene:
Meditations on First Philosophy, edited by John Cottingham, Cambridge University Press, 1996.
Evans, Gareth:
"Can There Be Vague Objects?" in *Analysis* O 78; 38: 208.
Grossmann, Reinhardt:
Meinong, Routledge Press, 1974.
Kripke, Saul:
Naming and Necessity, Harvard University Press, 1980.
Morreau, Michael:
"What Vague Objects are Like," in *Journal of Philosophy*. Jl 02; 99(7): 333-361.
Russell, Bertrand:
The Problems of Philosophy, Oxford University Press, 1988.
Sainsbury, R.M.:
Logical Forms, Blackwell Press, 2001.

RYAN J. WASSERMAN

Framing the Debate over Persistence

1 Introduction

Endurantism is often said to be the thesis that persisting objects are, in some sense, 'wholly present' throughout their careers. David Lewis, for example, writes:

> Let us say something…*endures* iff it persists by being wholly present at more than one time. (1986, p.202)[1]

But this is a rather poor way to characterize the doctrine of endurantism, for it only invites the following question: what is it for an object to be wholly present at a time? As recent discussions have made clear, it is exceedingly difficult to provide an illuminating answer to this question.[2] In fact, Trenton Merricks (1999) has gone so far as to argue that the endurantist can only provide an answer to this question at the cost of accepting *presentism*, the doctrine that only the present is real. This is a rather startling conclusion, for I take that many theorists would like to both accept endurantism and reject presentism.

The goal of this paper is to provide a way of thinking about endurantism that does not rely on the mysterious notion of an object being 'wholly present' at a time. This will absolve the doctrine of endurantism from charges of obscurity or incoherence. It will also make clear that the endurantist is not committed to any controversial theses like the doctrine of presentism.

The outline of the paper is as follows. In sections 2-5, I consider a variety of views that one might have about the relation between temporal

---

[1] Similar characterizations of endurantism are given by Dau (1986: 464), Graham (1977: 309), Lombard (1986: 69-70), Markosian (1994: 244), Mellor (1981: 104), Rea (1998: 225) and Simons (1987: 175).

[2] See Hawley (2001), Hudson (2001), Marksosian (1994) and Zimmerman (1996).

extension and temporal parts. This discussion will lead to a precise characterization of endurantism (and the rival doctrine of perdurantism) in section 6. Finally, in section 7, I consider the question of whether my discussion provides the resources required to define 'wholly present'.

2 Strong perdurantism

To facilitate our discussion, I will first need to introduce some terminology.[3]

I take two notions as undefined: '*x* is a part of *y* at *t*' and '*x* exists at time (or temporal interval) *t*'. Let me say a bit about how I will be using this second primitive. Suppose *t* is the temporal interval corresponding to the career of some persisting object *o*. Then *o* exists at *t*, *o* exists at every sub-interval of *t* and *o* exists at every temporal interval that has *t* as a sub-interval. But *o* do *not* exist at any interval wholly distinct from *t*.

I next offer the following definitions:

(D1) *x* overlaps *y* at $t =_{df}$ there is some *z* such that *z* is a part of *x* at *t* and *z* is a part of *y* at *t*.[4]

(D2) *x* exactly occupies temporal interval $t =_{df}$ (i) *x* exists at *t*, (ii) *x* exists at every sub-interval of *t*, and (iii) *x* does not exist at any interval wholly distinct from *t*.

(D3) *x* is a temporal part of *y* at $t =_{df}$ (i) *x* is a part of *y* at *t*, (ii) *x* exactly occupies *t*, and (iii) *x* overlaps at *t* everything that is a part of *y* at *t*.

(D4) *x* is a proper temporal part of *y* at $t =_{df}$ *x* is a temporal part of *y* at *t* and $x \neq y$.

With these definitions in hand, we can state the doctrine of *strong perdurantism*:

---

[3] The terminology and definitions suggested here owe much to Sider (1997, 2001).

[4] In these definitions (and the commentary that follows) I restrict my attention to instants and, thus, I speak of *z* being a part of *y at t*. But all of these definitions can be easily amended so as to include talk of temporal intervals. One can say, for example, that *x* overlaps *y* at *or during t* just in case there is some *z* such that *z* is a part of *x* at *or during t* and *z* is a part of *y* at *or during t*.

> *Strong Perdurantism*: For any object *x*, if *t* is the temporal interval exactly occupied by *x* then, for every sub-interval of *t*, *t*-, *x* has a proper temporal part at *t*-.[5]

The strong perdurantist is a *strong* perdurantist in that he accepts the existence of *arbitrary* undetached temporal parts. The strong perdurantist claims that for *any* persisting object *o* and for *any* sub-interval *t* of the temporal interval exactly occupied by *o*, there exists some object that is a proper temporal part of *o* at *t*. And this will be the case no matter how discontinuous and gerrymandered that sub-interval may be.

Note that, as I have characterized it, one can accept the doctrine of strong perdurantism and, at the same time, deny that there are any temporally extended objects. So, for example, it is open for the strong perdurantist to deny the existence of temporally extended objects like the Eiffel Tower and Woodrow Wilson. Note also that one can accept the doctrine of strong perdurantism and, at the same time, deny that composition is unrestricted.[6] So, for example, the strong perdurantist can accept the existence of temporally extended objects like the Eiffel Tower and Woodrow Wilson without admitting that there is a mereological sum of such objects. Finally, note that strong perdurantism, as I have characterized it, is very similar to Theodore Sider's (2001) *Thesis of Temporal Non-Locality* and Peter van Inwagen's (1981) *Doctrine of Arbitrary Undetached Temporal Parts*. Both Sider and van Inwagen take their respective theses to characterize the doctrine of perdurantism. I will argue below (section 4) that this is a mistake – one that has led to an incorrect view about the relation between perdurantism and counterpart theory.[7]

---

[5] Strong perdurantists include Heller (1990), Hudson (2001), Lewis (1986), Quine (1960), and Sider (2001). Note that, in addition to accepting the doctrine of strong perdurantism, the perdurantist may claim that the doctrine in question is a necessary truth. This, I suppose, would make one a *super strong* perdurantist.

[6] On the thesis of unrestricted composition, see Lewis (1986: 212-13) and van Inwagen (1990: 74-80).

[7] Sider, at least, is aware that there are weaker versions of perdurantism available (1997: 204-5). Sider is also clear about the connection between these various versions of perdurantism and the counterpart theoretic analysis of *de re* modality (2001: 221-2).

3 Strong endurantism

Strong perduantism is the thesis that *every* persisting object has a proper temporal part at *every* sub-interval of the temporal interval that it exactly occupies. Strong *endurantism*, on the other hand, is the thesis that *no* persisting object has a proper temporal part at *any* of the sub-intervals of the temporal interval that it exactly occupies:

> *Strong Endurantism*: For any object *x*, if *t* is the temporal interval exactly occupied by *x* then there is no sub-interval of *t*, *t*-, such that *x* has a proper temporal part at *t*-.[8]

Here it may be enlightening to discuss a possible analogy between temporal extension and spatial extension. One question concerning the relation between parthood and spatial extension is this: are there (or could there be) any *spatially extended simples*?[9] A spatially extended simple would be an object that occupies an extended region of space (or, at least, a non-point-sized region of space) at some time while lacking any proper parts at that time. Such objects would seem to be quite bizarre, but this has not stopped some thinkers from finding a place for them in their ontology.[10] The point I would like to make is that, on the strong endurantist's way of looking at things, persisting objects are fundamentally analogous to spatially extended simples – such objects are what we may call *temporally extended simples*. A temporally extended simple would be an object that exactly occupies an extended temporal interval while lacking any proper temporal parts. This is exactly how the strong endurantist describes the persisting objects around us.[11]

---

[8] Strong endurantists include van Inwagen (1990), Rea (1998), Merricks (1999) and Zimmerman (1996).

[9] For a nice introduction to mereological simples and related issues, see Markosian (1998).

[10] It seems as if Epicurus and Newton, for example, both held that the fundamental objects of our world enjoy spatial extension. And, more recently, David Lewis (personal correspondence), Ned Markosian (1998) and Mark Scala (2002) have all endorsed the possibility of such objects. So it looks as if we have some reason to take the possibility of spatially extended simples seriously.

4 Moderate perdurantism

Between the two extremes of strong perdurantism and strong endurantism we have a variety of more moderate views about temporal extension and temporal parts. One way of marking the relevant distinctions here is to think about what these various views say about temporal extension and *decomposition*. Here it will be helpful to have a definition of 'decomposition' on hand:

> (D5) *T* is a decomposition of $x =_{df}$ (i) every member of *T* is a proper temporal part of *x* at some time, (ii) no members of *T* overlap at any time and (iii) the temporal interval exactly occupied by *x* = the temporal interval jointly exactly occupied by the members of *T*.[12]

The notion of 'joint exact occupancy' is to be defined as follows:

> (D6) The *x*s jointly exactly occupy interval $t =_{df} t$ is the union of all the intervals exactly occupied by one of the *xs*.

So, to say that a persisting object is subject to decomposition is to say that the object can be divided up, without remainder, into proper temporal parts.

The *moderate perdurantist* rejects the doctrine of strong perdurantism, but claims that there is a decomposition for every persisting object:

> *Moderate Perdurantism*: Strong Perdurantism is false but, for every persisting object *x*, there is some *T* such that *T* is a decomposition of *x*.

So, while the moderate perdurantist agrees with the strong perdurantist in claiming that every persisting object is subject to decomposition, he breaks with the strong perdurantist in denying that every persisting object is subject to *arbitrary* decomposition.

---

[11] To clarify: a temporally extended simple may not be mereologically simple in that it may have various *spatial* parts at different times. An object qualifies as a temporally extended simple just in case it lacks proper *temporal* parts.

[12] Compare with Zimmerman (1995: 62).

Once again, it may be helpful to think about the analogy to spatial extension. Let us suppose that the physical world is, at any time, completely decomposable into point-sized material simples. And let us add to this the claim that composition does not always occur. For illustrative purposes, let us follow Peter van Inwagen (1990: 81-97) and suppose that there exists a *y* such that the *x*s compose *y* at *t* if and only if the activity of the *x*s at *t* constitutes a life (or there is only one of the *x*s at *t*). On the picture suggested by van Inwagen, physical reality consists of material simples and certain fusions of those simples. The members of a particular class of simples have a fusion just in case their activity constitutes a life. The notion of what it is to 'constitute a life' is somewhat vague, but it is clear that the ontology suggested by van Inwagen includes things like persons, dogs and trees. In particular, I (currently) exist on this picture. So there is some set of simples, *S*, such that the members of that set (currently) compose me and there is some region, *r*, such that I (currently) exactly occupy that region. Consider now the sub-set of *S*, *S*-, whose members jointly exactly occupy the sub-region of *r*, *r*-, which we would normally take to be filled by my right arm. The activity of the members of *S*- does not constitute a life. On the picture currently under consideration, it follows that the members of that set do not have a fusion. In other words, it follows that I do not currently have a proper part at *r*- (strictly speaking, there is no such thing as my right arm).

The moderate perdurantist will say something very similar when it comes to temporal extension. Since the moderate perduranitst is committed to the claim that *every* persisting object is subject to decomposition, they will say that I, for example, am completely decomposable into instantaneous temporal parts.[13] That is, they will say that there is some set *T* that is a decomposition of me and is such that all of its members are instantaneous temporal parts. But the moderate perdurantist will also deny the existence of arbitrary temporal decompositions. As in the spatial case, this will be due to a restriction on composition. So, for example, suppose that there are some members of $T - o_1, o_2, \ldots, o_n$ – that do not have a fusion. Let *t* be the temporal interval jointly occupied by these objects. Given that the objects in question do not have a fusion, I do not have a proper temporal part

[13] Assuming that (i) time itself is ultimately decomposable into instants and (ii) objects are not 'temporally gunky'.

at *t*. Since I lack proper temporal part at one of the sub-intervals of the interval that I exactly occupy, strong perdurantism is false.

The foregoing discussion helps to bring out an important role for moderate perdurantism in the debate over the nature of persistence. One of the most familiar arguments against perdurantism, due to Peter van Inwagen (1981), begins with the claim that the perdurantist is committed to a counterpart-theoretic analysis of *de re* modality. The objector goes on to claim that counterpart theory is incorrect, so that perdurantism must be rejected. Here is van Inwagen:

> Take Descartes, for example. Let L be the temporal part of Descartes that occupied the last year of Descartes's existence. Let D-minus be the temporal part of Descartes that occupied the interval from Descartes's birth (or conception or whenever it was he began to exist) to the moment exactly one year before Descartes ceased to exist… In that case, obviously, D-minus and Descartes were not identical. But suppose, as seems possible, that Descartes had ceased to exist exactly one year earlier than he in fact did; or, if you like, suppose, as seems possible, that D-minus had not been "attached to L" or "continuous with L" (or however one should put it). What then would have been the relationship that held between D-minus and Descartes? What could it have been but identity? To suppose otherwise is to suppose that a thing might have had two improper temporal parts. But if D-minus and Descartes could have been identical, then there are two things that could have been one thing. (134-5)

As van Inwagen argues, the perdurantist who believes in the actual existence of D-minus is committed to the claim that that object could have been Descartes. But then one is committed to (something like) the counterpart-theoretic analysis of *de re* modality. Since van Inwagen rejects such an analysis, he concludes that perdurantism, in general, is unacceptable. The problem with this argument is obvious: the perdurantist need not be a *strong* perdurantist, so he need not believe in the actual existence of arbitrary temporal parts like D-minus or L. In other words, the idea that perdurantism entails counterpart theory results from ignoring the moderate perdurantist position and equating strong perdurantism with perdurantism *simpliciter*.[14]

[14] For a related discussion, see Heller (1993).

5 Moderate endurantism

So the moderate perdurantist denies the existence of arbitrary temporal parts while claiming that every temporally extended object is subject to decomposition. The moderate *endurantist*, on the other hand, rejects even this weaker claim:

> *Moderate Endurantism*: Strong Endurantism is false and it is also false that, for every persisting object *x*, there is some *T* such that *T* is a decomposition of *x*.

To illustrate one way in which the doctrine of moderate endurantism might be developed, let us focus on those theorists known, alternatively, as 'co-locationists', 'coincident entities theorists' and 'defenders of the standard account'.[15] To see why theorists of this sort are to be classified as *moderate* endurantists, let us consider a familiar puzzle of material constitution. Suppose that we have a lump of clay – hereby named 'Lump' – whose career begins at t_1. Suppose that at a later time, t_2, Lump is sculpted into the likeness of the biblical king David, giving us a statue – hereby named 'David'. And finally, let us suppose that Lump and David are simultaneously destroyed at some later time, t_3. We can now ask the following question: what is the relation between Lump and David? According to standard account, Lump and David are not identical since they differ in their *de re* temporal properties, *de re* modal properties and so on. But it is also part of the standard account that, during the interval from t_2 to t_3, Lump and David materially coincide.[16] In other words, David is a part of Lump during this interval and David overlaps during this interval everything that is a part of Lump during this interval. Moreover, David exactly occupies the interval from t_2 to t_3. It follows from (D3) that David is a temporal part of Lump during the interval in question. Since, on the standard account, Lump and David are distinct, (D4) tells us that David is a *proper* temporal part of Lump during this interval. So Lump has at least

---

[15] Advocates of this view include Lynne Rudder Baker (2000), Judith Jarvis Thompson (1998), and David Wiggins (1980).

[16] *x* materially coincides with *y* at *t* just in case every part of *x* at *t* is a part of *y* at *t* and every part of *y* at *t* is a part of *x* at *t*. It should be admitted that certain defenders of the standard account deny the claim that Lump and David, for example, share parts in this way. See, for example, Baker (2000).

one proper temporal part. Since the defender of the standard account claims that there are at least some proper temporal parts, they are committed to the denial of strong endurantism. But defenders of the standard account will also claim that Lump is not completely decomposable into proper temporal parts, for they will deny that Lump has a proper temporal part during the interval from t_1 to t_2. Since the defender of the standard account claims that there are at least some temporally extended objects that are not subject to decomposition, they are committed to the denial of moderate perdurantism. Hence, the defender of the standard account is a moderate endurantist.

6 Endurantism and perdurantism

At this point we have identified four different views concerning the relation between temporal extension and temporal parts: strong perduantism, strong endurantism, moderate perdurantism and moderate endurantism. How ought we to think about the general debate between endurantists and perdurantists? The answer, I take it, is fairly obvious: the perdurantist asserts, and the endurantist denies, that every temporally extended object is decomposable into proper temporal parts. In claiming that there is a decomposition for every persisting object, the perdurantist asserts that temporal extension requires temporal parts. In rejecting the claim in question, the endurantist severs the link between parthood and extension – the moderate and the strong endurantists both claim that certain objects in our world enjoy temporal extension without the benefit of temporal parts. So we have:

> *Perdurantism*: For every persisting object *x*, there is some *T* such that *T* is a decomposition of *x*.
>
> *Endurantism*: It is false that, for every persisting object *x*, there is some *T* such that *T* is a decomposition of *x*.

I believe that this method of characterizing the debate over persistence has several nice features to recommend it. First, if we frame the debate over persistence in the way that I have recommended, we do not have to invoke the problematic notion of an object being 'wholly present' at a time. The only two primitives required are these: '*x* is a part of *y* at *t*' and '*x* exists at *t*'. Since both parties to the debate require primitives of this sort, enduratism is no longer open to charges of obscurity or confusion.

Second, it should be obvious that my way of characterizing endurantism does not commit the endurantist to presentism, the doctrine that only the present is real. This is obviously a mark in favor of my proposal, since many theorists would like to both accept endurantism and reject presentism. Finally, it should also be clear that my way of characterizing perdurantism does not commit the perdurantist to a counterpart-theoretic analysis of *de re* modality. As argued in section 4, moderate perdurantism is consistent with the denial of counterpart theory and, obviously, moderate perdurantism is also consistent with my characterization of perdurantism *simpliciter*. All of this speaks in favor of the current proposal.

7 Defining 'Wholly Present'

My proposed characterization of endurantism does not rely on the notion of an object being 'wholly present' at a time. But one might wonder whether the foregoing survey can, in turn, shed any light on this concept. The purpose of this final section is to address that question.

Here is an initial idea suggested by our earlier discussion:

(D7) x is wholly present at $t =_{df} x$ exactly occupies t.

All parties to the debate should agree that (D7) captures one natural idea of what it is to be wholly present during a particular temporal interval. For, if an object exactly occupies a temporal interval, it exists at every subinterval of that interval while not existing at any other time not in that interval. Nonetheless, (D7) will obviously not serve the endurantist's purposes since objects are not wholly present in this sense at *every* moment during their careers.

Here is a second definition of 'wholly present' that is suggested by our discussion thus far:

(D8) x is wholly present at $t =_{df} x$ exists at t and x does not have a proper temporal part at t.

If an object has a proper temporal part during an interval, then there is a clear sense in which it is only *partly* present at that interval. The intuitive idea behind (D8) is that *wholly* present is the converse of *partly* present – an object is wholly present at a temporal interval where it exists if and only if it is not partly present at that interval. Given (D8), the strong perdurantist will say that there is a single temporal interval where a given ob-

ject is wholly present, the temporal interval corresponding to that object's entire career. Conversely, the strong endurantist will say that persisting objects are wholly present in this sense at *every* moment throughout their careers.

Unfortunately, (D8) yields the incorrect results for the moderate perdurantist. Suppose, with the moderate perdurantist, that I have some instantaneous temporal parts that do not have a fusion. Let *t* be the temporal interval jointly occupied by these objects. Given that the objects in question do not have a fusion, I do not have a proper temporal part at *t*. But I do exist at *t*. So, given (D8), it follows that I am wholly present at *t*. This, I take it, is an unwelcome result since the moderate perdurantist will want to say that I am wholly present at only one temporal interval – the temporal interval corresponding to my entire career.[17]

We can, however, easily amend (D8) so as to get around these kinds of problems:

(D9) *x* is wholly present at $t =_{df}$ *x* exists at *t* and *x* does not have a proper temporal part at any time other than *t*.[18]

Recalling our earlier example, the moderate perdurantist denies that I have a proper temporal part during *t*, the temporal interval that is jointly occupied by the instantaneous temporal parts o_1, o_2, …, o_n. But the moderate perdurantist does admit that I have proper temporal parts at times other than *t*. So (D9), unlike (D8), does not commit the moderate perdurantist to the claim that I am wholly present at *t*.[19]

---

[17] A further problem for (D8) arises in connection with the analogy between spatial and temporal extension that I have appealed to throughout this paper. Just as objects can be wholly present at a time, they can be wholly present at a place. Indeed, it does not seem as if we have two distinct relations here: there is but one relation – the relation of *being wholly present* – that relates objects to both times and places. If this is correct, and if we accept (D8), we should also accept something like the following: *x* is wholly present at region *r* just in case *x* exists at *r* and *x* does not have a proper part at *r*. But suppose, with van Inwagen, that the material simples that jointly exactly occupy the region we would normally associate with my right arm do not have a mereological sum. It follows that I do not have a proper spatial part at that region. But I do exist at that region. Given the spatial analogue of (D8), it follows that I am wholly present at that region. This is absurd, for I am not *wholly* present at the arm-shaped region in question.

[18] See Markosian (1994: 247).

Unfortunately, (D9) also fails as a perfectly general definition of 'wholly present', since it yields the intuitively incorrect results for the moderate *endurantist*. Consider once again the treatment of the Lump/David case offered by the defender of the standard account. According to such a theorist, David is a proper temporal part of Lump during the interval from t_1 to t_2. Thus, given (D9), Lump is not wholly present during the interval from t_2 to t_3.[20] But I have suggested that the standard account is to be classified as an *endurantist* view, a view on which Lump is wholly present throughout its career.

Where does this leave us? First of all, we have arrived at a definition of 'wholly present' that can be embraced by the strong perduratist, the moderate perdurantist and the strong endurantist alike. For such theorists, (D9) yields the desired conclusion that an enduring object is wholly present at every time within its careers and that a perduring object is wholly present at only one temporal interval – the temporal interval corresponding to that object's entire career. But we have also seen that (D9) is not a perfectly general definition of 'wholly present', since it does not fit well with the picture defended by the moderate endurantist. This is a rather disappointing result, but I prefer to put a positive spin on things: our failure at finding a perfectly general definition of 'wholly present' only underscores the advantages of doing without that problematic notion. That is, our failure here only serves to make more plausible the characterization of endurantism that was suggested in the previous section.[21]

---

[19] Similar reasoning applies, of course, to the spatial case.

[20] This objection is due to Ted Sider.

[21] An earlier version of this paper was presented at the 2002 Pacific Division meeting of the American Philosophical Association. I thank my commentator on that occasion, Gabriel Uzquiano. Thanks also to John Hawthorne, Kris McDaniel, Mark Scala, Ted Sider and Dean Zimmerman for helpful discussion.

ABSTRACT

Endurantism is often said to be the thesis that persisting objects are 'wholly present' whenever they exist. This invites the question of what it is for an object to be wholly present at a time. As recent discussions have made clear, it is exceedingly difficult to provide an illuminating answer to this question. In fact, Trenton Merricks (1999) has gone so far as to argue that the endurantist can only provide an answer to this question at the cost of accepting *presentism*. The goal of this paper is to provide a way thinking about endurantism that avoids mysterious primitives and unwanted ontological commitments.

REFERENCES

Baker, Lynne. (2000) *Persons and Bodies: A Constitution View* (Cambridge: Cambridge University Press).

Dau, Paolo. (1986) "Part-Time Objects," in P.French, T. Uehling, and H Wettstein (eds.),*Midwest Studies in Philosophy11* (Minneapolis: University of Minnesota Press).

Graham, George. (1977) "Persons and Time," *Southern Journal of Philosophy* 15: 308-15.

Hawley, Katherine. (2001) *How Things Persist* (Oxford: Clarendon Press).

Heller, Mark. (1990) *The Ontology of Physical Objects: Four Dimensional Hunks of Matter* (Cambridge: Cambridge University Press).

Heller, Mark. (1993) "Varieties of Four Dimensionalism," *Australasian Journal of Philosophy* 71: 47-59.

Hudson, Hud. (2001) *A Materialist Metaphysic of the Human Person* (Ithaca: Cornell University Press).

Lewis, David. (1986) *On the Plurality of Worlds*. (Oxford: Basil Blackwell).

Lombard, Lawrence. (1999) "On the Alleged Incompatibility of Presentism and Temporal Parts," *Philosophia* 27: 253-60.

Marksosian, Ned. (1994) "The 3D/4D Controversy and Non-Present Objects," *Philosophical Papers* 23: 243-249.

Marksosian, Ned. (1998) "Simples," *Australasian Journal of Philosophy* 76: 213-226.

Mellor, D.H. (1981) *Real Time* (Cambridge: Cambridge University Press).

Merricks, Trenton. (1999) "Persistence, Parts and Presentism," *Nous* 33: 421-438.

Quine, W.V.O. (1960) *Word and Object* (Cambridge, MA: MIT Press).

Rea, Michael. (1998) "Temporal Parts Unmotivated," *Philosophical Review* 107: 225-260.

Scala, Mark. (2002) "Homogeneous Simples," *Philosophy and Phenomenological Research* 64: 393-397.

Sider, Theodore. (1997) "Four-Dimensionalism," *Philosophical Review* 106:197-231.

Sider, Theodore. (2001) *Four-Dimensionalism: An Ontology of Persistence and Time* (Oxford: Clarendon Press).

Simons, Peter. (1987) *Parts: A Study in Ontology* (Oxford: Oxford University Press).

Thomson, Judith. (1998) "The Statue and the Clay," *Nous* 32: 149-173.

van Inwagen, Peter. (1981) "The Doctrine of Arbitrary Undetached Parts," *Pacific Philosophical Quarterly* 62: 123-137.

van Inwagen, Peter. (1990) *Material Beings*. (Ithaca: Cornell University Press).

Wiggins, David. (1980) *Sameness and Substance* (Cambridge, MA: MIT Press).

Zimmerman, Dean (1995) "Theories of Masses and Problems of Constitution," *Philosophical Review* 104: 53-110.

Zimmerman, Dean. (1996) "Persistence and Presentism," *Philosophical Papers* 25: 115-126.

ADOLF RAMI

Why the Minimalist Cannot Reduce Facts to True Propositions

Paul Horwich aims to capture the major claims of what he calls the *correspondence intuition* by means of his minimal conception of truth. In his view, the correspondence intuition can be characterized as follows:

> ... minimalism ... does not deny that truths do correspond – in some sense – to the facts; it acknowledges that statements owe their truth to the nature of reality; [..] It is indeed undeniable that whenever a proposition or an utterance is true, it is true because something in the world is a certain way – something typically external to the proposition or utterance.[1]

According to this quote, the correspondence intuition consists of at least two claims:

> (1) Truths correspond (in some sense) to the facts.
> (2) Statements owe their truth to the nature of reality.

The first claim is a vague and intuitive formulation of the essence of the correspondence theory of truth. The second claim expresses a more general intuition. It represents an intuitive version of the so-called truthmaker principle, which claims that truths are made true by portions of reality.

Horwich is aware of the fact that it is necessary to give (1) und (2) a *specific* interpretation to be able to capture the correspondence intuition on the basis of the minimal conception of truth. Not every possible interpretation of (1) and (2) is compatible with the minimal conception of truth.[2] Horwich expresses this fact as follows:

> The correspondence conception of truth involves two claims: (1) that truths correspond to reality; and (2) that such correspondence is what truth essentially is.

---

[1] Horwich (1998, p. 104).

[2] A strategy to capture intuition (2) from the minimalist point of view is presented in McGrath (2003).

> And the minimalist response [..] is to concede the first of these theses (properly understood) but to deny the second.[3]

Therefore, it is necessary for the minimalist to find an interpretation of (1) that is compatible with the claim that the correspondence to reality is *not* what truth essentially is. Horwich assumes that this goal can be achieved if we interpret (1) as follows:

(1') True propositions (=truths) are identical with facts.[4]

Is that a promising strategy? It depends on whether the identification of truths with facts can (i) be carried out and is (ii) compatible with the minimal conception of truth. I will argue that both is not the case. There are indeed several possibilities to identify true propositions with facts. But either this strategies cannot be carried out in an adequate way or they are not compatible with the minimal conception of truth. Therefore, Horwich's strategy fails to capture (1) by means of the minimal conception of truth.

From the deflationist point of view, the reduction of facts to true propositions seems to have certain merits. It provides ontological economy and it *deflates* the concept of fact. For instance, if facts are identical with true propositions they cannot have the explanatory function that a correspondence theorist claims them to have. According to Julian Dodd, who thinks that a certain variant of the identification of facts and true propositions can be carried out and is compatible with the minimal conception of truth, these two aspects of the identification of true propositions with facts are the major motivations for the reduction of facts to true propositions:

> The most powerful motivation for identifying facts with true thoughts is that of ontological economy.[5]

> … the modest identity theory constitutes a response to an error made (about the nature of facts) by correspondence theorist, and it is his role which requires use of the concept of identity. [..] Deflationism can only be argued for effectively once the correspondence theory has been dismantled.[6]

---

[3] Horwich (1998, p. 116).
[4] According to Horwich, the primary bearers of truth are proposition; (Horwich (1998, p. 16; p. 129; p. 133)).
[5] Dodd (2000, p. 81).
[6] Dodd (2000, p. 126; p. 128).

A successful identification of true propositions with facts requires the satisfaction of two conditions: It must be compatible with our basic intuitions and assumptions about the nature of propositions *and* about the nature of facts.

There are, I think, three types of conceptions of propositions that seem to be worth considering in connection with a reduction of facts to true propositions: (a) conceptions of propositions that regard propositions as concrete entities (=as constituents of reality), (b) conceptions that regard propositions as abstract entities that contain constituents of reality, and (c) conceptions that regard propositions as abstract entities that contain no constituents of reality. I will now discuss the reduction of facts to true propositions in a threefold way: I will choose one example of each of the three distinguished types of conceptions of propositions to demonstrate that a reduction of facts to true propositions can either not be carried out in an adequate way or is incompatible with minimalism.

Let us start with a conception of propositions of type (a). This conception regards propositions as states of affairs (according to Armstrong). For Armstrong an (obtaining) state of affairs is nothing else than the instantiation of a universal by an object (or the instantiation of an n-place relation by n objects).[7] Is it possible to identify true propositions with facts on this basis? Two problems seem to speak against this possibility. The first problem concerns false propositions, the second negative facts.

If we regard a true proposition as the instantiation of a universal by an object (or the instantiation of an n-place relation by n objects) what are false propositions against this background? A realist about possible worlds seems to be able to explain what contingently false propositions are against this background: a contingently false proposition (in the actual world) is the instantiation of a universal by an object (or the instantiation of an n-place relation by n objects) in at least one possible world that is not identical with the actual world. But the realist about possible worlds cannot explain what necessarily false propositions are on the same basis. An actualist about possible worlds can neither explain what contingently false propositions are, nor what necessarily false propositions are. He might try to regard false propositions as ordered n-tuples of objects and universals or relations. But firstly this strategy presupposes an abstract realism about universals, and secondly it cannot accommodate all false propositions, be-

[7] Armstrong (1997, p. 115f); Dodd (2000, p. 2-14).

cause there are some false propositions which are about objects that do not exist in the actual world.[8]

As similar point is made by Dodd:

> Neither can states of affaires serve as propositions, for the simple reason that such an account of propositions is unable to leave room for a proposition's being false.[9]

Negative facts as well seem to be a problem of this first kind of identification of facts with true propositions. The true proposition that snow is not yellow is not identical with any (obtaining) state of affairs in the actual world. (The only colour-property that is instantiated by snow is the property of *whiteness*.) Therefore, it seems to be not a fact that snow is not yellow on the basis of the identification of obtaining states of affairs with facts. But it is a fact indeed. Therefore, there seems to be no plausible way of capturing negative facts on the basis of the identification of states of affairs with facts. The first cited kind of an identification of true propositions with facts is inadequate because of the mentioned two reasons.

As an example of a conception of propositions of type (b) we may choose so-called Russellian propositions. Russellian propositions are normally regarded as ordered n-tuples that contain, if they are ordered pairs, an object and a property, and if they are n>2-placed tuples, they contain n objects and an n-placed relation. Almost for the same reasons as the identification of states of affairs with facts, the identification of Russellian propositions with facts is problematic. It seems impossible to explain what false propositions are if we treat propositions as Russellian propositions. Because Russellian propositions are abstract entities, there seems to be no way either for an actualist or for a realist about possible worlds to explain what contingently false propositions are *ontologically*. The only and very crude way for the realist about possible worlds to accommodate this problem would be to supply the constituents of Russellian propositions with an index that explains in which possible world they exist or are instantiated. Only then, it seems possible for the realist about possible worlds to explain the difference between a contingently false and a contingently true Russellian proposition. A contingently false proposition would then be a proposition that contains objects, a property or a relation, that exist or are instanti-

[8] See: Dodd (2000, p. 66-70).
[9] Dodd (2000, p. 113).

ated in a possible world that is not identical with the actual world. But the problem with this strategy is that nearly every object exists in more than one possible world, nearly every property is instantiated in more than one possible world. And that means that nearly every Russellian proposition is true in more than one possible world. Therefore, the strategy of indexing the constituents of Russellian propositions as entities of a certain possible world seems to be an arbitrary or hopeless procedure. Therefore, if we treat propositions as Russellian propositions then there seems to be no way of explaining what either contingently or necessarily false propositions are.

Negative facts confront the identification of true Russellian propositions with facts with a second unsolvable problem. In the actual world, it is a fact that snow is not yellow, but there is no true Russellian proposition that could be identified with this fact; (because there is no property of being not yellow.) Therefore, we cannot accomplish the identification of true propositions with facts on the basis of a Russellian conception of propositions.

After showing that two apparently possible kinds of identification of true propositions with facts cannot be accomplished, I will now demonstrate that although the third kind of identification of true propositions with facts can be carried out in an adequate way, as Dodd already pointed out, this conception however is not as Horwich and Dodd think compatible with minimalism. We may choose so-called Fregean propositions as an example of propositions of type (c). Fregean propositions can be treated in analogy to Russellian propositions as ordered n-tuples. The difference between Russellian propositions and Fregean propositions concerns the constituents of the propositions. While Russellian propositions contain objects, properties and relations as constituents, Fregean propositions contain only senses (or concepts) as constituents: senses of singular terms, predicate terms, relational terms etc. On the basis of identifying Fregean propositions with facts, it is no problem to explain what false propositions are and to constitute negative facts. But this kind of identification has a different problem that concerns its compatibility with minimalism. How can the difference between true and false Fregean propositions be explained? I will now show that the truth or falsehood of a Fregean proposition cannot be explained on the basis of an intrinsic property of such a proposition. And this fact has negative consequences for the compatibility of this third identity conception with minimalism. Let us demonstrate this by means of an example. The proposition that snow is white is true. The proposition that snow is yellow is false. Which fact explains the difference in truth-value

between these two propositions. Both propositions contain only senses (or concepts). But it does not only depend on the senses (or concepts) a proposition contains whether it is true or false. There must be some property beyond those and therefore an extrinsic property of a Fregean proposition that explains the difference. A similar point may be made by considering a further example. In the actual world it is a fact that snow is white and therefore the proposition that snow is white is true. But the actual world might be such that it is not the fact that snow is white. And therefore the proposition that snow is white would not be true. But the proposition that snow is white has the same intrinsic properties if snow is white as it would have, if snow would not be white. Therefore, it must be an extrinsic property that explains the difference between the truth and falsity of a Fregean proposition. And this is not only true of Fregean propositions as we conceived them; it is true of all propositions of type (c). It is not a matter of the intrinsic properties of abstract entities whether a proposition is false or true. And propositions of type (c) are and contain only abstract entities. The truth of such propositions depends on an extrinsic property and therefore partly on the existence of entities that exist independently of these propositions.[10]

In how far is our conclusion that the difference between true and false abstract propositions can only be explained on the basis of an extrinsic property a problem for the compatibility of the third mentioned kind of identification of true propositions with facts with minimalism? Minimalism holds two central theses: (A) The property of truth cannot be reductively defined (and has therefore no underlying nature).[11] (B) The property of truth is not an extrinsic property (that might obtain between truthbearers and so-called truthmakers)[12]. But if the difference between true and false abstract propositions can only be explained on the basis of an extrinsic property then the property of truth of such a proposition can be *reduced* to an underlying extrinsic property. And therefore the *underling nature* of the property of truth of such a proposition is constituted by an extrinsic property (that might obtain between bearers of truth and so-called truthmakers). We may therefore conclude the following: Horwich argues that (1) is compatible with deflationism if it is interpreted as (1'). As we have seen two of three possibilities to reduce facts to true propositions cannot be carried out in an adequate way. And the third kind of identification of true proposi-

[10] See: Dodd (2000, p.72-74; p. 123-128).
[11] Horwich (1998, p.5; p.120f; p.125; p.138; p.142. p.145).
[12] Horwich (1998, p. 2; p.105f; p. 116; p.141f).

tions with facts is incompatible with minimalism. Therefore it is not possible for the minimalist to reduce facts to true propositions and to capture the intuition (1) on this basis.

REFERENCES:

Armstrong, David M. (1997): A World of States of Affairs, Cambridge: Cambridge University Press.

Dodd, Julian (2000): An Identity Theory of Truth, London: Macmillan Press.

Horwich, Paul (1998): Truth, 2nd Edition, Oxford: Clarendon Press.

McGrath, Matthew (2003): "What the Deflationist May Say About Truthmaking", in: Philosophy and Phenomenological Research, 66, pp. 666-688.

D. W. MERTZ

The Nature and Necessity of Composite Simples, E.g., Ontic Predicates

I. Introduction

Over the history of philosophy entities of a number of kinds have been declared *simple* in their being, and, correlative with this, fundamental in some ontological sense. These include God, souls, (at least some) intensions or universals (e.g., Red^1), ontic predicates both as substantial forms or unit attributes (e.g., Red^1_1, Red^1_2,…, whether conceived as predicable instances or 'substance-like' tropes), individuating 'bare particulars', spatial points and temporal instances.[1] As typically defined an entity is simple if it *has no proper parts*, *is non-composed*, or *is (actually) undivided and (potentially) indivisible*. Yet, with the exception of simple universals, entities of the above kinds have been analyzed as having *essential but distinct 'aspects'* (controversially so for bare particulars[2]), and this would seem to imply real and internal composition. For example, God is traditionally treated as the coalescence of divine attributes (omniscience, omnipotence, goodness, etc.) and, under the Christian Trinitarian doctrine, identical with three Divine Persons. More generally and found in the tradition has been the thesis that the 'principles of substance'—form and matter—as they compose at least some substances (e.g., Socrates), are one or both simples with yet the dual aspects of being unrepeatable particulars or individuals (e.g., individuated souls, the prime matter of each material substance) having repeatable or universal essences or natures (e.g., Humanity, Non-repeatability). A like analysis was commonly extended to all predicable attributes—properties, accidents, and relations (when admitted)—where each, e.g., this red (Red^1_i), is assayed as a simple ontic predicate composed jointly of an individuating ('thisness') aspect and qualitative/intensional ('suchness') aspect (e.g., Red^1). Unit attributes, particularly in the more telling polyadic form of relations, will be central to the analysis below. Similarly for non-extended simple spatial points that are at best tropes, each with an unrepeatable aspect together

with a repeatable spatial-, extension-relevant qualitative essence necessary to non-arbitrarily found the spatial relations that have them as relata. Likewise for temporal instances. Given, then, any of the above distinctions, it has seemed evident to some philosophers that the 'simples' to which they are attributed must each have an internal or constituent metaphysical diversity necessary to found the distinction, and thus in a strict sense be non-simple. For, the argument would go, if an entity *x* has even one constituent that is not identical with it, then *x* is an ontological composite. And crucially, if *x* is a composite then, *prima facie*, it must have a real internal differentiation and so inherent division—a discreteness/diversity of parts precisely as they each contribute to the reality of the whole—which would render *x* not simple. This would certainly seem to be the case for wholes whose composition included multiple *individuals* or *particulars*, i.e., unrepeatable entities, as, for example, physical wholes like a wall of stacked stones, or abstract wholes such as the natural number 3 together with its properties as instances: Prime^1_i, Odd^1_j, etc. With this and the further assumption that all entities whatsoever and at any level of analysis are individuals, what is the defining thesis of nominalism, then all composites would be non-simple.

What the above argument denies as a premise is the possibility of an entity with a 'virtual differentiation' of constituents, i.e., an entity where there are non-identical constituents but no inherent divisions or 'ontic discontinuity' marking this non-identity. Stated otherwise, denied is an entity that can have an internal non-identity/distinctness of multiple constituents yet among which there is no numerical differentiation/discreteness as they jointly constitute the whole. If to the contrary there were such an entity then any actual differentiation of constituents could only be 'external' and the result of an act of cognitive abstraction, what has been called in the tradition a 'formal distinction'. A principal source of the formal distinction was and is the analysis of entities held to be composed of both repeatable (intensional, qualitative) and unrepeatable (individuating, particularizing) aspects, what would be every entity whatsoever, with the sometimes posited but bogus exceptions of bare particulars at the one extreme and at the other entities treated as bundles of only repeatable properties. William of Ockham, for example, characterized an entity with supposed formally distinguishable aspects as one where of the constituents "while there are not two things, one is not formally the other."[3] Ockham held the impossibility of such a composite,

saying that "In created things there is no such thing as a formal distinction. All things which are distinct are really distinct and therefore, different things."[4] What I take Ockham to imply by the 'distinct-implies-really-distinct' requirement on constituents is that *distinct* means *discrete* in the sense of a separation or division inherent to the whole. The clarification below is that all internal division is marked by the requirement that one of the constituents have the special causal status of agent unifier among the remaining constituents (e.g., in the tradition a substantial or accidental form) in order to bridge the division and effect what is a manifold whole. In supposed composites whose constituents are only formally distinct there would be no 'ontic distance' between yet distinct constituents that would require an agent unifier to bridge. But on Ockham's and like philosophers' view, lack of 'ontic distance' implies a coinciding identity and so the absence of real composition. Ockham's view is maintained in contemporary ontology by Herbert Hochberg[5] and J. P. Moreland[6].

The opposing thesis recognizes formal distinctions or 'distinctions of reason that have foundations in things' (*a parte rei* = in reality), what are intermediate between 'real distinctions' on the one side and 'merely conceptual distinctions' on the other, the latter having no extra-conceptual bases.[7] With a formal distinction there is a differentiation—a rendering discrete—by intellectual separation of what is founded in and is partial to a fuller reality undifferentiated *in se*—the internally simple subject of selective abstraction. The recognition of the distinction and concomitant entities, or 'aspects', are found in the Scholastics, e.g., with the *distinctio formalis a parte rei* of John Duns Scotus or the *distinctio rationis rationcinatae* and 'modal distinction' of Francisco Suarez and others, a distinction advocated in contemporary ontology by, e.g., Keith Campbell, D. M. Armstrong, and myself.[8] Allowed here are entities that are both in some sense simple—internally undivided—and in some sense composite—having non-identical parts. Scotus advanced the formal distinction in the context of a theory of the union between the repeatable nature (e.g., Man) and the unrepeatable 'individual difference' or '*haecceitas*' ('thisness') that jointly compose a particular (e.g., Socrates). Suarez denied any such distinction in this context but pointed out its necessity between the 'mode' of inherence or *union* of a property and the property (specifically, the intension) as the latter is ontically predicable of a subject.[9] Foundational to the following analysis I shall rehearse an argument of how these contexts are, in fact, the same—that what is ontically predicable is by that very fact

unrepeatable, and that though this unifying and particularized aspect is not discrete/divided from a concomitant intension or quality that delimits its agency, neither is it identical to it. Clarified here will be both the necessity for and the nature of the formal distinction in a context in which it continues to be debated: the nature of the union or nexus between the qualitative and individuating aspects of particulars, what historically has been confused by some with the union between subject individuals and their ontic predicates treated as universals. A clarifying thesis argued herein is that ontology's basic particulars are ontic predicates themselves, where each is a union of what are the formally distinct aspects of a qualitative intension and a combinatorial/unifying act among an *n*-tuple of subjects, the latter being as such unrepeatable, i.e., an individuating aspect. Out of the related analysis there will arise a clarification of our pre-critical concepts of the simple, complex, and composite.

Specifically, it will be argued below that the obscurities concerning the concepts of simple and composite, and relatedly of the formal distinction, turn on a failure to distinguish between two types of wholes. These are: a) the commonly recognized and pervasive plural wholes of joined yet discrete elements, what are *complexes* (*structures, systems*), but what here will be more descriptively termed *articulated composites*, and b) theoretically necessitated non-articulated and internally non-differentiated wholes of yet identity-preserving proper constituents, wholes whose assay is more subtle and what are accurately termed *continuous composites*. Both types of wholes are 'composed' but in distinct ways with the result that complexes are non-simple whereas non-articulated composites are simple. The primary analytic tool for clarifying both types of composites will be the predicable unit attribute, or 'relation instance', R^n_i, what I have assayed in detail elsewhere as, succinctly, an *individuated intensioned ontic combinator*.[10] Outwardly, when combinatorial (ontically predicable) among one or more subjects, an instance R^n_i is the unifying cause (both 'formal' and 'material') of a resultant *atomic* articulated composite, i.e., a fact or state of affairs, and when conjoined with other relation instances via shared relata is a contributing cause of more complicated structures, this up through hierarchies of complexes that constitute the ordinary objects of experience and of science (e.g., an atom, a living body, the universe, the Natural Number System). A complex is 'articulated' at relata, the 'joints', where the relation instances, the 'connecting rods', meet. Directed externally, relation instances have the ontic role of effecting unity-at-a-

distance, i.e., unity among the yet discrete. This analysis explains the fact of structure, what in the Aristotelian tradition and there under the 'tyranny of the monadic' was simply made the effect of a posited 'principle'—monadic *form*, substantial or accidental. The analysis overturns classical and retarding assumptions concerning unification and the nature of polyadic relations, viz., that all elements making up a structured whole must share a *single unifier* as the cause of their collective unity, and, concomitantly, that all ontic predication is *monadic* in intension.[11] Relatedly, relation instances as individuated agent unifiers provide, I propose, non-trivial answers to the Special and General Composition Questions made popular by Peter van Inwagen: respectively, Under what conditions does composition (among the discrete) occur?, and What is composition (among the discrete)?[12] Contrary to what some contend, (articulated) composition is not just a brute fact: the concepts of the so-called 'mereological circle'—of part, sum, and composite—can be analyzed in terms outside of the circle, and this in a way that explains how some entities and not others are 'fastened together'.[13] Indeed, it is not difficult to theorize how a single category of relation instances can effect or 'boot up' all of physical and cognitive reality, starting at what is said to be the purely relational nature of quantum reality—physical simples are instances of quantum and spatial/temporal relations.[14] In a strict and ultimate sense, reality is 'all in the arrangements'. I shall not rehearse the arguments for these extended claims, referring the reader to the given references.

What is relevant herein and founds the above claims is that the analysis demonstrating that, as ontic predicates, relations (including properties in the limiting case) are outward agent combinators, and are individuated as such, also implies an inward nature for relation instances of composite simplicity. Crucial here is the perennial and contradictorially interpreted regress now known as Bradley's Regress.[15] The insight is that relation instances are each 'simple' in more than the crude pre-critical mereological sense of being non-composite. That is, we must give up the naïve definition: x is simple $=_{df}$ x has no proper parts. Observed in the limiting case of monadic properties as far back as Scholastic ontology, a relation instance R^n_i of any polyacity is necessarily assayed as a *continuous composite* of cognitively distinguishable but not discrete constituents, the latter being the correlative aspects of an unrepeatable combinatorial agency (indicated by the subscript 'i') and a specific and delimiting intensional

content, R^n (the superscript indicating the number of subjects required jointly for the intension to characterize, what is specified by the intension itself). The uniqueness of the unifying act of a relation instance as predicable of its relata is precisely the 'thisness' (*haecceitas*) aspect distinguished but unexplainable in traditional ontology. In the following it will be explained how it must be the case that, though such a whole is internally undifferentiated, the identities of each of the constituents as constituents are maintained in their full and essence-specific realities, and so the whole is properly a composite. In other words, though such a whole is not a plurality of articulated parts, neither is it homogeneous—it is not the same throughout. It has been called to my attention that such an analysis was one of the "fundamental innovations" by Gustav Bergmann in his posthumous *New Foundations of Ontology* (1992), where he asserts "A simple is a conjunction of two: one is an ultimate sort [certain intensions]; the other an item [an individual]."[16][my inserts] He implies that this composite is nevertheless 'simple' because the ultimate sort and item components are "totally 'inseparable'" in the sense that it is a "'combination'" but where there is no "tie" to hold them together. This is apparently why such composites are "for good reasons called simples"[17], and deserving of the special designation as each a "Two-in-One".

To anticipate, a heuristic analogy for grasping the concept of a composite simple would be a colored disk whose color differs continuously left to right from red through yellow to green, as in a non-segmented, seamless spectrum color wheel, one of the types used to teach art. The coloring of the whole is not homogeneous yet there are no internal boundaries marking numerically distinct regions of different colors. The disk is, phenomenally, a continuous composite and as such a simple entity. The unity of a continuous whole is a continuum of the yet distinct—a fusion without diffusion, a concretion without an identity-obliterating blending. Characterized as such, the unity of a continuous composite is to be distinguished from what some hold as the only alternative to articulated composition: the erroneous 'absolute unity' attributed by monists to the One. With such an entity the blending of any would-be initial elements is so absolute that the resultant 'reality' has *no composition*, no internal distinction or relations, and where, as Bradley observed, any differentiation by abstraction is necessarily falsification insofar as it supposedly marks a real distinction in the blend.[18] An analogy would be gray paint as the

resultant blend of white and black paint, and in which, phenomenally, the latter colors have ceased to exist.

Succinctly then, principal among the insights to be gained in the following are: a) The term 'simple' is properly defined as the absence of any internal differentiation or division—absence of discreteness of constituents or parts *qua* actually contributing to the being of the whole, as opposed to only external differentiation in the intellect by abstraction. b) Discreteness of constituents, what characterizes an articulated whole, is marked by constituent interposing ontic predicates, i.e., relation (including property) instances. For, it is the nature of a relation instance as an ontic combinator existing 'between' and 'among' its distinct relata to be a rigid connector simultaneously bridging and presupposing/enforcing an ontic division of mutually differentiated and discrete subjects, the instance's character as an inter-subject unifier likewise rendering it differentiated and discrete from its relata. Hence, a necessary and sufficient criterion for an entity being simple is the impossibility of any constituent being ontically combinatorial of another constituent. c) There are entities that have non-identical constituents yet have no internal divisions since none of the constituents are themselves ontic predicates, e.g., relation instances. d) And hence, the term 'simple' is to be seen as not the contradictory of 'composite', but rather as equivocal between the non-composite or 'absolutely simple', e.g., the intension Red^1, and the composite, e.g., the relation instance Red^1_i, the latter properly termed the 'continuously simple'.

II. Historical Context: Realists vs. Nominalists on Continuous Composites

Historically, the controversy over the possibility of continuous composites stems directly from differing accounts of ontology's central *Triple Aspect Problem*[19]: How is it that apparently unrepeatable ('non-communicable') particulars (whether as ordinary 'substances', e.g., Socrates, or as individuated attributes, i.e., instances or tropes) can *possess* apparently repeatable ('communicable') qualitative contents or intensions that characterize them and make up part of their being? How an ontology interprets predicable 'possession' is correlative with its theses on what of the apparent unrepeatable and repeatable aspects of an entity are real. Every individual is of one or more kinds (types, categories), F, G, H,…, and it is as an individual that it is distinct from every other individual of

any kind, and being of kind F it is in some sense the 'same as', and so grouped as like, every other individual of kind F but distinct from every other individual of kind G contrary to F. That we understand this implies that we can at least cognitively distinguish between what is an individuating aspect and one or more qualitative contents or intensional aspects of individual entities. The question is whether there is a real and extra-conceptual distinction in the particular that corresponds to this distinction between abstractions? Essential to their positions, realists are required to admit such real distinctions *a parte rei*, whereas nominalists cannot allow them.

Realists advance a real distinction in recognizing constituent repeatable intensions, but differ on the nature of their union with what individuates the entity they characterize. The standard options exercised by realists have been to construe an ordinary 'thick particular', e.g., an apple, either a) as a bundle of property intensions, b) as intensions predicably attached to an underlying individuating substratum, what must be at some atomic level a bare particular, or c) as a fusion 'tighter' than any ontic predication between the intensional and individuating aspects of an entity. Classically the union described in b) was between a substantial form and prime matter, with all other properties and accidents predicably attached to the resultant substance. Options a) and b) require articulated composites, where for a) the constituent unifier is the posited 'Compresence^2' relation, and for b) the unification is provided either by the predication of the intensions themselves of the substratum, or, when the intensions are considered combinatorially inert, by the classic mediating relation of 'Exemplification^2' or 'Instantiation^2' linking them to the substratum. Option c) is, first of all, negatively motivated by strong arguments against a) and b). They are principally: Against a) there is the fact that any bundle of universals is itself universal and so cannot account for a particular's unrepeatability. Further, bundle theory implies that the Principle of the Identity of Indiscernibles is a necessary truth.[20] Against b) is the following argument. In the context of bare particulars an ordinary thick particular *a* is understood in such a way that at least the intensions P^1, Q^1, …, that are essential to the defining essence of *a* and are ontic predicates of *a*, i.e., where $P^1(a)$, $Q^1(a)$, …, are true, are constitutive of *a* in the sense that *a* is a complex whole consisting of P^1, Q^1, …, as each is non-predicably 'tied-to' the same individuating bare particular p_a, i.e., where it is true that Tied-to$^2(P^1,p_a)$, Tied-to$^2(Q^1,p_a)$, … Significantly, the Tied-to^2

relation implies non-ontic-predication, i.e., for every intension F^1, Tied-to^2(F^1,p_a) $\supset$ $\neg F^1(p_a)$. Now, bare particular p_a itself seemingly has properties essential to it, e.g., Unrepeatability^1, Simplicity^1, etc., so that propositions Unrepeatability^1(p_a), Simplicity^1(p_a), etc., are all true. But now the above analysis applies to particular p_a just it did to particular *a*, i.e., p_a is a complex consisting of intensions Unrepeatability^1, Simplicity^1, etc., tied-to some bare particular p_a', i.e., Tied-to^2(Unrepeatability^1,p_a'), Tied-to^2(Simplicity^1,p_a'), etc. And like before, Tied-to^2(Unrepeatability^1,p_a') $\supset$ $\neg$Unrepeatability^1(p_a'), and similarly for Simplicity^1, etc. Now, if $p_a \neq p_a'$, there results a vicious infinite regress of further and further bare particulars, p_a'', p_a''', … Alternately, if $p_a = p_a'$, then not only would we have the untoward situation of a bare particular being a constituent of itself, but also we would have contradictions such as Unrepeatability^1(p_a) and $\neg$Unrepeatability^1(p_a). The last defense is to say that bare particular p_a has no properties essentially, but this is to say that p_a has no essence/nature, and is thus *no*thing, i.e., it evaporates into incoherence.[21] A related and equally serious problem with bare particulars is their inability to found in a non-arbitrary manner relations (and thus properties) which have them as supposed relata.[22] An additional argument often brought against option b) is Bradley's Regress, though I contend its relevance is indirect: the regress has to do with the link between the combinatorial agency of ontic predicates and their controlling intensions, and the fact that this agency is unrepeatable makes it relevant here, what will be made explicit below. I shall also return below to arguments against bare particulars. The net effect of these arguments is to force realists to conclude that the union between a particular's individuator and its qualifying intensions is one not effected by an interposing ontic predicate, i.e., the union here is not that of an articulated composite. The contradictory nature of these aspects, i.e., unrepeatability vs. repeatability, prevents their identification and requires any entity they jointly make up to be composite, though with a union that can only be a fusion in the manner described above for a continuous composite. Armstrong, for example, concludes that "Obviously, we can and must distinguish between the particularity of a particular, on the one hand, and its properties (and relations), on the other. But it is a distinction without relation."[23] Other realists have called this tighter-than-predicational-unity a 'non-relational tie' (P. F. Strawson[24]) or 'nexus' (Gustav Bergmann, Herbert Hochberg[25]).

Prior to these contemporary views but in stronger and, I propose, more accurate and insightful terms, Scotus described this union between the formalities of a *natura* (*quidditas* ('whatness') or 'specific difference') and a *haecceitas* ('individual difference') making up a particular as a *per se* unity. Here the resultant intension/individuator whole is "one thing which is virtually or pre-eminently as it were two realities".[26] Elsewhere he asserts: "The whole to which this unity belongs is perfect of itself", the two aspects together being "*per se* one", i.e., intrinsically one.[27] In this sense the whole would be simple, what Scotus would seem to imply in distinguishing it in "kind", i.e., as a different species of simplicity, from the "perfect divine simplicity", where, because the attributes of God are each formally infinite, they can include *each other* "through an identity".[28] Importantly, Scotus is explicit in taking the intension/individuator union to be that of a *composite*, though different from composition "proper" which is between "'thing' and 'thing'".[29] As standard composition the latter is presumably of constituents that remain differentiated and discrete in making up a plural whole, an entity that emerges through the mutual contributions of ontically prior parts *qua* differentiated parts. That is, the external differentiation, discreteness, or otherness—as "'thing' and 'thing'"—of the parts from each other is as much a contribution to or a determinate of the essence of this type of plural composite as is the internal essences of the parts. The further insight urged herein is that a differentiation/discreteness of parts *qua* parts of a whole (a standard composite) mutually implies the existence of at least some parts being unifying ontic predicates among other parts of the whole. Scotus would seem to intimate this thesis when he says that "[ontically predicable] form is more principally that by which something is a [proper] composite than the matter is, so it is more principally that by which a composite is one."[30][my inserts] Succinctly, the point I would urge is that discreteness of parts requires a constituent combinator to bridge the ontic gap between them, and conversely, the absence of this unifier among yet distinguishable parts marks a non-standard composite. Prior to this insight and using Scotus' analytic tool of identity, in describing a whole of discrete parts it makes no sense to speak either of identity between the parts, or of the parts melded into identity in the whole. In contrast, Scotus asserts that the "less proper" composition between an intension and an individuator has these two "realities" as "*quasi per se* parts",[31] in the sense that it "includes both of them through an identity." According to Scotus this identity is not between the nature or intension and the individuating difference, but

between them and the including whole. Now, for this to be coherent the identity here can only be between each of these aspects and their respective distinct portion of what, as simple, is nevertheless a non-differentiated (non-divided) 'perfect' whole—what I have labeled above as a continuous composite. Here as with all composite wholes the constituents are ontically simultaneous with the whole, but unlike with articulated composites where the whole emerges from components connected or organized by one or more constituent ontic predicates, in a continuous whole the constituents emerge as differentiated/discrete from the whole as the result of external abstraction—the formal distinction. The analogy here is perhaps of two different visual perspectives on a single object, the different content of each representing in a partial way what in itself is one and the same continuous entity. There are no internal demarcations or ontic gaps between what would otherwise be differentiated parts as they make up the whole, and because of this 'non-otherness' among the parts *qua* parts Scotus was lead to describe their union in the whole in terms of 'identity' (*idem* = same) in the sense that 'sameness' is synonymous with 'non-otherness'. As unbroken and continuous the intension/individuator whole can yet be heterogeneous in having internal distinctions—non-identical constituents—as, say, among the colors in the above given example disk that continuously change from red to green across its surface. Though Scotus asserts it in a different context with a different sense, he would have its analog apply here: "[In some wholes] the distinguished [i.e., non-identical constituents] need not be absolutely diverse [discrete as parts]."[32][my inserts]

Nominalists, by contrast, reject the coherence of the very concept of a continuous composite, and, with the rejection of repeatable intensions under their defining thesis that every entity whatsoever is individual, are not theoretically pressured to posit such composites, or so they think. A nominalist can hold without apparent contradiction, and indeed must hold, the thesis that it is possible to make a cognitive distinction differentiating the particularity and qualitative content of a particular *x* and yet this differentiation of aspects correspond to no distinction intrinsic to *x*. That is, a viable nominalism must recognize an atomic ontic level of at least minimally thick particulars—particulars with some qualitative content—that yet have no composition *in re*. The view is explicit in Campbell's defense of nominalistic trope theory: "To avoid such elements [bare or 'thin' particulars], we must deny that in the ontic structure of an individual

is to be found any non-qualitative element."[33] Campbell states elsewhere: "We must construct an ontology which does not accord the particularizing role to one sort of being, while attributing sortedness (quality) to another. We require one item with both roles."[34] These atomic items—tropes—do not simply have natures or intensional contents, they are each a particularized nature but without a duality of being.[35] They are necessarily so in order to found the Resemblance^2 relation among some tropes and not others, and so in turn account for the fact that some tropes and not others are non-arbitrarily 'of the same kind'. The founded Resemblance^2 relation, e.g., as in the fact :Resemblance^2(Red^1_i, Red^1_j), is held to eliminate the need to posit with the realists a numerically identical characterizing constituent in each of the resembling tropes, e.g., Red^1 numerically the same in both Red^1_i and Red^1_j.[36]

Supporting the nominalists' necessary rejection of continuous composites is their appeal to both the pre-critical intuitiveness of the contradictory to Scotus' position that the distinguished do not have to be absolutely diverse or discrete, as well as the putative explanatory success of a nominalist ontology without continuous composites. Important here because of their explicit attention to the first claim are the medieval Scholastics Ockham and Suarez, Ockham a conceptual nominalist and Suarez a resemblance ('similarity') nominalist in the manner of Campbell.[37] For example, against Scotus' analysis Ockham assets that "In creatures there can never be any distinction outside the mind unless there are distinct things; if, therefore, there is any distinction between the natures and the difference, it is necessary that they really be distinct things."[38] And, "Therefore, one should grant that in created things there is no such thing as a formal distinction. All things which are distinct in creatures are really distinct and, therefore, different things."[39] Later and also in the context of criticizing Scotus, Suarez likewise asserts the contradictory of Scotus' thesis. He states, "All objects which we conceive as two entities are either really the same or are really other. If they are really other they are really distinct"[40], where by 'really distinct' he understands differentiated and discrete as "thing and thing"[41], as "two altogether separate things or entities"[42]. Succinctly then, what Ockham and Suarez are asserting is that any real distinction, any non-identity, internal to a single (created) entity *x* implies *x* is a plural entity of discrete parts. This implies on the extended analysis herein that to be composite at all is to be an articulated composite or complex in the above precise sense. But even

prior to this explication it implies that the individuating and qualitative aspects of a particular *x* cannot be distinct (non-identical) in *x*, for otherwise they would be differentiated and discrete in *x* and so requiring, on the one hand, the individuator be a bogus bare particular, and on the other and violating nominalist doctrine, that the intension be repeatable, i.e., a universal, since if it were unrepeatable *x* would have two individuators and hence be two particulars and not one. To the contrary, this latter observation together with the demonstration below that the individuator and qualitative aspects of an ontic predicate cannot be identical will be used to demonstrate the necessity of universals.

The fact that for a nominalist every composite whatsoever is a complex does not mean that the latter would have been defined by the above referenced nominalists (and on the argument below could consistently be defined by any nominalist) in the manner given in the introduction—as networks of entities linked by polyadic and thus interposing relations (even if the relations are treated as individuated attributes or tropes). Such a description was unavailable to Ockham and Suarez, and indeed to most Western philosophers up until recent times. The common assay of entities of yet discrete parts in the influential Aristotelian/Scholastic tradition specified that a single constituent be *in act* as a unifier, i.e., as a combinatorial *agent*, relative to the other constituents (patients) that are *in potency* to its agency (*Meta*. 1045a20-25, b16-21), what was identified as either a single substantial or accidental *form*.[43] As Aristotle rightly observed and the tradition concurred, an articulated whole, e.g., a syllable, flesh, a house, a property qualifying a subject, must have, in order to avoid Bradley's vicious regress, a constituent whose ontic role relative to the whole is other than that of just another element to be unified (*Meta*. 1041a6-b33, 1043b5-14; also see 1045a7-19, 1040b7-10). This constituent must have the nature of a *cause* or *principle* of the unity among the other elements relative to the whole—it must be an *agent unifier* interconnecting the other separated as differentiated elements. Significant however as a source of error, the form when unifying multiple subjects (e.g., secondary matter, as say bodily organs or parts of an artifact) was *never* conceived as a polyadic relation, this witnessed by the fact that forms were always monadic in intension (e.g., Man, House).[44] Though the act/potency account of articulated composites given by Aristotle was in a context where a modern would acknowledge real and interposing polyadic relations, for Aristotle and most of the tradition polyadic relations were

considered necessarily reducible to monadic properties of their relata, this reduction strategy pursued recently by Campbell.[45] Indeed, the distorted Aristotelian act/potency account is precisely the analytic residue of what is the agent-unifier (combinatorial) nature of relations erroneously reduced to single-subject properties of their relata. Specifically, a dyadic causal relation is taken as equivalent jointly to a monadic property of actuality in an agent correlative with a monadic property of potency in a patient. Telling of the error here is the necessity of using 'correlative' or synonymous terms which shows that there is no elimination of cross-subject linking, and for this to be non-arbitrary it cannot be a 'bare linking' and therefore it must be controlled by a polyadic intension. More on this below. The monadic reduction of relations was abetted by the equally insidious and classic containment or inherence model of ontic predication, where a subject is conceived as 'containing' its properties analogous to a jar holding its contents (e.g., Aristotle, *Meta*. 1023a7-16; *Cate*. 15b16-30). The model is plausible if ontic prediction is in every case (in every fact) the qualification of only a single subject, i.e., facts of the form $:P^1(a)$, *and* if what is indeed an inert non-unifying (non-predicable) intension P^1 is confusedly identified with the subsuming unifying predicate $P^1(x)$, for then there is no compelling reason why intension 'ontic predicate' P^1 is any more a unifier for fact $:P^1(a)$ than subject *a* would be. Further, given the maxim that 'Unity is by the (shared or common) unit or one', and the fact that multiple properties are unified together as they characterize a single subject *a*, it is easy to mistake this for proving that *a* is the cause of the unity with each of its properties (like a jar holding multiple stones). The temptation to error in this way is removed when multi-subject polyadic relations are recognized as real and irreducible, for in a relational fact $:R^n(a_1,a_2,\ldots,a_n)$ it is obvious that the polyadic predicate is what is the single 'common unit' among multiple subjects, and so by the maxim must be the cause of the unity effecting the fact. The *locus classicus* for demonstrating the irreducibility of polyadic relations to monadic properties is Bertrand Russell's arguments in *The Principles of Mathematics* (1903)[46], though the full ontological significance of the unreduced inter-relata linking nature of polyadic ontic predicates has yet to be generally appreciated.

Now immediately relevant and telling is the fact that, historically, the agent-unifier nature of ontic predicates was recognized in the limiting case of properties, and, ironically, even by Scholastic nominalists, e.g., Suarez and John Buridan, as forming with its concomitant intension what is

termed here a continuous composite. The two aspects were held to exist virtually and to be distinguished only formally by what was variously called a *distinctio rationis ratiocinatae* (a 'distinction of the reasoned reason'), a *distinctio ex natura rei* (a 'distinction from the nature of the case'), or a 'modal distinction'.[47] A modal distinction exits between an entity and its mode, a principal example given being between a property and its *mode of inherence* in a subject. The mode of inherence of a monadic attribute is its agent-unifier aspect as distinguished from its delimiting intension, and what provides the union of the latter with a subject characterized by the attribute. Buridan calls the causal means of inherence of a unit property a 'disposition', and asserts that "Concerning the whiteness and the stone I say that it is necessary that there be an added disposition so that the whiteness may inhere in the stone…", and that, on pain of Bradley's Regress, no further disposition is needed to connect the first disposition to the stone and the instance of whiteness.[48] Further, Buridan maintains that, though subjects and their properties (which he treats as particulars) can exist apart, not even God can separate the inherence disposition of a predicable property from the property (i.e., intension), for otherwise Bradley's Regress would result.[49] More developed in Suarez, he asserts, "In quantity, for example, that inheres in a substance, two aspects may be considered: one is the entity of the quantity itself [the intension itself], the other is the union or actual inherence of this quantity in the substance."[50][my insert] According to Suarez, here *a particular case* of inherence is a mode of the quantity, i.e., the *union* itself of a property (intension) with its subject is *unrepeatable*, a consequential insight to be developed below. The distinction is "in the real order" but "less than a real distinction", i.e., one "not so great as the distinction between two altogether separate things."[51] That this union between an entity and its mode is very similar to that of a continuous composite as characterized above is evident for Suarez's description: "A mode is not, properly, a thing or entity. Its imperfection is clearly brought out by the fact that it must invariably be affixed to something else to which it is *per se* and directly joined without the medium of another mode, as, for instance, sitting is joined to the sitter, union of the things united, and so of other cases…"[52] Specifically, then, for a property intension and its 'mode of inherence' in (i.e., its ontic predicability of) a subject, they are distinct but 'directly joined without the medium of another mode', i.e., without a further mode of what would be here at least a dyadic (relational) 'inherence'. Suarez also at least implies that if it were otherwise then

Bradley's Regress would result.[53] As 'directly joined' the two aspects are seamless and without ontic gap in the manner of a continuous composite, which stands in contrast to their being a composite of 'really distinct' constituents requiring as such a gap-bridging 'medium of another mode', i.e., an ontic predicate, what results in an articulated composite as defined above. In sum, the important thesis advanced by both Buridan and Suarez is that there are *two types of union involved in ontic predication*: one is the internal union between an intension and its unifying agency ('disposition' or 'mode of inherence') that is 'so tight' as to compose a single undifferentiated entity (i.e., an ontic predicate), and the other is the external union between the latter composite and a subject that is thus characterized/qualified, what jointly form a plural differentiated composite that is a fact. And, in forming such a monadic fact :P^1(*a*) (the only type then recognized), if the former union is confused with the latter, then the mode of inherence is taken as discrete from intension P^1 just as these two jointly are discrete from subject *a*, and this requires that the mode of inherence be either a dyadic unifier having P^1 and *a* as subjects, or that it be a predicably inert subject similar in ontic status in the fact to subject *a* and requiring a further mode of inherence for P^1 to join itself to the first mode of inherence. With polyadic unifiers disallowed, Buridan and Suarez were left to observe that confusing these two types of union precipitates a vicious regress of further and further presupposed (monadic) modes of inherence. The issues at play here will be made more transparent below.

III. The Nature of Ontic Predicates

The above historical survey has tied the existence and nature of continuous composites to both the problem of individuation and the nature of ontic predication. This is no accident, as we shall now see. For, ontic predication properly understood is an *intension-determined unifying agency*, and it is the combinatorial act here that is for ontology a *principium individuationis*, while in composing an ontic predicate the union between a specifying intension and its concomitant unification to and among subjects is that of a simple continuous composite. An ontic predicate is simple in the straightforward sense of having no internal divisions as evidenced by the absence of constituent agent unifiers, the latter otherwise correlative with plural composition and so internal differentiation.

There are, I shall argue, three principles that explicate the intension-relevant unity that is ontic predication. When generalized to predicates of any number of subjects these principles are as follows:

Principle I:

Constitutive of every fact :$R^n(a_1,a_2,\ldots,a_n)$, for $n \geq 1$, is an ontic predicate, $R^n(x_1,x_2,\ldots,x_n)$, that is the agent/cause of the character-izing predicable unity of itself with its relata, a_1, $a_2,\ldots$, a_n, a unification whose type is to result in a fact, as opposed to a list, set, or mereological sum.

Principle II:

Every ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ has as a constituent an intension R^n whose ontic role is that of delimiting or determining non-arbitrarily the possible *n*-tuples of relata, $<a_1,a_2,\ldots,a_n>$, that predicate $R^n(x_1, x_2,\ldots, x_n)$ can unify into a fact, but the intension of itself has no causal agency whatsoever as a unifier (it is 'predicably inert' or 'substance-like').

Principle III:

In addition to and distinct from intension R^n, there is constitutive of ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ its actual mode of union, its combinatorial or linking agency, among and to its subjects. The linking aspect of predicate $R^n(x_1,x_2,\ldots,x_n)$ is itself not a further intension in addition to R^n, but a *causal act of unification* that is 'joined' with intension R^n that controls its effects. This joining is the unity of a *continuous composite*, i.e., a union of two distinct entities without the agency of a further interposing ontic predicate or act of unification. Moreover, the unifying act of an ontic predicate is unrepeatable and particular, rendering the containing predicate an individual, i.e., a unit attribute.

The analysis that yields these principles starts first in broadest terms with the fact that a given of our experience is the existence of a myriad of structured wholes—articulated composites—each as such having constituents in one or more *types* or *kinds* of inter-connectedness or organization, e.g., cognitive, physical/mechanical, and social structures. In such complexes, entities *and their mutual qualitative connections ('orderings', relationships, arrangements)* jointly contribute to the

existence and nature (specific essence) of the whole. That is, the being of a structure, whether, say, as a dynamic physical system (e.g., an operating engine) or a static formal one (e.g., the Natural Number System), is a function of the mutual qualitative co-relevance of both the intension contents of the constituent unifying relationships and the compatible natures of their respective subjects, and as the former orders the latter. The simplest such or atomic structured whole would be one instance of one kind of intensioned connection or unification among one *n*-tuple of other constituents. This is a fact or state of affairs, $:R^n(a_1,a_2,\ldots,a_n)$, e.g., $:Red^1(a)$, $:Contiguous\text{-}with^2(b,c)$, $:Owes^3(d,e,f)$ (as in '*d* owes *e* to *f*'), whose arrangement-kind is intension R^n, in the examples, respectively, Red^1, $Contiguous^2$, Owe^3. Here the subjects, a_1, $a_2,\ldots$, a_n, are linked and ordered (if any) into a resultant fact $:R^n(a_1,a_2,\ldots,a_n)$ according to intension R^n, though, on the analysis below, not *by* the intension R^n.

In particular and observed at least as far back as Aristotle (though misconstrued in terms of forms), it is the *prima facie* nature of a polyadic relation that it have the role of a *cause* or *principle—an agent*—of the unity of itself with its relata in forming a fact, and by extrapolation a role likewise but less obvious for the limiting case of a monadic property in its fact. To sharpen this intuition, and to prepare for a reply to a previous challenge, consider first causality in general. An agent/cause is so characterized because it 'brings about', is 'responsible for', or 'produces', the existence and nature of a further and distinct reality beyond (non-identical with) itself—the effect. Other entities or 'patients' (e.g., subject relata) may be needed for the effect (e.g., a structured, intension/essence-dependent unification among relata) but their existences and natures independent of the cause are insufficient for the reality of the effect. This is what is meant by an entity having causal 'power': an agent/cause can 'go beyond itself'—in what is a causal 'act'—and be both a sufficient condition for the existence of, and a conditioning or specifying of the nature of—the qualitative content of—a separate reality. In a temporally neutral sense a cause *qua* cause 'goes beyond itself' to produce something different from itself. This is so whether the act is, for example, a single temporal event or an atemporal state as in the unity of a necessary fact (e.g., $:Prime\text{-}divisor\text{-}of^2(3,6)$). A moving billiard ball as cause effects by an act of collision (in the act itself it is a cause in the proper sense) the wholly new reality of the specific motion of a struck billiard ball. In contrast, the 'going beyond itself' nature of a causal agent is absent in the

Humean reduction that treats physical causation as mere temporal succession, or causation in general as mere conjunction. A world of radically isolated and other-indifferent/mutually-irrelevant entities, other than being at most temporally juxtaposed (which itself is a relational structure), is contrary to the pervasive given of our experience that involves the productive nature of causation. More particularly and a key point herein, all relatedness, whether physical or 'metaphysical', involves causation in that all relations as ontic predicates 'go beyond themselves' to form trans-subject unifications, and a Humean universe devoid of causation is a universe without relatedness, which is counter-factual. That motion M_1 is the cause of motion M_2, i.e., that there is a fact :Efficient-cause-of^2(M_1,M_2), is not reducible to the set {M_1,M_2} which lacks any ordering structure, or even to the temporal fact :Precedes^2(M_1,M_2), since in the latter the relation Precedes^2 involves an unreduced causation of its own, as detailed presently. The Humean analysis has the plausibility that it does only in a tradition that reduces relations to properties whose causal nature (as unifying themselves to their subjects) is least obvious.

Consider now specifically what is the necessity and nature of a unifying cause of a plural whole. Just the existence of each of multiple entities is not sufficient for the existence of a whole containing them, contrary to, say, mereological universalism. For, if it were otherwise, since all entities are equal in their status as existents there would be only one whole—the universal whole W—containing everything that exists. Any sub-whole must require something other than just the existences of its elements to differentiate it from W, and hence this something would have to be such as to limit the elements to just those making up the non-global whole. Because extensional existence is not enough to provide it, a whole limited to just certain elements would have to be by other means—what is both a cause of unification among and a delimiting of the union to just these elements. The alternatives are unions by means either a) external to and independent of the qualitative natures of these elements, or b), to the contrary, materially relevant to and so correlative with the internal essences of the elements. In either case, a unifying/delimiting something must 'go beyond itself' in order to link via itself each and all of just the contained constituents. Under a) wholes are the result of arbitrary grouping indifferent to the natures of the grouped entities, what must presuppose as such the free selections and associations (willed or not) of a mind. Here the whole would be either an actual conceptual entity

proprietary to a particular mind, i.e., particular lists, sets, or mereological sums, or the 'Platonic projections' from such: the posited possibilia implied by a formalized theory idealizing the results of these cognitive operations while abstracting away their conceptual origins and extrapolating beyond human limitations, i.e., the entire theoretical realms of such extensional entities implied by set theory and mereology (e.g., see Philip Kitcher[54]). (One might recall here Cantor's appeal to the mind of God to guarantee the realm of infinite sets.[55]) In contrast, under b) a whole exists by a limitation intensionally determined and so internally relevant to the natures of just these entities taken jointly. That is, here there is a particular union controlled in its extent by a specific intension that is qualitatively relevant to the elements mutually and not just singly, and in a way that delimits this relevance to exactly this number of elements. Intuitively, this is precisely the categorical nature of polyadic ontic predicates, i.e., relations-as-they-exist-in-facts, facts being the basic structures of the world, both extra-conceptual and conceptual. For example, in the fact :Prime-divisor-of^2(3,6), the intension Prime-divisor^2 specifies by its very content exactly two relata per its fact-forming role, and where the natures of relata 3 and 6 are mutually pertinent to the intension Prime-divisor^2 only as they are paired, and indeed ordered as paired. It is plausible that even the extensional wholes of type a) above exist via cognitive relations of a limiting type that have specific intensions, e.g., Associated-by-mind-m^2, which are indifferent to the qualitative natures of their relata, as in fact :Associated-by-mind-m^2(cabbage *a*,square root of 2), again this indifference being a sign of their cognitive status. For the same reason, this cognitive status would also extend to 'trivially essential properties' like Being-colored-if-red or Being-odd-if-identical-to-3 discussed in the context of bare particulars and where the latter in having such properties supposedly signals an unobserved subtly in their characterization as 'bare of properties'. Having a conceptual reality only, with no existence *in re*, these properties tell us nothing about the nature of bare particulars nor somehow make their existence palatable.

In general and fundamentally, it is the intuitive nature of relations that in facts they are trans-subject unifiers—they *act-to-unify* their relata. Even the Aristotelian/Scholastic tradition hostile to polyadic relations observed their causal character in 'going beyond themselves' by classifying them as having uniquely an *esse ad*, or 'being toward' quality, what implies equally a character of being 'toward something' (*ad aliquid*).

The two together imply a completed 'bridging' between related subjects, the basis for the medievals characterizing a relation as an 'interval' (*intervallum*).[56] Indeed, it seems plausible that the interval nature of a relation as an ontic predicate and among discrete relata implies a holding-apart of its subjects even as it holds them linked (together-at-a-distance), on the analogy of a rigid connecting rod, and what is essential to characterizing the resultant as an articulated composite. In this polyadic predicates would not only mark, but also enforce an ontic division between their relata in jointly forming the factual whole. The idea here is that there is no plurality of entities without a discreteness enforced by interposing relations, as there is equally no multi-subject relations without a plurality of discrete relata to be joined. Without multi-subject relations articulated wholes would at best collapse into continuous simples. At any rate, a principle point herein is that a composite free of such internal intermediaries and hence of the divisions they mark is *simple* in a proper sense. Now, as predicable it is a relation's correlative agent-unifier and bridging roles in a fact that Russell, in response to Bradley, characterized as 'actually relating', and what Bradley termed, respectively, a relation's being a 'together' and a 'between'.[57] Bradley thought these two characteristics were jointly impossible because a relation as a 'between' has no unifying agency and so cannot be a 'together', what is purportedly highlighted by the regress argument that bears his name and that we shall consider below. It is the joint combinatorial and interposing roles among relata that is meant by referring to a relation as an 'ontic predicate', what is symbolized here in general form as '$R^n(x_1,x_2,\ldots,x_n)$'. Given relations thus properly defined, *they can occur only in facts*, $:R^n(a_1,a_2,\ldots,a_n)$, in that they presuppose elements to be unified/bridged, i.e., a subject *n*-tuple $<a_1,a_2,\ldots,a_n>$. Unification presupposes as mutually dependent both unifier and unified. This causal nature of a relation as its occurs in a fact is reinforced by the correlative classic and extensional maxim that: All unity is by the shared unit or one.[58] In a fact with a polyadic relation, e.g., $:Owes^3(d,e,f)$, it is obvious that what is 'shared across' the other constituents as their common 'unifying thread' is the relation—subjects *d*, *e*, and *f* jointly share the relation having intension Owe^3.

It is additional evidence of the causal-agent nature of ontic predicates that they are in themselves incomplete in a way that makes them ontically dependent on other entities. This is precisely the character a causal unifier would have to have in 'going beyond itself' to effect a whole of which it is

the unity-contributing constituent. Specifically in regard to a causal unifier, its 'going beyond itself' involves an effected whole of both entities linked ('patients') and the linking agency aspect of the unifier. If in being aware of the whole one abstracts away the entities linked the cognitive remainder is the unifier with its act of unification, what in itself is incomplete and requiring something else in order to exist, viz., the things that it acts upon to unify. That is, to cognitively focus via abstraction just on the ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ of a fact $:R^n(a_1,a_2,\ldots,a_n)$, as such ignoring the fact's particular subjects, a_1, a_2,…, a_n, but continuing in the recognition of an agent and its agency that is their unification, is to focus on an entity in itself incomplete as to the conditions for its existence. An analogy would be that in regard to the whole that is an act of hand-clapping (strike and recoil), to abstractly focus on the motion of just one hand is to have something essentially incomplete, what is in need of the motion of the other hand in order to constitute the whole on which its existence depends—there is no clapping without two hands. Further and relevant to **Principle II**, to then abstract away and ignore the linking aspect of ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ is to arrive at the analytic residue of the non-predicable intension R^n. The incompleteness peculiar to ontic predicates has been referenced in the literature as Fregean 'unsaturatedness'[59], Seargent/Armstrong '*ways* that things are'[60], and in part by what the Scholastics meant in recognizing an accident as having a type of being that is being-in-another (*ens in alio*), what they further understood as a defective reality relative to a subject substance whose being is being-in-itself (*ens per se*), the latter held necessary to support the former. I have argued elsewhere[61] that, contrary to the latter Scholastic view which continues to be prevalent today, incomplete ontic predicates (as relation instances) can have as subject relata—be 'completed' by—other incomplete ontic predicates (as relation instances), and this pervasively at some atomic ontic level, what, for example, is apparently needed in an ontology for quantum physics. The mutual completing/support of incomplete/dependent ontic predicates nullifies a supposed vicious regress based upon the false assumption that ultimately incomplete entities must be sustained by a category of substances each with a 'full and complete' self-sustaining reality. It is evidence that the incompleteness of an ontic predicate stems from the predicate's ontically positive 'activity', i.e., its unifying causality, and so derives from a power representing a richness rather than a deficit of being (see Plato's *Sophist* 247e), as such not requiring it be parasitic upon and sharing in some other type of entity

whose 'quantity of being' reaches a threshold of self-sustaining completeness (*ens per se*). Though anomalous to their Aristotelian substance/attribute ontology, the view is in effect the conclusion the Scholastics arrived at in analyzing the Trinity in terms of pure relatedness—each Person a relation between the other two, yet necessarily each Relation without a deficiency of being.

Further in support of **Principle I**, and pivotal to the import of Bradley's Regress argument, is the observation that a fact, $:R^n(a_1,a_2,\ldots,a_n)$, e.g., $:Loves^2(a,b)$, is not identical with an extensional whole, e.g., a list, set, or mereological sum, made up of the very same constituents, say, set $\{R^n(x_1,x_2,\ldots,x_n),a_1,a_2,\ldots,a_n\}$, e.g., $\{Loves^2(x_1,x_2),a,b\}$. First, a fact whose ontic predicate has a contingent intension R^n, e.g., $Love^2$, can come into and go out of existence, or never exist at all, independent of the arbitrarily generated existence of the corresponding list and certainly of the corresponding set that is held to exist atemporally 'always'. Further, with certain polyadic relations, e.g., asymmetric and non-symmetric relations, their intensions, R^n, e.g., $Love^2$ or $Prime\text{-}divisor^2$, determine an order among the remaining constituents of a fact, but there is no ordering in the corresponding sets or sums. For example, if both facts obtain for $a \neq b$, then $:Loves^2(a,b) \neq :Loves^2(b,a)$, though $\{Loves^2(x_1,x_2),a,b\} = \{Loves^2(x_1,x_2),b,a\}$. Finally but most relevant, a fact contains information about the subject relata, a_1, $a_2,\ldots$, a_n, singly and collectively, that the corresponding list, set, or sum does not, viz., that the subject(s) are characterized by the ontic predicate, and in particular when the latter is a polyadic relation that it *jointly* characterizes the subjects. Fact $:Loves(a,b)$ carries the information that a loves b, whereas the set $\{Loves^2(x_1,x_2),a,b\}$ does not. So, for every fact $:R^n(a_1,a_2,\ldots,a_n)$ we have a corresponding set with exactly the same constituents, $\{R^n(x_1, x_2,\ldots, x_n),a_1,a_2,\ldots,a_n\}$, but where in the set the togetherness of its particular elements is not a function of their essences or any qualitative aspects of them, but requires only their existences, and the cause of their togetherness is not a constituent of the whole but rather is an arbitrary association ignored in abstraction.

Now relevant to Bradley's Regress argument, for any set $\{R^n(x_1, x_2,\ldots, x_n),b_1,b_2,\ldots,b_n\}$, constituent ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ presupposes for its existence an n-tuple of relata that it is agent-combinator for, perhaps even $<b_1,b_2,\ldots,b_n>$ whose constituents are elements of the set. However, the unity of the whole that is the set is itself not the unity

effected by predicate $R^n(x_1,x_2,\ldots,x_n)$ on $<b_1,b_2,\ldots,b_n>$, for otherwise the resultant whole would not be the set, but rather fact $:R^n(b_1,b_2,\ldots,b_n)$. And obviously, the unity that is the set's is not that effected by ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ among some other set of relata. Thus, predicate $R^n(x_1,x_2,\ldots,x_n)$ does not have the role of agent unifier for set $\{R^n(x_1,x_2,\ldots,x_n),b_1,b_2,\ldots,b_n\}$. Yet and importantly, this does not mean that $R^n(x_1, x_2,\ldots, x_n)$ does not have this role, and hence the nature of an agent-unifier, in some other whole, i.e., in some fact $:R^n(a_1,a_2,\ldots,a_n)$, and even in a fact $:R^n(b_1,b_2,\ldots,b_n)$. Now, Bradley's Regress proceeds on the contrary assumption: that in comparing fact $:R^n(a_1,a_2,\ldots,a_n)$ with corresponding set $\{R^n(x_1,x_2,\ldots,x_n),a_1,a_2,\ldots,a_n\}$, since both wholes have exactly the same constituents and *ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ is not the cause of the unity of the set, then predicate $R^n(x_1,x_2,\ldots,x_n)$ is not the cause of the unity of the fact*. Consequently, since the fact $:R^n(a_1,a_2,\ldots,a_n)$ requires some constituent unifier, on the assumption that this unifier is a further and implicit relation with intension R'^{n+1}, it is the case that $:R^n(a_1,a_2,\ldots,a_n) = :R'^{n+1}(R^n(x_1,x_2,\ldots,x_n),a_1,a_2,\ldots,a_n)$. But of course, the same analysis applies to the latter fact, and so on to vicious infinite regress. The alternative is to take the requisite unifier to be intensionless or devoid of qualitative content—a 'bare linking', what philosophers have adopted as a response to the regress under the terms 'non-relational tie' or 'nexus'. I shall rehearse below the incoherence of such a concept. Crucially, what motivates the error leading to either fork, and what brings us to **Principle II**, is the failure to differentiate a non-unifying (non-combinatorial, 'non-predicable') intension R^n, e.g., $Love^2$, with any subsuming unifying ontic predicate $R^n(x_1,x_2,\ldots,x_n)$, e.g., $Loves^2(x_1,x_2)$. An abstracted intension in itself is non-combinatorial in any context—it is causally inert—and if it is identified with the ontic predicate in a fact, then some other constituent of the fact must be found to unify the then 'predicate' (but not 'predicable') intension with the other subjects. This is the road to perdition. However, as we shall see, the prospect of Bradley's Regress returns at the sub-ontic-predicate level in assessing the union between a composing intension R^n and a predicable agency, and it is at this point that we see the rationale for composite simples.

Turning now to the warrant for **Principle II**, consider first that though any arbitrary entities whatsoever are said to form a set or sum, only certain limited combinations of ontic predicates and subject *n*-tuples form a fact. This is so because the unity of a fact depends upon the non-arbitrary

match or content-determined mutual relevance or qualitative agreement between the predicate's specific intension R^n and the determinate natures of (and order among, if any) the entities in the *n*-tuple. The dyadic predicate expressed, for example, by 'is a father of', i.e., Father-of^2(x_1,x_2), delimits as its extension pairs including <Philip II,Alexander the Great>, but not <4,5> or <Apple *a*,Orange *b*>. It is the intension that sorts ontic predicates into contraries and contradictories, and specifies the formal properties of polyadic relations, e.g., the ordering among relata for asymmetric and non-symmetric relations, or their transitivity or not across relata. The same point is established in the negative: if an ontic predicate has no qualitative constituent or intension determining/delimiting the range and ordering of its unifying causation, then it would be a 'bare unifier', analogous to and as illegitimate as a 'bare particular'.[62] An intensionless unifier would be absolutely uncontrolled and without limitation in its agency, both locally in the sense of allowing anything to be unified to anything else, and globally in requiring either nothing or absolutely everything be unifying at once—total reality—without differentiation into any sub-wholes of sets, facts, or complexes. Not only do ordered wholes, e.g., the spatial system that is the fact :Taller-than^2(*a*,*b*), go unaccounted for, but there is no reason why contrary (e.g., Green and Red) or contradictory (e.g., Transparent and Opaque) properties cannot be arbitrarily tied to the same subject, and this is contradictory to the nature of ontic predication.

Further and ontologically crucial is the point that intensions are in themselves non-combinatorial and so are not identical with their subsuming combinatorial predicates. This is seen most clearly in the fact that intensions exist for which there are no corresponding ontic predicates and so facts, e.g., Unicorn^1, Phlogiston^1, or the intensions Spouse^2 or Employer^2 in a world reduced to one extant human that retained the latter as abstractions. Likewise, intensions like Orbiting^2, One-meter-apart^2, and Gravitational-attraction^2 would exist in a possible universe where all physical/spatial entities are annihilated except one suitably reduced or primitive, but where a single intellect remained retaining the intensions as abstractions. In these examples the intension is in itself either a free creation of a mind or the result of an abstractive act with an existence as separated dependent upon that of a distilling and retaining mind, there being no extant agent ontic predicate of which it is the conditioning content. The processes of abstraction from fact to contained agent ontic

predicate, and from the latter to contained agentless intension, are marked by variations on words and phrases in English. We can abstract from a state of affairs or fact, e.g., :Red^1(*a*), :Loves^2(*b*,*c*), :Father-of^2(*e*,*f*), or :Similar-to^2(*g*,*h*), expressed respectively by '*a* is red', '*b* loves *c*', '*e* is the father of *f*', and '*g* is similar to *h*', intensions expressed by abstract nouns, e.g., 'red' or 'redness', 'love', 'fatherhood' and 'similarity', that have in themselves no combinatorial nuance or 'mode' in the Scholastic sense, and that stand in contrast to the intermediate abstractions of ontic predicates proper, e.g., Red^1(x_1), Loves^2(x_1,x_2), Father-of^2(x_1,x_2), and Similar-to^2(x_1,x_2), expressed in the verb phrases, respectively, as 'is red', 'is in love with', 'is a father of', and 'is similar to'. In addition, the non-predicable nature of intensions is seen from the fact that they do not have the kind of dependence/incompleteness that their subsuming ontic predicates have. Succinctly, this 'substance-like' independence is the prerequisite factual basis for all of the following: the erroneous inference from intensions to Platonic hypostatized Forms; the erroneous assay of ontic predication (corrected herein) as an (inert) intension being a subject, along with the entity(ies) it qualifies, of an (agent) exemplification tie; the initial plausibility of Bradley's Regress; and Russell's correct but undeveloped distinction of contexts where relations 'actually relate' (i.e., are polyadic predicates) and where they do not (what would be the relation intension abstracted from its predicate). Moreover, it is the non-unifying, inert nature of intensions that renders trope theory deceptively plausible, where each trope is an individuated but non-predicable monadic intension. Revealing of its weakness, however, the theory must call upon predicable/combinatorial polyadic relations, and not just the dyadic relations of Compresence^2 and Resemblance^2. Even Campbell in advocating trope theory has maintained that, though Resemblance^2 is (purportedly) monadically reducible as an 'internal' relation, Compresence^2 presents a more difficult case involving at best the 'At^2' relation between a trope and its location which itself is irreducible to properties of its relata.[63] Also identified as irreducible by Campbell is the Referring^2 relation between a term (e.g., 'Paris') and the entity it names (e.g., Paris), and apparently in general any relation of correspondence between elements of a mental state (e.g., the cognitive content that is the 'meaning' of a declarative sentence) and what that state represents (e.g., a fact that is the truth-condition for the declarative sentence).[64] Irreducible relations imply unifying agency by polyadic predicates, though monadic tropes treated as speciously prototypical are not combinatorial/predicable

at all, an embarrassing duality for trope theory considering that we have here what is *prima facie* one category of entities—characterizing qualities—differentiated only by the number *n* of subjects that are jointly required for them to characterize (their *n*-adicity).

We now have **Principles I** and **II**, and from them follows important and particularly relevant **Principle III**. With **I** and **II** we know that ontic predicates are agent-unifiers among *n*-tuples of subjects and so jointly generate facts, but that the predicates' subsumed/constituent intensions that specify and delimit their linkings have no such agency. This implies that for each ontic predicate there is, in addition to its constituent intension, a non-identical remainder of constituent and intensionless unifying or combinatorial act. The combinatorial acts of ontic predicates are the 'ontoglial' (Greek: 'glue of being') essential to the unity of and marking the diversity in a plural universe. Like an intension relative to its ontic predicate, and indeed the predicate relative to its fact, the unifying act of an ontic predicate is recognized via a process of abstraction, but does not otherwise exist separated. Recall there are no 'bare linkings' without intensions, nor are there ontic predicates without subjects to unify. This now brings us to the principle thesis of the essay: The union between the combinatorial aspect, say unifying act U, and the ontically distinct intension aspect R^n of an ontic predicate $R^n(x_1,x_2,\ldots,x_n)$, the latter providing the intensional unity of some fact $:R^n(a_1,a_2,\ldots,a_n)$, is not a function of an agency of act U, or any other constituent unifier U′, whether U′ is itself an intensionless unifying act or an intensioned ontic predicate. When this is established we will have a composite—ontic predicate $R^n(x_1,x_2,\ldots,x_n)$—consisting of act U and intension R^n but without a constituent unifier, and in particular without a constituent unifier interposing and thus registering an internal differentiation between and so a discreteness of U and R^n. Hence, an ontic predicate is a composite but one 'tighter' than an articulated complex. All of this follows, first, from the fact that agency U cannot cause intension R^n to be linked to it, for otherwise intension R^n would have a status in the fact the same as subjects, a_1, a_2,…, a_n, whose unity among themselves is likewise via U unifying itself to them. Here the intension R^n of the ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ is stripped from its correlative unifying act U and then made to be a subject ('patient') of U so that $:R^n(a_1,a_2,\ldots,a_n) = :U(R^n,a_1,a_2,\ldots,a_n)$. What is illicit about the latter is not that it precipitates Bradley's Regress, for U is not a further intensioned relation, but rather that U must function as an intensionless unifier or pure

unifying act—a bare linking. And, as noted above, a bare linking has no intension in itself to control its agency and so the natures of its relata are indifferent to it, i.e., bare linking is the arbitrary linking of a list and is contrary to the union forming a fact. Nor could there be a further constituent unifier of the original fact so that $:R^n(a_1,a_2,\ldots,a_n) = :U'(U,R^n,a_1,a_2,\ldots,a_n)$, for U′ would have to be itself either a bare linking, which is impossible, or alternately, an intensioned unifier, i.e., a predicable relation identical in this regard to $R^n(x_1,x_2,\ldots,x_n)$ in the original fact, and this would effect a Bradley-type vicious regress. In sum, the non-identical but correlative aspects of intension R^n and unifying act U constituting an ontic predicate $R^n(x_1,x_2,\ldots,x_n)$, as the latter is the constituent cause of the unity of a fact $:R^n(a_1,a_2,\ldots,a_n)$, form a union without any constituent unifying agent and its agency. This is the unity of a continuous composite, and what makes it a 'tighter' unity than that of an articulated composite whose unity is via constituent agents and their agencies.

In addition to this result two further and significant consequences follow from the above analysis. First, that the agent-unifier/combinatorial-aspect of an ontic predicate $R^n(x_1,x_2,\ldots,x_n)$ is unrepeatable follows in a simple way from the existence of ontic predicates with contingent intensions R^n, e.g., $Love^2$, $Above^2$, Owe^3. Assume to the contrary that the act of unification for facts, say, $:Loves^2(a,b)$ and $:Loves^2(c,d)$, for $\langle a,b\rangle \neq \langle c,d\rangle$, is, like the intension $Love^2$, repeatable and *numerically the same* in each. Then, if fact $:Loves^2(a,b)$ ceased to exist, i.e., the act of unification between *a* and *b* under intension $Love^2$ ceased to exist, then because it has numerically the same act of unification between *c* and *d*, fact $:Loves^2(c,d)$ would likewise cease to exist. This is, of course, counter-factual. It follows, then, that the combinatorial aspect of an ontic predicate is unrepeatable, i.e., individual, and so under what Armstrong calls the 'Victory of Particularity' principle the subsuming ontic predicate inherits this particularity. In short, ontic predicates $R^n(x_1,x_2,\ldots,x_n)$ are unit attributes, what I have symbolized elsewhere succinctly as 'R^n_i', 'R^n_j', 'R^n_k',…, where the shared 'R^n' indicates a common intension content and the different subscripts indicates each instance's unrepeatability. In more explicit form, the example facts would be given as $:Loves^2_i(a,b)$ and $:Loves^2_j(c,d)$, and, for $\langle a,b\rangle \neq \langle c,d\rangle$, then $Loves^2_i \neq Loves^2_j$. The present argument corrects a thesis advanced independently by Michael Loux and E. J. Lowe[65] that individuation is via the instantiation of a repeatable substantial form posited as a type of entity specially endowed with the

power to individuate its instances. Observed here is that individuation is via the 'instantiation of any intension' in the sense of following from the predicable or agent-unifier role of relation instances of any kind. Relation instances (including limiting property instances) can in hierarchical fashion jointly account for the existence of all individuals (e.g., 'substances' as iterated complexes of complexes), and hence through them ontic predictability—unifying agency under an intension—is ontology's *principium individuationis*.[66] One of the great virtues of the above analysis and of subsequent relation instances, what gives further warrant to both, is this positive theory of individuation, the alternative to which is an explanatory vacuum in which must be simply posited specious bare particulars.

Secondly, we can now also make good on the promise of an argument for realism: intension or qualitative contents are numerically repeatable—identically the same content in multiple subjects—and thus are universals. This thesis was simply assumed above, *but none of the arguments given turn upon it*. And as noted, Campbell has held that a unit attribute conceived as a non-unifying trope can have a qualitative content abstractable from it and distinct in abstraction from the trope's unrepeatability, but that the trope itself has no internal distinctions. To the contrary and first, it was argued above that for a unit attribute R^n_i its aspects of intension R^n and combinatorial agency U are distinct in composing it for the obvious reason that the latter is a causal entity and the former is not. Now further, if R^n were unrepeatable or individual as is act U, then subsuming instance R^n_i would be composed of two distinct individuals. Then on the principle observed at the beginning of the essay that a whole composed of two or more individuals is internally differentiated/diverse, then some constituent must have the role of unifier among the others, whether this is U or some further implicit entity. But, we have seen the impossibility of these alternatives above. Therefore, intension R^n as a constituent of instance R^n_i is a repeatable entity—a universal.

IV. Results in Context and Replies to Critics

Let us now summarize the major ontological theses advanced herein and their place in the ongoing dialectic, including some attention to the issue of individuated ontic predicates versus bare particulars. First, an ontic

predicate now identified as a relation instance R^n_i is a composite continuous simple, whereas its constituent combinatorial act U is absolutely simple, as is its intension R^n in some (e.g., Red^1), if not in all cases. For any instance R^n_i its intension content R^n is *not* ontically predicable of its individuating combinatorial act U, rather the two only jointly as a continuous whole is so predicable of *n* further subjects. That is and contrary to the tradition, an intension R^n is *not* itself an ontic predicate, and it gives qualitative content to a subsuming ontic predicate R^n_i *not* by being predicable of it. Strictly speaking, to characterize an entity, say the number 3, is to be ontically predicable of it, as in :$Prime^1_i(3)$, but the intension $Prime^1$ of ontic predicate $Prime^1_i$ is not an ontic predicate of the latter, i.e., it is false to say that 'Instance $Prime^1_i$ is prime' since intension $Prime^1$ makes sense only relative to characterizing numbers, and not ontic-predicates/relation-instances. An intension R^n is once-removed from ontic predication. In this regard it is important to be clear on the subtle difference that makes all the difference between individuating combinatorial acts and their theoretical rivals of would-be bare particulars. First and the same for both, whether a particular is taken as individuated by a predicable act (what would be a relation instance) or by a bare particular (what would be an ordinary thick particular), an intension universal, e.g., Red^1, in conditioning that particular is not ontically predicable of its individuator. But contrasting the two, for a relation instance, say Red^1_i, the intension Red^1 conditions the correlative combinatorial act so that it is relevant to the nature of a type of subject, viz., entities that are red (and for some polyadic intensions they order their combinatorial acts as well as specify jointly possible relata, as such having relevance to certain *n*-tuples), whereas with a bare particular p_a the 'predication' of an intension Red^1 of its thick particular *a* reduces to Red^1 being 'tied-to' p_a in a way indifferent and irrelevant to the 'nature' of p_a, what is in effect arbitrary association. Now further, an ontic predicate R^n_i characterizes its *n* subjects *externally* as predicably attached to and among them, in contrast to the traditional inherence model of predication where the predicate's intension is itself the ontic predicate and as such is held to be internally constitutive of the nature of its subject, what as such is necessarily a monadic intension. Importantly, an instance R^n_i predicably attaches to its subjects conditioned on its intension R^n being 'mutually qualitatively compatible with' or 'co-relevant in quiddity ('whatness') with' the essences or natures of its subjects (as ordered if relevant), portions or aspects of the latter grounding or providing the foundation for this attachment. This is how an ontic

predicate, though external to its subjects, is non-arbitrarily 'true of' and carries information about—is 'telling of'—the internal essences of its subjects. This is a generalization and weakening of what is a specious though widely and implicitly held thesis restricted to monadic predicates, viz., the **Inherence Thesis** (**IT**): In a monadic fact :$P^1_i(a)$, that portion of the being of subject *a* that grounds the predicable attachment to it of ontic predicate P^1_i is itself intension universal P^1. In other words, the universal intension aspect of every ontic predicate 'true of' a subject is a constituent of that subject. Here the essence- or nature-conditioned relevance under the weakened externalist assay becomes identity under the narrower internalist view, what is definitive of the inherence model of predication.

Now for those who adopt **IT** it can serve as a premise for arguments against bare particulars, and indeed I had assumed it implicitly in the past.[67] The arguments are built on the assumption that, in conformity to **IT**, an unrepeatable thick individual *a* is composed of repeatable universals that are constitutive of the ontic predicates characterizing *a*, along with an unrepeatable particular p_a distinct as such from all these universals but to which the latter are joined (e.g., by a Compresence^2 or Tied-to^2 relation) and which serves to account for the individuality of *a*. Now, the arguments against the coherence of p_a starts with the observation that it can have no constituent intensions whatsoever, because otherwise it would be itself a 'thick particular' in need of a further posited individuator, p_a', and so on. But then on **IT**, p_a can have no ontic predicates either, for otherwise their intensions would be constituents of it. On the premise that having no ontic predicates implies having no nature and so no being, then p_a evaporates into *no*thingness. Relatedly, p_a is indeed said to have necessarily ontic predicates, e.g., $\text{Unrepeatability}^1_i$, Simplicity^1_j, etc., but even these have repeatable intensions, e.g., Unrepeatability^1 is a universal, which by **IT** would have to be constitutive of p_a, a contradiction. So bare particular p_a dissipates into non-being, and it is in this sense that all bare particulars are 'identical'—all are absolutely mutually indistinguishable in their ontic vacuity.[68]

Though these arguments stand in full force against inherence theorists who adopt **IT**, because I reject it on the above analysis I must forgo them. The same analysis, however, shows by other means why bare particulars are untenable. The only way an advocate of posited bare particulars can hope to avoid the above conclusions is by adopting an

externalist assay of ontic predication argued herein. This is in effect the tack adopted recently by James Moreland and Timothy Pickavance in dividing ontic predication into two types of relations: the standard 'Rooted-in^2' relation (equivalent to the usual Exemplification^2 relation) between the properties of a thick particular *a* and *a* itself, and, at a lower level, the 'Tied-to^2' relation between the properties of *a* and its bare particular, p_a.[69] All such attempts are, however, doomed to failure. First, I simply note that ontic predication cannot be identified with any particular relation(s), for all relations (including monadic properties) of whatever intensions are all equally cases of ontic predication, and to otherwise make this reduction is to identify an aspect of every relation with the whole of a particular relation (or relations). The plausibility of this identification turns on the fact that the chosen relation(s) exercises that very aspect that was to be explained in all relations—a combinatorial act guided by an intension, i.e., ontic predication. In other words, the unsuccessful strategy here is to explicate something exhibited by every element in a class by identifying it with one of the exhibiting elements in the class, a form of vicious circularity. Now specifically in regard to Moreland and Pickavance's externalist strategy to save bare particulars, assume property P^1 (whether as an intension or instance) is externally tied-to a bare particular p_a, what is the individuator for thick particular *a*, say, a red, round disk. Now, either this means that P^1, e.g., Red^1 or $Round^1$, is non-arbitrarily grounded in a composing nature of p_a, or, to the contrary, P^1 relays no information about p_a and so is arbitrarily associated with it in the manner of items in a list or set. One cannot have it both ways. But on the first alternative this can only mean that P^1 is nature-relevant to a something constitutive of p_a and thus P^1 is rooted-in p_a, what is ruled out by Moreland and Pickavance. On the second alternative any two properties whatsoever can be jointly tied-to p_a, including contrary properties, e.g., $Round^1$ and $Square^1$. Then on Moreland and Pickavance's thesis that Tied-to^2(P^1,p_a) if and only if Rooted-in^2(P^1,*a*), contrary properties can be ontic predicates of any individual *a*, e.g., *a* can, absurdly, be both round and square. Now it might be replied that on my analysis of an ontic predicate R^n_i as a continuous composite I have its intension R^n tied-to its individuating combinatorial act. But on my analysis the latter represents a third type of union distinct from what Moreland and Pickavance intend by the extremes of the Tied-to^2 and Rooted-in^2 relations: unlike the Tied-to^2 relation, the union between a combinatorial act and its correlative intension is not one of mutual indifference but one where the latter aspect controls in extent and order the

former, but unlike with the Rooted-in^2 relation the intension is not ontically predicable of—does not characterize—its combinatorial act. As a final point I would only observe that bare particulars are simply posited as ontology's individuating principles for a lack of a known alternative derivable from other ontological considerations—the above provides this alternative.

On another front I would address an argument advanced recently by William Vallicella that a fact can and must have a unifier external to it. This follows from what he would consider to be the failure of the analysis of factual unity given above in **Principles I**, **II**, and **III**, and therefore that "The unity of a fact's constituents cannot be a proper constituent of the fact"[70], along with the rejection, correctly, that a fact as a plural whole cannot be the cause of the unity of itself, *contra* Armstrong[71]. Vallicella's critique of the former results from a confusion as evidenced by his thinking that it is inconsistent with my theses that "Thus numerically one and the same entity, [universal intension] R, occurs as constituent in both facts [:R(*a*,*b*) and :R(*c*,*d*)]: but R's [agency in] relating *a* and *b* is numerically distinct from R's [agency in] relating *c* and *d*."[72][inserts mine though intended by Vallicella as clear from the context] The supposed inconsistency is said to result from my failure to distinguish between an agent and its agency by identifying a relation R, whether I am treating it as a universal for sake of argument or as an instance, with its concomitant unifying act in a fact. To the contrary, I have argued for this distinction herein, and did so in the works Vallicella cites. Among other criticisms, what is relevant here is that Vallicella rejects the possibility that my ontic-predicates/relation-instances can be simple entities. He finds the concept of a formal distinction and what I have herein called a composite simple to be incoherent on the same grounds as did Ockham and Suarez (when criticizing Scotus). Rejecting my type of analysis Vallicella concludes that the unity of a fact's constituents can only be a function of an external causal 'operator'. What makes Vallicella's view untenable, however, is that a fact :R(*a*,*b*) has its being just as a-fact-producing-type-of-unity-among-the-other-constituents, i.e., the fact :R(*a*,*b*) is not R, *a*, and *b* prior to and independent of their factual union. There is no plural whole without a *constituent* unifying act, as there is no pearl necklace without a unifying string, for a plural whole just is the other constituents (e.g., the pearls) so acted upon (e.g., connected by the string) and nothing less. Now, to declare that the unifying agency of :R(*a*,*b*) is 'external to it' is simply to re-

draw the boundaries of the purported fact with just constituents R, *a*, and *b*, to also include the 'external' agency, U, what then is properly an internal constituent of the real fact here as necessarily expanded to parts-properly-unified. This means that the fact mistakenly analyzed as :R(*a*,*b*), i.e., where R is the agent unifier, is properly rendered :U(R,*a*,*b*). But then how is it that fact :U(R,*a*,*b*) avoids the import Vallicella gives Bradley's Regress against purported fact :R(*a*,*b*)? It can not if U is intensioned, i.e., U is itself a relation like R, and the alternative is that U is arbitrary association, what presumably would have to be an act of Divine will. The latter would make facts like :Prime-divisior-of^2(3,6) and :Left-of^2(*a*,*b*) obtain independently of the natures of any of the relations and relata involved, which is counterfactual.

In regard to Vallicella's rejection of composite simples I offer the following argument, one that expands upon the simple observation that a causal sequence must end somewhere where a cause brings about an effect *immediately*, without otherwise a vicious regress of further causes. It is to establish the point, ironic in regard to Vallicella, that causation itself is in every case a fundamental example of a composite simple. Consider first that causation is *at the causal act*, whether the act is instantaneous (e.g., a collision between inelastic balls), or over a temporal interval (e.g., the unifying act of a contingent fact), or 'eternally' atemporal (e.g., the unifying act of a necessary fact). More specifically, causation proper is at the causal act where cause (agent, 'operator'), patient(s), and effect come together, and only relative to which are each classified such. Now the argument is that at a causal act the agent and the act (the agent's agency), though distinct, form an immediate union tighter that a plural whole, i.e., form a continuous composite. This is so in that there is no constituent of this union, whether agent, agency, or some implicit third, that can have an additional unifying mode or aspect that allows that constituent to go beyond itself and link itself to or among the others, what would otherwise indicate an ontic distinction among the thus united, a characteristic of a looser plural whole, i.e., of an articulated composite. For, if it were otherwise then the constituent would have to be a *cause* of the causal unity between itself and the other constituents in the initial agent/act whole. In other words, it would have to be an agent with a unifying act, act′, having the original causal act as a patient. Clearly, this is the beginning of a vicious regress. Agent and causal act at the act form a continuous composite. So if a unifying act is necessarily constitutive of a whole, its

concomitant agent must likewise be. It is by a derivative and misleading 'courtesy of inheritance' that an agent *a* could be said to be 'external' to a causal act, act_1, that produces an effect *c*. For, this could only mean that there is a causal relation between *a* and some implicit effect *b*, i.e., fact $:Causes^2(a,b)$ obtains, where the ontic predicate for the latter has its own causal act, act_2, and where fact $:Causes^2(b,c)$ likewise obtains and the ontic predicate for it has causal act_1. In other words, to say that an agent *a* is 'external' to its agency in producing an effect *c* is simply to say that it is a remote cause of *c*.

V. Conclusion: What Can be Understood of Composite Simples

We have seen that in at least the ontologically fundamental category of ontic predicates there are composites that each have two non-identical constituents—an intension and a combinatorial agency—where neither, nor some implicit third constituent, acts as agent unifier relative to the other(s). And, it was argued that all unifications among the yet differentiated/discrete, what I have called articulated composites and what are the ubiquitous structures and complexes of experience and theory, exist if and only if each has one or more constituent ontic predicates that as causal unifiers 'go beyond themselves' to join themselves to and among other constituents. As is obvious in the paradigm case of irreducible polyadic relations, each in forming the 'togetherness' that is a fact is also 'between' its relata in the sense of presupposing an 'ontic distance' between and so discrete otherness of each from the other, and the ontic predicate itself from each relata. Ontic predicates mark/bridge an ontological division between their subjects, and between themselves and their subjects, in the wholes they serve to unify. What this means is that the criterion for differentiation/discreteness of parts of a composite whole is that each part is either an agent unifier among other parts, or is a patient of such agency. Consequently, with simplicity defined as the 'absence of division' we then have the necessary and sufficient conditions for an entity *x* being simple, viz., if and only if *x* has no constituent which is an ontic predicate of another constituent.[72] It is in this sense that an ontic predicate is simple, and yet with distinct constituents it is internally non-homogeneous making it appropriately termed a 'continuous composite'.

Consequently, the pre-critical air of paradox concerning the concepts of a composite simple and the 'formal distinction' is removed with the

differentiation of ontic division and discreteness from distinctness and non-identity, and the observation that ontic predication is a necessary case of the latter without the former. It was also argued that the union of a causal agent and it agency at a causal act is a case of simple continuous composition. Heuristic to the nature of composite simples I have proposed the analog of a disk whose color changes continuously across its surface from red through yellow to green as in the spectrum of an unpartitioned color wheel. It is continuous in having no inherent boundaries or divisions between colors, and thus is undivided and so simple, yet it is composed of distinguishable colors so known by selective attention. These colors add up to the phenomenal being of the whole—it is not different from them collectively. So it is for any continuous composite, the division and differentiation of the thus discrete parts is posterior to the whole (*post rem*), and though it has distinct/non-identical constituents, their essences as such are not sufficient in themselves to cause a mutual ontic division, what is achieved only by external cognitive analysis. Whereas in an articulated composite the division or mutual discrete otherness of the parts is prior to the whole, and is maintained even as the parts are unified in the whole, a differentiation implied in the ontic predictability of some of the parts relative to the others. Stated otherwise, in both types of unions the existences of the wholes are simultaneous with the 'joint existences' of their parts, where with an articulated composite or complex the union of the parts is a function of the contained parts that remain differentiated as such due to the predicable nature of some among the others (each such whole a *unitas ex intra se*), whereas with a continuous composite this union is a function of the containing whole relative to which the parts are virtual until differentiated externally by abstraction (each a *unitas per se*). An example of the latter is God traditionally conceived as the coalescence of divine attributes, the latter differentiated only in the intellect. In contrast to an articulated composite, with a continuous composite, because the whole is prior to the parts as subsequently conceptually differentiated, the extra-conceptual existence of these constituents is never independent of (outside the being of) such composites. In regard to ontic predicates (i.e., relation instances), the latter observation is in keeping with the Aristotelian/Scholastic thesis that only individuals exist extra-conceptually, and that their characterizing intensions are 'individuated in things', i.e., individuated as forming in each case a continuous whole with an unrepeatable combinatorial act, but are 'universal in the mind' when conceptually abstracted from these correlative unifying acts. Also, it

would seem that, though for articulated composites they can have 'upwardly emergent' and intensionally *sui generis* properties and relations due to the manner of their composition via structuring constituent ontic predicates, e.g., as consciousness emerges with brain complexity, in contrast, with a continuous whole, because there is with it a 'downward emergence' of the parts only mutually divided in abstraction, it can have 'nothing new that is not in the parts', i.e., have no properties and relations not definable logically from the conjunction of the properties and relations of the parts, since the union here of the parts can add no essence-altering structure to the whole. Hence, composite simples represent an ontological limit, not of analysis, but of system and structure, and in this way they are necessarily atomic to plural structured reality.

It is worth ending on the following observation. It is a symptom of the error of Bradlarian Monism that its analysis of ontic predication requires in the end that not only all discreteness but all distinctness (non-identity) collapse into a homogeneous One. The error is in the assumption that predicable unification is by mutual 'inclusion' or 'absorption', a view abetted by the specious inherence model of predication, and which requires in the end a melding or blending of natures where all distinction among the united is obliterated in a coinciding identity. Continuing the above metaphor, think of the colors on the example disk uniformly blended into a single color homogeneous across its surface. So for such complete 'blends' there is, on the one hand, the requirement that the specific and distinguishing essences of the constituents (e.g., divine omniscience, divine omnipotence, divine goodness) contribute to the cumulative and specific nature of the whole (e.g., the nature of God), and yet on the other, precisely as contributing parts they must lose their content-specifying identities as the blend obliterates all internal distinctions, and with this the whole loses the contributing qualitative essences of the would-be parts. In such bogus blends the natures of the parts disappear and so can make no contribution to the nature of the whole which must then evaporate as an essenceless illusion. The lesson herein is that a whole which analysis reveals must have a unification 'tighter than' that of the usual articulated composite, e.g., an ontic predicate or God, need not collapse into the absurdity of a homogeneous one, but can be a continuous composite.

ABSTRACT

In ontology a number of entities have been assayed as simple but nevertheless composed of multiple aspects, e.g., God as the coalescence of divine attributes, or unit attributes as having repeatable intensions and unrepeatable individuators. Focusing on the latter and defending three principles describing ontic predication, I argue: a) The term 'simple' is properly defined as the absence of any internal differentiation or division—absence of discreteness of constituents or parts *qua* actually contributing to the being of the whole, as opposed to external differentiation by abstraction. b) Discreteness of constituents, what characterizes an articulated composite, is marked by constituent interposing ontic predicates, i.e., relation (including property) instances. Hence, a necessary and sufficient criterion for an entity being simple is the impossibility of any constituent being ontically combinatorial of another constituent. c) There are entities that have non-identical constituents yet have no internal divisions because none of the constituents are themselves ontic predicates, e.g., relation instances. d) Hence, the term 'simple' is to be seen not as the contradictory of 'composite', but rather as equivocal between the non-composite or 'absolutely simple', e.g., the intension Red^1, and the composite, e.g., the relation instance Red^1_i, what is appropriately termed 'continuously simple'.

NOTES:

1. Herein terms naming intensions, e.g., 'Red^1', '$Love^2$', 'Owe^3', will each have superscripts indicating the number of subjects the intension specifies as jointly necessary in order to be characterized or qualified (including being ordered) under that intension. Alternately and in general, the superscript 'n' on the intension term 'R^n' indicates the number *n* of subjects in an *n*-tuple $<a_1,a_2,\ldots,a_n>$ necessary in order to form a fact with that intension controlling the ontic predication among $a_1, a_2,\ldots, a_n$, the fact designated as '$:R^n(a_1,a_2,\ldots,a_n)$'. The colon locution is used to distinguish a fact designated as '$:R^n(a_1,a_2,\ldots,a_n)$' from a corresponding proposition '$R^n(a_1,a_2,\ldots,a_n)$'. Subscripts on intensions, e.g., as in 'Red^1_1', 'Red^1_2', renders each such term a name for a particular and unrepeatable instance of the indicated type, e.g., Red^1. Ontic predication explicated herein is to be understood as what is traditionally identified as 'material' or 'fundamental predication' and concerns the nature of composition among any entities whatsoever, extra-conceptual or conceptual, and is to be distinguished from 'formal', 'linguistic', or 'grammatical predication' which pertains to the linguistic/conceptual syntactical composition of declarative sentences.

2. D. W. Mertz, 'Individuation and Instance Ontology', *Australasian Journal of Philosophy* 79 (2001), 45-61. J. P. Moreland and Timothy Pickavance, 'Bare Particulars and Individuation: A Reply to Mertz', *Australasian Journal of Philosophy*

81 (2003), 1-13. In the same issue see my response, 'Against Bare Particulars: Response to Moreland and Pickavance', 14-20. Also relevant here is Richard Brian Davis, ''Partially Clad' Bare Particulars Exposed', *Australasian Journal of Philosophy* 81 (2003), 534-48.

3. William of Ockham, *The Summa Logicae, Part I*, trans. Michael Loux as *Ockham's Theory of Terms* (Notre Dame: University of Notre Dame Press, 1974), p. 82.

4. Ibid., p. 84.

5. Herbert Hochberg, 'Individuation and Individual Properties: A Study of Metaphysical Futility', *The Modern Schoolman* 79 (2002), 107-35, p. 114.

6. J. P. Moreland, 'Naturalism, Nominalism, and Husserlian Moments', *The Modern Schoolman* 79 (2002), 199-216, pp. 206ff.

7. A traditional example of a 'merely conceptual distinction', what was called a *distinctio rationis ratiocinantis* ('distinction of the reasoning reason'), is 'Peter is identical to Peter.' Here Peter is said to be distinguished from himself, which, of course, cannot correspond to any extra-conceptual distinction. For an explanation of these types of Scholastic distinctions see Francis Suarez, *On the Various Kinds of Distinctions, (Disputationes Metaphysicae, Disputatio VII, de variis distinctionum generibus)*, trans. Cyril Vollert, S. J. (Milwaukee: Marquette University Press, 1947), pp. 18-19.

8. For Scotus' views see his *Ordinatio II*, d.3, part 1, qq. 1-6, translated in Paul Spade, *Five Texts on the Mediaeval Problem of Universals* (Indianapolis: Hackett Publishing Co., 1994), pp. 57-113. For Suarez see *On the Various Kinds of Distinctions, Disputatio VII*, pp. 18-19, 27-39. Keith Campbell, *Abstract Particulars* (Oxford: Basil Blackwell, 1990), pp. 56-7. D. M. Armstrong, *Nominalism & Realism: Universals & Scientific Realism*, Vol. I (Cambridge: Cambridge University Press, 1978), pp. 108-111. Mertz, 'Individuation and Instance Ontology', pp. 59-61. In the latter I used the unfortunate term 'non-constituent whole' for what I herein refer appropriately to as a 'continuous composite'. Also see Mertz, 'Combinatorial Predication and the Ontology of Unit Attributes', *The Modern Schoolman* 74 (2002), 163-98, p. 91.

9. For Suarez's denial of a formal distinction between the individuating and intensional aspects of an entity see Francis Suarez, *On Individuation (Disputationes Metaphysicae, Disputatio V, De unitate individuali ejusque principio)*, trans. Jorge Gracia (Milwaukee: Marquette University Press, 1982), pp. 46-52, and Suarez, *On Formal and Universal Unity (Disputationes Metaphysicae, Disputatio VI, De Unitate Formali et Universali)*, trans. J. F. Ross (Milwaukee: Marquette University Press, 1964), pp. 29-35. For Suarez's assertion that there is a formal or 'modal' distinction between an attribute and its mode of inherence in a subject see his *Disputatio VII*, pp. 27-39.

10. Mertz, 'Combinatorial Predication'. Also see Mertz, *Moderate Realism and Its Logic* (New Haven: Yale University Press, 1996).

11. D. W. Mertz, 'An Instance Ontology for Structures: Their Definition, Identity, and Indiscernibility', *Metaphysica: International Journal for Ontology & Metaphysics* 4 (2003), 127-64.

12. Peter van Inwagen, *Material Beings* (Ithaca: Cornell University Press, 1990). The Special Composition Problem—Among what conditions does composition (among the discrete) occur?—is answered by what I have called the **Unity-by-Instances Thesis**: All plural unity—complexity or structure—is by the following:

a) A relation instance R^n_i predicable of an *n*-tuple of relata, $<a_1,a_2,..,a_n>$, is the cause of an individual plural whole, i.e., a fact $:R^n_i(a_1,a_2,..,a_n)$, having R^n_i, a_1, a_2, .., a_n, as its only constituents.
b) If R^n_i is a constituent of a plural whole *x* and S^n_j is a constituent of a plural whole *y*, and R^n_i and S^n_j, share one or more relata, then there is an individual plural whole *z* that has as constituents all and only the combined constituents of *x* and *y* (horizontal composition).
c) For any fact $:R^n_i(a_1,a_2,..,a_n)$, if for $1 \leq j \leq n$, a_j is a plural whole, then there exists an individual plural whole whose constituents are all and only the constituents of the fact and constituents of a_j (vertical composition)

This is so because the answer to the General Composition Question—What is composition (among the discrete)?—is: The unifying effect of the predicable agency or combinatorial act of a relation (including property) instance with its subjects.

13. Ned Markosian, 'Brutal Composition', *Philosophical Studies* 92 (1998), 211-249; Van Inwagen, *Material Beings*, pp. 50-51.

14. For an indication with references of how the single category of relation instances can contribute to an ontology for quantum mechanics see Mertz, 'Instance Ontology for Structure'. Also see in the same volume of *Metaphysica*, 4 (2003), the paper by Michael Esfeld, 'Do Relations Require Underlying Intrinsic Properties? A Physical Argument for a Metaphysics of Relations', 5-25.

15. A partial historical survey of different interpretations of Bradley's Regress is found in Mertz, *Moderate Realism*.

16. Gustav Bergmann, *New Foundations of Ontology* (Madison: University of Wisconsin Press, 1992), pp. 56-58, 90. This reference was brought to my attention by William Vallicella in his 'Bradley's Regress and Relation-Instances', *The Modern Schoolman* 81 (2004), forthcoming. Vallicella somehow construes Bergmann as implying that bare particulars are simple composites, or 'Two-in-One's', and that there is thus little difference between bare particulars, which I reject, and my relation

instances. I propose that Bergmann's relevant texts referenced here show the error of this interpretation.

17. Bergmann, *New Foundations*, p. 57.

18. F. H. Bradley, *Appearance and Reality*, 2d ed. (Oxford: Clarendon Press, 1897; reprt. ed. 1966), pp. 404, 467, 509-11, 521; and Bradley's 'Relations' in *Collected Essays*, Vol. 2 (Westport, CT: Greenwood Press, 1970), pp. 648-50, 660, 663-64.

19. See Mertz, 'Combinatorial Predication'.

20. Michael Loux, *Substance and Attribute* (Dordrecht: Reidel, 1978), pp. 117-19, 131-34. Also, Loux, *Metaphysics: A Contemporary Introduction* (New York: Routledge, 1998), pp. 106ff.

21. For some of the recent dialectic concerning bare particulars see the references in note 2. I note that Davis in ''Partially Clad' Bare Particulars Exposed' argues that Moreland's defense of bare particulars implies that bare particulars must be constituents of themselves.

22. Ibid. This point is made by Armstrong in regard to the Resemblance^2 relation in the context of criticizing resemblance nominalism. See his *Universals: An Opinionated Introduction* (Boulder: Westview Press, 1989), pp. 43-45.

23. D. M. Armstrong, *Nominalism and Realism*, p. 111.

24. P. F. Strawson, *Individuals* (London: Methuen, 1971), pp. 167ff.

25. Gustav Bergmann, *Realism* (Madison: University of Wisconsin Press, 1967), pp. 9, 42ff.; Herbert Hochberg, 'A Refutation of Moderate Nominalism', *Australasian Journal of Philosophy* 66 (1988), 188-207.

26. The description is translated and cited by Allen Wolter, *The Philosophical Theology of John Duns Scotus* (Ithaca: Cornell University Press, 1990), p. 46.

27. Scotus, *Ordinatio II*, in *Five Texts*, p. 101.

28. Ibid., p. 108.

29. Ibid., pp. 107, 108.

30. Ibid., p. 113.

31. Ibid., p. 108, where Spade translates the phrase as "as it were *per se* parts", whereas "as *quasi per se* parts" is the translation of R. L. Kilcullen in his 'John Duns

Scotus, *Ordinatio*, II, dist. 3, pars 1.', 1996, found at URL = <http://humanites.mq.edu.au/Ockham/wjds.html>. I take "*quasi*" to be Scotus' term but I have not been able to verify it.

32. Scotus, *Ordinatio II*, in *Five Texts*, p. 106.

33. Keith Campbell, 'The Metaphysics of Abstract Particulars', in *Midwest Studies in Philosophy, Vol. VI, The Foundations of Analytic Philosophy*, ed. P. French, et al. (Minneapolis: University of Minnesota Press, 1981), 477-88, p. 482.

34. Keith Campbell, 'Abstract Particulars and the Philosophy of Mind', *Australasian Journal of Philosophy* 61 (1983), 129-41, p. 129.

35. Campbell, *Abstract Particulars*, p. 57.

36. Ibid., pp. 30-34, 59-60.

37. Evidence of Suarez's similarity nominalism is found at *On Formal and Universal Unity*, *Disputatio VI*, pp. 30, 36, 47-48.

38. Ockham, *Ockham's Theory of Terms*, p. 82.

39. Ibid., p. 84. These points are reiterated by Ockham in the *Ordinatio*, see Spade's *Five Texts*, pp. 156ff.

40. Suarez, *Various Kinds of Distinction*, *Disputatio VII,* p.22.

41. Ibid., p. 21.

42. Ibid., p. 27.

43. Aristotle, *Metaphysics* 1045a6-b24; Ockham, *Ockham's Theory of Terms*, p. 170; Francis Suarez, *On the Formal Cause of Substance (Disputationes Metaphysicae, Disputatio XV*), trans. J. Kronen & J. Reedy (Milwaukee: Marquette University Press, 2000), pp. 177-78.

44. Jeffrey Brower, 'Medieval Theories of Relations', *The Stanford Encyclopedia of Philosophy* (Summer 2001 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2001/entries/relations-medieval/>.

45. See Campbell's *Abstract Particulars*, pp. 97ff. Campbell admits certain relations are not reducible to foundations in their terms in his 'Unit Properties, Relations, and Spatio-Temporal Naturalism', *The Modern Schoolman* 79 (2001), 151-62.

46. Bertrand Russell, *The Principles of Mathematics*, 2d ed. (1903: reprt. ed., New York: Norton, 1938), pp. 221ff. I have sought to reinforce these arguments against objections raised by Campbell in my *Moderate Realism*, pp. 163-71.

47. See Suarez, *Various Kinds of Distinction*, *Disputatio VII*, pp. 18ff.

48. Calvin Normore, 'Buridan's Ontology', in *How Things Are*, ed. J. Bogen & J. McGuire (Dordrecht: Reidel, 1985), pp. 180-203. Normore here translates from Burdian's *Questiones in metaphysicam aristotles*, V, q. 8, fols. 31, 33.

49. Ibid., pp. 197-98.

50. Suarez, *Various Kinds of Distinction*, *Disputatio VII*, p. 28.

51. Ibid., pp. 26, 27.

52. Ibid., p. 31.

53. Ibid., p. 29.

54. Philip Kitcher, *The Nature of Mathematical Knowledge* (Oxford: Oxford University Press, 1984), pp. 108ff.

55. See Michael Hallett, *Cantorian Set Theory and Limitation of Size* (Oxford: Clarendon Press, 1984), pp. 34-37.

56. See Brower 'Medieval Theories of Relations', and Mark Henninger, *Relations: Medieval Theories 1250-1325* (Oxford: Clarendon Press, 1989).

57. Bertrand Russell, 'Some Explanations in Reply to Mr. Bradley', *Mind* 19 (1908), pp. 373-78. F. H. Bradley, 'Relations' in *Collected Essays*, pp. 643-44.

58. See Mertz, 'Instance Ontology for Structures'.

59. Gottlob Frege, *Translations from the Philosophical Writings of Gottlob Frege*, ed. P. Geach & M. Black (Oxford: Basil Blackwell, 1970), pp. 54-55.

60. David Seargent, *Plurality and Continuity: An Essay in G. F. Stout's Theory of Universals* (Dordrecht: Martinus Nijhoff, 1985), pp. 113-115, 123. D. M Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pp. 30, 99, 123-24, and his *Universals: An Opinionated Introduction*, pp. 96-97, 116.

61. Mertz, 'Instance Ontology for Structures'.

62. Mertz, 'Individuation and Instance Ontology'.

63. Keith Campbell, 'The Place of Relations in a Trope Philosophy', *Proceedings of the Colloque International de Philosophie de Grenoble: La Structure du Monde; Objets, Proprietes, etats de choses*, in *Recherches sur la philosophie et le langage*, Universite Pierre Mendes France, Grenoble, 2003.

64. Campbell, 'Unit Properties, Relations, and Spatio-Temporal Naturalism'.

65. Michael Loux, *Substance and Attribute*, pp. 163ff, and Loux, *Metaphysics: A Contemporary Introduction*, pp. 117ff. E. J. Lowe, *The Possibility of Metaphysics* (Oxford: Clarendon Press, 1998), pp. 180-83, 197.

66. Mertz, 'An Instance Ontology for Structures'.

67. E.g., at Mertz, 'Individuation and Instance Ontology', pp. 49-50.

68. This 'identity in vacuity' is the valid point that in 'Individuation and Instance Ontology', p. 52, I garbled badly in an argument that critics have been right to criticize (e.g., Vallicella, 'Bradley's Regress and Relation-Instances', and Richard Davis, ''Partially Clad' Bare Particulars Exposed', pp. 541-41). The argument there should have been as follows. First, I understood 'constituent of' as extended in sense to include the 'improper' case of the very essence itself of an entity—the essence of an entity being constitutive of it. Then, the constituent analog to the Identity of Indiscernibles, **CII**, was to include this extended sense: $(x)(y)[(z)(z$ is a proper or improper constituent $x \equiv z$ is a proper or improper constituent $y) \supset x = y]$. If upon analysis bare particulars x and y have no ontic predicates in the standard sense and therefore have no essences, then the antecedent of **CII** is true and so $x = y$, for all bare particulars x and y. Hence, absurdly, there could be only one ordinary thick particular. In 'Individuation' I was not explicit about the extended sense of 'constituent of' nor that **CII** was to include it, and made the argument curtly saying "All bare particulars in having no constituents have exactly the same constituents and so are identical." Whatever the merits of this clarified argument, it does not imply, as critics of the garbled original asserted of it, that all (absolutely) simple entities, in being without proper constituents, would have to be identical. This would be implied only if **CII** were rewritten to concern only proper constituents, but the variables in the initial quantifiers, '(x)' and '(y)', remained unrestricted in their range. Moreland and Pickavance, in 'Bare Particulars and Individuation', pp. 12-13, avoid the unwanted implication by holding that the variables in the initial universal quantifiers of **CII** are to be restricted to range over only composite entities, what they contend is the common understanding.

69. Moreland and Pickavance, 'Bare Particulars and Individuation: A Reply to Mertz'.

70. William Vallicella, 'Bradley's Regress and Relation-Instances'. Vallicella's advocacy of the validity of Bradley's Regress can also be found in his 'Three

Conceptions of States of Affairs', *Nous* 34 (2000), 237-59, an in 'Relations, Monism, and the Vindication of Bradley's Regress', *Dialectica* 56 (2002), 3-35.

71. Armstrong, *States of Affairs*, pp. 118-19.

72. Vallicella, 'Bradley's Regress and Relation-Instances'.

73. This answers the 'Simple Question' posed by Ned Markosian in 'Simples', *Australasian Journal of Philosophy* 76 (1998), 213-28. His answer is that entities are simple if they are maximally spatially continuous, a criterion which allows for physical divisibility. Though I think his intuition concerning spatial continuity as involving a simplicity among the yet heterogeneous is in the right direction, the criterion for simplicity offered herein is metaphysically universal and would include spatial simplicity as but one case. I note further that the analysis herein has proceeded in the reverse direction from that suggested by Markosian when he says "If we are to try to figure out how it is that several things can combine in order to compose a single thing [in order to answer van Inwagen's Special Composition Question (see note 12 above)], then we will likely be aided in our investigation if we have some idea of the nature of the basic building blocks that are meant to be combined in order to form [articulated] composite objects."[p. 215; my inserts]. I have argued for the insight that it is ontic predicates that are the unifying causes of composites with yet discrete parts, and that consequently it is their absence that is the criterion for being simple.

JANINE JONES

Cartesian Conceivings

Even amidst the heavy and sustained attacks, there remain some philosophers who believe that some version of Descartes' epistemological argument for the distinction between mind and body in the sixth meditation must be right.[12] In this paper I distinguish three senses of conceiving, two of which Descartes availed himself to show the distinction between mind body and one of which he did not. Regarding the first two, I will show why they fall short of fulfilling Descartes' expectations. As regards the third, I explain why it provides the sense of conceiving that Descartes needed in order to *try* to show the distinction between mind and body, but why it would have failed to produce the desired result had he used it. I will begin with Descartes' ontological argument for the distinction between mind and body.

A version of Descartes' argument can be rendered as follows below. In and of itself the argument is neither purely epistemological nor ontological. Casting it as one or the other depends, in part, on how premise 5 is supported.

1. If A can exist apart from B and vice versa, then A and B are really distinct (by stipulation).
2. Whatever I clearly and distinctly perceive (or conceive) can be brought about by God as I perceive (or conceive) it (from God's omnipotence).[3]
3. If I clearly and distinctly perceive (or conceive) that I can exist apart from my body and vice versa, God can bring this about (from 2).

---

[1] See Hart, *The Engines of the Soul* (Cambridge University Press: 1998) pp. 52-53, and his recent paper 'The Music of Modality' in *Topoi* (2003), vol. 23, no. 2.

[3] Nevertheless, Descartes writes that "The question of what kind of power is required to bring about such a separation does not affect the judgement that the two things are distinct. See the sixth meditation in *The Philosophical Writings of Descartes Vol. II*, trans. Cottingham, Stoothoff, and Murdoch (Cambridge University Press: 1984), p. 54.

4. If God can bring it about that A can exist apart from B and vice versa, then A and B are really distinct (from 1)
5. I clearly and distinctly perceive (or conceive) that thought belongs to the nature of mind and extension to the nature of body and that mind can exist with thought but not with extension, and that body can exist with extension but not with thought.
6. I clearly and distinctly conceive that mind can exist without body and vice versa (from 5).
7. God can bring it about that mind exists apart from body and vice versa (from 2 and 5).
8. Mind and body are really distinct (from 1 and 7).

For the moment I will not call premises 1 through 4 into question. The question I will begin with asks how we obtain 5. One way of obtaining 5 depends on using a type of conceivability found in Descartes' work. I call this type of conceivability Ontological Cartesian Conceivability (OCC) because it supports an ontological rather than an epistemological argument for the distinctness of mind and body.

Ontological Cartesian Conceivability

According to Ontological Cartesian Conceivability, what we can conceive about a thing X depends on our knowing X's essence or nature. Conceiving that X is P (or not P) is first and foremost a question of determining what is compatible with **X's nature**: On Descartes' view this is done by inspecting contents of one's own mind, whether the contents be the self or geometrical figures. In order to conceive that X is or is not P we must first know **X's nature**. We then build that knowledge into our act of conceiving. Suppose that in knowing X's essence we know that P is not part of X's essence. In that case we will be able to conceive that X does not possess P. Or, if we know that P constitutes (even partially) X's essence, then we cannot conceive of X's existing without its possessing P.

We can support premise 5 above using the following Cartesian givens and an OCC-style conceivability argument. The Cartesian givens, presented below, come from Descartes' definitions of mind and body.

A. Mind is a substance whose essential attribute is thought (i.e., thought constitutes the nature of mind).[4]

[4] In this context, an essential attribute of a substance is an attribute that *fully* determines the nature of that substance.

B. Body is a substance whose essential attribute is extension (i.e., extension constitutes the nature of body).
C. A substance can only have one essential attribute.
D. If substances A and B have distinct natures then they are distinct.

If this is the metaphysical picture with which we *start*, and plug it into the argument presented above, then mind and body can be clearly and distinctly conceived as being distinct. Taking A and B together we see that mind has a nature body does not possess and vice versa. Thus, the distance we have to go in order to see that mind and body are not one and the same has been shortened considerably. But this might not be thought to be enough to say that we have *clearly and distinctly* conceived that mind and body are distinct. It could still be claimed, for example, that when we say that mind's essential attribute is thought and body's essential attribute is extension we are surreptitiously bringing into play *the way we think* about mind and body to bear on the matter, as we do when we claim that pains are essentially painful while brain states (e.g., C-fiber firings) are not, and from this conclude that pains are not identical to any brain state. If we were talking about visually seeing the distinctness between two objects this type of objection would probably not arise: When you see that two objects are not one in the same you also see that they are distinct. Not so for introspectively perceiving their distinctness. There remains the possibility that a certain type of perception can make it appear as though the subject of investigation is not identical to an object to which it really is identical. Therefore, we must, *in addition*, perceive the distinctness of the objects in question.

By adding C – a substance can have only one essential attribute – the distinctness of mind and body moves clearly into view: No matter how we think of mind and regardless of how we think of body, no substance can have more than one essential attribute. By introducing C we can now say: However we accessed mind and its essential attribute – thought – mind's *one* essential attribute *is* thought. Similarly, however we accessed body and its essential attribute – extension – its one and only essential attribute is extension. Therefore, no matter how we think of mind and body in order to determine their essential attributes, they must be distinct because, by C, a substance can possess no more than one essential attribute. Thus with the addition of C we not only see that mind and body are not one and the same, we see clearly and distinctly that they are indeed distinct. As for 4, most

philosophers who accept the idea of distinct kinds with distinct natures will find it uncontroversial.

As we have seen, premise 5 is supported by the Cartesian definitions of mind and body, and by the Cartesian assumption given in C. Subsequently, 6 through 8 follow.

A Problem with OCC-style Conceivability arguments

There is a problem for OCC-style conceivability arguments or conceivability arguments based on it (e.g., Cartesian subtraction thought experiments): They can be used only if we know the (full) nature of mind or body.[5] Build in different premises about the nature of mind (or body) and the conclusion that mind and body are distinct may not follow. Build in premises that only provide *a partial description* of the nature of mind or body and we will be in *no* position to claim that we see clearly and distinctly what their natures are. Hence, we would be wrong to assert that we see clearly and distinctly that they are distinct. So with respect to the above argument, a way must be found to support the truth of A and B (not to mention C). Otherwise, we cannot claim to know the full nature of mind, in which case even if the argument were in fact sound, we would be in no position *to advance it* as a sound argument. And, of course, there is always the possibility that A and B (and C) are false.

Descartes is sometimes thought to have claimed that he clearly and distinctly perceived (or conceived) *the nature* of mind. It is far from clear that Descartes claims this, or that he should have claimed it if he did.

After stating that he is a thinking thing (in the 2nd meditation), Descartes goes on to ask what his nature is. Because the supposition that he does not have a body is still in effect he concludes that he is not body. But he then asks: "Yet may it not perhaps be the case that these very things which I am supposing to be nothing, *because they are unknown to me*, are in reality identical with the 'I' of which I am aware? *I do not know, and for the moment I shall not argue the point, since I can make judgements only about things which are known to me.* . . . If the 'I' is understood strictly as we have been taking it, then it is quite certain that knowledge of it does not depend on things of whose existence I am as yet unaware. . ."[6]

---

[5] Subtraction thought experiments involve subtracting a property P from an object O's nature. If P can be subtracted without undermining O as the subject of the subtraction then P is not an essential property of O; otherwise it is.

[6] Descartes, p. 18-19, emphasis added.

Here it seems that Descartes does not believe that he has clearly and distinctly perceived *all* that he is essentially. What he claims to be – a thinking thing – is what he is relative to what he *knows* himself to be. It is this object – Descartes-as-known – that is the genuine object of his investigation.[7] Further, we mustn't forget that Descartes clearly and distinctly perceived this object – his self (or clearly and distinctly conceived *that* he existed) *while* rationally doubting the existence of all things corporeal, or while supposing or pretending that corporeal things did not exist.[8] Thus,

---

[7] In footnotes to *Descartes: Oeuvres Philosophiques II* , Classiques (1999) ed. Alquié Garnier, p. 419-420, Ferdinand Alquié's position is in agreement with my mine. He writes: "*Descartes distingue ici l'ordre de la connaissance et celui de l'être. Il ne prétend pas encore décider de ce qu'il est, mais seulement de ce qu'il sait être. . . . on peut considerer que Descartes atteint ici, en ce qui concerne sa nature, un savoir à la fois certain et limité. Certain, car Descartes est assuré d'être une chose qui pense. Il peut être autre chose encore, et des réalités, rejetées hors de lui parce que non certaines, peuvent lui appartenir. On voit que, de toute façon, la véracité divine sera nécessaire pour établir la distinction réelle de l'âme et du corps, ou, si l'on préfère, pour établir que je suis «seulement» une chose qui pense*.

(Translation: Descartes here distinguishes between knowledge and being. He does not claim to have yet determined what he is but only to have determined what he knows himself to be. We might consider that Descartes here attains knowledge that is both certain and limited as regards his nature. It is certain because Descartes is guaranteed to be a thinking thing. He can still be something else, and those realities, excluded from what he is because they are uncertain, could belong to him. In any case, it can be seen that divine truth will be necessary to establish the real distinction between the soul and the body, or, if you prefer, to establish that I am «only» a thing that thinks.)

Alquié's interpretation here differs from mine in that he focuses on the idea that Descartes knows for certain his nature, whereas, as will be seen further in the text, I will focus on the fact that Descartes knows for certain that he exists. On the other hand, even Alquié, at the end of the above citation, claims that God will be required in order for Descartes to know, for certain, his nature. I agree with this, but believe that it should be observed that this is not so, as I argue in the text, for Descartes' existence. His own existence is something of which he does have a clear and distinct perception, even without God's help.

[8] On some interpretations of the relation between *cogito* and *sum*, the *cogito* argument is not a proof. Rather, Descartes' existence is recognized as something self-evident, in a simple act of mental intuition, where intuition is sometimes understood as an act of introspection. See Jacques Chevalier, *Descartes* (Paris: Plon, 1921), p. 218. In this case, Descartes' way of coming to know himself is by clearly and distinctly perceiving the referent of 'I' as uttered by him. Alternatively, we might say that he clearly and distinctly perceives *his existence*. In either case the subject of his perception is an object.

Descartes, in effect, was arguing (or should have been arguing) that *Descartes-as-known* cannot be bodily in nature, not because Descartes knows the full nature of the referent of 'I' as uttered by himself and thereby knows that *it* does not include body. Rather he knows that Descartes-as-known cannot be bodily in nature because this object is known to him to exist – it is *being* known to him to exist! – *while* he supposes the non-existence of body.[9] In other words, even as he supposes the non-existence of body he remains in a state of awareness of the existence of himself or of the fact that he exists.

Therefore it is not true to say that Descartes has shown us through his method of radical doubt that he clearly and distinctly perceives the nature of the referent of 'I' as uttered by him. (And again, it does not seem that he claims to have done so.) Consequently, the ontological argument presented above does not get off the ground because Descartes' method does not support premise 5: Descartes has clearly and distinctly perceived (or conceived) that thought belongs to Descartes-as-known, but he has not clearly and distinctly perceived (or conceived) that thought *alone* belongs to his mind. Thus, while he may have clearly and distinctly perceived (or conceived) that Descartes-as-known exists without extension, he has not shown that he clearly and distinctly perceived (or conceived) that his mind exists without extension.

This being said, I think Descartes could still conclude that he clearly and distinctly perceives his existence apart from his body, or apart from any body for that matter. Or alternately, he could conclude that he clearly and distinctly conceives *that* he exists apart from body. In fact, there is a

---

However, other interpretations of Descartes' *cogito* argument have been offered according to which we should understand it as an inference from *cogito* to *sum*. Various difficulties, as well as ways of solving these difficulties have been raised for this interpretation. See Anthony Kenny, *Descartes: A Study of His Philosophy* (New York: Random House, 1968), pp. 40-62; Bernard Williams, *Descartes: The Project of Pure Enquiry* (New Jersey: Humanities Press, 1978), pp. 72-101; and Margaret Wilson, *Descartes* (London, Henley and Boston: Routledge & Kegan Paul, 1978), pp. 50-71.

In any case, if Descartes' *cogito* argument is interpreted as inferential then Descartes' way of coming to know himself would be through an act of conscious perception whose subject is a fact. Because of this we would then say that Descartes clearly and distinctly *conceives* (i.e., judges, understands) *that* the referent of 'I' as uttered by him exists.

[9] Descartes is in a state of being immediately acquainted with the referent of his utterance of 'I'. Or he is experiencing the referent of his utterance of 'I'. It is *being known* in this sense.

sense in which he has done this. But an examination of this claim takes us to Descartes' epistemological argument, and the question emerges, How much metaphysical magic can Descartes pull out of an epistemological claim?

Descartes' Epistemological Argument

The version of Descartes' epistemological argument I will offer is like his ontological argument, except for premise 5*. Thus we have:

1.* If A can exist apart from B and vice versa, then A and B are really distinct (by stipulation).
2.* Whatever I clearly and distinctly perceive (or conceive) can be brought about by God as I perceive (or conceive) it (from God's omnipotence).
3.* If I clearly and distinctly perceive (or conceive) that I can exist apart from my body and vice versa, God can bring this about (from 2*).
4.* If God can bring it about that A can exist apart from B and vice versa, then A and B are really distinct (from 1*).
5.* I clearly and distinctly perceive (or conceive) that my mind exists while supposing or pretending that body does not exist.
6.* I clearly and distinctly conceive that mind can exist without body and vice versa (from 5*).
7.* God can bring it about that mind exists apart from body and vice versa (from 2* and 5*).
8.* Mind and body are really distinct (from 1* and 7*).

If we recall *how* Descartes argues for the epistemological claim that he can clearly and distinctly perceive that he exists apart from body we should come to see that it is not really such a strong claim after all. What it indicates is that Descartes could perceive his own existence (or perceive that he exists) while supposing that nothing corporeal exists. How does he accomplish this feat? If it is through introspection – a type of perception – then he is immediately aware of himself – not his nature.

Let's suppose it has turned out that Dodo birds exist. Suppose further that we do not know this; in fact, we believe that Dodo birds are extinct. We might go so far as to say that we know that the Dodo is extinct.

Now imagine that I am out in a forest and a dodo bird swoops down and perches itself on a branch directly in front of me. I have never seen this kind of bird before, but I do not suppose that it is a dodo. I emphatically suppose that it is not, even though I am intrigued by its resemblance to the depictions of dodos I have seen in the Museum of Natural History.

In the situation as described I am consciously aware of a dodo, while supposing that dodos do not exist. Using a demonstrative and pointing at the dodo I could say, 'I know that *that* exists'. And again I assert this while confidently believing that dodos are extinct. Let's put aside skeptical worries such as hallucinations, the possibility of an evil demon, and the like. We could then say that I have perceptual knowledge that *that* exists, referring to the dodo, while I believe that dodos are extinct.

Would anyone conclude from this that God or any power could make it the case that *the thing* that I have perceptual knowledge about could exist apart from dodos? I think not. It seems to me that the reason that Descartes can clearly and distinctly perceive himself while pretending or supposing that nothing corporeal exists is for pretty much the same reason that I can have perceptual knowledge of the Dodo while confidently believing that Dodos are extinct. He perceives something whose *existence* is undeniable to him given the perceptual experience he is consciously aware of having. He can have such a perception and know with certainty that the object of his awareness exists while knowing very little about the nature of the object of his awareness. In Dretskian terms, we might say that he has object awareness (of which is certain) without having fact awareness about that object. But not knowing the complete nature of the object of his perception, he also does not know *what it is not* and can therefore deny, without contradiction, that the object possesses properties it is not represented as having in his perception of it: Properties of the object that are not available to him through his perception of it, that is, properties that are not constituents of his perception.

Alternately, we might say that Descartes clearly and distinctly perceived or conceived the fact *that* he exists. But then we must acknowledge that being aware – even clearly and distinctly aware of the fact that something exists – does not entail that one knows anything about the nature of the thing that the fact is about. Thus, analogously to the case of perceptive knowledge discussed, I can clearly and distinctly conceive that *that thing* exists without knowing what it is. Therefore, once again, I can deny, without contradiction, that properties $P_1 . . . P_n$ can be predicated of the object of

my awareness if those properties are not available to me in my act of conceiving.[10]

Descartes' problem may be that he confuses matters of nature (essence) and existence. It might seem that because we can latch on to a thing in a way that allows us to know that it exists that it follows that the *nature* of the thing – like the thing itself – is available for use in our acts of conceiving or that the nature of the thing – like the thing – is a constituent of our act of conceiving. One might think this because the nature of a thing is supposed to provide its existence conditions. From this one might reason that if an object is a constituent of an act of conceiving so too must be its existence conditions be. There is a similar kind of confusion in the contemporary literature because, in the fashion of Kripke, we tend to assert *identities* between objects and their essences rather than viewing, after the manner of Putnam, an object's essential essence as a property of that object, not as something that the object is identical with. If we assert an identity between an object and its essence, then if the object is a constituent of an act of a conceiving so would its essence. From this it might seem that the essential properties are available to us in an act of conceiving. Of course, we will not be tempted to reason this way if the object – the logical subject of an act of conceiving – is not identical to those properties that provides its existence conditions.[11]

Whatever the reason for the confusion, knowing through some type of perception that a thing exists, or knowing of its existence, does not bring it about that the thing's *nature* is available for use in an act of conceiving. We might perceive that a thing exists, and this might be sufficient for our *thinking* about the thing in various ways. Looking at a dodo bird I might think to myself, What is *that*? I might daydream about it or have a nightmare about it. And in these cases, the object of my perception, the Dodo,

---

[10] Descartes would not be able to respond to my criticism of his argument in the way that he responded to Arnaud's objection that in conceiving of his mind, he (Descartes) did not have a complete understanding of his mind. Descartes had replied that what was required was not that he conceive completely what mind is, but rather, that he conceive a complete thing or substance. On my reading of Descartes, in perceiving of himself without body he did conceive of a complete thing's existence. But not having clearly and distinctly conceived of the nature of this complete thing, he did not clearly and distinctly perceive that the full nature of his mind is distinct from body. This, however, is what he needed.

[11] Descartes most likely did not make the latter mistake since he did not assert an identity between the referent of 'I' as uttered by himself and the nature of that referent. Rather, the nature of the referent, on Descartes' view, is predicated of the referent.

would be a constituent of my thoughts (i.e., my wondering, my daydream, my nightmare). But if we do not know the nature of an object then *its nature* cannot be a constituent of our conceivings, even though the object itself – whose existence we have apprised ourselves of through some type of perception or act of conceiving – is a constituent of our conceivings. On the other hand, if the nature of an object is not a constituent of an act of conceiving, then not only is that nature unavailable for our use in a positive way (i.e., for conceiving what further properties the object possesses) the nature of the object cannot *constrain* what we can conceive about the object. [12]

Without the nature of a thing, all that is available to us is the thing (and those properties we apprehend through our perception of it). But when the thing itself – and not its nature – is the subject of our conceiving, we can conceive almost anything about it we fancy. Perhaps the only things that we cannot conceive about the object are those things that we cannot conceive about *any* object in virtue of its being an object (e.g., that it exists and does not exist, that it is red all over and yellow all over at the same time, that it is not identical to itself, etc.)

So, yes, Descartes can clearly and distinctly conceive that he exists without anything corporeal existing. That is, he can give a *self-consistent* account in which he knows that he exists while rationally doubting that anything corporeal exists. The story *is* about Descartes, but in no way is it *about* his nature. His full nature is not a constituent of the story. It is not available for use in his account; it is not available for constraining his account. This does not mean that Descartes cannot clearly and distinctly perceive his existence apart from body, or that he cannot clearly and distinctly conceive that he can exist apart from body. He can do both. It does mean, however, that nothing about his *possibly existing* without anything corporeal existing follows from his being able to clearly and distinctly perceive or conceive their existential separation in this way. For even though Descartes' nature is not available for use in his act of conceiving, his nature is still what provides the conditions necessary and sufficient for his existence. Therefore, what he needs to show is that he can clearly and distinctly perceive or conceive the full nature of his mind while supposing the non-

[12] Of course, in the case of an OCC-style conceivability argument (or a subtraction argument) without the nature of the object in question these types of conceiving do not get off the ground to begin with. Therefore, whether or not the nature *constrains* what we could conceive about the object would be a moot point.

existence of body. Given what Descartes says (above) even he should not claim that he has done this.

Where does this leave Descartes? Well, premise 2*is not correct. Neither God nor any other power can bring about *whatever* Descartes clearly and distinctly conceives.[13] What God or some lesser power can effect is the existential separation of two things whose *full* natures have been clearly and distinctly perceived or conceived as diverse. Therefore, Descartes' epistemological argument does not go through.

The question now becomes: Can Descartes show us that he can clearly and distinctly perceive the *full* nature of his mind thereby making *the nature* of his mind a constituent of an act of clear and distinct conception? Alternatively we can ask: Can Descartes show that he can clearly and distinctly conceive that the full nature of his mind exists while supposing that body does not exist? If he can do either, then he can use the result, together with the premise pertaining to God's omnipotence, to show the possibility of the distinctness of mind and body.

As we have seen neither an OCC-style act of conceiving (nor a subtraction thought experiment on which it is based) will work. Both require that *we begin with* the full nature of the subject of the conceiving in order to get the act of conceiving *off the ground*. We have also seen that conceiving *that* – where the goal is to provide a self-consistent account of some state of affairs – did not get Descartes his desired result because he did not provide a self-consistent account of *the kind of state of affairs* required to establish the distinction between mind and body.

I submit that what Descartes needs to do, prior to trying to conceive that his mind is distinct from body, is *conceive of* his disembodiment. This would allow him to clearly and distinctly perceive that body does not belong to his nature, rather than merely clearly and distinctly perceiving that body does not belong to the object *Descartes-as-known* (by Descartes). Then he could use this perception – whether factual or objectual – as data in an act of clearly and distinctly conceiving *that* mind is distinct from body. The self-consistent account he could give would then be about Des-

[13] I want to stress that I am *not* calling into question Descartes' claim to have clearly and distinctly perceived his existence apart from the existence of body. In fact, the argument that I am advancing is very much in the spirit of Malebranche, who believed that we can gain certainty of our own existence through consciousness, but, who, at the same time, not only disagreed with the idea that we could clearly and distinctly conceive the nature of our own minds, but thought that we do not have any idea *of* the nature of our minds, let alone a clear and distinct one. See Malebranche, *The Search After Truth* Bk. VI, Pt. ii, ch. 6, 480 and Bk. I, ch. 13, IV, 62-63.

cartes' (full) nature existing without body, and in this case it would be possible for God to pull the two apart.

But in order to accomplish the feat of conceiving his disembodiment Descartes would have to be able to conceive of his disembodiment, which is a far cry from *perceiving* himself and simultaneously denying or disbelieving his embodiment. The problem with this strategy is that its success depends on being able to imagine one's disembodiment (or imagine that one is disembodied), and this, I think, cannot be done. Below I will explain my view on this matter by first distinguishing three cognitive acts*: imagining, conceiving of, and conceiving that*.

Imagining, Conceiving of, and Conceiving that

The following 'imaginative' acts can be distinguished: *imagining of*, *imagining that, conceiving of,* and *conceiving that.* Here I will focus primarily on *imagining of*, *conceiving of*, and *conceiving that*. These different acts can be further qualified. Thus, we have: *sensuous imaginings of*, *sympathetic imaginings* of, and *perceptual imaginings* of. *Imaginings that* can be similarly qualified. Further, we can distinguish sensuous, sympathetic, and perceptual *conceivings of*. But *conceivings that* are not so qualified because their mode of presentation is not part of their content.

Sensuous imaginings of occur when we use our sensory imagination (e.g., visualization, auralization, tactilization, etc.) to imagine properties, objects, and events. Thus, a sensuous imagining of blueness is the visualization of blueness.

Sympathetic imaginings of occur when we use the sympathetic imagination to imagine conscious states of an individual or phenomenal states and properties of an individual. We do this by putting ourselves in conscious states (or phenomenal states) resembling the conscious states (or phenomenal states) of the individual we are sympathetically imagining.

Perceptual imaginings of require theoretical knowledge, though the content of this knowledge is not part of the content of the imagining. Thus, for example, someone might have a perceptual imagining of pain if, first, he knows what brain state pain is identical with. He might *then* have a perceptual imagining of pain by visualizing that brain state.

Sensuous conceivings of first require the sensuous imagining of some object, event, or property. But the content of this type of act will not be fully given unless the sensuously imagined object is identified in some way

or other. So, for example, in order to conceive of blueness, it will not suffice to visualize blueness. The conceiver must *recognize that* the property visualized is blueness. In other words, he must identify it. The same is true of *sympathetic conceivings of* and *perceptual conceivings of*, though they differ from *sensuous conceivings of* with respect to the kind of object they take. Thus, a *sympathetic conceiving of* will take as its object a conscious state or property. But sympathetically imagining pain is not sufficient for sympathetically conceiving of pain. The conceiver must recognize that the imagined state is pain. As regards the perceptual conceiving of pain, on the assumption that pain is identical to with a brain state, we might perceptually conceive of pain by visualizing the brain state. But the act of conceiving of is completed only when we have identified the brain state with pain. Hence, for all types of *conceiving of* concepts must be applied to whatever is sensuously, sympathetically, or perceptually imagined.

Further, regarding *sympathetic conceivings of*, concepts must be applied from the first-person perspective. To sympathetically *conceive of* being in pain I must describe a state of affairs in which I recognize that the concept of pain, understood *from the first-person point of view*, applies to pain, for it is the first-person perspective that makes the sympathetic concept of pain possible.

But let us, for a moment, suppose that pain is identical with some brain state, C fiber firings. If I sensuously or perceptually imagine a situation in which C fiber firings occurs but I am ignoring my pain and am unaware of it from the first-person perspective (perhaps because I am competing in a game that I cannot win if I focus on the feeling) I have not *sympathetically* applied the concept of pain. Therefore, I have not sympathetically *conceived of* pain.

On the view that I am advancing, we do not *sensuously imagine* pain, for it is not through our sensory organs that we have the experience of pain. That is the task of the sympathetic imagination. We should also observe that we do not sensuously *conceive of* pain. Doing so would require that we be able to *sensuously imagine* pain. By contrast, we do sensuously imagine seeing blue and sensuously conceive of blueness.

Now in order to clarify the distinction between *conceiving that* and *conceiving of* let's begin with two of its cognitive cognates: *perceiving that* and *perceiving of*. I might correctly say that I perceive that the lamp is on in the following circumstances: I see that the light switch is up, I know that all electrical connections are working, I know that a working light bulb is placed correctly in the lamp, and I know that the lamp cord is plugged in

the socket. But it would not follow in these circumstances that I perceived of the lamp's being on. For this to follow my perceiving would need to take on a sensuous aspect or mode of presentation involving sensory information received from the lamp's glowing light bulb, for example. I think something quite similar is going on with respect to *conceiving that* and *conceiving of*.

When I say that I conceive *that* the lamp is on I can do so merely by *describing* a situation in which that state of affairs obtains: The light switch is up, the electrical connections are working, a light bulb is placed correctly in the lamp, etc. What is described is not sensuously presented. Whether I succeed in conceiving *that* the lamp is on will depend on things such as whether the description I offer is self-consistent, whether the physical laws, implicit in the description, are correct (or could be correct). On the other hand, if I say that I conceive *of* the lamp being on, as in the case of perceiving, my conceiving must take a sensuous shape. Because of this the sensuous imagination is implicated.

Application of Distinctions to Conceiving One's Disembodiment

First of all, as regards Descartes' using the imagination to perceive the full nature of his mind it is well known that he would have repudiated this strategy, believing, as he did, that the imagination was the kind of mental operation that necessarily introduced corporeal elements. Imagining a square had to do with visualizing it. The reason we cannot imagine a chiliagon, according to Descartes, is because we cannot visualize all of its sides. He makes no room for imagining conscious or phenomenal states of individuals – imagining being angry, imagining being happy, imagining being in pain, imagining being in a state of wonderment or a state of hopefulness or a state of despair – imaginings that are not *obviously* tied to sensory experiences and the sensory concepts they give rise to, but are rather connected to imaginings whose realization depends on phenomenal experiences and the phenomenal concepts they give rise to.

Now it might be the case that some phenomenal experiences and sensory experiences (and phenomenal concepts and sensory concepts) are so intimately linked that one cannot have certain phenomenal experiences without simultaneously having certain sensory experiences. Nevertheless, it might still be the case that one could possess and apply a certain phenomenal concept, PC, without possessing the sensory concept, SC, linked to the sensory experience, SE, necessary for the existence of the phenome-

nal experience, PE, which in turn is necessary for the possession of PC. On the other hand, suppose that some sensory concept, SC, is necessary for the possession of a phenomenal concept, PC. Even so, it might be the case with respect to some particular *conceiving* that SC does not apply to the object of the conceiving while PC does because the object of the act of conceiving does not include a sensorial element as a constituent (i.e., the sensorial element is not available for use to the conceiver).

Let's suppose, for the sake of argument, that Descartes can imagine being disembodied, where this precludes the introduction of anything corporeal into his act of imagining. We can suppose that he does this by imagining being in certain conscious phenomenal states with no sensorial element as a constituent of the imagining. Still, Descartes would not be home free. In order to *assert that* he has imagined disembodiment – in order to use imagining disembodiment to argue for a between mind and body – he must identify his imagining, from the first-person point of view, *as* an imagining of disembodiment. This means that he will have to apply a concept to his imagining, from the first-person perspective, which distinguishes it as an act of imagining disembodiment. That is, he will have to go from merely imagining his disembodiment to *conceiving of* his disembodiment. In other words, Descartes will have to be justified in believing that he has imagined being disembodied, and in so doing apply the concept of imagining disembodiment. By achieving this he will have conceived of being disembodied. The question is whether or not he can so conceptually identify his imaginative act. I will argue that he cannot.

The most promising course open to a Cartesian is to conceive of an experience that is the analogue of experiencing her disembodiment. That is, to conceive of an experience that resembles the experience one would have if one were disembodied. The two possibilities I will consider are these. First, the Cartesian may suppose that she has out-of-body experiences (OBEs) in which she seems to view her body from an external vantage point; these experiences are the bases of her imaginative acts of disembodiment. She will then go on to apply the concept of disembodiment to what she has imagined. Second, the Cartesian may suppose that she is in a state of complete sensory deprivation. She would then use her experience of such a state to construct an imagining of her disembodiment, subsequently applying the concept of disembodiment to what she has imagined. I will now argue that neither of these strategies could work for the Cartesian.

In the case of the type of OBEs described above, the content of the experience *essentially involves* an experience of one's body. As Descartes acknowledges, if one *distinctly* conceives (perceives) of oneself as an incorporeal substance, then one must do so without conceiving (perceiving) of anything corporeal. Hence, a Cartesian cannot conceive (perceive) of her disembodiment by imagining OBEs.

In the case of total sensory deprivation, it would not be obvious that the Cartesian's body was not implicated (necessarily) in the experience of her sensory deprivation. In other words, there is nothing in the experience itself which makes it evident that she is not a *body* in a state of sensory deprivation. Therefore, the Cartesian cannot conceive (perceive) of her disembodiment by imagining an experience of complete sensory deprivation.

There may well be other ways of attempting to imagine one's own disembodiment. However, as far as I can see at present, they are no more promising for the Cartesian than the ones I have discussed. I conclude that there is no reason to think that a Cartesian can clearly and distinctly perceive (conceive of) her disembodiment.[14]

ABSTRACT

In this paper I examine Descartes' argument for the distinction between mind and body by distinguishing three senses of conceiving, two of which Descartes availed himself to show that mind and body are distinct, and one which he did not use. Regarding the first two, I show why they fall short of fulfilling Descartes' expectations. As regards the third, I explain why it provides the sense of conceiving that Descartes needed in order to *try* to show the distinction between mind and body, but why it would have failed to produce the desired result had he used it.

[14] I would like to thank Gary Rosenkrantz for his very helpful comments on this paper.

DISCUSSION

KÄTHE TRETTIN

New Literature on Tropes

- Anna-Sofia Maurin, *If Tropes*. Dordrecht: Kluwer (Synthese Library Vol.308), 2002.
- Arkadiusz Chrudzimski, "Two Concepts of Trope", *Grazer Philosophische Studien* 64 (2002), 137-155.
- Donald Mertz (ed.), Symposium on "Nominalism and Realism: The Ontology of Unit Attributes", *The Modern Schoolman* LXXIX , No. 2 & 3 (2002).
- Fredrik Stjernberg, "An Argument Against the Trope Theory", *Erkenntnis* 59 (2003), 37-46.

Although tropes (particular properties, individual qualities) are not newcomers in general metaphysics, but, in fact, have a long history from Aristotle to Husserl, it is only quite recently that more and more philosophers have engaged in analysing the prospects of tropes or unit attributes as fundamental entities. Starting in the beginning of the nineteen nineties in a more or less programmatic way, discussions have now reached a stage of refinement. Arguments focus around the more intricate problems and have gained in subtlety. This, I think, is in itself a good development, for it shows that general metaphysics or ontology is a lively and fruitful area of philosophy.

In reviewing some of the recent literature on tropes I shall begin with a general characterisation of Maurin's book and then turn to one of the vital problems discussed in the book and/or additionally in the papers mentioned above: Are tropes 'simple' or 'complex' entities?

If tropes

The approach of the Swedish philosopher Anna-Sophia Maurin may be characterised as both ambitious and humble. It is ambitious in that it embarks on constructing a general metaphysic based solely on the category of Trope. There is a great awareness of problems which such a "revisionary" undertaking should deal with which is rarely found in recent literature. Perhaps this cautious way of proceeding is at the same time responsible for the book's humble and defensive outlook. It is humble in two aspects: first, in that it is hypothetical in a pronounced way. As indicated in the title, the whole thing rests on a presumption or assumption: "The existence of particular properties will [not be argued for, but] instead be *assumed* and in the context of this assumption we will ask: if there are particular properties, what problems will a theory incorporating such properties face and how are these problems to be solved? In this sense, the present work attempts to *construct* a theory that includes particular properties. It does not attempt to argue for, or defend, this theory." (p. 2f.) Secondly, although the intention behind this work is "a wish to uncover the basic structural features of the world *in general*", Maurin is quite aware of the fact that her theoretical construction will be incomplete, because neither mental phenomena nor mathematical objects are discussed; the subject matter is restricted to "the truncated world" (p. 30). There is also very little on trope alteration or change and the connected problems of causality, and construing time and space in a trope-theoretical way is only briefly touched upon. Surely, one cannot cover everything in one book, and so the incompleteness is not considered to be very grave. The pronounced hypothetical or even constructivist framework seems to be more problematic, because it can have an immunising function concerning critique: At times Maurin just reminds possible critics of their 'obligation' to respect the assumptions of her theory. Of course, some assumptions have to be laid down to start any theory, but these should be good enough to be respected by all without comment. If some of those belong to the core of controversial debates, it simply is not a good enough assumption or axiom of one's theory, as is the case with whether tropes are simple or complex. Somehow one gets the impression that Maurin has, so to speak, a rather aloof affair with tropes. She doesn't love them wholeheartedly. On

the other hand, she takes great care in defending her theoretical construction which may be summarised as follows.

Tropes are characterised as 'simple', 'particular', and 'abstract'. Let's postpone simplicity to the discussion below. Concerning the qualification of "being particular", Maurin then, and I think, rightly, dismisses spatio-temporal location as the individuating or particularising ground, and takes particularity as primitive (p. 16-21). Her argument, however, is not very convincing. If a trope is conceived of as 'a quality-at-a-place', says Maurin, it would be complex – contrary to the assumption of being simple. Furthermore**,** she holds that individuation of tropes is a matter of epistemology rather than of metaphysics. She could have done better, or so I think, if she had given an explanation of how time and space figure in trope theory. A possible answer would be something along these lines: Since the seventeenth century, and prominently since Locke, it has been a very nice trick to keep people thinking that to 'individuate' things means to refer to their spatio-temporal positions without further arguing what time and space are. What might be plausible for a substance ontology combined with an absolute or container-like view of space is, however, not apt to serve as a general condition of individuation. Trope ontology shows that this conception is a worn-out myth, since tropes can occupy the same place at the same time. Therefore, the ontological container view should be replaced by a relativistic view which conceives of space-time as spatial and temporal modes dependent on what there is.[1] Once the metaphysical priority of space-time is rescinded and individuality (rather than particularity) is regarded as not being further analysable, there is no need to refer to epistemology here, and, more important, at least one defeating argument against the assumed simplicity of tropes is rebutted.

Concerning the qualification of tropes as 'abstract' particulars, Maurin, again rightly, points out the "conceptual confusion" due to the trope pioneers Donald Williams and Keith Campbell. "To my mind, the important trait here is what I would like to call the inherent 'qualitativeness' of the trope. The trope is, quite simply a 'quality particularised', and this serves to distinguish it both from the realist's

[1] Also Mertz (TMS, p. 105) holds that "space-time no longer has ontic priority over the entities 'in' space-time".

universal and the ordinary concrete particulars of everyday life" (p. 23f.). So the basic category to start with is a 'simple particularised quality'. Before constructing any complex entities out of tropes thus characterised, Maurin offers two chapters concerning methods and goals of metaphysics, one general, the other more specific to trope theory. First, she takes up the well-known distinction made by Strawson between descriptive and revisionary metaphysics and opts for the latter (chap. 3), arguing that "the actual structure of our thoughts about the world need not provide us with the actual structure of the world" and "that additional information about the way the world is might lead us to correct the actual structure of our thoughts" (p. 28). The goal being an account of the structural features of reality in general, whereby, as already mentioned, the scope is limited to the physical world. Maurin points out that such an account is formal in the Husserlian sense, rather than substantial. More interesting is how she gets from her revisionary project around to a method which prohibits mere speculations. In general, the rational and empirical constraints laid down by Whitehead in the introductory chapter of his *Process and Reality* are adopted. More specifically, it's truth-maker theory supplemented by a modified logical atomism which is chosen as a methodological guide. This is a reasonable move. If one holds that language is not a mirror of what there is, one has to turn to the non-linguistic side of the question and ask: what makes our propositions true. And doing so, a good starting point may be to investigate what makes an atomic proposition true. The modification of Russellian logical atomicity is that "it will not here be assumed to imply ontological atomicity in any corresponding truth-maker" (p. 43).

The result of the somewhat lengthy chapter on truth-makers is what trope theorists have thought all along, namely, that not all propositions can be made true by tropes alone but need at least trope structures equivalent to things or substances as well as something equivalent to universals as truth-makers. In a way, truth-maker theory – initially intended to be a mere methodological device for ontology – turns out to be some prior theory that somehow dictates which entities there are (should be), or, in this case, have to be constructed out of tropes. Although I do not object to truth-maker theory in principle, I believe that truth-making is a derivative function of reality and therefore, cannot, in a strict sense, prescribe ontological analyses.

The second part of the book is the constructive one. First, the 'problem of universalisation', as Maurin quite appropriately modifies the classical 'problem of universals', is solved by constructing strictly resembling trope classes, where trope resemblance is taken to be an internal relation. Secondly, a thorough analysis is dedicated to 'thing-construction', including fine arguments for circumventing Bradley's (vicious) regress, and opting, in the end, for accepting a relational trope of 'compresence'. This trope, being external to the terms in order to account for contingency, serves as the unifier of tropes bundled together in a thing, a trope which is conceived of as one-sidedly dependent on the tropes it relates. The original thought here is that these compresence- or relation-tropes have the sole quality of just relating: "relations necessarily relate" (p. 163ff.).

All in all, the project of trope ontology in a purist version is well argued for. Maurin's book is especially strong in disentangling confused ideas about tropes. Even if there are too many 'assumptions' and the truth-maker theory seems to overwhelm the direction of investigation at times, the book's spirit is admirably serious and straightforward. For further clarification, let us now turn to a specific problems by including more literature on tropes.

Are tropes 'simple' entities ?

Usually trope theorists hold that a trope is simple in the intuitive sense that it is not a composition or complex of different tropes, but just one singular quality instance or individual quality. In this sense of simplicity tropes are taken to be the basic ontological elements or atoms, the very building-blocks or ultimate constituents of everything complex. Surely, the architectural picture is quite appealing: Once the 'ontological architects' get hold of the irreducibly simple elements, they can start their construction work with the wonderful prospect of a wide range of combinatorial possibilities in order to account for the structural features of the world. But are tropes really 'simple'? Isn't the tripartite characterisation of tropes as 'simple', 'particular', and 'qualitative' – already to be found not only in Maurin, but in many others – a puzzling indication of non-simplicity? Unfortunately, trope theorists have done a lot

to give the impression that tropes are more than just one quality, especially by talking about 'tropes and their natures' or about the trope's particularity on the one hand, and its quality, on the other. No wonder that critics take this loose talk as evidence for their objections.

Herbert Hochberg, one of the nicest, albeit severest critics of trope ontology for decades, once again ponders, for instance, Keith Campbell's "bewildering version of the trope view", because "Campbell speaks of 'the trope's being red'" (Hochberg, TMS, p. 115).[2] Therefore, the tropes advocated by Campbell[3], Hochberg goes on, "are instances of 'tropiness', if I may so put it, as well as of redness" (TMS, p. 116). Taking trope advocates by their own words, tropes, or so it seems, are not at all simple, but rather complex entities, constituted at least by a sort of 'bare particular', *i.e*. a trope which grounds particularity, and additionally by an instance of a quality which implicitly refers to a universal kind, which makes (at least) two items on the list. Moreover, if one takes talk about the trope's 'existing at a place in time and space' seriously, one can easily add a temporal trope and a spatial trope. Counting them one by one, we have meanwhile gained a balance of four items – and thereby demonstrated that the claim of simplicity is defeated without even taking into account all the relation-tropes which seem to be necessary for bundling these tropes into one.

Fredrik Stjernberg presents an argument against trope theory in a similar vein. If tropes are supposed to be the fundamental building-blocks, they cannot have properties. In fact, however, the officially propertiless tropes seem to have quite a few properties, at least those of being "elements in sets (the concurrence sets making up ordinary objects, and the resemblance sets making up the ersatz universals of trope theory)". Moreover, "they are allowed to flank the identity sign, they are quantified over" (p. 39). Although this charge might already suffice for defeating the tropist's claim, Stjernberg considers a possible way out: the distinction between 'tropes of ordinary individuals' (*1-tropes*) and 'tropes of tropes' (*2-tropes*). The rescue by way of trope-hierarchy, however, turns out to be

[2] To the literature listed above I shall refer by stating author's name and page; in case of papers published in the above indicated issue of the journal *The Modern Schoolman* I shall use additionally the abbreviation TMS.

[3] K. Campbell (1990), *Abstract Particulars*, Oxford: Basil Blackwell, pp. 59-60.

an impasse, for as soon as we try to tell the difference between them, says Stjernberg, we are on our way to a vicious infinite regress, because "in order to explain what an *n*-trope is, we have to introduce an *n* + 1-trope which in turn is explained by the introduction of *n* + 2-tropes" (p. 42). Although Stjernberg concedes that it is at least possible that the difficulties can be overcome, he thinks that "the root of the difficulties for trope theory lies in its trying to accomplish too much" and, finally, recommends an attitude "of cautious moderate pragmatism" (p. 44). Tropes could be useful in explaining various phenomena, such as causation and perception, trope theory could be an "interesting approach" in ethics and aesthetics, but it shouldn't be both a theory of predication and a theory of the ultimate building-blocks of the world (p. 44). Similarly, Arkadiusz Chrudzimski distinguishes between two concepts of trope. If tropes are apt for predication, they cannot be the fundamental unstructured building-blocks prior to concrete objects; if tropes are conceived of as the ultimate ontological elements, however, they cannot "function as semantically efficient truthmakers" (p. 137). Surely, Chrudzimski is right when he points out that only the concept of unstructured trope is the concept "that metaphysics needs" (p. 154).

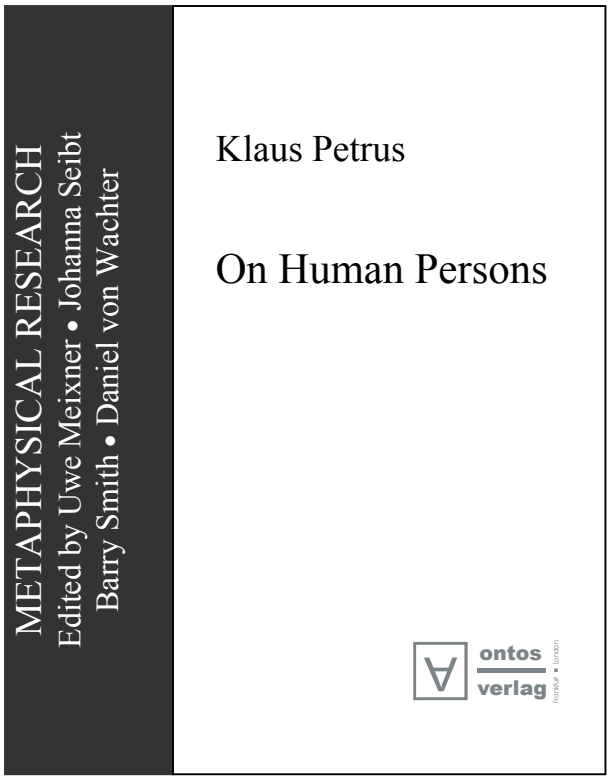
What can trope philosophers offer in defence of tropes' simplicity against these heavy charges? Maurin suggests two answers, while fighting with similar critiques (of Chris Daly and J. P. Moreland). The first one is an argument from parity. If properties taken as universals can have properties, and they do, so can tropes – period (p. 15). The second and final answer to the charge of a trope being complex is a negative one: "The sense in which the trope is *not* complex is, […] best put as follows: it does not contain (is not constituted of) more than one kind of entity" (p. 15). Unfortunately, these replies, even if taken together, are not satisfactory, even though each of them covers a point. But it is simply not enough to claim simplicity by pointing to a trope-kind. Kinds are, at least in the classical sense, essential universals and at best are constructed out of salient tropes of trope complexes or as resemblance classes of tropes. What really is at stake here is the claim that a trope is supposed to be both, an individual and a quality as just 'one' – and as such a 'simple' entity. Therefore, the core question is how trope advocates of simplicity will have to bite the bullet. Either they fall back on the substrate view with a 'bare'

trope which is supposed to be nothing other than a pure particular without any properties, a *haecceitas* in the sense of Duns Scotus. This option, however, would not be a solution for at least two reasons. First, the substrate view, *i.e.* the view of something particular which seems to be entirely without any qualities, has been one reason for trope theorists' pursuing the revisionary track, namely, for rejecting the classical substrate-*cum*-property view, simply because it is inconsistent. An entity claimed to be 'bare' of any qualifications simply cannot fulfil the function of a 'unifier' or 'bearer' of properties. If it is without properties, it cannot have the property of unifying; if it unifies, it is not without properties. Secondly, someone could easily turn up and hold that a pure substrate trope, even without taking into account the classical unifying property, has at least one negative property, namely, that of not-having-a-property, and by way of parity – a negative property is as good as a positive one.

If my explication so far is plausible, the 'bare-particular view' is a non-starter. The other bullet to bite would be, secondly, to just admit that the simple trope is, *in veritas*, a quite happy family of core tropes, all ready to get in touch with the great world, building fusions here, building clans there, and living happily ever after. But then, everything turns on the meaning of 'simplicity'. Even if, as Stjernberg tries to show, a core of *1*-tropes can be singled out, not only does a regress loom, but a clear-cut meaning of simplicity goes by the board. My own suggestion is that trope theorists should think about it and decide in favour of tropes being simple. Simplicity is – if it can be sustained – a vital feature of explicating the complex structure of reality. My favourite choice, until now, turns heavily on the intuitive evidence of examples: this redness (of this sofa), that roundness (of that ball), etc. – they are all simple tropes in that they are just the individual quality of redness or the individual quality of roundness. That the English language seems to refer to kinds by using the grammatical particle 'of' is not of the essence: an instance *of* red is one and not two. Generally, non-qualitied individuality might be logically possible, but, at least to my mind, not possible in any sense of ontology. For, whatever there possibly is, it is some quality. Therefore, I think that ontological simplicity is just a corollary of primitive individual quality.

METAPHYSICAL RESEARCH

Edited by Uwe Meixner • Johanna Seibt • Barry Smith • Daniel von Wachter



There is no question: We are all persons. But what exactly are persons? Are we immaterial souls or Cartesian Egos which only contingently have bodies? Or are persons nothing over and above their bodies? Are they essentially or most fundamentally animals, evolved beings of a certain sort? Or are we something other or more than animals, namely constituted beings with a certain capacity that distinguishes persons from everything else? What is necessary, and what is sufficient, for an entity to be classified or (re)identified as a person? What's the value of an analysis of such (biological or psychological) conditions? What does it contribute to our understanding of ourselves as free agents or as beings wanting to live their individual live? – The essays collected in this anthology try to answer these questions. They are primarily concerned with the metaphysics of persons and the criteria of personal identity, but also touch on problems of the theory of action and of practical philosophy.

ISBN 3-937202-31-5
Pb, ca. 200 Seiten € 26,00

Ontologie, Wahrheit und Kausalität **stellt den Versuch dar, die ontologische Analyse von Kausalität vor dem Hintergrund der Verteidigung von Ontologie im traditionellen Sinne einer realistischen Kategorientheorie zu führen. In einem ersten metaontologischen Teil wird die Möglichkeit von Ontologie als realistische Kategorientheorie verteidigt und es werden methodologische Grundsätze für ontologische Untersuchungen entwickelt. Im zweiten Teil der Untersuchung werden ontologische Theorien der Kausalität aus der aktuellen Diskussion vor dem im ersten Teil entwickelten metaontologischen Hintergrund evaluiert. Die Analyse von Kausalität als ontologische Relation erweist sich dabei als den anderen Vorschlägen überlegen.**

ISBN 3-937202-35-8
Hardcover • 325 Seiten € 45,00

ontos verlag
P.O. Box 15 41
63133 Heusenstamm nr.
Frankfurt / Germany
www.ontosverlag.com
info@ontos-verlag.de

ontos verlag Lancaster Frankfurt

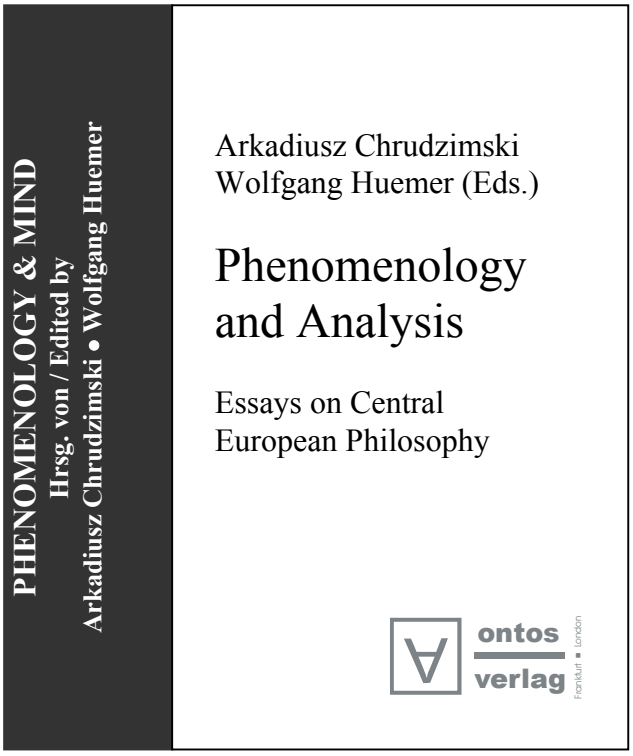
In der neueren Philosophie wird der Realismus in verschiedenen Debatten kontrovers erörtert. Dies hat sich inzwischen in einer Vielzahl realistischer und antirealistischer Positionen niedergeschlagen. Der vorliegende Band vereint 17 Beiträge, die sich unter verschiedenen Blickwinkeln (Erkenntnistheorie, Wissenschaftstheorie, Moralphilosophie) mit der Realismusproblematik auseinandersetzen. Neben der Einführung in die Realismusdebatte und der Entfaltung einer Reihe neuer Argumente und Positionen soll damit insbesondere der Vielfalt des philosophischen Realismusbegriffs Rechnung getragen werden.

ISBN 3-937202-28-5
ca. 450 Seiten • Pb. € 32,00
ontos verlag 2004

The history of twentieth century philosophy is characterized by the gap between analytic and continental philosophy – even though both have their roots in a tradition referred to as "Austrian" or "Central-European" philosophy. The essays in this volume show in historical and systematic studies, how a reassessment of this "Central-European" tradition can build an interesting bridge between phenomenology and analytic philosophy and, thus, create a new foundation that allows for an original perspective on central problems of philosophy.

Contributors: Wilhelm Baumgartner (Würzburg), Christian Beyer (Erfurt), Arkadiusz Chrudzimski (Salzburg/Zielona Góra), Dagfinn Føllesdal (Stanford/Oslo), Wolfgang Huemer (Erfurt), Dale Jacquette (Pennsylvania State University), Edgar Morscher (Salzburg), Tommaso Piazza (Florence), Roberto Poli (Trento), Robin Rollinger (Louvain), Peter Simons (Leeds), Barry Smith (Buffalo/Leipzig), Gianfranco Soldati (Fribourg), Jan Woleński (Cracow).

ISBN 3-937202-36-6
ca. 350 pp, Pb. € 32,00
ontos verlag 2004



ontos verlag
P.O. Box 15 41
63133 Heusenstamm nr.
Frankfurt / Germany
www.ontosverlag.com
info@ontos-verlag.de

ontos verlag
Frankfurt • Lancaster