perceptual experience. In perception, the world acts on us, and we act right back.[7]

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When does 'everything' mean everything?

AGUSTÍN RAYO

At least two different lines of resistance might be deployed against the view that it is possible to quantify over absolutely everything.[1] According to the

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[1] For discussion on quantifying over everything see Dummett 1981: chapters 14–16; Parsons 1974; Boolos 1998b; Williamson 1999; McGee 2000; Rayo 2002; Rayo and Williamson forthcoming; Glanzberg MS; Williamson MS and, especially, Cartwright 1994.

first, there is no such a thing as an all-inclusive domain.[2,3] In contrast, the second line of resistance concedes – at least for the sake of argument – that there is such a thing as an all-inclusive domain, but insists that nothing in an agent's thoughts and practices could ever uniquely determine that her domain of quantification is all-inclusive. For whenever it is *compatible* with an agent's thoughts and practices that her domain of quantification is all-inclusive, it is also compatible with her thoughts and practices that her domain of quantification is less-than-all-inclusive. So the agent could never be said to *determinately* quantify over absolutely everything.[4] In this paper, I will argue that, when the first line of resistance is set aside, there are reasons for thinking that determinate unrestricted quantification is possible. I will have nothing to say about the first line of resistance.[5]

Quine and Putnam have famously set forth views that can be taken to support the second line of resistance.[6] For instance, a friend of the second line of resistance might conclude on the basis of the following result that no set of first-order sentences could ever be used to ensure that our domain consists of absolutely everything:

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[2] One might doubt whether this view can be stated coherently, since it seems to imply that there are some objects which are not in our current domain. But wait! Didn't I just refer to them? It is sometimes suggested that this worry can be addressed by arguing that there are subtle shifts in the range of quantification (the machinery described in Stanley and Szabó 2000 might be used for such a purpose). See, however, Williamson unpublished.

It is worth noting that that if there really is no such thing as an all-inclusive domain, then there is a difficulty in expressing the position that there is such a domain, since the quantifiers in 'there is a domain consisting of absolutely everything' will always be restricted. This was pointed out to me by Gabriel Uzquiano.

[3] We speak of domains for expositional purposes only. Officially, talk of domains is to be understood plurally. Sentences of the form 'there is a domain D_i such that so-and-so' should be understood as 'there are some things – the D_is-such that so-and-so'; and sentences of the form 'x is a member of domain D_i' should be understood as 'x is one of the D_is'.

[4] McGee (2000) offers a response to the second line of resistance aimed at someone who is happy to set aside the first. By helping himself to a strong metatheory, McGee shows that Gentzen-style introduction and elimination rules can be used to fix the meanings of first-order quantifiers in such a way that their domain is unrestricted unless a restriction is imposed by context. The aim of the present note is to display a context in which no restrictions are imposed. (The postscript to Field 1998 in Field 2001 contains a reply to McGee.)

[5] I shall assume a semantic approach to quantifier domain restriction – see Stanley and Szabó 2000. But my argument will not depend on any particular way of spelling out the semantic approach.

[6] See Quine 1968 and Putnam 1980. See also Field 1998.

Let L be a countable first-order language, and assume that each closed term in L has an intended referent and that each predicate in L has an intended extension.[7] Say that an interpretation I of L is *apt* if it assigns to each term in L its intended referent and to each predicate in L the restriction of its intended extension to I's domain.[8]

On the assumption that there are uncountably many objects, it can be shown that, if every sentence of L in a set S is true according to some apt interpretation with an all-inclusive domain, then every sentence in S is also true according to an apt interpretation with a less-than-all-inclusive domain.[9]

The result is, of course, unassailable. But to get the indeterminist's conclusion we need the assumption that the domain of S is determined to be D only if no apt interpretation with a domain other than D makes every sentence in S true. Such an assumption isn't too far-fetched if the following is plausible:

(*) The domain of discourse of a set of utterances is fixed by the *linguistic meaning*[10] of the sentences uttered, together with a Principle of Charity, according to which the utterances are mostly true.

(The reason is this: it not too far-fetched to suppose that apt interpretations respect linguistic meaning. If this is so, and if Charity is strengthened to the assumption that *all* our utterances are true, then it follows from (*) that the domain of S can only be determined to be D if no apt interpretation with a domain other than D makes every sentence in S true.)

And, indeed, (*) might seem plausible if one has in mind a picture of mathematical practice according to which we fix the meanings of mathematical terms by insisting that a certain set of axioms is true. But (*) is extremely implausible in general. For – concerns about Charity aside – it says nothing about the *context* in which the relevant utterances take place. And context can make all the difference.

If you are in any doubt about this, consider the case of Cowboy Sam, the used-car dealer. When Cowboy Sam utters 'Everything is on sale!' as part

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[7] The term 'extension' is used for expositional purposes only. Officially, talk of extensions is to be understood plurally. See n. 3.

[8] Since there is no set containing everything there is, it will not do for present purposes to think of interpretations as set-sized models. For a more appropriate notion of interpretation, see Rayo and Uzquiano 1999.

[9] As first noted by Putnam 1980, this result can be proved on the basis of a strong version of the Löwenheim-Skolem Theorem.

[10] Roughly, the linguistic meaning of a sentence consists of those of its semantic features that do not depend on context.

of a television commercial for his used-car dealership (and utters nothing else), his domain of quantification includes only items sold in the dealership, even though this is not ensured by the linguistic meaning of his utterance, together with the assumption that the utterance is true. (For instance, both of the constraints would be satisfied by a domain consisting of all and only the mangoes on sale in my local supermarket.) Whether or not Cowboy Sam's utterance has a fully determinate domain of discourse, context imposes constraints that go well beyond those imposed by linguistic meaning and Charity.

The objective of the next few paragraphs is to argue that, given an appropriate utterance in an appropriate context, it can be reasonable to conclude that the utterance's quantifiers determinately range over absolutely everything. (Strictly, quantifier-expressions are part of the sentence uttered, rather than the utterance itself. I fudge the distinction for expositional purposes.)

Suppose that Susan, who is a fully trained philosopher, is asked to explain as articulately as she possibly can what the domain of quantification of a future utterance of hers, U, will consist in. We have every reason to believe that she is fully cooperative. We have pointed out to her that she is free to utter sentences like 'the quantifiers in U will range over all and only the elephants in Africa', or 'the quantifiers in U will include only things which are currently within the Solar System'. But we have been especially emphatic about the fact that she is free to utter the following:

(1)   My intentions are consistent with the possibility that the quantifiers in U are somehow restricted.

As it turns out, Susan utters the following instead:

(2)   The quantifiers in U will range over everything satisfying the condition of being self-identical.

If we focus on linguistic meaning alone, Susan's utterance of (2) is extremely uninformative – all it tells us is that the speaker intends everything in the domain of quantification of (2) to be part of the new domain of quantification. Moreover, we have good reasons for thinking that the uninformativeness was deliberate, since Susan chose the trivial but tortuous construction 'everything satisfying the condition of being self-identical'.[11] Why the deliberate uninformativeness? Since we have good reasons for thinking that she was as cooperative as she could be, and asked her to be as articulate as possible, the best explanation is that she couldn't do any better. And this is only plausible if she intended the domain of U to

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[11] Constructions like 'absolutely everything', 'everything there is' or '*everything*' (with an appropriate emphasis) would have a similar effect.

consist of absolutely everything. Otherwise she could have been slightly more informative at the level of linguistic meaning by uttering (1), of which she was emphatically made aware. (Unlike the linguistic meaning of (2), the linguistic meaning of (1) excludes the possibility that the speaker intends her domain to consist of absolutely everything.)

Here is a different way of making the point. The all-inclusive domain has a feature that distinguishes it from any other, namely, the fact that any attempt to specify it as one's intended domain of quantification must be utterly uninformative, at the level of linguistic meaning. No other domain has this feature. For, should one's intentions be compatible with a less-than-all-inclusive domain, one could at least utter (1), which *does* convey some information at the level of linguistic meaning. That is the reason Susan is able to specify the all-inclusive domain as the intended domain of quantification: by displaying the fact that she is unable to be more informative at the level of linguistic meaning, she creates a context in which it is reasonable to conclude that she intends the quantifiers in U to range over absolutely everything.[12]

It is important to be clear that the following complaint does not threaten the present proposal:

> Nothing in the argument so far shows that the domain of (2), as uttered by Susan, consists of absolutely everything. But unless we presuppose that it does, the argument gives us no reason for thinking that Susan intends the quantifiers in U to range over absolutely everything, rather than the domain of (2), as uttered by Susan.

In fact, there are good reasons for thinking that Susan intended the quantifiers in her utterance of (2) to range over absolutely everything. By now the story will be familiar: unless Susan had such an intention, she could have been more cooperative by uttering (1) rather than (2), given that (1) is more informative than (2) at the level of linguistic meaning. So it is only reasonable to suppose that Susan did not intend the quantifiers in her utterance of (2) to range over absolutely everything if she is taken to be uncooperative, or inarticulate.

We have found reasons for thinking that Susan *intends* the domain of U to consist of absolutely everything. But may we conclude from this that Susan will *succeed* in making the domain of U consist of absolutely everything? Certainly not, if it is a live possibility that that there be no such thing as an absolutely unrestricted domain. But recall that we are not taking that possibility into account: all we wish to show is that, when the first line of

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[12] Even though our story appeals to Gricean norms of cooperation, it is not a story about what is implicated by Susan's utterance, as in Grice 1989a. It is a story about what propositions are *expressed* by Susan's utterances.

resistance is set aside, there are reasons for thinking that determinate unre-stricted quantification is possible.

I submit that, in the present context (though probably not in general), it is reasonable to conclude from Susan's intention to quantify over absolutely everything, that she will succeed in quantifying over absolutely everything. This contention cannot, of course, be established in the absence of a proper account of the relationship between intention and meaning (and I have no account to offer). But I believe the contention is plausible enough for present purposes. If this is right, then we have found a case in which it is reasonable to conclude that an utterance's quantifiers determi-nately range over absolutely everything.[13],[14]

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[13] It is worth noting that a similar argument can be used to counter a certain source of concern regarding *second-order* quantification: the worry that nothing in the thoughts and practices of an agent could ever determine that her second-order quan-tifiers range over every plurality of objects in the domain of her first-order quantifiers.

[14] Thanks to Adam Elga, Michael Glanzberg, Jason Stanley, Gabriel Uzquiano and a very helpful audience at the University of St Andrews. This note was written during the tenure of an AHRB fellowship, for which I am very grateful.

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Paradoxes of multi-location

STEPHEN BARKER & PHIL DOWE

Call theses of *multi-location* philosophical doctrines that hold that one and the same entity can be wholly present and located at distinct space-time regions. Several substantial metaphysical theses are theses of multi-location. One is *endurantism*, the doctrine that in persisting, an object O is wholly temporally located at each time of its persistence.[1] The second thesis of multi-location is the immanence conception of universals according to which they do not transcend space-time. On this view, universals are spatio-temporally located where they are instantiated (either by space-time regions or by particulars located at space-time regions).[2]

   In this paper we argue first, assuming 4-Dimensionalism, or *eternalism*, about time, that multi-location doctrines, given reasonable assumptions about mereology and location, entail contradictions: that one and the same entity is both 3- and 4-Dimensional – *paradox 1* below. We then show that, given even leaner assumptions about location, we get another version of

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[1] See Armstrong 1997, for the view that simples endure; van Inwagen 1990 and Mellor 1998, for the view that temporal slices endure; and Erhing 1997 and Bordes 1998, for the view that tropes can endure. A third minor thesis of multi-location follows from endurantism and the possibility of time travel. If you travel back in time and meet your earlier self in a room, you are spatially bi-located. As this is a consequence of endurantism, we do not consider it separately here.

[2] Armstrong (1997) defends this kind of view.