Interpretation Magnetism

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Recently, Jonathan Schaffer (Forthcoming) has proposed an important question for an ongoing metaontological debate surrounding *quantifier variance* between Ted Sider (2007, 2009, 2011, 2014) and Eli Hirsch (2002, 2005, 2008, 2009). Can first-order ontological debates, such as the one between mereological nihilists and universalists, be substantive without committing to heavy ideological views, like Sider's *ontological realism* (2009)? And, if so, how?

I refer to this question as the *stability problem*.[i] Schaffer argues it can be solved; first-order ontological debates, what he calls *heavy ontology*, can be dialectically stable through defenses that don't privilege ideology as Sider does. He proposes a framework for how this can be done through a new analysis of quantifier variance as *domain variance*. On his view heavy ontology can be supported without heavy ideological commitments, if there is a metaphysically privileged domain. He refers to this view as *domain realism*.

I agree with Schaffer that the stability problem can be solved. However, I argue this is best achieved not through domain realism. In this paper, I develop an alternative solution to the stability problem with a metaphysically privileged *interpretation*, a function mapping predicates to extensions in the domain, and treating existence as a predicate. I call the view *interpretation magnetism*.[ii] The paper will proceed as follows. In section one I will present Schaffer's analysis of quantifier variance in the Hirsch-Sider debate and his solution to the stability problem, domain realism. In section two I develop my interpretation realism which extends Schaffer's framework. I likewise show how it gets around the stability problem. I then give reasons to prefer interpretation magnetism as a solution by arguing it

solves problems which domain realism cannot. I finish the paper in section three by considering potential objections to my view.

1. Schaffer's Domain Realism

Schaffer lays down a general framework for how the stability problem can be solved through an analysis of quantifier variance in terms of its sources: variance in the domain of quantification and variance in the logical clause expressed by the quantifier. Having mapped this out, he proceeds to show how a solution, including his own, can solve the stability problem. I begin this section by briefly outlining the Hirsch-Sider debate and then reconstructing Schaffer's analysis of quantifier variance sources. Next, I present Schaffer's domain realism, relating it to the framework provided in the previous subsection. I end the section by demonstrating how domain realism solves the stability problem.

1.1 Sources of quantifier variance

Schaffer recognizes the metaontological debate as one over whether or not quantifier variance can be avoided. Hirsch (2002) develops a quantifier variance view originally proposed by Putnam (1987), which holds that speakers can have different quantifier meanings associated with semantic rules which count whether or not a sentence is true in their respective language.[iii] Hirsch argues (2009 pg. 237-9) no single meaning is best, so nihilists and universalists speak truly within their own languages with neither being "really true" by some external standard. If so, their debates are merely verbal, shallow and not substantive. Sider thinks there *is* a metaphysically privileged quantifier meaning, so that only one quantifier meaning best represents the objective structure of the world.[iv] In the same way that there are distinguished properties according to Lewisian naturalness (1983), Sider argues (2009, 2011) there is a distinguished quantifier meaning

so that logical notions like "∃" or "∀" correspond to real structure in the world. If this is true, then only one quantifier meaning between the nihilist's or the universalist's (or a third candidate) respects the objective structure of reality and best describes the world. If so, the debate is substantive.

Schaffer seeks a way to support heavy ontology without committing to Sider's privileged quantificational structure. He begins his project by analyzing the sources of quantifier variance on a Tarskian semantic approach (Forthcoming pg. 5-6).[v] He argues quantifier meaning can be split into two constituents: a clause or thin logical meaning which specifies the semantic value of the quantifier (e.g., "for all *x*" or "for some *x*") and a domain the quantifier ranges over.[vi] The domain is neither unique to any one quantifier nor part of the language the quantifier is in. Rather, it is posited in the metalanguage, whatever language we choose to model our object language in, by an interpreter who models that language. In model-theoretic semantics, an interpreter also posits an interpretation, a function which determines how predicates are mapped to extensions in the domain.

To illustrate these sources of quantifier variance, consider two languages that adopt different quantifier clauses. If the domain is a set of objects and the sentence closed under quantification is a complex predicate whose extension is a subset of the domain, the clause is a rule that tells us how these two sets must relate for the quantified sentence to come out true. Given a domain {*a,b,c*} and monadic predicate F with extension {a}, the existentially quantified sentence "$\exists x \mathrm{F}x$" will be true in a language whose existential quantifier has the clause "For at least one (some) *x*". But in a language which associates the clause "For at least two *x*" with the existential, "$\exists x \mathrm{F}x$" will be false. Thus, quantifier variance.

If we instead fix the existential clause in both languages as "For at least one *x*", quantifier variance can still occur if different domains are adopted. "∃*x*F*x"* will be true in a language with domain {*a,b,c*} and F extension {a}, but false in a language with domain {*b,c*} and a null F extension.[vii] Since Schaffer takes these two sources to be exhaustive, languages with the same domain and quantifier clauses will not have quantifier variance.

1.2 Domain realism

Schaffer argues that the relevant sort of variance Hirsch and Sider are concerned with is domain variance. He gives three reasons (Forthcoming pg. 8-10) for thinking this is the case. First, it fits the core idea of the quantifier variantist that the nihilist and universalist are both speaking (correctly) in different languages. A nihilist who says "There are no composites" speaks truly in his language, because his domain has no composites, as does a universalist who says "There are composites" since his domain includes such.

Second, domain variance leaves the formal principles of quantification unaltered. Both Hirsch (2002 pg. 53) and Sider (2009 pg. 8-9) agree that the debate is not one over the logical or inferential rules quantifiers obey; the existential quantifier is properly associated with the clause "For some (at least one) *x*".

Lastly, quantifier variance results in changes to the semantics of predicates and names. This fits with domain variance insofar as it changes the extensions of both names and predicates. Names for "composites" in our object language may not refer in the nihilist language while they do in the universalist language.[viii] Likewise, predicates like "is composed" may be instantiated in the universalist language, but not in the nihilist. Schaffer then uses the framework of domain variance to present his *domain realism.*

> **Domain Realism** There is a metaphysically privileged domain which consists of a totality of objects, which may or may not be include composite objects.

Whenever an interpreter posits a domain, he is faced with a choice as to how to interpret the object language he models with his metalanguage. Domain realism says that if this domain is not the single, metaphysically privileged domain consisting of the totality of all objects, he incorrectly interprets the object language. Importantly, the privileged domain will not have any restrictions on it. For example, if the privileged domain is the nihilist's, it is not restricted to the domain of simples. *Everything* that exists is in this domain, denying anything else has existence or object status. That this domain only contains simples is just a consequence of what the metaphysical domain privilege is.

1.3 Around the stability problem

Schaffer argues that domain realism gets around both horns of the stability problem. First, unlike Sider's view, it has nothing to do with privileging certain terms or ideology. Schaffer (Forthcoming 12) says Sider's view privileges an entire object language, which includes ideological terms like logical notions. But a domain is not part of an object language, nor does it refer at all to any ideological terms in the object language. Domain variance only concerns objects, and not truth functions or quantificational terms used to theorize about such objects. It takes no stance on what terms, such as the existential and universal quantifiers, refer to or on their ontological or fundamental status. Furthermore, he says a domain has nothing specifically to do with quantification at all (Forthcoming 10). As stated earlier, a domain is not unique to any particular quantifier. The same domain can be used for the existential, universal or any generalized quantifier. It is just a way to assign semantic values to expressions in an object language through a metalanguage.

Given that domain realism is not ideological commitment, Schaffer takes it as straightforward that it can support heavy ontology. This is because domain realism is

worldly and non-conciliatory (Forthcoming 12). If the privileged domain is the nihilist's, then the universalist will speak falsely, regardless of what domain she adopts (or vice-versa). There will be no "truth respective to their own language" according to the quantifier variantist. So long as there is such a distinguished domain, then first-order ontological debates do run deep and get at a substantive question.[ix]

2. Interpretation Magnetism

I think Schaffer is right that the stability problem can be solved. However, I think an alternative solution based on his framework is available and should be preferred. I begin this section by extending Schaffer's quantifier variance framework, arguing for a third source of quantifier variance. Then I will develop a solution based on this source, interpretation magnetism, and show how it solves the stability problem. I end the section by arguing how interpretation magnetism solves key problems which domain realism cannot. All else being equal, I take these as good reasons to prefer interpretation magnetism over domain realism as a solution to the stability problem.

2.1 A third source of quantifier variance

Schaffer assumes that domain variance and quantifier variance are exhaustive sources of quantifier variance. However, I argue there is a third source of quantifier variance, variance in interpretation functions. This may be the case when existence is taken as a predicate, instead of being represented through ontological import from the domain or quantification. When two languages adopt different rules for mapping an existence predicate to extensions in the domain, the relevant sort of quantifier variance can occur.[x]

To illustrate this, consider two languages, a nihilist and a universalist. Suppose both have the same clause for the universal quantifier "For all *x*" and the same domain, {*a,b,c*},

where the first two elements stand for names of simples in our ordinary language and the third element stands for a name of a composite. However, the nihilist has an interpretation function that maps an existence predicate, E, only to simples in the domain, giving it extension {*a,b*}. The universalist's interpretation differs, also mapping E to names for composites, giving it extension {*a,b,c*}. Thus, $\forall x \mathrm{E}x$ will be true in the universalist language while false in the nihilist language, despite having the same domain and quantifier clauses.

This sort of variance matches the three conditions Schaffer lays out for being the relevant sort of quantifier variance. First, it holds on to the idea that both the nihilist and universalist are speaking truly in their respective languages. Second, it leaves the formal principles of quantification unaltered, keeping clauses fixed. And third, it changes the semantics of predicates and names. Interpretation variance directly alters the intensions of predicates, changing how they are mapped to extensions, and it changes the meaning of names in so far as it may alter what predicates each instantiates. Given these considerations, interpretation variance is a suitable candidate for quantifier variance.

2.2 Around the stability problem (again)

If interpretation variance is a relevant source of quantifier variance, we can use it as Schaffer uses domain variance to solve the stability problem. Thus, I present my view.

> **Interpretation Magnetism** There is a metaphysically privileged interpretation function that maps an existence predicate (and possibly other predicates) to extensions in the domain.

Schaffer first presents a version of interpretation magnetism (Forthcoming 16) to accommodate Lewisian naturalness and reference magnetism (1984) within domain realism. I agree with him (Forthcoming pg. 16) that interpretation magnetism remains neutral whether to adopt a metalanguage which only has predicates for Lewisian natural

properties. However, my interpretation magnetist adopts a less neutral stance towards reference magnetism.

Lewis' reference magnetism (1984 pg. 227) is a constraint on how uninterpreted expressions in an object language are assigned denotations and that naturalness of a candidate denotation determines its degreed eligibility as an interpretation. Given that interpretation magnetism is, partially, a constraint on interpretation, reference magnetism could be adopted as part of that constraint. On this view, an interpreter should only interpret predicates in the object language with their natural extensions: the uninterpreted "is green" should be interpreted according to the, non-time dependent, natural property of being green which applies to objects such as emeralds and grass at all times and never to objects like water and blue birds.[xi] But the interpretation magnetist does not need to take reference magnetism so far. All that's needed for her to use the view to support heavy ontology is to constrain how the existence predicate is interpreted, remaining neutral on other predicates. The uninterpreted existence predicate in our object language must be interpreted to its natural, non-gruesome extension, which may be either the nihilist's or the universalist's.

This brings us to the other key part of the view: treating existence as a predicate. I closely follow Graham Priest's view of *noneism* (2005, 2011) which takes quantification to be completely ontologically neutral. On Priest's view (2005 pg. 311-5), expressions in our object language such as "There are" or "There exists" should not be interpreted as quantification, but rather as existential predication. Quantifiers only stand for the clause or thin logical meaning associated with them; the existential quantifier should be read as "For some *x"* and the universal as "For all *x*" without any ontological import towards *x.*

Interpretation magnetism also holds that existence and ontological commitment is not done in the domain. Rather, a domain is just a way of introducing names that can be predicated on.

Definition in hand, we can now see how interpretation magnetism solves the stability problem. For one, it does not privilege any terms or ideology, quantificational or logical. Like the domain, an interpretation is not a proper part of the object language under study, but rather posited by an interpreter in the metalanguage. It only determines semantic values for expressions by fixing how predicates are mapped to extensions in the domain. And, as a domain has nothing specifically to do with quantification, an interpretation has even less. While domains are ranged over by quantifiers through clauses, interpretations functions only deal with the domain, predicates and relations.

Interpretation magnetism supports heavy ontology by being worldly and non-conciliatory. According to interpretation magnetism, the interpretations that we may posit in a metalanguage are not all created equal. Instead, there is a metaphysically distinguished interpretation function, so that one function best respects objective predication in the world. If the privileged interpretation function is that of the nihilist, and existence is only a predicate of simples given any domain, then the universalist speaks falsely, regardless of the interpretation he adopts (and vice-versa). Interpreters who don't adopt this function incorrectly interpret the object language under study. Thus, such debates are substantive.

2.3 Problems for Domain Realism

I have argued that interpretation magnetism is a suitable alternative solution to the stability problem. I now propose problems domain realism faces which interpretation magnetism solves, giving reason to prefer my solution. First, domain realism faces

problems from set theory. If the domain is supposed to be a set, this may require the domain realist to be committed to the existence of sets, otherwise he may face embarrassing questions about how a domain could be a "distinguished totality of all things" but not acknowledge sets as part of this totality. He will then face paradoxes in orthodox set theory, where a set containing itself and a set containing all sets is barred, as Schaffer recognizes (Forthcoming pg. 11). We might try to get around this second concern with unorthodox set theory, but this adds baggage for the domain realist. The interpretation magnetist avoids this problem as she does not need to be committed to the existence of sets, since her ontological commitments are not made in the domain.

Second, domain realism faces flexibility problems. First, while it is well-suited for specific versions of mereological nihilism and universalism who have thin notions of existence, it cannot properly represent views with thick notions of existence, such as those of many contemporary Meinongians. Anyone committed to heavy ontology who also wants to commit to multiple modes of being has no way of doing so inside of the domain realism framework, because existence is fixed as thin, all-or-nothing notion. Interpretation magnetism avoids this by allowing for thicker existence notions, including possibly multiple "being" predicates. (But she does not need to allow for this. If she instead has a thinner notion of being, she can admit only a single existence predicate and apply it according to her first-order ontological commitments).

Domain realism also faces a flexibility problem in that it makes it hard for metaphysicians to theorize in terms of fundamentality, ground or generally about relations between different levels of reality. For example, consider the nihilist who believes the privileged domain is his own, but is also interested in physicalism and consciousness. Even

if he has an eliminativist stance towards consciousness, where the phenomenon should eventually be explained away in terms of its constitutive material simples and their arrangements, lacking a thorough theory of how this happens, he is left incapable of saying much about consciousness at all, since consciousnesses are not in his domain! This concern can be generalized to all cases where a metaphysician is unsure of how a certain phenomenon which she is not ontologically committed to can be explained in terms she is committed to. The interpretation magnetist avoids the problem since she allows for domain variance. She can talk and theorize about entities in her domain in terms of ground, fundamentality or other metaphysical tools without being committed to their existence.

The domain realist also runs into flexibility problems when she tries to theorize about modality, whether possible objects or worlds. Without an unsavory commitment to modal realism, the domain realist will have trouble talking about merely possible objects, since they do not exist and should not be allowed into the domain. So much the worse for the domain realist, as an incapability to talk about modality is not just a concern for metaphysicians, as the prior problem was, but one which is deeply tied to ordinary language. The domain realist may try to avoid this by saying each possible world has a metaphysically privileged domain, so that when we model our object language, we are modeling it according to the *actual* world, but similar questions come back up. What allows us to talk about objects in other possible worlds? What is the status of these objects in our world? Again, the only tenable path may be a forced commitment to modal realism, which would be all the worse for the domain realist. The interpretation magnetist avoids these issues because he allows for domain variance and does not hold ontological commitment in

the domain, allowing him to talk about merely possible objects in his metalanguage, including in modal logic languages.

Lastly, domain realism faces an incompatibility problem with metalanguages which do not use quantifiers, such as Shamik Dasgupta's *generalism* (2009).[xii] Since there is no domain in generalist languages (in fact, there are no individual objects), there can be no domain privileging. On first blush, we might think that an object-free view like Dasgupta's is incompatible with heavy ontology given that it is *no* ontology, but I don't think this is so. For one, Dasgupta (2009 pg. 54) outlines a variety of ways a generalist can still remain somewhat committed to objects, including a non-reductive approach that says statements about individual objects are true because they express the very same thing as facts in his generalist language. Given this option, we could still hold that the mereological debate concerns substantive questions with true or false positions taken by the nihilist or universalist. Furthermore, if the debate between the nihilist and universalist is one over *composition*, a generalist language could include a composition predicate and, accordingly, have it either "obtain" or not (2009 pg. 53).

3. Objections to Interpretation Magnetism

So far, I have developed my view, interpretation magnetism, and argued it solves problems for domain realism. All else being equal, I take this to be good reason to prefer my solution. However, all else may not be equal. There may be decisive objections to interpretation magnetism which will sway the needle back towards domain realism. In this section, I consider two potential objections to my view. The first says the solution is not generally Schafferian and comes too close to Sider's commitments. The second is that interpretation magnetism results in an unsavory commitment to nonexistent objects.

3.1 Too much Sider, not enough Schaffer

The first objection says interpretation magnetism strays too far from Schaffer's project and comes too close to Sider's ideological commitments. Specifically, modeling existence as a predicate does privilege bits of ideology in our object language: the uninterpreted existence predicate. I think this charge may be partially correct, the existence predicate, taken as a piece of ideology from the object language, does have an important status in interpretation magnetism. However, I argue this is not the sort of heavy ideological commitment Sider has and still stays true to Schaffer's project.

A large part of Schaffer's project, I take it, is to move ontological commitment in the Hirsch-Sider debate away from quantification. He does so by shifting it onto a domain which, as he states, has nothing specifically to do with quantification. As mentioned in footnote ix, he even thinks that the name "quantifier variance" is a bit of loose talk—quantifier meaning in the strictest sense, i.e., the clause associated with any given quantifier, is not the source of the relevant sort of quantifier variance. His move shifts ontological commitment away from quantification to the domain. My interpretation magnetism works similarly, shifting ontological commitment away from quantification, but instead shifts it towards our predicates and interpretations. While this may depart from the Fregean tradition that Schaffer sticks too (Forthcoming pg. 13), it still stays true to the core move of his project.

As to the related ideology charge, interpretation magnetism may result in commitment to (at least) one ideological term, but this isn't the relevant sort Schaffer is trying to avoid. A large motivation for Schaffer seeking an alternative way to support heavy ontology is that Sider's ontological realism faces difficult questions about which

interdefinabile logical and quantificational notions are most fundamental or most respect the objective structure of reality. He references McSweeney (2019 pg. 118) on the issue who says that the logical realist has gone wrong if we are in a position where we're forced to ask and answer whether the world privileges "∧ "over " ∨ " or "∃" over "∀". But interpretation magnetism does not fall into these sorts of questions. Because an interpretation (like a domain!) is a posit by an interpreter, nothing about it concerns the quantificational or logical notions in our object language. All an interpretation does is tell us how to map predicates to extensions in the domain. It does not make any Sider-like commitments to worldly privilege for logical or quantificational notions. Thus, even if it does have a limited amount of ideological privileging, it is not the sort that Schaffer is trying to avoid.

3.2 Contradiction in Nonexistent Objects

Perhaps a more pressing objection against interpretation magnetism is that it requires a commitment to non-existent objects. There may be domains we adopt which have objects that are not included in the extension of the existence predicate. Familiar concerns come up here from Kant, Russell and Quine that such entities entail contradictions and therefore existence is *not* a predicate of individuals. While I take such concerns rather seriously, I think the interpretation magnetist can avoid some of the unsavory commitments that come with a commitment to non-existent objects. I then argue the remaining problems are not definitive reasons to reject my view in favor of domain realism.

First, the interpretation magnetist can temper her commitment to non-existent objects by adopting a weak domain realism.

> **Weak Domain Realism** There is worldly pressure on an interpreter to posit domains which do not include any impossible objects, e.g., square circles or incomplete objects.

Weak domain realism amounts to a simple constraint on the domain posited in our metalanguage. The interpretation magnetist could adopt this constraint and still maintain the same ontological commitments relevant for the first order ontological debate in mereology. Her motivation for doing so would be to avoid the principle of explosion: in classical logic, once a contradiction has been asserted, all propositions follow. This also avoids needing to resort to commitments to impossible worlds among other modal rabbit holes. The interpretation magnetist might instead admit impossible objects into her domain, rejecting weak domain realism, and avoid the explosion problem by choosing to model her metalanguage using paraconsistent logics whose definition of logical consequence does not include all propositions being entailed by contradictions. Either way, she will avoid the explosion problem.

Explosions avoided, there still remain familiar objections to views of nonexistent objects which may arise. Some of these objections, such as Russell's "Golden Mountain Problem", are avoided by adopting Priest's noneism (2005 pg. 13-15) which holds that merely possible objects exist, but only at other possible worlds and not in our world. Since existence is a predicate of individuals, there may be a possible object which has instantiates predicates "is golden", "is a mountain" and "exists", but does not do so in the *actual* world, rather in some possible world. But, countless more concerns still stand. While I cannot offer a full defense of noneism and views about nonexistent objects here, I do not think this is a decisive blow for the interpretation magnetist for a few reasons.

Views about nonexistent objects will solve problems elsewhere which are generated by the more Frege-Quinean view which serves as the background for Schaffer and Sider's

views. I take views like noneism to be tenable and dialectically stable against such opponents. Furthermore, presupposing the of failure of noneism and other views about non-existent objects and using that against interpretation magnetism is bad philosophy. The question about whether or not such views are stable should be settled in separate debate. While I may not convince harsh opponents against such views to prefer my solution to Schaffer's, even with adopting weak domain realism, that's alright. There is still plenty of work interpretation magnetism can accomplish. For one, given it solves the stability problem and problems for domain realism, it may be used as ammo for supporting views about nonexistent objects elsewhere. It also adds to Schaffer's framework for solutions to the stability problem by arguing for a third source of quantifier variance. Given this, it may lay framework for further solutions which solve problems for both mine and Schaffer's views.

Endnotes

[i] Heavy ontology is the name Schaffer adopts to refer to the meta-views which think such ontological debates are substantive, non-defective and what he calls "good debates".

[ii] The name "interpretation magnetism" is first coined by Schaffer (Forthcoming). He briefly mentions how this may be a suitable alternative solution to the stability problem but does not fully argue for it as a standalone thesis. My interpretation magnetism will further develop his view, as well as include substantive revisions to his original formulation.

[iii] Hirsch only thinks there is a possibility of quantifier variance. He thinks that ordinary speakers do not have different quantifier meanings, but their meanings render the ontological questions obvious, so that they are not substantive. For the sake of this paper, I present the quantifier variance in question as a deflationary kind which Hirsch thinks occurs when philosophers choose to adopt different languages. For a wider analysis on kinds of ontological deflationism through quantification, see Sider (2009 pg. 386-87).

[iv] Schaffer calls this thesis "heavy ideology" in his paper. I'm inclined to use Sider's name for it given that ontological realism focuses more particularly on quantificational structure. Sider's broader view about is a sort of logical realism in which he argues that certain terms we may choose to theorize in, including logical notions, better respect the objective "structure" of the world. The debate at hand, however, is only concerned with whether or not any single quantifier is privileged. For more on the broader view, see Sider 2011.

[v] Although he does not explicitly argue against Sider's view in his paper, one of the main motivations he sees for seeking a different way to support heavy ontology is that Sider's view has to answer unsavory questions, such as whether or not seemingly equivalent theories stated with different quantifiers and connectives (e.g., '∀', '&', and '∼', or '∃', '∨', and '∼') are not equally good theories and why. For more on the problem as well as possible defenses see McSweeney (2019) and Sider (2020 ch. 5).

[vi] Schaffer (Forthcoming pg. 6-7) also extends his analysis to modern generalized quantifiers as well. For my purposes, I only need discuss the basic framework.

[vii] Note here that the same interpretation function is being used so that if *a* was included in the second domain, it would fall under the F extension.

[viii] The nihilist could also say that the name does refer but, instead of referring to a composite as it does in the universalist language, it refers to a bunch of simples arranged chair-wise.

[ix] Schaffer explicitly says he is *not* arguing that domain realism is true, just that it can support heavy ideology. Similarly, I am not arguing that interpretation magnetism is true, just that it can support heavy ideology.

[x] It is a bit of a misnomer to talk about domain variance and interpretation variance as sources of quantifier variance, since neither is actually a part quantifier in an object language. This is something Schaffer recognizes (Forthcoming pg. 13) and thinks quantifier variance is a sort of "loose talk". It stands in as a name for a general phenomenon which may occur when a sentence in an object language is interpreted differently between two metalanguages due to different semantic machinery, one of these possible differences being in the interpretation of a clause associated with a quantifier which is perhaps the only "true" source of quantifier meaning. For simplicity's sake, I continue to refer to the phenomenon as quantifier variance.

[xi] Again, this does not mean the interpretation magnetist cannot use predicates in her metalanguage standing for "is grue", just that the extension of such predicates will be their time dependent gruesome extensions.

[xii] This concern is first brought up by Sider (2009 pg. 38) although I expand on it here in light of Dasgupta's theory (2009).

References

Dasgupta, Shamik. 2009. “Individuals: An Essay in Revisionary Metaphysics.” *Philosophical Studies* 145: 35-67.

Hirsch, Eli. 2002. “Quantifier Variance and Realism.” *Philosophical Issues* 12: 51–73.

——2005. “Physical-Object Ontology, Verbal Disputes, and Common Sense.” *Philosophy and Phenomenological Research* 70: 67–97.

——2008. “Language, Ontology, and Structure”. *Noûs* 42: 509–28.

——2009. “Ontology and Alternative Languages”. In *Metametaphysics*, edited by David Chalmers, David Manley, and Ryan Wasserman: 231–59. Oxford: Oxford University Press.

Lewis, David. 1983. “New Work for a Theory of Universals.” *Australasian Journal of Philosophy* 61: 343–77.

——1984. Putnam’s Paradox. *Australasian Journal of Philosophy* 62: 221–36.

McSweeney, Michaela. 2019. “Following Logical Realism Where It Leads.” *Philosophical Studies* 176: 117-39.

Priest, Graham. 2005. *Towards Non-Being. The Logic and Metaphysics of Intentionality*. Oxford: Clarendon.

——2011. “Creating Non-existents.” In *Truth in Fiction*, edited by Franck Lihoreau: 107-18. Heusenstamm: Ontos.

Putnam, Hilary. 1987. “Truth and Convention: On Davidson’s Refutation of Conceptual Relativism.” *Dialectica* 41: 69–77.

Schaffer, Jonathan. Forthcoming. “Heavy Ontology, Light Ideology.”

Sider, Ted. 2007. “Neo-Fregeanism and Quantifier Variance.” *Proceedings of the Aristotelian Society* 81: 201–32.

——2009. “Ontological Realism.” In *Metametaphysics*, edited by David Chalmers, David Manley, and Ryan Wasserman: 384–423. Oxford: Oxford University Press.

——2014. “Hirsch’s Attack on Ontologese.” *Noûs* 48: 565–72.

——2011. *Writing the Book of the World*. Oxford: Oxford University Press.

——2012. *The Tools of Metaphysics and the Metaphysics of Science*. Oxford: Oxford University Press.