XX PLATONIC REALISM Chad Carmichael

Realism about properties is the thesis that there are properties. *Platonic* realism is the thesis that at least some properties are platonic. So what is a property, and what is it for a property to be platonic?

1 What is a property?

Properties are also sometimes called qualities, features, attributes, characteristics, states, traits, kinds, sorts, types, or aspects. (These terms can also be used to mark various distinctions between different kinds of property.) Putative examples of properties include:

redness circularity philosopherhood the property of having mass the property of being a toaster.

Of course, not all realists about properties believe in the existence of every putative example. The most restrictive or *sparse* form of realism will accept only the most fundamental properties, such as perhaps the property of having mass and similar posits of fundamental physics. By contrast, an *abundant* form of realism accepts a wider range of properties, including even properties like the property of being a toaster-or, even weirder, the "disjunctive" property of *being either a toaster or a black hole.* Whether to think of properties sparsely or abundantly is the sort of thing realists disagree with each other about (see Ch. XX this volume).¹

Armstrong (1978b, 1989) favors a sparse conception. Russell (1912: chapter IX), Bealer (1993), van Inwagen (2004), and Carmichael (2010, 2022) favor an abundant conception. Lewis (1983) suggests a view on which there are sparse property-like things that he calls

As with many philosophical terms, there is no consensus about how best to define 'property'. A traditional idea is that properties are things that are or could be *had in common* by many particular objects, as for example a red ball, a red tomato, and a red hat all have the property *redness* in common. But some realists about properties hold that there are properties that have exactly one instance of necessity: the property of being an even prime number, for example. One might have thought that properties can be defined as those things that have (or could have had) *instances*—i.e., they are *instantiables*. But some realists think that there are properties that *cannot* have instances: the property of being a round square, for example.

A somewhat more metaphysically neutral conception of properties is as follows. Let's say that something is a *predicable* just in case it is capable of being either true or false of something. Various linguistic items are predicables: for example, the predicate 'is a dog' is a predicable that is true of each dog. But predicates are not properties. So what is the difference between a property and a predicate like 'is a dog'? The answer is that, unlike a predicate, a property is *mind-independent* in the sense that it does not depend for its existence or its status as a predicable on the existence or activity of any minds. On this view, then, properties are *mind-independent predicables*.

This account is neutral on a wide range of metaphysical disputes about properties: whether properties are sparse or abundant, whether they can exist uninstantiated, whether they can be uninstantiable, whether they stand in causal relations, whether they are located in the physical world, and so on.² In any case, irrespective of what conclusion one comes to on these and other controversies, one will presumably agree that *if* there were mind-independent predicables, they would be pretty good candidates for being properties.

[&]quot;universals" (conceived along Armstrong's lines) as well as abundant sets of possibilia, which he calls "properties".

² Lewis (1983, 1986: section 1.5) identifies properties with sets of possibilia. Is his theory consistent with my view that properties are predicables? I think so. Lewis's theory entails that sets can have instances and properties can have members. If Lewis is willing to say these things, I think he should also be willing to say that sets can be predicables.

2 What is a platonic property?

Some realists about properties hold that all properties are located in their instances. On this view, if there is such a property as blueness, then blueness itself is located where each blue object is located. Call the view that properties are located in their instances *immanent realism*.³ One thing that it could mean to say that a property is *platonic* is that it is not immanent but *transcendent*: it is incapable of spatial location. In another terminology, to say that properties are platonic in this sense is to say that they are *abstract objects*.

This is a form of platonic realism on any reasonable understanding. But I want to suggest that there are also weaker forms of platonic realism. For example, one might claim that some properties exist uninstantiated, and that they are therefore unlocated and rather abundant. But one might also think that all properties with instances are located in their instances, and that uninstantiated properties are all such that they *could* have had an instance, and *would* have been located in their instances if they had any. Such a position does not embrace the idea that there are properties that *could not* have had a location. Is this a form of platonic realism? Yes, at least in the sense that this view embraces properties without spatial locations (for more about this view, see section 12 and Carmichael 2022).

In short, then, I will understand platonic properties as properties that (perhaps contingently) lack locations. And platonic realism is therefore the idea that there are mindindependent predicables that lack locations. I now turn to some arguments for platonic realism.

3 The "one over many" argument

We often make claims, in both ordinary and scientific contexts, which appear to entail that properties exist. If any of these claims is true, and the apparent entailment is genuine, then properties exist. A common sort of argument for realism is that, in one or another of these cases, opponents of properties have no plausible analysis that renders the relevant claim false or the entailment merely apparent.

³ Sometimes immanent realists also hold that properties are *parts* or *constituents* of their instances, and that each property is *wholly* located where each instance is located, so that properties with multiple instances are multiply located.

Perhaps the most well-known argument like this is the so-called "one over many" argument. Different versions of the argument focus on slightly different claims related to having features in common; here is a sampling:

- 1. *a* and *b* "partake of a common nature" (Russell 1912: 143)
- 2. *a* and *b* "have something in common" (Quine 1948: 29)
- 3. *a* and *b* are "of the same type" (Armstrong 1978*a*: xiii)
- 4. *a* and *b* "have the same property, F-ness" (Devitt 1980: 434)
- 5. *a* and *b* "have some common property" (Lewis 1983: 355)
- 6. "Spiders share some of the anatomical features of insects" (van Inwagen 2004: 114).

Claims 4 and 6 at least apparently have the existence of properties or features as a *logical* consequence. In the other cases, the entailment is something more tenuous, going by way of the claim that the "type" or "common nature" or "thing in common" must be a property since it is hard to see what else it could be. The argument crucially depends on denying that opponents of properties might devise a paraphrase of these claims which reveals that, despite appearances, they are either false or do not entail the existence of properties (for more on the idea of paraphrases, see Ch. XX, this volume).

This argument has been endorsed by proponents of platonic and non-platonic theories of properties alike.⁴ This is at least initially puzzling. Nearly every presentation of the argument appeals to cases that involve properties that only *abundant* realists accept: the property of being red, for example. If the argument is successful, then, it appears to establish a relatively abundant form of realism that typically appeals to platonists.⁵ One reason for this appeal is that, once we

 ⁴ Russell (1912: chapter IX) and van Inwagen (2004) are platonists who endorse the argument.
Armstrong (1978*a*) is a non-platonist who endorses the argument.

⁵ And, in particular, an abundant realism on which properties are more abundant than typical non-platonic views such as Armstrong's would have it. Armstrong might try to paraphrase 'all the red things have something in common' by 'all the red things either have F or G or H or ...', where F, G, and H are sparse properties which entail that their bearers are red. However, for this to be an adequate paraphrase, its truth must explain the (at least) apparent truth of 'all

opt for a relatively abundant view of properties, we are faced with the question of how abundant properties are, and the natural answers entail that they are abundant enough to include some platonic properties. For the argument, if successful, establishes the existence of properties that are, or are equivalent to, disjunctive properties. For example, suppose that the property of being jade is the disjunctive property of being either F or G. Then if all the samples of jade that were F but not G were eliminated, but there were still samples of jade that were G, then the property of being jade, along with its two disjuncts F and G, would still exist. In that case, though, the property F would exist uninstantiated. So the argument tends to favor a platonic view.

In response to the "one over many" argument, David Lewis (1983) notes that it requires a (perhaps unmotivated) rejection of the idea of primitive resemblance, since primitive resemblance seems to afford opponents of properties a paraphrase of at least claims 1-3 and 5. In addition, Michael Devitt (1980), following W.V. Quine (1948), argues that claim 4 can be paraphrased as '*a* and *b* are both F,' which he analyzes, in turn, as equivalent to '*a* is F and *b* is F'. Both Quine and Devitt argue that the latter claim does not require realism (on this exchange, see Ch. XX, this volume).

Claim 6 is perhaps more challenging, as it seems to require a more specific relationship of *anatomical resemblance*, which is apparently equivalent to *resemblance by virtue of sharing anatomical properties*. The opponents of properties do not want a distinct primitive for every respect in which things can resemble one another; what then should they say about anatomical resemblance and similar notions that involve similarity-in-a-specific-respect?

Lewis (1983: 347-348) proposes that the relevant notion of primitive resemblance is variably polyadic and contrastive, so that we say " $x_1, x_2, ...$ resemble one another and do not likewise resemble $y_1, y_2, ...$ " Using this predicate, the thought goes, we can uniquely capture the *anatomical* resemblance of spiders and insects, without invoking properties, by means of the contrast between the manner in which they resemble one another and the manner in which they do not resemble everything else.

the red things have something in common'. But, in that case, one would expect 'all the toasters and black holes have something in common' to be apparently true, since it could be given a similar "disjunctive" paraphrase.

Another approach, due to Gonzalo Rodriguez-Pereyra (2002: chapter 4), has it that primitive resemblance is a dyadic relation (rather than a variably polyadic one), and that it comes in degrees. Then the idea is that, for each anatomical feature the realist believes in, there is a set of things $S = \{x_1, x_2, ...\}$ such that each pair of the *xs* resemble each other to a specific degree. The opponent of properties then claims that this precisely captures the fact that the *xs* resemble each other in the specific respect for which the realist accounts by posting a shared anatomical feature. Claim 6 above would then be understood to mean: each (actual) spider-insect pair is such that its members are both members of some such sets.

4 Lewis's argument

Lewis (1983: 348-351) gives a similar argument for platonic realism, but one which appeals to a broader range of statements apparently about properties. Lewis claims that properties are needed in order "to provide an adequate supply of semantic values for linguistic expressions" (p. 348). The idea here is that there are a wide variety of plausibly true and certainly meaningful sentences whose semantic analysis seems to require properties. Lewis cites these examples (among others):

Red resembles orange more than it resembles blue Red is a colour Redness is a sign of ripeness Grueness does not make for resemblance among all its instances He has the same virtues as his father.

Lewis also claims that we need properties for the purpose of "characterizing the content of our intentional attitudes" (p. 351). Only *abundant* properties can fill these roles, Lewis thinks, since the relevant semantic values, and the content of our intentional attitudes, are so numerous. Plausibly, some such abundant properties must be platonic in our sense, since some of them will end up being uninstantiated.

Lewis's argument and the "one over many" argument make a *prima facie* case for platonic realism. Given the lack of consensus about how the opponent of properties should proceed, the elegance and naturalness of a realist position, and the failure of standard objections to abundant platonic realism (see below), these arguments have won some converts to platonic

realism. Still, these arguments have an open-ended character, in effect placing a bet that their opponents cannot find a plausible account of the above claims and of mental content.⁶ But it is hard to be confident about what clever opponents of realism might devise in the future. Arguably, then, these standard arguments are less convincing than one might have hoped.

5 A modal argument for realism

In my view (Carmichael 2010), a more convincing argument derives platonic realism from considerations involving necessary truth. The first step of this argument proceeds from the idea that there are necessary truths, and that every necessary truth is a truth that would have been true in any possible situation. Given that something cannot be true without existing, it follows that actual necessary truths had to exist.⁷ The second step of the argument says that these necessarily existing truths are structured entities with logical form, and specifically that they have predicable constituents that they could not exist without. Thus, there are necessarily existing predicables. The third step is the claim that necessary existence entails mind-independence.⁸ From this, it follows that there are mind-independent predicables, which is my favored definition of a property, as discussed above. Finally, if one can argue that these properties are platonic in one of the senses I identified, one can conclude that platonic realism is true.

This style of argument faces a number of challenges; let's look at a few of them.

6 'True at'

One common challenge says that a necessary truth is not a truth that would have been true in any possible situation. Instead, the idea is that a necessary truth is a truth that is *true at* every possible

⁶ Lewis makes an even more specific prediction: any such account will be "piecemeal" in a way that "threatens systematic semantics" (1983: 350).

⁷ Sentences exist contingently and can be necessary truths. But they are only necessary in a secondary sense, by virtue of expressing truths that are necessary in the primary sense, which is the sense under discussion in the text.

⁸ One might reply to this step by saying that necessarily existing predicables are minddependent because they are concepts in the mind of a necessarily existing God. See Plantinga (1982).

world, where 'true at' is understood in such a way that a necessary truth can sometimes be true at a world even though that truth does not exist in that world. The thought here is that a truth can describe a possible world "from the outside," so to speak, and if it correctly describes *every* world, then it is necessary without *existing* necessarily, contrary to the modal argument.

This view faces a problem involving iterated modality. Suppose that it is necessary that everything is self-identical. On the present view, this is necessarily equivalent to the claim that it is true at every possible world that everything is self-identical. But of course it is also necessary *that it is necessary* that everything is self-identical. So, on the present view, it follows (by substitution of necessarily equivalents) that it is necessary that it is true at every possible world that everything is self-identical. It is impossible for something to be true at every possible world without existing. (A necessary truth can be true at every world without existing in every world, on the present view, but it cannot be true at every world without existing *simpliciter*.) Thus, it follows that the necessary truth *that everything is self-identical* exists necessarily.

One could respond by denying that there are any iterated modal truths such as 'it is necessary that it is necessary that everything is self-identical'. But this is pretty implausible. One could also deny that 'it is necessary that everything is self-identical' is necessarily equivalent to 'it is true at every world that everything is self-identical'. In that case, either there could be a necessary truth that is not true at every world, or there could be something that is true at every world without being a necessary truth. Neither claim is very plausible. But more importantly, this view is dialectically out of line: the interest we have in *truth at every world* is precisely undermined by its alleged non-equivalence with necessity. For, given its non-equivalence with necessity, proponents of this reply can no longer claim to provide an alternative to the idea that necessary truths *just are* truths that would have been true in any possible situation.⁹

⁹ Speaks (2012) responds that '*p* is necessarily true' is necessarily equivalent to 'every world instantiates C_p ', where C_p is the "truth condition" associated with *p*. Since Speaks thinks of truth conditions as properties, this idea secures contingently existing propositions at the cost of admitting my desired conclusion that there are (necessarily existing) properties.

7 Second-order quantification

Here is a different sort of objection having to do with second-order quantifiers.¹⁰ Second-order quantification is quantification into non-nominal (e.g., predicate or sentential) position, as in:

∃F Jack is F

 $\exists p \text{ it is true that } p.$

On the view I have in mind, one should not interpret these claims to mean, respectively,

There is a property F such that Jack has F

There is a proposition *p* such that *p* is true.

For, so interpreted, the higher-order quantifiers are really just first-order quantifiers, which effectively (at least in a semantic sense) quantify into nominal position and range over a restricted domain. The idea that recent enthusiasts of the second-order framework have in mind is more radical than this: the thought is that higher-order quantifiers are *sui generis* and cannot be reduced to first-order quantification in this way.¹¹

This sort of view can be used to object to the modal argument for realism. The idea is that the starting point of the argument—that there are necessary truths—is ambiguous. On the first-order reading, it means:

 $\exists x \Box x \text{ is true.}$

But, on the second-order reading, it means:

 $\exists p \Box$ it is true that *p*.

The objection has it that the first reading is false, while the second reading is true but does not serve our argument. For, the thought goes, on the second reading, to get the necessary existence of a proposition, we would require a premise which says something like:

 $\forall p \Box$ (it is true that $p \rightarrow p$ exists).

However, this is ill-formed, since 'p' is a higher-order variable and therefore cannot take nominal position, as it does in the consequent of the embedded conditional. So the modal argument is blocked.

¹⁰ For discussions of this idea, see Jones (2018), Cameron (2019), and Liggins (2021).

¹¹ They are also not supposed to be substitutional quantifiers, since ' $\exists p$ it is true that p' would have been true even if there had been no languages.

My response: if primitive higher-order quantification makes sense, then so does higherorder identity. And, if we have an expression for higher-order identity, say '≡', then we can express the existence of a given necessary truth—say the proposition that everything is selfidentical—using a second-order quantifier:

 $\exists p \ (p \equiv \text{everything is self-identical}).$

Now we can formulate the needed premise like this:

□ (it is true that everything is self-identical $\rightarrow \exists p \ (p \equiv \text{everything is self-identical}))$. And now, given that

☐ it is true that everything is self-identical we may derive:

 $\Box \exists p \ (p \equiv \text{everything is self-identical}).$

Thus we end up with my conclusion: that necessary truths necessarily exist. The argument can then go through as before.

One could try to claim that there is no intelligible notion of higher-order identity. But this is not particularly plausible. Primitive higher-order quantification is about as intelligible as primitive higher-order identity. And enthusiasts of primitive higher-order quantification are already committed to being open-minded about our ability to understand higher-order ideology. One could also reply that $\exists p \ (p \equiv p)$ does not express a notion of existence that is of interest in ontology. But ontology is at least in part about what there is. So, if 'there is' can express second-order quantification, then ontology is (in part) about what there is in the second-order sense. One might try to claim that 'there is' does not in any sense express second-order quantification, but this is inconsistent with the present objection, which maintains that 'there are necessary truths' can be given a second-order reading. One could reformulate the objection, claiming instead that there really are no necessary truths, but that this is not as absurd as it sounds because ' $\exists p \Box$ it is true that p'—a claim that is uninterpretable in natural language—is true. This is an unpersuasive response: if a claim is uninterpretable in natural language, then its truth is ill-suited to explain our attraction to the thesis that there are necessary truths. Moreover, if the modal argument shows that platonic realism is as plausible as the claim that there are necessary truths, then it is a successful argument.

8 Necessary truths and logical form

The modal argument says that necessarily existing truths have logical form. Why think this? Let's call necessarily existing truths "propositions". There certainly are such things as logical truths: for example, it is a truth of logic that everything is self-identical. If this truth of logic is not a proposition, then we must have in mind that the *sentence* 'Everything is self-identical' is a truth of logic. On this view, only sentences have logical form. Call this "the sentence view." Here are three problems with the sentence view:

- 1. On the sentence view, which logical truths there are is a contingent matter, since any given sentence of natural language might not have existed. But it does not seem contingent which logical truths there are: it seems necessary, for example, that it is logically true that everything is self-identical.
- 2. Each truth of logic is true by virtue of (or grounded in) its logical form. On the sentence view, therefore, we can correctly say that *the fact that it is true that everything is self-identical* is grounded in the fact that 'Everything is self-identical' has logical form *f*. As Jonathan Schaffer (2016: 58) observes, grounded facts are typically counterfactually dependent on their grounds. But it would have been true that everything is self-identical even if the sentence had never existed. So counterfactual dependence does not hold in this case, contrary to the sentence view.
- 3. Sentences do not play the right doxastic and epistemic role to be the sole bearers of logical form: when we deductively justify belief in a logical truth, we logically deduce the *content* of our belief, which is not a sentence. But to be logically deduced, the content of our belief (a proposition) must have logical form.

For these reasons, I conclude that the sentence view is false. Since propositions are the other salient candidates for being the primary bearers of logical truth, they must have logical form after all.

9 Does the modal argument establish *platonic* realism?

It seems so. For suppose that there could have been properties that have no actual instances. If the modal argument succeeds, then, had there been such a property F, there would have been a necessarily existing proposition involving F, such as the proposition that either something is F or nothing is F. Since that proposition would have existed necessarily, it would exist in the actual world, and therefore—again assuming the success of the modal argument—the property F would actually exist as well, and would by hypothesis be actually uninstantiated. So to avoid the actual truth of platonic realism, given the success of the modal argument, one would have to deny that there could have been properties that have no actual instances. But this is implausible: plainly there could have been such properties given realism about properties. So the modal argument, if successful, establishes not just realism but platonic realism.

10 The Benacerraf-Field argument

I now briefly turn to some standard arguments against platonic realism. Perhaps the most famous of these is the Benacerraf-Field argument (Benacerraf 1973; Field 1989: 25-30), which is usually posed against abstract objects generally, but which can be directed, in particular, against platonic properties. According to this argument, if there were eternally uninstantiated properties, then it would be hard to see how they could stand in an appropriate explanatory relationship to our beliefs about them. For example, they would seem to be causally isolated. This apparent lack of an appropriate explanatory relationship, according to the argument, defeats our justification for any beliefs we hold about such properties.

Let's focus for a moment on the belief that platonic properties *exist*. Suppose that one rests this belief on the modal argument above. The premises of that argument are about the nature of necessary truth and logical truth. To undercut this basis for belief in the existence of properties, then, one would have to press the Benacerraf-Field objection against these modal and logical beliefs. Of course it is true that we should try to develop an epistemology of logic and modality, and the details of such an epistemology are a matter of ongoing controversy. But the failure of philosophers to conclusively establish an epistemology of logic and modality is not an adequate reason to embrace skepticism about these beliefs. So, on this understanding of our basis for realism, the Benacerraf-Field objection is an interesting philosophical problem to be solved rather than a serious objection to realism.

On the other hand, what if one rests belief in realism on the "one over many" argument? Then the situation is not so clear. For the premises in that case are, according to the realists themselves, quantifications over properties. For example, the premise that "*a* and *b* have something in common" is, according to realism, a simple existential generalization over properties. And so, according to the Benacerraf-Field objection, there are serious concerns, specific to realism itself and not generalizable to a wider class of modal and logical beliefs, about our justification for such beliefs. And the same remarks apply to Lewis's argument for realism. However, those who rest their realism on these arguments can still take advantage of the response to the Benacerraf-Field argument that I discuss in section 12.

11 Parsimony arguments

Another standard argument against platonic realism appeals to considerations of parsimony. As David Armstrong (1978*a*: 130) puts the point:

A spatiotemporal realm of particulars certainly exists (it includes our bodies). Whether anything else exists is controversial. If any entities outside this realm are postulated, but it is stipulated further that they have no manner of causal action upon the particulars in this realm, then there is no compelling reason to postulate them. Occam's razor then enjoins us not to postulate them.

If this is right, then parsimony may provide a reason to reject platonism in favor of the sort of "immanent realism" that Armstrong favors.¹²

Of course, *something* has to do the work of properties; we do not want the simplest theory *simpliciter*, but rather the simplest theory *that explains all that needs explaining*. As I argued in sections 3 and 4, the "one over many" argument and Lewis's argument, if successful, require a relatively abundant conception of properties, including platonic properties, to account for the truth (or meaningfulness) of a number of ordinary claims that are apparently about properties. Furthermore, as we saw above, if the modal argument is correct, theories that reject platonic realism fail to account for the modal facts, and especially the facts involving alien

¹² Schaffer (2015) argues that parsimony has to do with what is fundamental. If he is right, then Carmichael (2016), which defends a fundamental ontology consisting only of properties, actually *favors* platonic realism on grounds of parsimony.

properties. So, if these arguments for realism are correct, then parsimony does not favor a theory like Armstrong's, because such theories are too sparse to explain all that needs explaining.

12 Weak platonism

In addition to the above replies to these standard objections to platonic realism, I want to propose that what I call *weak platonism* provides an additional defense against these objections. By "weak platonism" I have in mind a theory with the following three tenets, each of which it accepts as necessary:

(Platonism)	There are properties without locations (specifically: uninstantiated ones)
(Instantiability)	Each property could have had an instance
(Immanence)	Each instantiated property is located in each of its instances.

A theory that incorporates these three tenets is by my definition still a version of platonic realism because it accepts properties that have no location. But it helps to alleviate the epistemic and parsimony worries by appealing to Instantiability and Immanence. Let me briefly explain.¹³

First the parsimony worry. Lewis (1973: 87) distinguishes between quantitative and qualitative parsimony: roughly, the distinction between reducing the number of things (quantitative) and reducing the kinds of things (qualitative). Lewis argues with some plausibility that qualitative parsimony is what we should care about reducing when we are concerned with parsimony, at least in ontology. The ontology of weak platonism differs from that of traditional immanent realism (e.g., Armstrong's view) only in that it embraces properties that are unlocated but could have had a location. So the key question is whether the elimination of *properties that are contingently unlocated* amounts to a gain in qualitative parsimony. Arguably, the answer is no. The contingently unlocated properties are not a natural or essential kind, but rather a gerrymandered grouping of the sort whose elimination is not normally regarded as constituting a gain in qualitative parsimony. For this reason, given weak platonism, I think this sort of parsimony-based worry about platonism is not convincing.

¹³ See my (2022) for further details.

Second, the epistemic worry. On weak platonism, each property is such that, had it been instantiated, it would have been located. Thus, a wide range of counterfactual conditionals about the physical world concern these properties. For example: if there is no object of mass M, then we would nevertheless know that, had there been an object of mass M in location L, the property of being mass M would have been located in L. If we suppose that there is no epistemic problem about our knowledge counterfactuals about the physical world, then this rescues a wide range of beliefs about uninstantiated properties—in addition to the existential beliefs I defended above—from the epistemic worry.¹⁴

References

Armstrong, D. M. (1978a) Universals and Scientific Realism, Volume I. Cambridge: Cambridge University Press.

Armstrong, D. M. (1978b) Universals and Scientific Realism, Volume II. Cambridge: Cambridge University Press.

Armstrong, D. M. (1989) Universals: An Opinionated Introduction. Boulder: Westview Press.

Bealer, G. (1993) Universals. Journal of Philosophy 60(1): 5-32.

Benacerraf, P. (1973) Mathematical Truth. Journal of Philosophy 70(19): 661-679.

Cameron, R. (2019) Truthmaking, Second-Order Quantification, and Ontological Commitment. *Analytic Philosophy* 60(4): 336-360.

Carmichael, C. (2010) Universals. *Philosophical Studies* 150(3): 373-389.

Carmichael, C. (2016) Deep Platonism. *Philosophy and Phenomenological Research* 92(2): 307-328.

Carmichael, C. (2022) Immanence in Abundance. Erkenntnis, doi: 10.1007/s10670-022-00594-y.

Devitt, M. (1980) "Ostrich Nominalism" or "Mirage Realism"? *Pacific Philosophical Quarterly* 61(4): 433-439

Field, H. (1989) Realism, Mathematics, and Modality. Oxford: Blackwell.

Jones, N. (2018) Nominalist Realism. Nous 52(4): 808-835.

Lewis, D. (1973) Counterfactuals. Cambridge, MA: Harvard University Press.

¹⁴ Thanks to Dan Korman, John Keller, Anna-Sofia Maurin, and participants of the Online Properties Workshop in May 2022.

Lewis, D. (1983) New Work for a Theory of Universals. *Australasian Journal of Philosophy* 61(4): 343-377.

Lewis, D. (1986) On the Plurality of Worlds. Oxford: Blackwell.

Liggins, D. (2021) Should a Higher-Order Metaphysician Believe in Properties? *Synthese* 199(3-4): 10017-10037.

Plantinga, A. (1982) How to be an Anti-Realist. *Proceedings and Addresses of the American Philosophical Association* 56(1): 47-70.

Rodriguez-Pereyra, G. (2002) Resemblance Nominalism. Oxford: Oxford University Press.

Quine, W.V. (1948) On What There Is. *The Review of Metaphysics* 2(5): 21-38.

Russell, B. (1912) The Problems of Philosophy. London: Williams and Norgate.

Schaffer, J. (2016) Grounding in the Image of Causation. Philosophical Studies 173(1): 49-100.

Schaffer, J. (2015) What not to Multiply Without Necessity. *Australasian Journal of Philosophy* 93(4): 644-664.

Speaks, J. (2012) On Possibly Nonexistent Propositions. *Philosophy and Phenomenological Research* 85(3): 528-562.

Van Inwagen, P. (2004) A Theory of Properties. Oxford Studies in Metaphysics 1: 107-138.