

No Ground Floor: Living with Global Relativism

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When it comes to me and living in my world, and this little coconut head that I've got, it's a lot of fantasies. And when I feel the fantasy, it is my reality and nothing can change that.

– Valentina

I do not for one moment believe that the doctrine which has these lazy consequences is true. I realize, however, that I have an overpoweringly strong bias against it, for, if it is true, philosophy is, at best, a slight help to lexicographers, and at worst, an idle tea-table amusement.

– Bertrand Russell

Abstract

A case is made for global relativism. More specifically, *I* make a case for global relativism: I claim that the truth value of any sentence (even a sentence of metaontology) is determinate only local to a theory of reality, and thus that there is no “external” vantage point from which one such theory can be privileged over any other. I locate this claim within my personal theory of reality and invite the reader to do the same, though she will not be “wrong” if she chooses to decline.

I.

Absolutist Attempts at Relativism

In this paper I defend a view that is described in the literature as “inane” and “radical” (Hacking 1982, Eklund 2008). Curiously, I find the view entirely sane and ordinary. This

conflict is easily understood if we take the positions of the cited papers to be literally that: positions, located in a space of conceivable ideologies. On this reading, “radical” is a relational term like “distant,” and it is entirely plausible that the view I am about to defend could be radical-to-you but not radical-to-me.

There is not much new to say about global relativism, or much to say about it at all, for that matter. It is a metaontological view which, once accepted, entails close to nothing about ontology proper. A course on global relativism could conclude after half a session, with the students free to go off and construct their own personal conceptual frameworks of reality, in accordance with their own personal ontological desiderata. If there were a dedicated community of global-relativist philosophers, they would have nothing to offer scholarship beyond the occasional article restating their one shared metaontological position in different ways. None of this is *ipso facto* a reason to believe that global relativism is wrong.

An inventory of the philosophical literature on global relativism reveals, troublingly, that the term is always used exonymically—by a writer who is not a global relativist and has not consulted with any global relativists before writing. No wonder the position is so disparaged, when we haven’t even been given the space to state and defend it on our own terms! Here is Max Kölbel’s attempt to characterize a view he has never encountered: “For all $F \in \mathcal{F}$, there is a parameter P to which it is relative whether an object is F , and for all x there are values v_1 and v_2 of P , such that x is F relative to v_1 and x is not F relative to v_2 ” (Kölbel 2011). And here is Tim McGrew: “Any knowledge-claim P about field X can be evaluated only according to a particular set of background principles and standards. . . .” (McGrew 1994). Both of these formulations read as statements of absolute fact, expressed in terms of universals, and apparently meant to constrain the space of viable worldviews. They are not, in other words, relativist positions.

The situation is no better if we drop the word “global” and inspect other positions described by analytic philosophers as “relativist.” Here at least we have some writers willing to adopt the title themselves, but still the views they defend are not recognizably relativist on my understanding of the term. A canonical example from mathematics would be Hilary Putnam’s if-thenism, which expresses all mathematical truths as statements of first-order

modal logic: for instance, Fermat’s last theorem becomes $\Box[\text{AX}(S, T) \supset \sim \text{FERMAT}(S, T)]$ (Putnam 1967). An analogous approach in the context of ethics is Gilbert Harman’s moral relativism, which treats “the moral ‘ought’ as a four-place predicate . . . which relates an agent A , a type of act D , considerations C , and motivating attitudes M ” (Harman 1975). John MacFarlane has recently generalized these sorts of approaches with a postsemantics which assesses every sentence S not at face value but as a relational statement to an n -tuple of context coordinates (MacFarlane 2014).

All of these views share the same criticism of more naïve forms of absolutism: that many claims we typically describe as “true” merit that descriptor only relative to a presumed context—an axiom set or moral framework, as the case may be. And yet, these “locally relativist” views all eventually reduce to some further relational principle which is then taken to be absolutely true (universally true, objectively true, true in all contexts, capital- t True). For instance, Harman denies that ‘ A ought to D ’ can ever be absolutely true, but allows that ‘Ought(A, D, C, M)’ often is. If one has accepted a relativist critique as applied to naïve absolutism, it requires a delicate act of justificatory acrobatics to explain why an analogous critique should not apply to new absolute truths. Such an explanation is absent from these accounts,¹ presumably because they expect their audiences to be launching critiques from the absolutist flank. “Local relativism” thus appears to be the result of starting from a null hypothesis of absolutism, patching up the most glaring holes, and leaving the rest intact. I would categorize all these schemes, which aspire to relativism yet affirm absolute truths, as *half-baked relativisms*.

There is another class of established positions in the literature which appear to gesture towards relativism (or are at least allied with relativism against absolutism’s most gratuitous moves): *anti-exceptionalism about F* , for some field of inquiry F .² These are negative positions, attacking a particular privileging of F -truths as absolute, by demonstrating that

¹To his credit, MacFarlane admits that “relativism is not true for everyone”—a good signal that he is serious about the project. However, this admission is isolated to a single page of his book, and he does not explore what it could mean that his context-inclusive postsemantic propositions are “not true for everyone,” no matter how many coordinates of context are injected into the proposition.

²The term is extended by analogy from anti-exceptionalism about logic. I use “anti-exceptionalism” rather than “anti-objectivism” in this context to focus on the negative position in isolation, remaining neutral about what realist picture might emerge from the critique.

there are multiple equally viable ways of formulating the F -truths. In this category we have anti-exceptionalism about mathematics (Hamkins 2012; Hamkins 2015), logic (Putnam 1968; Maddy 2012; Hjortland 2016), and philosophy itself (Williamson 2013). These views are generally considered Quinean or Neo-Quinean, and we might place Quine in this camp too for his doctrine that “the universe of a theory makes sense only relative to some background theory” (Quine 1969). The anti-exceptionalists, however, seem hesitant to actually describe a picture of reality compatible with their anti-exceptionalism.³ Perhaps they believe something they are afraid to admit!

Is there a single realist picture which can accommodate the anti-exceptionalist critique about a field F ? The option on offer in the literature is F -pluralism, the view that *all* the members of some set of plausible formulations of the F -truths are metaphysically instantiated (Balaguer 1995; Field 2009; Clarke-Doane forthcoming). Which set, though? As long as the list of satisfactory F -theories (whatever that might mean) is not specified, F -pluralism is not a single realist picture after all, and we’re left with only the anti-exceptionalist critique. Yet if the list *is* specified, this list must be an absolute truth, and F -pluralism is in the end still an absolutist view, albeit one step removed⁴—another half-baked relativism. This is not to say that it is not a viable theory, just that it is still not relativism, and the gap in the literature remains.

Then what is global relativism? The term “relativism,” as it is typically used by actual relativists, does not describe any single affirmative position. Like “atheist” or “person of color,” the term denotes a category defined in contrast to a group so sociologically significant that its non-members often must be identified by their non-membership. In the case of relativism, the complementary category by which it is defined is absolutism. I repeat: relativists do not, by virtue of their relativism, believe anything in common; what we share is our *lack* of belief in the central premise of absolutism.

I will precisely define *the absolutist premise*, and thus also global relativism, in §6; we will first require an appropriate notation. For now, here are three rough sloganizations of

³Quine’s naturalist picture (which happens to be quite similar to my own proper ontology) itself famously rests on the unjustified premise that the empirical method is in some sense correct or exceptional; it thus does not survive the anti-exceptionalist critique.

⁴Being “pluralists about pluralism” simply regresses the problem one step further, as we will see in §2.

the absolutist premise:

- There is objective truth, and it is accessible to humans.
- At least some of our knowledge is absolute.
- Truth is universal.

And here, complementarily, are three rough sloganizations of how a relativist might respond:

- If there is such a thing as objective truth, it may not be accessible to humans.
- We do not know what we think we know.
- “Truth,” as we typically use the term, is local to a conceptual model of reality.

These claims are, to a relativist, rather uninteresting, and if not for the preponderance and disproportionate social power of absolutists, we would likely not bother with such questions of “absolute truth” (whatever that might mean). We would likely have more time to focus on practical matters of urgent interest, like reducing suffering or developing new technologies, without getting caught up in the weeds of what suffering *really is*. And yet, here come the absolutists: they want us to believe exactly what they believe, and find us worthy of contempt for refusing! Sadly, just as atheists and people of color find themselves tasked with identifying and debunking the central conceits of theism and whiteness, it appears to be the relativist’s job to conceptually dismantle absolutism from a sober, outside perspective. Fortunately for relativists, absolutists have, quite contrary to their own intentions, already done quite a bit of the work of dismantling absolutism on their own.

It will be my project in this paper to collate and formalize the existing arguments against the “grounding projects” used to justify Western academic absolutism (§2) and then, rather than trying to patch up the absolutist picture, I will offer an alternate framework wholesale which avoids these problems (§3–6). It will not necessarily be the most comforting picture, but I find that we must sometimes resign ourselves to the world not being quite the way we wish it were.

II.

The Downward Spiral

What I will call *the downward spiral* is a recurring argumentative pattern appearing in different guises across several fields of philosophical inquiry. It arises in response to attempts to provide *grounding* for a field F , that is, to justify or otherwise strengthen the truths of F with an appeal to “earlier,” “lower-level,” or “more fundamental” F -truths.⁵ In metamathematics, the downward spiral is called “the foundational crisis”; in metaethics it’s the “moral twin-Earth problem”; in philosophy of physics it’s the “problem of theory choice.” In this section I argue that, to the extent that such attempts at grounding aspire to metaphysical content (typically, that the F -truths are privileged over plausible alternative F' -truths⁶), the downward spiral presents an intractable problem.

A colorful heuristic statement of the downward spiral is given by mathematician–novelist Lewis Carroll in his celebrated dialogue, “What the Tortoise said to Achilles.” At the critical moment in Carroll’s story, the Tortoise has accepted propositions A and B , as well as the proposition “(C) If A and B are true, Z must be true” but is refusing to accept Z . Achilles is understandably bewildered (Carroll 1895):

“If you accept A and B and C , you *must* accept Z .”

“And why *must* I?”

“Because it follows *logically* from them. If A and B and C are true, Z *must* be true. You don’t dispute that, I imagine?”

The infinite regress is clear. The Tortoise proceeds to adopt the proposition “(D) If A and B and C are true, Z must be true” and then, naturally, wonders why accepting A , B , C , and D requires him to accept Z . And so on, until Achilles’s notebook is full of propositions and the Tortoise has still not accepted Z .

⁵I am assuming that F is closed under meta-discourse. Even when F is weaker than arithmetic, we may take F^+ to be the countable union of F , meta- F , meta-meta- F , ... and proceed with the argument on F^+ .

⁶ F and F' are two alternate precisifications of syntactically similar truths; in a canonical example, F is Euclidean geometry and F' is hyperbolic geometry. A more complete treatment is given in (Clarke-Doane forthcoming).

Carroll is making a simple and I believe entirely correct point about the limits of justification: if the Tortoise does not accept the legitimacy of propositional logic, there is nothing inside propositional logic which can compel him to do so. If we want to make use of propositional logic, we have to adopt it without justification.

Bertrand Russell, whose *Principia Mathematica* represents perhaps the highest-profile attempt at grounding a field in intellectual history, concedes in an earlier text that what he calls “Carroll’s puzzle” is troubling. “One of our indemonstrable principles,” he writes, “[is] that if the hypothesis of an implication is true, it may be dropped, and the consequent asserted. This principle. . . eludes formal statement, and points to a certain failure of formalism in general” (Russell 1903b). In other words, even if we have formally transcribed *modus ponens* as a string of symbols and declared this string a truth, we still must simply adopt the custom that the action we somehow understand this string to describe is valid for us to perform. We have ‘ p ’, and ‘ $p \rightarrow q$ ’, but how are we justified in asserting ‘ q ’? *Modus ponens*. Okay, now we have ‘ p ’, ‘ $p \rightarrow q$ ’, and some further principle, perhaps ‘ $(p \rightarrow q, p) \vdash q$ ’. Still, how are we justified in asserting ‘ q ’? “Until we have some new principle, we shall only be led into an endless regress of more and more complicated implications, without ever arriving at the assertion of q .” Russell does not resolve the downward spiral; however, he indicates that he believes it is eventually resolvable.⁷

In “What Achilles Should Have Said to the Tortoise,” James F. Thomson offers an answer to Carroll’s puzzle, and his proposed resolution is even more revealing than Russell’s silence: “Whether or not [the Tortoise] accepts C , it is logically true. That means that the argument from A and B to Z is logically valid and that the Tortoise in accepting A and B commits himself to accepting Z . So he is already under a logical necessity to accept it” (Thomson 1960). Logical inference, Thomson is saying, must simply be accepted. It must! End of argument. This is, in my view, the only honest response to a Tortoise: to pound

⁷Russell proposes that we introduce a “notion of *therefore*, which is quite different from the notion of *implies*” in that it holds only between asserted propositions. That is, ‘ p implies q ’ asserts nothing about the status of p and q themselves, while ‘ p therefore q ’ asserts both p and q . Certainly this makes the move from ‘ p therefore q ’ to ‘ q ’ even more trivial than before (whatever that might mean) but if “therefore” presumes the assertion of its consequent, I still don’t see how we ever make the leap from not asserting ‘ q ’ to asserting ‘ q ’. We have, it seems, merely taken one more step down in the downward spiral. Russell agrees that the task is not complete, and closes by saying, apparently without irony, that “this seems to be the first step in answering Lewis Carroll’s puzzle.”

one's fist. "It may be objected that the Tortoise is justified 'from his own point of view' in saying that he can accept A and B without accepting Z ," Thomson continues. "The reply is that this point of view is a mistaken one and Achilles' task is precisely to make him give it up." The unjustified practice of logical inference is again asserted as an unquestionable universal, now with the added normative claim that anyone who does not engage in this practice ought to be compelled to adopt it.

As a personal matter, I of course do believe that *modus ponens* is a valid deductive practice, and I would likely find a conversation with a Tortoise uninteresting and frustrating. The lesson of Carroll's fiction is not that the Tortoise is expressing some deep wisdom that we ought to adopt. The lesson is that *there is no ground floor*—no basic, fundamental premise which all parties are obliged (logically? normatively?) to accept. That is because, given any candidate ground-floor premise whatsoever, a Tortoise may come along and reject it. We may offer him reason to accept the premise, but that reason is just adding another floor below, and the Tortoise may reject that too. Hence the downward spiral: it's Tortoises all the way down.

Can this conclusion be avoided? Sure, if adopt Thomson's approach: you may decide that, as you travel down floor by floor, there is a point at which the Tortoise becomes Wrong (flat-out-wrong, no-further-justification-needed-wrong) to disagree. He may disagree, of course, as a practical matter, but he is Wrong to do so, and you can comfortably ignore him. You may decide, as Thomson apparently does, and as Russell does with a bit more equivocation, that *modus ponens* is this ground floor. But you have decided this. You have not found a ground floor out in the wilderness; you have built one with your own two hands.

The case of propositional logic is admittedly a bit extreme, as *modus ponens* appears to us so trivial that I can easily empathize with the suspicion that it is a genuine Truth—not merely a starting point we have adopted—and that one is genuinely Wrong to deny it. Note, though, that the argument of the downward spiral applies more generally to any attempt to justify a claim not just as a consequence of earlier agreed-upon premises, but flat-out, Wrong-to-disagree, Justify it. Quite simply: any claim can be met with a "Why?"; a string of "Why?"s either descends indefinitely or ends in a "Because I said so!"; and any "Because

I said so!” can be met with a “Well, that’s just, like, your opinion, man.” Either accept the downward spiral and believe nothing, or build yourself a ground floor.

This generalization of Carroll’s argument from propositional logic to a generic field of inquiry F can be precisified mathematically as follows. Let $\{S_1, S_2, \dots\}$ be the set of all truth-apt sentences of F , and let \leq be a grounding relation, that is, $S_i \leq S_j$ exactly if the truth of S_i “grounds” the truth of S_j . (The exact metaphysical, epistemic, or syntactic nature of “grounding” is to be specified by the proponent of the grounding project.) If \leq is reflexive, antisymmetric, and transitive, and at least one S_i is true, then either

- (i) there is an F -truth without grounding, or
- (ii) there is no finite set of F -truths which collectively ground every F -truth.

This claim is mathematically trivial: the set of F -truths, with \leq as a partial ordering, either (i) has a least element or (ii) it does not.⁸

Mathematically trivial, yes, but philosophically rather significant, I’d say! This general result means that any effort to justify, explain, defend, prove, necessitate, or otherwise make universal a set of truths will either descend interminably or lead us to exactly the truth which cannot be justified, explained, defended, proven, necessitated, or otherwise made universal. If our claims are tethered to anything at all, they are tethered to some brute fact (axiom, article of faith, “indemonstrable principle”). We may find our indemonstrable principle obvious and undeniable, but that is a relational act: *we* are finding it obvious and undeniable, and if someone else did not find it so, we would have no stable means to convince them otherwise. They may build a lattice of truths on an alternate premise, which *they* find obvious and undeniable, and consider us obstinate fools for not adopting their impressively rigorous framework. The situation is, from the outside, fully symmetrical.

In short: whenever we make truth-claims, whether in mathematics, ethics, the empirical sciences, or any F at all, we are speaking from within a self-contained, self-sanctioning, and externally unjustifiable F -theory.

This does not mean, in and of itself, that no one F -theory can be True. It’s certainly

⁸A more rigorous proof is provided in Appendix A.

conceivable that a single formulation of the F -truths is metaphysically instantiated while the others are not. What Carroll's argument shows is that this metaphysical content can't be provided by a grounding project. This is simply because the F -truths are no more grounded than the F' -truths, and so the grounding project has done exactly no work in distinguishing the absolutist's preferred system from its alternatives. All these elaborate projects serve to do is distract from the intractable problem that any truth-set, even one with a dense algebraic structure,⁹ is founded on an unjustifiable first premise. The successful embedding of all mathematics in ZFC, and the supposedly forthcoming embedding of all natural phenomena into a physical TOE, are no more proof that these systems are True than the Ten Commandments are proof of the ontic existence of the Abrahamic *Yahweh*.

Is this fatal for absolutism? No. F -absolutism still seems to me in many cases a perfectly viable theory: intelligible, internally consistent, possibly even useful and comforting. So, for that matter, is F' -absolutism, and so is absolutist Shintoism. The point is not that these theories are Wrong, but that none of them can be externally justified and all of them can be internally justified. Absolutist ontologies of set theory and natural science may use grounding programs to privilege themselves over alternatives, but surely every absolutist theory has a self-privileging rule as to which theory should be privileged. Of *course* everyone thinks their truths are True!

Remember: my aim is not to debunk or even denigrate absolutism, but to clearly spell out the alternative. To that end, I ask you to temporarily abandon the assumption that one system of truths is metaphysically privileged over all others. You may decide in the end that you still affirm the absolutist premise, but I request that you wait to do so until §6. What follows is a description of how we can recover and in fact strengthen the observed usages of "true" and "real" in general, and the standard picture of Western naturalism in particular, *without* the absolutist premise. Take off that skeptical smirk for now—we are merely entertaining a possibility.

⁹I am sympathetic to the idea that the structure revealed by grounding projects is somehow evidence that "we're not making this up." In fact, I personally affirm mathematics and a form of Quinean naturalism for more or less this reason, which we might call *consilience*. But of course, this doesn't endorse absolutism; "consilience indicates Truth," however precisified, is just a further unjustified premise. The spiral persists.

III.

A Notational Convention for Pluralism about Truth

We are, as of now, operating without the assumption that one particular set of truths is metaphysically privileged over all others. Let us establish a checklist of goals that must be met for this exercise to be considered a success. Broadly, sloganistically, we are aiming to “make sense of truth without Truth.” But what will this more specifically involve?

We will be operating from a metaphysically neutral position, assuming neither the absolutist premise nor its negation. From this position, we must offer a descriptive account of the observed nature of discourse about truth. First, we must ensure basic intelligibility—that it even makes sense to engage in discourse without aiming at Truth. Second, we must explain the meanings of the predicates “true” and “real” themselves, without assuming notions of “True” and “Real.” Third, we must explain what it means to be logical, mathematical, or empirically adequate, if these are not conditions of Truth. Fourth, we must explain what is happening when people disagree, if they are not seeking Truth. Fifth, we must explain what is often called “metaphysical intuition,” if it is not a hint towards Truth. Fifth, we must account for the remarkable success of the scientific project, if it does not reveal Truth. If I succeed in ticking all these boxes without assuming that a metaphysically instantiated Truth does or does not exist, I will have at least shown that the absolutist premise is not *necessary* for making sense of the phenomenon we call “truth.”

First up, intelligibility. The question might be posed: *what am I even saying?* Here I am writing sentences, and yet clearly I do not believe that these sentences are members of a privileged set of absolute truths. Then what do I believe about them? Are they merely empty pieces of syntax, ink on paper, pixels on a screen, pointless tongue-wagging? When I assert a sentence S , am I in fact asserting nothing at all?

No. My sentences are still properly interpreted as members of some truth-set; I am merely foregoing the further claim that this truth-set is metaphysically privileged over all others. I am outlining, in effect, a model of reality, which I find plausible, which I may use to explain phenomena, make predictions, guide my actions, and so forth. I just do not

assert that this is *the* model of reality, the only valid model of reality, the optimal model of reality, the one everyone ought to use, the one that carves the world at its joints, that this model *is itself reality*, or anything of that nature. It's just a model, a theory, and it's a perfectly serviceable one for all practical purposes, and that's just about all I can in good conscience say about it.

A new notation will be helpful in formalizing this intelligibility claim. It is *de rigueur* in analytic philosophy to read the sentence S as indicating that the writer believes S is True, that is, that S is an element of the metaphysically privileged truth-set. If you read my sentences this way, you will indeed find my position unintelligible, because you are presupposing my adoption of the absolutist premise every time I put pen to paper! The notation I am about to introduce will allow me to clarify the way I intend for my sentences to be read, while still allowing an absolutist's sentences to be read in exactly the same way as before. It is, in other words, strictly a generalization of existing convention; I am not baking relativism into my notation.

For some sufficiently large alphabet A (the set of all Unicode characters and L^AT_EX symbols, for instance), let \mathcal{L} be the set of all non-empty strings of symbols of this alphabet; that is, \mathcal{L} is the free semigroup on A . For the duration of this paper, we will take \mathcal{L} to contain every candidate for truth in every truth-set in the present scope of consideration. It contains, for example, the strings '2 + 2 = 4', 'Abraham Lincoln was a leopard', 'bornace is femuant', all the well-formed formulas of Zermelo-Fraenkel set theory, the infinite decimal expansion of π , the full text of this paper, and quite a bit else. We are excluding from possibility, quite unfortunately, non-linguistic¹⁰ truths; we will also be assuming that two pictures of reality with identical truths are relevantly identical. If these narrowings of scope are weaknesses of my notation, they are also weaknesses of the notations used elsewhere in analytic philosophy. All truths typically contested within the communicative context in which we are presently engaging are expressible as strings of \mathcal{L} .

Let us define a **theory** $x \subseteq \mathcal{L}$ as any set of strings of \mathcal{L} , understood as the set of all

¹⁰More precisely, we should say non-transcribable truths. Even more precisely, we should say we are excluding from consideration any picture of reality which cannot be mapped bijectively, by a map that has been fully specified prior to the translation process, to a set of strings of symbols of A .

claims considered true. We write $\text{true}_x(S)$ to indicate that $S \in x$, that is, S is a string of \mathcal{L} taken to be true within theory x . I will consider the following terms interchangeable for this purpose: theory, model, framework, picture of reality, philosophy, possibility, worldview, truth-set. I will write $\mathbf{Poss}_{\mathcal{L}}$, read as “possibility space,” to denote the set of all \mathcal{L} -theories, that is, $\mathbf{Poss}_{\mathcal{L}} = \mathcal{P}(\mathcal{L})$.¹¹ A theory is taken to be complete, which is to say closed under meta-discourse; any metaphilosophical claims a proponent of x takes to be true about x must themselves be truths of x . Thus a theory x might include strings like ‘ $\exists z : z^2 = -1$ ’ but also strings like ‘The symbol \exists quantifies over all ontically real objects’ and even ‘If $\text{true}_x(A)$ and $\text{true}_x(A \rightarrow B)$, it follows that $\text{true}_x(B)$ ’. Such self-reference is unavoidable when we are dealing with theories at least as strong as Peano arithmetic.

By mentioning self-reference and distinguishing different types of truths, I am implicitly assuming some means of interpreting strings, whether as statements of formal systems, claims about objects, claims about strings, or however else. It is important to note that this is *not* inherent in the notation on offer. As just defined, a theory is simply a set of strings and nothing more. We are not yet privileging any particular interpretation of strings or even requiring that strings be interpretable at all. The notation is intended to be maximally general, capable of handling any conceivable theory (except those consciously excluded two paragraphs ago), including those we’ve not yet conceived, and those we’ve conceived and rejected as unreasonable. We are indeed “overcounting” the theories, in the sense that ‘pr04xle’ is a theory by this definition. While we will not, in the end, find all theories equally worthy, we need not inject our biases at the level of notation. For now, we are equal-opportunity pluralists.¹²

Note, also, that while I am relying on set theory to define what I consider a theory, it is certainly not required that the theories themselves “obey” or “contain” set theory in any sense—a goldfish needn’t understand Latin for us to classify it as *Carassius auratus*. All

¹¹I use the word “possibility” here because, for a suitable restriction of $\mathbf{Poss}_{\mathcal{L}}$ to a frame $G \subseteq \mathbf{Poss}_{\mathcal{L}}$, the theories $w \in G$ are precisely the “possible worlds” of modal logic.

¹²I am using the term “pluralism” loosely and perhaps inaccurately here, as we are not asserting the metaphysical reality of any set of theories. Perhaps I should distinguish between ontological pluralism (the view advocated by e.g. (Field 2009)) and methodological pluralism (the metaphysically vacuous notational talk we are presently engaged in); the two are joined by their impartial consideration of a plurality of truth-sets.

that is required is that in *my* theory, the theory $m \subseteq \mathcal{L}$ which contains all the sentences you are currently reading,¹³ set theory is true. And it is! I have adopted all provable statements of Zermelo-Fraenkel set theory as truths of m . (In the notation I introduce in §4, $m \in \mathbf{ZFC}$.) If you find this unjustified adoption of ZFC discomfoting, I suggest you revisit §2 until you are made more broadly uncomfortable. *Everyone* assumes math is true without proof; I'm just openly admitting that that's what I'm doing.

Now, we are equipped to answer the question: *what am I even saying?* When I write the sentence S , I do not mean that S is True, that one Ought to believe or adopt S , or even that 'true _{m} (S)' or ' $S \in m$ ' is True. What I mean, from within my theory m (which is how I always mean things), is just that: S . Because my theory m obeys the "sanity constraint" to be specified in §4, I can rephrase this in any number of ways: ' S is true', ' S is a true sentence of m ', 'true _{m} (S)', "true _{m} (S) is true', 'true _{m} ('true _{m} (S))', and so forth, but fundamentally I mean what I say, which is S . I mean exactly what an absolutist means by S , except without the additional claim that my truth predicate true _{m} is privileged in some non-indexical sense over all others.

And how are you to interpret me? The same way you interpret sentences in everyday discourse, when no one is presumed to be speaking undeniable, universal Truths. When you read the sentence S that I wrote, you are under no obligation to update your own theory in any way. If you believe I am not trying to deceive you as to the contents of my theory, you may choose to add the string 'true _{m} (S)' to your theory. You may even wish to pause and consider S on its proper merits, see how it squares with your existing commitments, and possibly opt to adopt S yourself. But this is not necessarily my goal in writing S , such as when I write 'My name is Milo' or 'quesadillas are delicious'. All this would be entirely commonsensical if not for the prevalence of absolutist dogma: unless you're blindly trusting of some source, you *always* tag a quote with its speaker! That is simply the responsible way to process truth-claims, whether in a newspaper, in conversation, on the internet, in the lecture hall, in academic writing, or wherever else.

¹³It is not literally the case that all of these sentences are strings of m ; there is necessarily a natural-language interpretation process which takes as input not just the string literal but also various contextual features. For instance, the truth value of 'And it is!' clearly depends on context.

Crucially, this notation is entirely consistent with the existence of a single metaphysically privileged theory. (As promised, I am not baking relativism into our notation.) If there are objective, mind-and-language-independent Truths, let $\odot \subseteq \mathcal{L}$ represent some suitable encoding of all such Truths in language. (What exactly is the nature of \odot which picks it out from any other $x \subseteq \mathcal{L}$? Surely I of all people should not be the one made to answer this question.) With this additional symbol, suitably defined by someone who affirms its existence, the absolutist can easily express all his absolutist beliefs. For instance, I can write S and be flat-out Wrong; in our truth-pluralist notation, we'd write this ' $\neg \text{true}_{\odot}(S)$ '. It would still be the case from within my personal theory that S , that ' S is true', that ' $S \in m$ ', ' $\text{true}_m(S)$ ', and so on. I'd just be Wrong, because $m \neq \odot$, and the absolutist could as a practical matter ignore my truth-claims.

If it feels like I am putting my thumb on the scale for relativism with this notation, it is only because we are accustomed to the absolutist notational convention that $S = 'S \text{ is True}'$, which renders relativism inexpressible. Relative to this starting point, absolutists are indeed not getting quite what they want. But what they want is for us to read them as arbiters of absolute Truth, which we can't do without assuming the absolutist premise, and we've agreed not to do that until at least §6. To comfort the absolutist through this difficult transition, we may introduce the following derived predicate:

$$\text{true!}_x(S) \equiv \text{true}_x(' \exists \odot \wedge \text{true}_{\odot}(S)')$$

When a relativist writes S , we may understand this to suggest that $\text{true}_x(S)$, and when an absolutist writes S , we may understand this to suggest that $\text{true!}_x(S)$, and both parties are intelligible within the same framework.

The only objection I can imagine to this claim of intelligibility is that it is circular: you must already understand me to follow the demonstration of intelligibility. "Everything you're saying," the critique might go, "is just words. These are merely sentences of your theory m , some arbitrary and indistinguishable set of strings. They aren't meaningful beyond that, by your own admission! So this elaborate notation you've developed, this

claim of intelligibility, it's all just *text*, it's meaningless, and so you haven't demonstrated intelligibility; in fact you haven't said anything at all." I do of course agree with this critique, as I made painfully explicit in §2. We are always, as a mathematical fact, helping ourselves to some indemonstrable principle; I don't see why I should be held to a higher (and provably untenable) standard for having pointed out this fact. I have helped myself here to exactly what every other analytic philosopher gets—logic, mathematics, and our mutual understanding of English—and from this I have demonstrated intelligibility. You may play the Tortoise and act as confused as you like, but as a matter of fact you do understand what I'm saying.

With the above notation in place, recovering the observed usages of “true” and “real” without reference to “True” or “Real” is fairly trivial. Within each theory x , S is true exactly if S is true $_x$, and z is real exactly if ‘ z is real’ is true (or some syntactic variation of this form). Similarly, z is blue exactly if ‘ z is blue’ is true, and in general $\varphi(z)$ exactly if ‘ $\varphi(z)$ ’ is true. Individual theories may say quite a bit more about what it means to be “real” or “true” or “ φ ” or “blue,” but this is the minimalist interpretation of predicates which all theories satisfying the “sanity constraint” (to be specified in §4) share.

How can we be sure that people who affirm different theories will agree on what is true and real? We can't, as a general matter, and this comports with lived experience. People often disagree as to what is true or real, and it is precisely our project at the present moment to not presume that either of them is Wrong (though each is lowercase- w wrong to the other, of course). If you are used to always reading “true” as “True” and “real” as “Real” you may misunderstand this to imply that the metaphysical nature of reality depends on how humans have gotten around to theorizing about it, that nothing existed before we were here to model it, or something to that effect. That is emphatically not what I am saying. I have not yet made any metaphysical claims, positive or negative; I've just defined terms. We are still neutral on the absolutist premise, making sense of discourse about truth without assuming it or its negation. So far we have managed to recover basic intelligibility, as well as the observed usages of “true” and “real,” from this neutral position.

IV.

Constraints on Truth-Sets

Our next task is to understand the relationship between truth and logic, mathematics, and empirical evidence. The natural way to introduce this discussion is to respond to what we might call the *anything-goes critique* of the conception of truth I have just outlined. If truth is indeed local to a picture of reality, then there can be no out-in-the-world Rules as to what types of truth-sets are or aren't possible (reasonable, worthwhile, intelligible—choose your critique) because such Rules would themselves constitute non-local Truths. And if there are no such Rules, then *anything goes*: the sentence ' $p \wedge \neg p$ ' is of the same status as ' $p \rightarrow \neg\neg p$ ', and the sentence 'Climate change is anthropogenic' is of the same status as 'Climate change is a hoax', true within some frameworks and not true in others. Clearly this would be a disastrous result, not just because it is deeply discomfoting, but because it would preclude the ability of truth to serve the practical, deliberative role we would like for it to play in matters of decision-making and action.

Fortunately, a relativist does not have to be so permissive. I, for one, am not. I often find, despite my commitment to global relativism, that claims are wrong. Not quite Wrong in the absolutist sense, but also not just wrong in the purely perspectival “not a truth of my truth-set” sense. I find some claims to be logically wrong, others to be mathematically wrong, and still others to be empirically wrong. Allow me to explain.

For a sentence $S \in \mathcal{L}$, consider the region of $\mathbf{Poss}_{\mathcal{L}}$ defined by $\mathbf{S} \equiv \{x \subseteq \mathcal{L} \mid \text{true}_x(S)\}$. This is the set of all theories in which S is true. If you find S to be a particularly significant or crucial truth, so much so that a theory which does not affirm S is simply ridiculous and not worth considering, you may describe such a theory $x \in \mathbf{Poss}_{\mathcal{L}} \setminus \mathbf{S}$ to be not just wrong but S -ly wrong. Intuitively, if you met a proponent of x , your disagreements would be so great that you would find conversing with them uninteresting and maybe even impossible. They don't even believe that S !

The property of S -affirming is not the only descriptive feature of theories that can be used to narrow our possibility space. Given any desired feature of a theory, we can similarly

restrict our deliberative window to the region of $\mathbf{Poss}_{\mathcal{L}}$ delineated by this feature. Consider Carroll’s Tortoise, who refuses to engage in modus ponens; if there is anyone who we can reasonably call wrong or refuse to talk to, the Tortoise should qualify. And yet the property of a theory x of obeying modus ponens is, as Russell demonstrated, not so simple as asserting a sentence. It describes a relationship between all sentences of x , a weak algebraic structure on the truth-set. The region $\mathbf{MP} \subseteq \mathbf{Poss}_{\mathcal{L}}$ must be defined to reflect this.

For a given notational convention γ for denoting implication,¹⁴ we may define the property $MP^\gamma(x)$ by

$$MP^\gamma(x) \equiv \nexists A, B \in \mathcal{L} : \text{true}_x(A) \wedge \text{true}_x(\rightarrow^\gamma(A, B)) \wedge \neg \text{true}_x(B) \quad (1)$$

Then, given a sufficiently exhaustive list $\{\gamma_i\}$ of suitable notational conventions, we may define the region $\mathbf{MP} \subseteq \mathbf{Poss}_{\mathcal{L}}$ by

$$\mathbf{MP} \equiv \bigcup_{\{\gamma_i\}} \{x \subseteq \mathcal{L} \mid MP^{\gamma_i}(x)\} \quad (2)$$

Intuitively, this is the set of all theories in which it is never the case that A is true, $A \rightarrow B$ is true, and B is not true.

There’s no reason to stop at modus ponens. For any formulation of the propositional calculus as a list of axioms $\{Ax_i\}$ and inference rules $\{Inf_i\}$, and any notational convention γ for denoting non-atomic sentences,¹⁵ we can define each axiom as a property $Ax_i^\gamma(x) \equiv \text{true}_x(Ax_i^\gamma)$ and each inference rule as structural property $Inf_i^\gamma(x)$ of theories akin to $MP^\gamma(x)$ above. Then the region of $\mathbf{Poss}_{\mathcal{L}}$ of theories which “obey propositional logic” in the intuitive

¹⁴A notational convention γ for denoting implication is described by a set of well-formed formulas $wff^\gamma \subseteq \mathcal{L}$ and an injective map $\rightarrow^\gamma: wff \times wff \rightarrow wff$ which takes the pair of strings (A, B) to the string which is to denote the implication we typically write $A \rightarrow B$. For example, one such notational convention is given by $wff = \{S \in \mathcal{L} \mid S \text{ contains an equal number of open and close parentheses}\}$ and γ maps (A, B) to the string formed by concatenating $(, A,) \rightarrow (, B,$ and $)$.

¹⁵In general, a notational convention γ will be given by a set of well-formed formulas $wff^\gamma \subseteq \mathcal{L}$ and, for each legal means of generating non-atomic sentences, a map which describes how that grammatical operation is to be denoted syntactically.

sense is given by

$$\mathbf{PL}^\gamma \equiv \left\{ x \subseteq \mathcal{L} \mid \bigwedge_{\{Ax_j\}} Ax_j^\gamma(x) \wedge \bigwedge_{\{Inf_j\}} Inf_j^\gamma(x) \right\} \quad (3)$$

for a specific notational convention γ and, given a sufficiently exhaustive list $\{\gamma_i\}$ of suitable notational conventions,

$$\mathbf{PL} \equiv \bigcup_{\{\gamma_i\}} \mathbf{PL}^{\gamma_i} \quad (4)$$

in general. Any theory $x \notin \mathbf{PL}$ can be described as “illogical.” Under a given notational convention γ , a sentence S such that no $x \in \mathbf{PL}^\gamma$ contains S can be called “logically false,” while a sentence S such that every $x \in \mathbf{PL}^\gamma$ contains S can be called “logically true.” Furthermore, we can define the theory $pl^\gamma \in \mathbf{PL}^\gamma$ as the set of all logically true sentences, that is, $\text{true}_{pl^\gamma}(S)$ if and only if $\text{true}_x(S)$ for all $x \in \mathbf{PL}^\gamma$. We will generally suppress the γ at this point and write $\text{true}_{pl}(S)$. Intuitively, pl is the theory that all logical necessities are true and nothing else is.

Some epistemic humility is necessary here, lest we get carried away and think that logical truth is Truth, or that $\odot \in \mathbf{PL}$, or anything like that. We have merely introduced some new terminology and outlined a region of $\mathbf{Poss}_{\mathcal{L}}$ that is in some sense worthy of our consideration. Nothing metaphysical is going on here. While one of course *could* decide that $\exists \odot \wedge \odot \in \mathbf{PL}$, this is absolutely not a logical conclusion of the foregoing discussion and I would ask you once again to hold off on assuming $\exists \odot$ at least until §6. If you feel certain that theories in \mathbf{PL} must be somehow metaphysically superior to those outside it, let me say this to slow you down: \mathbf{PL} is still in many ways arbitrary. We have assumed a list of axioms and inference rules in defining \mathbf{PL} ; as always, these axioms and inference rules are themselves inherently unjustifiable. Consider the anti-exceptionalist critique of logic, summarized by Penelope Maddy as “the idea that the progress of science could lead us to a different logic just as it once led us to a different geometry” (Maddy 2012). Hilary Putnam takes particular aim at the law of the excluded middle, arguing that it could be falsified by empirical evidence and

in fact *has* been falsified by quantum mechanics (Putnam 1968). While I would clearly want to interrogate the meaning of “falsified” in the preceding sentence—what could it mean to falsify a logical axiom?—I do agree that non-binary logics are at the very least *useful* and *worthy of consideration* in a post-Gödel, quantum-mechanical world. I even suspect that if there is Truth, it does not obey the law of the excluded middle. So maybe **PL** is not all that!

In any case, the material point is clear: we can define regions of **Poss_L** to pick out particular features we would like for theories to have. There is the region **Sane** of all theories obeying the “sanity constraint” that under some notational convention γ , S holds exactly when $\text{true}^\gamma(S)$ does. Within **PL** there is also the narrower **ZFC**, containing all theories which under some notational convention affirm the axioms (and thereby all the theorems) of Zermelo-Fraenkel set theory (and thereby all of standard mathematics). There is also the region **Emp**($\{E_i\}, \tau$) for any given set $\{E_i\}$ of empirical evidence (elements of some set \mathbb{E} of possible observations) and transcription function $\tau : \mathbb{E} \rightarrow \mathcal{P}(\mathbf{Poss}_L)$ which maps an observation to the set of all theories consistent with it.¹⁶ Intuitively, this is the space of empirically adequate theories on a given set of evidence. The notation is consistent with any definable “data structure” of evidence; for instance, if E is the pattern of light presently impinging on my left retina, and τ is the function my brain uses to convert visual data into linguistic expressions, it is true in each $x \in \mathbf{Emp}(\{E\}, \tau)$ that ‘There is a laptop in my lap’. It is clear how this definition could permit us to say that ‘Atmospheric CO₂ concentrations exceed 400 ppm’ is empirically true and even that ‘Climate change is a hoax’ is empirically false. Unfortunately, people can and clearly do differ as to the scope of $\{E_i\}$ and nature of τ , while others apparently do not constrain their x within any recognizable **Emp**.

So yes, we *can* constrain our possibility space by logic, mathematics, empirical adequacy, and certainly much more. But what is the point of all this narrowing, if we’re not searching for the One True Theory? If we lack the absolutist’s faith that \odot exists somewhere in this constrained region, what is the normative impetus to select a theory therein?

¹⁶Evidently, $\mathbf{Emp}(\{E_i\}, \tau) \equiv \bigcap \tau(E_i)$.

There isn't, of course, a Normative Impetus to constrain one's theory, but I can offer three practical reasons why a relativist might do so nonetheless. The first is that these constraints on truth-sets amount to a *shared standard*, in the sense of (Maddy 2017), as to "what counts" as true in a particular linguistic community. An individual's use of language is of course governed in large part by her participation in a communicative community, and while one *can* use "blue" to refer to whatever one likes, we expect a speaker for practical reasons to conform at least roughly to the shared standard of her community. When applied to the term "true," this notion of a shared standard will be central to understanding the nature of disagreement, as we will see in §5.

The second reason a relativist might adopt a logical, mathematical, and empirical theory lies in the role of truth in decision-making and action-guiding. If an individual wants to achieve a particular goal or act in a manner which maximizes some quantity, and if her actions are in any way influenced by the truths she affirms, she may find it desirable for this practical reason to "rationally" constrain her theory within these bounds.¹⁷ Finally, as we will also see in §5, a relativist may choose a theory so constrained because she feels an instinctive, unplaceable, *intuitive* urge to do so—I, for one, feel such an urge. While this third reason as presently stated may seem loose and supernatural, there is of course an entirely naturalistic explanation for such an urge, emerging by necessity from the standard picture of human cognition offered by Western science.

V.

The Picture of Reality as a Rapidly Expanding Gas Cloud

I'll keep this section short, as it is relatively light on actual philosophical content. I find it necessary at this point to draw from the scientific canon because, as a matter of personal preference, my worldview is largely scientific. (I believe I am what philosophers call a

¹⁷It is unfortunately outside the scope of this paper to explore this reason. One may read the existing absolutist literature on decision theory, substituting all normative claims with the descriptive claim that 'behaving in the prescribed manner will maximize the desired quantity' is true at every $x \in \mathbf{ZFC}$.

Quinean naturalist.) Thus my answers to a range of descriptive and predictive questions—including, as the case may be, philosophical questions—build on a stock of scientific truths to which I ascribe a high level of confidence.¹⁸ This is problematically circular only if one believes that the philosophical truths “precede” the scientific truths in some well-ordering, which we have seen in §2 is not a stable position. This sort of interplay between empirical evidence and philosophy, logic, and math in a sort of naturalist adjustment process is generally considered Neo-Quinean, and is well-captured by Quine’s quote that “knowledge, mind, and meaning are part of the same world that they have to do with, and that they are to be studied in the same empirical spirit that animates natural science. There is no place for a prior philosophy” (Quine 1969).

Thus I will begin this section by asserting, stipulatively, that the picture of reality offered by contemporary Western science is more or less correct. I adopt this body of knowledge much like I adopted ZFC in §3 and like I have adopted the English language throughout this paper, which is to say, without making any attempt at external justification. I find that most contemporary analytic philosophers similarly help themselves to aspects of the scientific picture without further explanation; again, I don’t see why I should be held to a higher (and provably untenable) standard for acknowledging that this is what I’m doing. I’m repeating myself here, but the point bears repeating: no one is obliged to adopt the same model I am offering in this paper. My goal is only to show by way of example that one can make sense of truth without assuming the absolutist premise.

Here is a story which I take to be more or less a work of non-fiction. Some four billion years ago, a lightning bolt struck a tide pool. (Or a similar influx of mechanical energy struck a similar cache of carbon-rich molecules; I wasn’t there.) The ensuing chaos led to the coincidental formation of a remarkably unlikely collocation of particles: a self-replicating molecule. Its chemical properties naturally attracted the sea of organic material around it into a perfect clone of itself, or a near-clone with a slight mutation. The clones made clones, the mutants made mutants, until replicators came to dominate the planet. In the end, the

¹⁸Throughout this paper we have been working under the simplifying assumption that one either affirms a truth or does not. It is consistent with global relativism, though outside the scope of this paper, that one might distribute one’s credence between any number of theories (without subsequently claiming that credence aims at Truth).

most common replicators were mutants with fantastical properties: the tendency to extract materials from other replicators, the tendency to ally with trillions of other replicators in complex macrostructures, to heal wounds, to track the constant barrage of external particles in a simplified model encoded in flashes in an electrochemical control center. To exchange features of these internal models via communicative muscle movements—dancing, gesturing, flapping, tongue-wagging, paper-writing.

Note that I am not saying this story is the One True Theory; in fact, it is catastrophically underspecified! There is no single ontology implied by these claims. For instance, what *is* a molecule in the first place? Most naturalists take it to be non-fundamental, an emergent phenomenon of regularities in the interactions between smaller components parts called atoms, which are in turn emergent sums of quarks and leptons, which are in turn excited states of quantum fields, but here the consensus ends. Philosophers of physics are in dramatic disagreement as to the ontological nature of quantum fields, nor is there even consensus on what sorts of “ontological desiderata” should be considered in answering the question. Physicists themselves find the question entirely uninteresting and simply treat the fields as components of a conceptual model which is useful for making predictions and answering questions. As a matter of practice, physicists hop freely between mutually contradictory theories, and even some conceptually incoherent ones, as circumstance requires. In the interest of maintaining metaphysical neutrality, I will follow this practice and (as with ZFC) adopt the truth-claims of the above story without imbuing them with any deeper Meaning.

This story provides answers to all three of the remaining questions on our checklist: (1) What is the nature of disagreement? (2) What is the source of metaphysical intuition? (3) What accounts for the success of the scientific project?

(1) We locate the “theories” that we have defined in this paper as the internal models of organisms, with truth-claims suitably encoded in a network of neurons. Each organism thus has an associated “theory” which determines its muscle movements, and one’s perceptual experience updates one’s theory and thus one’s subsequent behavior. We locate “communication” as a category of behavior which spreads one organism’s theory to another organism, such as when a honeybee who has found a source of nectar dances in a prescribed fashion

which updates the attendant honeybees' theories to include knowledge of this nectar's location. Social organisms, such as insects or primates, often act cooperatively in ways that require, to ensure the survival of the group, that all members' theories agree in certain respects. The phenomenon of disagreement ultimately amounts to a contestation over which theory to adopt as the group's shared standard.

(2) We are instinctively compelled to adopt empirically adequate theories because there is a strong evolutionary pressure to have such an instinct. A mother bird can be said to in some sense "know" how many offspring she has, as when she hunts just enough prey to feed them and herself. We can see how it would be evolutionarily disadvantageous for her to adopt a theory which inaccurately predicts how many birds she will observe when she returns to her nest. Similarly, it is expected that primates who are predisposed to adopt empirically adequate theories will be more successful at survival and child-rearing.

(3) The scientific project amounts to a dramatic quickening of the evolutionary pressure to select an empirically adequate theory. Rather than encoding new theories in a mutant child's neural wiring and waiting for statistical regularities in survival rates to check the theory over many generations, we may propose and dispose new theories in as long as it takes to run an experiment. We "believe in" science because we are predisposed to believe in empirically adequate theories, and science produces empirically adequate theories at breakneck pace because that is precisely what it is designed to do.

One final time: the account of truth I have laid out in the preceding three sections is just one account of truth, and other relativists make sense of truth-oriented discourse differently. What I have hopefully just demonstrated, by completing the established checklist, is that the absolutist premise is not a requirement for understanding our relationship to truth.

VI.

Absolutism and Global Relativism

At this point it should be clear how we will define the terms *absolutism* and *global relativism*.

Abs is a region of $\mathbf{Poss}_{\mathcal{L}}$ given by

$$\mathbf{Abs} \equiv \{x \subseteq \mathcal{L} \mid \text{true}_x(\exists \odot)\}$$

(For convenience we are ignoring notational variation throughout this section.) An absolutist theory is any x in this region, which is to say, any x which affirms the existence of a privileged truth-set. By contrast, global relativism is defined by

$$\mathbf{GR} \equiv \{x \subseteq \mathcal{L} \mid \neg \text{true}_x(\exists \odot)\}$$

It is the set-theoretic complement of **Abs**; a global-relativist theory is simply any theory which is not absolutist. Unlike absolutism, there is no single sentence whose affirmation delineates **GR**, and as such the position of global relativism cannot be identified with a single truth-claim, as discussed in §1. In other words, global relativism is quite distinct from *anti-realism*,¹⁹ the affirmation of the non-existence of a privileged truth-set:

$$\mathbf{AR} \equiv \{x \subseteq \mathcal{L} \mid \text{true}_x(\nexists \odot)\}$$

An anti-realist theory which obeys non-contradiction is necessarily also a global-relativist theory, but the converse is not true. One may choose to be an *agnostic global relativist* and affirm neither the absolutist premise nor its negation.

As made clear by the foregoing discussion, I do not believe that of the complementary regions **Abs** and **GR** one is Right and the other is Wrong. In other words, my personal theory $m \in \mathbf{GR}$. I hope I have demonstrated in the preceding sections that this is a perfectly

¹⁹Anti-realism is often deemed self-refuting, but that is only the case if one adopts the absolutist notational convention that $S = \text{true!}_x(S)$. Of course $\text{true!}_x(\nexists \odot)$ is a contradiction in terms, but an anti-realist (and a global relativist more broadly) would never claim $\text{true!}_x(S)$ for any S .

intelligible and descriptively powerful place for one's theory to be located. That is all I have intended to do.

Of course, I do believe that absolutism is wrong, in the lowercase-*w* sense, and that there is much to gain from abandoning it. In fact I'm here contesting this point because I think we as a species would be much better off if there were more relativists among us—particularly if there were more relativists among the intellectual elite of each culture, whose truth-sets are taught to children and used to guide policy. I believe a shift toward relativism would further the advancement of science, whose ultimate founding premise is the distrust of dogma and respect for individual ideation and experimentation. I believe it might reduce conflict significantly, between persons and between nations, to acknowledge that even our most deeply held beliefs are one among many. (How many war criminals are global relativists?) But, presuming I am talking to absolutists, I doubt any of these reasons will be found compelling.

So here is a more standard argument against absolutism. Absolutism is a positive claim, and as such the burden of proof is on the absolutist to explain why we ought to adopt his premise. I eagerly await such an argument. This argument will need to resolve the downward spiral, respond to the arbitrariness problem of (Reitz 2016; Eklund 2017) and the epistemic access problem of (Benacerraf 1973; Field 1980). I do not believe such an argument is forthcoming. Instead, I typically hear two pseudo-arguments made by absolutists when the possibility of global relativism is presented; we may call them *metaphysical intuition* and *Russell's tantrum*.

I take the metaphysical intuition argument to be roughly the claim that “there *must* be a single objective reality, because it's obvious to everyone that there is, and *what else could there be?*” It is indeed strongly suggested by our metaphysical intuition (mine included) that one of these truth-sets must in the end turn out to be special. I can offer, as I did in §5, an account for where this metaphysical intuition comes from, but that is ultimately unsatisfying when we still feel the feeling as strongly as we did when we did not understand its origin. To an absolutist who is stuck on this point, I can offer the position of *vacuous*

absolutism: the belief that $\exists \odot$ but that the truths of \odot are inaccessible to humans.

$$\mathbf{VA} \equiv \{x \subseteq \mathcal{L} \mid \nexists S \in \mathcal{L} : \text{true!}_x(S)\}$$

When I say “inaccessible” I leave open whether this inaccessibility is fundamental or only incidental. That is, Truth may be inaccessible to humans in the same way the continuum hypothesis is inaccessible to ZFC, or it may be inaccessible to humans in the same way that it is inaccessible to giraffes.

Finally, we come to Russell’s tantrum, the final cry of the absolutist who does not wish to acknowledge that his absolutism is unfounded. The claim is, essentially, that it would be awful if absolutism were not true. For one example, when I told a professor that I was satisfied with the mathematical description of quantum mechanics and felt no need to privilege one ontology over the others on offer, he told me, “One of the questions you’ll need to answer, then, is: what’s the point of philosophy of physics?” The response, of course, is that this is not a question which needs to have an answer.

I find it telling that I have encountered this sentiment frequently among academics and almost never among non-academics. It is entirely self-evident why professors who seek and subsequently teach a single set of truths would be emotionally invested in there being one special set of truths. It is also clear why academic institutions would disproportionately promote and why academic history would disproportionately remember absolutists. None of this has anything to do with the content of the theory itself.

I use the term “Russell’s tantrum” in honor of its elegant statement by Bertrand Russell in a review of Ludwig Wittgenstein’s *Philosophical Investigations*,²⁰ quoted in the epigraph of this paper. Bertrand Russell, as a preeminent thought leader of his time, author of *Principia Mathematica*, Nobel laureate, and (perhaps most centrally) a British royal writing at the height of English global imperialism, could not bear to allow himself to genuinely consider the possibility that all of these projects were at best pointless. And yet, that *is*

²⁰Wittgenstein can be read as abandoning his absolutism midway through his lifetime. It is perhaps worthy of note that, as a bisexual Jew in interwar Austria, he likely found his views often deemed “wrong” by the shared standard of his community.

a possibility. It would similarly be an awful shame if death were final, creation were not beneficent, and the whole of human achievement were doomed to eternal erasure in the heat death of the universe. Yet these are possibilities which Russell is willing to reluctantly accept (Russell 1903a), and we may perhaps take some inspiration from the way in which he does so:

When first the opposition of fact and ideal grows fully visible, a spirit of fiery revolt, of fierce hatred of the gods, seems necessary to the assertion of freedom. . . . But indignation is still a bondage, . . . [and] the Stoic freedom in which wisdom consists is found in the submission of our desires, but not of our thoughts. From the submission of our desires springs the virtue of resignation; from the freedom of our thoughts springs the whole world of art and philosophy, and the vision of beauty by which, at last, we half reconquer the reluctant world.

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