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Relativity and Polyadicity

John Haven Spencer II

A dissertation presented to the faculty of
Princeton University in candidacy for the degree of
Doctor of Philosophy

Recommended for acceptance
by the department of philosophy.

Adviser: Gideon Rosen

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Abstract —

My dissertation is composed of three chapters. The first chapter is a brief overview. The following two chapters contain more substantive philosophical work. The second chapter is about what it is for one thing to be relative to another. I argue that, at the ontological level, there are two different ways for a property or relation to be relative to a parameter, and that this fact has considerable bearing on certain debates between absolutists and relativists. In the third chapter I consider the debate in semantics between invariantists and contextualists, and suggests that invariantists should adopt a relativistic conception of belief.

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I would like to single out a few of my colleagues for special attention.

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thought and argument contained in this dissertation, but your influence is yet farther-reaching. You have an enviable sense of which philosophical questions merit asking and what sorts of answers we should seek. By contrast, I am more philosophically gullible, too easily taken in by a thought that others seem excited about. Whether deliberately or not, you have encouraged in me a sense of what I want from philosophical research, and (by my own lights) this has made my work much the better.

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Chapter 1 –

Relativism Through the Lens of Relativism

§1.1 – The Larger Project

This dissertation is not a monograph. Besides this chapter, which is a brief introduction and overview, the dissertation contains two substantive chapters. I make no effort in the body of the dissertation to connect the two substantive chapters, so I thought I might take a moment here at the beginning to say a bit about how I see the dissertation as a whole hanging together.

First, the topic. This dissertation is about relativism and ontology. For many philosophers, the road into relativism goes via some particular relativistic thesis. One is persuaded by aesthetic relativism, say, or moral relativism, and then takes up the task of formulating the most plausible version of that relativistic thesis, proposing new and improved arguments in favor of the thesis, and responding to the latest and most

formidable objections against it. I take a different road into relativism, one that begins in ontology.

There are certain core philosophical notions. They include: property, relation, truth, fact, instantiation, world, proposition, propositional attitude, and state of affairs. Much of ontology is the study of these core philosophical notions. What is a property? What is a relation? What is a proposition? These questions fall to ontology.

There are standard conceptions of the core philosophical notions. Most of us are familiar with the standard conceptions; they are what we teach out students in Metaphysics 301. – *One might construe a world as a maximal spatiotemporal object or as a maximally consistent set of sentences or propositions. One might construe properties as universals, or as sets of objects. One might construe propositions as mental items, or as functions from indices to truth-values. Etc.* – I think, however, that many of the standard conceptions of the core philosophical notions are unsatisfactory, for they do a poor job of accommodating relativity and relativism. In fact, in some cases, adopting the standard conceptions makes it impossible to even formulate the most plausible versions of relativism.

Here is an example that we will revisit in §2.6.2 – morality. Like any moral theory, a moral relativism consists in large part of a theory of moral properties, moral relations, moral truth, moral facts, moral beliefs, and so on. But there is a problem. If we accept the standard conceptions, then we are forced to say that apparently monadic properties like *rightness* are really dyadic relations between an action and a moral system. But the claim that killing one person to save five is *right according to the utilitarian moral system* is not a moral claim at all. It is a factual claim about what follows from

certain moral assumptions. So the standard conceptions rule out any plausible version of moral relativism from the start, not on grounds specific to morality, but on grounds of general ontology.

I think that the solution to this problem (and others problems like it) is to revisit and revise our conceptions of the core philosophical notions. The new conceptions should be equivalent to the standard conceptions when absolutism is true, but should be more flexible than the standard conceptions in permitting the formulating of the most plausible versions of relativism. This is the fundamental motivation behind the dissertation: to take a critical look at our conceptions of the core philosophical notions with an eye towards being able to formulate the most plausible versions of relativism.

My early goals, I see now, were quite ambitious. Within the space of this dissertation I planned to revisit all of the core philosophical notions that I see as in need of revisiting. But the project has proved harder and more time-consuming than I expected. Therefore what is contained in this dissertation is a part of a larger project (which I continue to pursue I do accomplish a few of the tasks). I do accomplish a few tasks: I stake out and defend novel theses about properties, relations, actuality, and propositional attitudes, arguing that they are importantly different from what they are standardly taken to be. I argue (contra David Lewis and many others) that we should think of properties as items that an object may possess relative to a parameter, and, in particular, (contra Herman Cappelen and John Hawthorne) that it is no contradiction to say that propositional *truth* is both monadic and a relative matter. I argue that we should be relativists about belief. I argue (contra critics of color relativism) that colors can be relative and also exclude one another, and I argue (contra just about everyone) that

different worlds can be actual for different people. A recurring theme: *often in order to accommodate relativity we have to be relativists about the core philosophical notions themselves.*

But there is still much work to be done. The next project, hinted at in §2.8, is to look at reduction and metaphysical explanation. I think that a relativist ought to be open to the possibility of metaphysical explanation itself being relative.

Once we have revisited and revised our conceptions of the core philosophical notions, we are in a better place to adjudicate debates between absolutists and relativists. Most defenders of relativism operate within the confines of the standard conceptions of the core philosophical notions, and, in many cases, this leads to less plausible views. If we free ourselves from the standard conceptions, then we can formulate more plausible relativistic theses. I do not devote much energy in this dissertation to actually arguing for relativism, but I do believe that some of the relativistic theses that I formulate are indeed more plausible than their more familiar rivals.

§1.2 – Overview

Let me say a bit about each of the two substantive chapters.

In Chapter 2, ‘Relativity and Polyadicity’, I address the question of what relativity is. Some say that morality is relative; many say that simultaneity is relative. My question: What is it, at the ontological level, for one thing to be relative to another?

I argue that there are two different ways for a property to be relative to a parameter. The familiar way: a property is relative to a parameter by having an additional argument place that takes as its relatum a value of the parameter. I call this

‘relationalism’. And the unfamiliar way: a property is relative to a parameter by having an extension that varies across the parameter. There is, then, a distinction to draw within relativism itself. Two philosophers might agree that right and wrong are relative to moral codes, for example, but disagree about *what it is* for right and wrong to be relative to moral codes. One might be a moral relationalist, and the other might be a moral variabilist.

On the basis of the distinction between relationalism and variabilism, I argue for a number of claims. I argue that moral variabilism has certain advantages over moral relationalism. I argue that color variabilism is much more plausible than color relationalism. And I argue that one can be a relativist about a property (*F*, say) and also believe that objects can be *F simpliciter*.

In Chapter 3, ‘How to Disagree Selectively’, I turn my attention to propositional attitudes. The paper begins with the dispute between invariantists and contextualists. I use a forthcoming paper by Jacob Ross and Mark Schroeder as a taking off point. A defense of invariantism quickly leads to truth relativism – this is familiar. But I argue that a committed invariantist (like myself) should go one step further. We should be relativists about propositional attitudes, too. The resultant view, which I call ‘attitudinal relativism’, is able to solve certain puzzles that face invariantists, and is interesting in its own right.

I do not explore the interconnections between the two chapters, in the body of the dissertation, but there are some. (This paragraph presupposes some of the material to follow, so feel free to skip ahead to the next paragraph.) If variabilism is true of some domain (say, colors), then some natural questions arise concerning propositional attitudes. Indeed, audiences who have seen or read the second chapter of this dissertation

often raise objections about propositional attitudes. Here is one of the more common objections: “If an object is red (and not blue) for one type of perceiver and blue (and not red) for another type of perceiver, then does the perceiver of the first sort who believes that the object is red *disagree* with the perceiver of the second sort who believes that the object is blue?” This question is asked as if it points to a dilemma. On the one hand, nothing can be red all over and blue all over, so if one perceiver believes that the object is red all over and the other perceiver believes that the object is blue all over, then the two perceivers seem as though they disagree. But the conclusion that two perceivers necessarily disagree seems odd; after all, if the perceivers knew that color variability was true, wouldn’t they be in a position to see that *they are both right!* If I know that the object is red for me and blue for you, then why should I think that you are wrong when you believe that the object is blue?

As it turns out, attitudinal relativism solves this problem in what I see as a satisfying way. The two perceivers might disagree, but they need not. Whether they disagree depends on which relativized belief-like attitude they take.

Chapter 2 –

Relativity and Polyadicity

§2.1 – Introduction

It is commonplace that some things are relative. Left and right are relative to spatial orientation, for example, and legality is relative to jurisdiction. We also wonder about more controversial cases: Is morality relative to culture? Is color relative to type of perceiver? In this essay, I am not going to defend any particular relativistic thesis. Rather, I am concerned with the prior question: What is it for a one thing to be relative to another?

While philosophers have had much to say about *which* things are relative, they have had surprisingly little to say about what relativity *is*. In most debates between

absolutists and relativists, one conception of relativity – the standard conception – is simply taken for granted.

On the standard conception, *relativity is additional adicity*: a property or relation is relative to a parameter by having an additional argument place that takes values of the parameter. Take morality, for example. Moral absolutists believe that some actions are wrong, period; they conceive of wrongness as a monadic property of actions. Moral relativists, by contrast, believe that actions can be wrong only relative to a moral code. Standard moral relativists, i.e. moral relativists operating with the standard conception of relativity, conceive of wrongness as a dyadic relation that holds between actions and moral codes. The dispute between moral absolutists and standard moral relativists is thus partly a dispute about whether wrongness is monadic or dyadic. And if all relativity is additional adicity, as much of the philosophical literature assumes, then the debate between absolutists and relativists always takes the same form; the absolutists hold that the property or relation in question has n argument places, and the relativists hold that the property or relation has $n+k$ argument places.

I believe that there is a neglected third view – that a property or relation can be relative to a parameter *without* having an additional argument place. The purpose of this paper is to put forward an alternative conception of relativity. On the alternative, non-standard conception, *relativity is extensional variation*. Wrongness, as the non-standard moral relativists conceive of it, is a monadic property, but a special sort of property: a property with a variable extension. (More on what a variable extension is below.)

This essay has seven parts. In §2.2 I distinguish relativity as additional adicity and relativity as extensional variation, and in §2.3 I argue that the distinction between them is

genuine and substantive, as opposed to merely terminological. In §2.4 I respond to the objection that extensional variation is impossible. In §2.5 I respond to the objection that the relationalism/variabilism distinction is simply the familiar distinction between truth relativism and contextualism.

With the distinction in hand we then get to the philosophical payoff. In §2.6 I show how the distinction between additional adicity and extensional variation bears on first-order relativistic theses. As we will see, many arguments marshaled against relativism are in fact arguments only against relativity as additional adicity, and have no force against relativity as extensional variation. The distinction between additional adicity and extensional variation is relevant to every debate between absolutists and relativists, and there are some domains (e.g. colors) in which the distinction seems to me to change the balance of reasons; without the distinction, absolutism is more plausible, but with the distinction, relativism is more plausible. In §2.7 I defend a surprising thesis – that when relativity is understood as a claim of extensional variation, relativism about *F* is compatible with objects being *F simpliciter*. Finally, in §2.8, I consider some remaining questions

With that, two conceptions of relativity.

§2.2 – Two Conceptions of Relativity

§2.2.1 – What is relativity as additional adicity?

We are interested in the nature of relativity itself: What is it for a property or relation to be relative to a parameter? The standard conception of relativity is relativity as

additional adicity. Before I explicate relativity as additional adicity, let me introduce some terminology.

Properties and relations are entities that can be instantiated – that is, they are **predicables**. The difference between properties and relations is a difference of adicity. Properties are monadic predicables, and relations are polyadic predicables.¹

Adicity – also known as ‘arity’ or ‘degree of relationality’ – means number of argument places. For example, compare *being square* and *being taller than*. If you combine *being square* with a single argument, then you get *a’s being square*, which is a complete state of affairs.² By contrast, if you combine *being taller than* with a single argument, then you get *a’s being taller than*, which is not a complete state of affairs.³ Predicables are the bearers of adicity, and the adicity of a predicable is the number of arguments to which the predicable must apply in order to yield a complete state of affairs.⁴ *Being square* is monadic, having one argument place. *Being taller than* is dyadic, having two argument places.

Relativity as additional adicity is the thesis that what it *is* for a predicable to be relative to a parameter is for the predicable to have an additional argument place

¹ There are also multigrade predicables, e.g. *being in a group with*.

² A complete state of affairs is the sort of thing that can obtain or fail to obtain.

³ Or *being taller than a*, which is also not a complete state of affairs.

⁴ There are two notions of adicity. Linguistic adicity is borne by *predicates*, and the adicity of a predicate is the number of arguments to which the predicate must apply in order to yield a complete *sentence*. We are focused on metaphysical adicity, which is borne by predicables.

(unacknowledged by surface grammar and naive common sense) that takes as its relatum a value of the parameter.

Take the case of simultaneity, for example. There are two metaphysical possibilities. Simultaneity might be what it naively seems to be: a dyadic relation that holds between two events. John Stuart Mill took simultaneity to be a dyadic relation:

The simplest of all cases of relation are those expressed by ... the word simultaneous. If we say, for instance, that dawn preceded sunrise, the fact [i.e. state of affairs] in which the two things, dawn and sunrise, were jointly concerned, consisted only of the two things themselves; no third thing entered into the fact or phenomenon at all.⁵

But since Einstein and the advent of Special Relativity, most of us are convinced that simultaneity is *not* what it seems to be. Simultaneity is not a dyadic relation that holds between two events. It is a triadic relation that holds between two events and a frame of reference.⁶

It will be helpful to distinguish **plugged** and **unplugged** predicables. Given any unplugged n -ary predicable $R_n\langle x_1, x_2, \dots, x_n \rangle$, we can define a new predicable by replacing one or more of the variables by objects, and the result is a plugged predicable. Consider some examples. *Being taller than* is an unplugged dyadic relation, and *being taller than Joe* is a plugged monadic property. *Being in-between x and y* is an unplugged

⁵ Mill, (1846, Book 1, Chapter 3, §10).

⁶ Unless otherwise specified, frames of reference are inertial frames of reference.

triadic relation, *being in-between x and seven* is a plugged dyadic relation; and *being in-between five and seven* is a plugged monadic property.⁷

With the distinction between plugged and unplugged predicables in hand, we can be clearer about the underlying ontology. When we learn that simultaneity is relative to frame of reference, we learn two things. First, we learn that the unplugged simultaneity relation is not dyadic, as it seemed to be, but triadic. There is no such thing as the unplugged dyadic simultaneity relation, i.e., the unplugged dyadic simultaneity relation either fails to exist or is anyway uninstantiated.⁸ Second, we learn that there are many more dyadic simultaneity(-like) relations than we had previously thought. Instead of one unplugged dyadic simultaneity relation, there are many plugged dyadic simultaneity relations, one for every frame of reference – *being simultaneous relative to f_1* , *being simultaneous relative to f_2* ,

Relativity as additional adicity always produces the same ontological profile. If an apparently n -ary predicable is relative to a parameter and the relativity is additional adicity, then, at the ontological level, we eliminate and replace: we get rid of the unplugged n -ary predicable and replace it by an unplugged $n+k$ -ary predicable and a large family of plugged n -ary predicables.

⁷ Plugged properties are therefore what some philosophers (but not all!) mean by ‘relational’ properties.

⁸ Of course, merely being uninstantiated is not enough. There are worlds in which simultaneity is absolute (e.g. Newtonian worlds) in which, as a matter of contingent fact, there are no simultaneous events. To say that “there is no such thing as” the unplugged dyadic simultaneity relation is to say that the unplugged dyadic simultaneity relation is somehow unfit for instantiation (perhaps due to non-existence).

§2.2.2 – Is *all* relativity additional adicity?

It is widely believed that *all* relativity is additional adicity. Robert Streiffer, for example, says,

[Moral relativism is the view that] the moral properties expressed by moral sentences have an extra argument place, the values of which varies from context to context. So, although one might have thought that the property of being immoral was a one-place property, which a particular action either has or does not have, in fact, there is no such one-place property. Rather, there is a two-place relation of being immoral relative to a [moral code], and any particular action bears this relation to some [moral codes], but not to others.⁹

Crispin Wright says,

The ground-level relativistic idea is that the satisfaction-conditions of a certain property or family of properties, though superficially presenting as unary [i.e. monadic], are actually implicitly relational – or more generally, are of a *higher degree of relationality* than is apparent in the surface syntax.... [The] tacit relationality need not be to the effect that a certain apparently unary property is in fact binary. It may be to the effect that a certain apparently n -ary property is in fact $n+k$ -ary, $k > 0$.¹⁰

⁹ Streiffer (2003, 4).

¹⁰ Wright, (2008, 158-159).

Paul Boghossian says,

[W]e get the following template for a relativistic thesis about a domain of discourse D :

- (i) The central predicate of D is the predicate R . [...]
- (ii) R appears to express the concept of an n -place property and to denote an n -place property. [...]
- (iii) These semantical appearances are in fact correct. [...]
- (iv) However, no such n -place properties are instantiated in the world; instead the only instantiated property in the vicinity is an $n+k$ -place property, R^* , where part of what is involved in the more complex property is a parameters that can assume different values, not one of which can be thought of as factually privileged. [...]

[T]he crucial point is that...relativism is fueled primarily by a *factual* thesis to the effect that there aren't the sorts of n -place properties suggested by the semantical appearances but only closely related $n+k$ -place properties put forward by the relativist.¹¹

There is a debate between absolutists and relativists in just about every philosophically interesting domain, and in these debates it is simply assumed that relativity is additional

¹¹ Boghossian (2011a, 57). In this passage, Boghossian is describing what he calls 'thoroughgoing relativism'. Boghossian also discusses 'alethic relativism' and 'absolutist relativism'.

adicity. To get a sense of where this essay is headed, I want to take a closer look at how the assumption that all relativity is additional adicity affects the debate between absolutists and relativists.

Remember the ontological profile: if an apparently n -ary predicable is relative to a parameter and the relativity is additional adicity, then at the ontological level we get rid of the unplugged n -ary predicable and replace it with an unplugged $n+k$ -ary predicable and a large family of plugged n -ary predicables. To put the point another way, if all relativity is additional adicity, then relativity and **n -ary-ness** are incompatible; an apparently n -ary predicable is either an unplugged n -ary predicable or relative to a parameter, but not both. Simultaneity, for example, is either an unplugged dyadic relation or relative to frame of reference, but not both.

And as Monroe Beardsley once put it, “Since no applicable [predicable] has zero places, it cannot be relativism to claim that a particular [predicable] is monadic.”¹² If all relativity is additional adicity, then relativity and monadicity are incompatible; a predicable cannot be both an unplugged monadic property and relative to a parameter. Hence, truth is either an unplugged monadic property or relative, but not both; right and wrong are either unplugged monadic properties or relative, but not both, etc.

One of the main points I want to make in this essay is that it matters whether relativity and n -ary-ness are compatible. It matters because, sometimes, though we have good reason to believe that the apparently n -ary predicables are relative to a parameter, we have even better reason to believe that the apparently n -ary predicables are in fact

¹² Beardsley (1983, 265). Beardsley makes this point about predicates, but the same point applies to predicables.

unplugged n -ary predicables. This may come as a surprise, but many of the best arguments marshaled against relativism are at bottom attempts to leverage n -ary-ness in favor of absolutism. I call such arguments **Adicity Arguments**, and they take the following form:

- (1) If relativism is true, then the apparently n -ary predicables are not unplugged n -ary predicables but unplugged $n+k$ -ary predicables.
- (2) The apparently n -ary predicables are in fact unplugged n -ary predicables.
- (3) Therefore, relativism is false.

The philosophical literature is awash with Adicity Arguments. Herman Cappelen and John Hawthorne, for example, in their aptly titled recent book *Relativism and Monadic Truth*, run an Adicity Argument against truth relativism. They argue that truth is an unplugged monadic property; that truth relativists do and must “reject the idea of truth as a monadic property;”¹³ and thus that truth relativism is false. David Lewis runs an adicity argument against shape relativism.¹⁴ We will have the opportunity to take a closer look at some Adicity Arguments in §2.6 – one of the best arguments against moral relativism, and three of the best arguments against color relativism, are Adicity Arguments.

In a way, the purpose of this essay is to rebut Adicity Arguments on purely structural grounds. Whether you can refute relativism with an Adicity Argument hinges

¹³ Cappelen and Hawthorne (2011, 459). This particular quotation is not from the book but from a symposium about the book.

¹⁴ Lewis (1986, 203-204).

on whether relativity and n -ary-ness are incompatible, and whether relativity and n -ary-ness are incompatible hinges on whether *all* relativity is additional adicity.

I say that that relativity and n -ary-ness are compatible. Of course, *relativity as additional adicity* and n -ary-ness are incompatible, but not all relativity is additional adicity. Some relativity is extensional variation, and *relativity as extensional variation* is compatible with n -ary-ness.

§2.2.3 – What is relativity as extensional variation?

Relativity as extensional variation is a different conception of what relativity is at the ontological level. Again, let me begin with some terminology.

The **extension** of a predicable is the set of its instances. For example: the extension of *being prime* is the set of prime numbers, and the extension of *being taller than* is the set of ordered pairs $\langle x, y \rangle$ such that x is taller than y . An **index** on a parameter is a value that the parameter can take. For example: time is a parameter, and the various instants of time are the indices; type of perceiver is a parameter, and the various types of perceivers are the indices.

Given any parameter, we can distinguish the predicables with extensions that are ‘fixed’ across the parameter and the predicables with extensions that ‘vary’ across the parameter. The extension of a predicable is **fixed across the parameter** iff the extension of the predicable is (and must be) the same relative to all of the indices on the parameter.

The extension of a predicable **varies across the parameter** iff the extension of the predicable is (or could be) different relative to different indices on the parameter.¹⁵

Let me illustrate the distinction between fixed extensions and variable extensions with a familiar case: the modal case. World is a parameter, and the various worlds are the indices. Compare two properties, *being prime* and *being spherical*. The extension of *being prime* is fixed across worlds. Here are three different ways to say that the extension of being prime is fixed across worlds: (i) the extension of *being prime* is the same at every world; (ii) if we think of properties as functions from worlds to sets, then *being prime* is a constant function, which takes every world to the set $\{2, 3, 5, 7, \dots\}$; (iii) if an object is in the extension of *being prime* relative to one world, then the object is in the extension relative to every world. By contrast, the extension of *being spherical* varies across worlds. That is: (i) the extension of *being spherical* is different at different worlds; (ii) if we think of properties as functions from worlds to sets, then *being spherical* is not a constant function; (iii) an object can be in the extension of *being spherical* relative to one world, but not another. For example, imagine two worlds: in w_1 , Mars is spherical; in w_2 , Mars is pyramidal. Mars is thus in the extension of *being spherical* relative to w_1 , but not relative to w_2 .

Once you understand the distinction between fixed extensions and variable extensions as it applies to the modal case, you are in a position to understand the

¹⁵ For some parameters, all predicables have extensions that are fixed across the parameter. The astrological sign parameter might be a good example: it may be that no properties or relations do (or could) have extensions that vary across astrological sign. There is thus a deep and interesting question as to which parameters permit extensional variation.

distinction as it applies to any parameter. A predicable has an extension that varies across time iff the extension of the predicable is (or could be) different relative to different instants of time. A predicable has an extension that varies across types of perceivers iff the extension of the predicable is (or could be) different relative to different types of perceivers.

Now then, what is relativity as extensional variation?

Relativity as extensional variation is the thesis that what it *is* for a predicable to be relative to a parameter is for the predicable to have an extension that varies across the parameter. Relativity as extensional variation always produces the same ontological profile, but a different ontological profile: if an apparently n -ary predicable is relative to a parameter and the relativity is extensional variation, then, at the ontological level, the apparently n -ary predicable is an unplugged n -ary predicable with an extension that varies across the parameter.¹⁶

¹⁶ There is another distinction to draw. An individual can **belong** to a value of a parameter. There are many worlds, and I belong to the actual world. There are many times, and I belong to the present time. There are many types of perceivers, and I belong to the type of perceiver, whichever it is, that I am. Let us say that a value of a parameter is **inhabited** iff there is an individual that belongs to it. We can then distinguish strong and weak extensional variation. First of all, there is extensional variation iff the predicable has an extension that varies across the parameter. There is **strong** extensional variation iff the predicable has an extension that varies across inhabited values of the parameter. There is **weak** extensional variation iff the extensional variation is not strong. For instance, presentists and eternalists might agree that shape properties have extensions that vary across time, but disagree about the significance of that fact. For the presentists, extensional variation across time is cheap and metaphysically uninteresting (i.e. weak). Having a different

§2.2.4 – How are additional adicity and extensional variation different?

Relativity as additional adicity and relativity as extensional variation differ along two axes, which I call *n*-ary-ness and extensional fixity, respectively.

When relativity is additional adicity, there is **extensional fixity** but no *n*-ary-ness. Take the case of simultaneity, for example. If simultaneity is relative to frame of reference and the relativity is additional adicity, then there is no such thing as the unplugged dyadic simultaneity relation. Rather, there is an unplugged triadic simultaneity relation, which has an extension that is fixed across frames of reference, and a large family of plugged dyadic simultaneity relations, which also have extensions that are fixed across frames of reference. In other words, there is extensional fixity: all of the instantiated simultaneity relations have extensions that are fixed across frames of reference. But there is no *n*-ary-ness: there is no such thing as the unplugged dyadic simultaneity relation.

By contrast, when relativity is extensional variation, there is *n*-ary-ness but no extensional fixity. If simultaneity is relative to frame of reference and the relativity is extensional variation, then there is indeed such a thing as the unplugged dyadic simultaneity relation, and *it* – the unplugged dyadic simultaneity relation – has an extension that varies across frames of reference. In other words, there is *n*-ary-ness: there is such a thing as the unplugged dyadic simultaneity relation. But there is no extensional fixity: it is not the case that all of the instantiated simultaneity relations have extensions that are fixed across frames of reference.

extension at a non-present time is like having a different extension according to a false story. For eternalists, the extensional variation is weighty and metaphysically important (i.e. strong).

§2.2.5 – Two Forms of Relativism

My thesis is that there are two alternatives to absolutism that have not been distinguished. **Absolutism** is the thesis that the apparently n -ary predicates are not relative to the parameter. At the ontological level, absolutism is the view that the unplugged n -ary predicates exist, are instantiated, and have extensions that are fixed across the parameter. We can think of absolutism as the conjunction of two claims: n -ary-ness and extensional fixity.

Relativism can be reconciled with either of these two claims, but not with both. **Relationalism** is a claim of additional adicity. (Relationalism is so-named because by its lights relativity is just relationality that we did not expect. Relationalism is the familiar form of relativism, which above I called ‘standard relativism’.) Relationalism is the way to reconcile relativism with extensional fixity. **Variabilism** is a claim of extensional variation. (Variabilism is so-named because by its lights relativity is not relationality but something altogether different: extensional variation. Variabilism is the unfamiliar form of relativism, which above I called ‘non-standard relativism’.) Variabilism is the way to reconcile relativism with n -ary-ness.

With the distinction between relationalism and variabilism drawn, two questions remain. First: is the distinction genuine, or merely terminological? Second: is the distinction interesting, or redundant and pedantic? I will take the questions in turn. In §§2.3-2.5, I argue that the distinction is genuine. In §§2.6-2.7, wherein the real action of the essay occurs, I argue that the distinction is interesting and does quite a lot of philosophical work.

§2.3 – The Terminological Objection

The distinction between relationalism and variabilism rests in part on the distinction between an $n+1$ -ary predicable with a fixed extension and an n -ary predicable with a variable extension. But one might reject this distinction. Indeed, some philosophers have.¹⁷ I call what follows the **terminological objection**, for it alleges that the difference between relationalism and variabilism is merely terminological.

Objection: We learn that an apparently n -ary predicable is relative to a parameter. Relationalists say that the apparently n -ary predicable is an unplugged $n+1$ -ary predicable with a fixed extension, variabilists say that the apparently n -ary predicable is an unplugged n -ary predicable with a variable extension, and *I* say that these are just two ways of speaking. An unplugged n -ary predicable with a variable extension *just is* an unplugged $n+1$ -ary predicable with a fixed extension. Relationalism and variabilism are thus mere terminological variants, and a dispute between relationalists and variabilists is thus merely a verbal dispute.

Reply: We need to start by getting a clearer picture of the terrain. Imagine two disputes that you and I might have. First, we might have a “this versus that” dispute. There is an opaque box with only one eyehole. You look into the box, and then I do. You and I agree that there is only one thing in the box. You say that the thing is F , and I say that the thing is G . Our dispute will prove merely verbal if the thing in the box is both F (as you use the term) and G (as I use the term). Second, we might have a “this versus this and that” dispute. There is an opaque box with only one eyehole. You look into the box,

¹⁷ See Lewis (1986, 23), Hinchliff (1996, 121-122), and Cappelen and Hawthorne (2011, 459-460.)

and then I do. You say that there is only one thing in the box, and that the thing is F . I say that there are *two* things in the box. I agree with you that one of the things in the box is F , but I insist that there is another thing in the box that is G .

It is natural to construe the dispute between relationalists and variabilists as a “this versus that” dispute – there is only one thing in the world, the relationalists believe it to be an unplugged $n+1$ -ary predicable with a fixed extension, the variabilists believe it to be an unplugged n -ary predicable with a variable extension, and the skeptics suspect that the relationalists and the variabilists are somehow both right. But this construal is inaccurate. The dispute between relationalists and variabilists is a “this versus this and that” dispute. Let me explain.

Suppose that an apparently n -ary predicable is relative to a parameter. We may divide relationalism into its positive claim and its negative claim. The positive claim is that there is both an unplugged $n+1$ -ary predicable with a fixed extension and a large family of plugged n -ary predicables with fixed extensions. The negative claim is that there is no such thing as the unplugged n -ary predicable.

Variabilists should always accept the positive claim.¹⁸ Therefore, in the dispute between relationalists and variabilists, there is lots of common ground. They agree that there is an unplugged $n+1$ -ary predicable, they agree about the extension of the

¹⁸ We can distinguish **accommodating variabilism** and **unaccommodating variabilism**.

Unaccommodating variabilists reject both the positive claim and the negative claim.

Accommodating variabilists accept the positive claim and reject the negative claim. There is a spot in logical space for unaccommodating variabilism, but I see little or nothing to recommend it, so I set it aside.

unplugged $n+1$ -ary predicable, and they agree that the extension is fixed across the parameter. They agree that there is a large family of plugged n -ary predicables, they agree about the extensions of the plugged n -ary predicables, and they agree that the extensions are fixed across the parameter. They agree, moreover, about the conditional: that the unplugged n -ary predicable has a variable extension *if* it exists and is instantiated. The core disagreement between relationalism and variabilism concerns the unplugged n -ary predicable. Is there such a thing as the unplugged n -ary predicable? Relationalists say no; variabilists say yes.¹⁹ Variabilism is a thesis of ontological superaddition – that the world contains everything that the relationalists believe in, *and more besides*.

In my experience, pointing out that the dispute between relationalists and variabilists is a “this versus this and that” dispute satisfies some of the skeptics. They come to the same conclusion that I do: that the dispute between relationalists and variabilists is an ontological dispute about which objects instantiate which properties and relations, and is as genuine as other ontological disputes of the same sort. Compare the dispute about whether external world objects are colored.

¹⁹ The disagreement between relationalists and variabilists, as I have characterized it, belongs to ontology. However, there is a related disagreement that can be had between people who agree about the ontology. Take two people who are both variabilists. The one might think that the unplugged $n+1$ -ary predicable is more fundamental than the unplugged n -ary predicable – she is a **priority relationalist**. The other might think that the unplugged n -ary predicable is more fundamental than the unplugged $n+1$ -ary predicable – she is a **priority variabilist**. The dispute between priority relationalists and priority variabilists may be of some interest, especially to those who believe that predicables – even predicables with variable extensions – are easy to come by.

Other skeptics, however, of a more dogged anti-metaphysical bent, press the terminological objection further. The question at this point is whether it is a substantive matter as to whether the unplugged n -ary predicable is instantiated. The more dogged skeptic says no. What can be said to the more dogged skeptic? Let me say two things.

(1) First, a challenge. There are methods in first-order ontology for determining whether a putative predicable is instantiated. Employing these tests seems to reveal ontological differences between cases of relativity. And – here is the challenge – the ontological differences do not seem to be verbal differences. They seem to be genuine differences.

Start with the **switch-the-index test**. In cases of relative contrariety, if we switch the index on the underlying parameter, variabilism predicts a change in properties, and relationalism predicts no change in properties. The switch-the-index test cuts both ways.

In the case of shape, the test points in favor of variabilism. If objects endure, and if presentism is false, then shape is relative to time: An object O might be bent at t_1 , and straight at t_2 . Relationalists and variabilists agree that $\langle O, t_1 \rangle$ instantiate the dyadic relation *being bent at*, that $\langle O, t_2 \rangle$ instantiate the dyadic relation *being straight at*, and that O instantiates the plugged properties *being bent at t_1* and *being straight at t_2* . The question is whether the unplugged monadic shape properties, i.e. *being bent* and *being straight*, are instantiated. Employ the switch-the-index test. Suppose that time passes from t_1 to t_2 . Has O undergone a change of shape properties? Relationalists say, “No; the only shape properties that O has are plugged properties, and objects do not gain or lose their plugged shape properties over time. At t_1 , O instantiates both *being bent at t_1* and *being straight at t_2* , and at t_2 , O instantiates both *being bent at t_1* and *being straight at t_2* .”

Variabilists say, “Yes; at t_1 , O instantiates *being bent*. Then, from t_1 to t_2 , O undergoes a genuine change of shape properties, loses the property *being bent*, and gains the property *being straight*.” Since intuitively O does indeed undergo a change of shape from t_1 to t_2 , the switch-the-index test points in favor of variabilism.

In the case of size, however, the switch-the-index test points in favor of relationalism. Big and small are relative to comparison class: Remy, a big mouse, is big relative to mice, and small relative to animals. Are the unplugged monadic size properties, i.e. *being big* and *being small*, instantiated? Employ the switch-the-index test. Suppose that we change the salient comparison class. (It does not matter whether we change the salient comparison class synchronically or diachronically, but it is easier to imagine the change over time.) At first, Remy is surrounded by other, smaller mice, and then we gradually replace the mice with bigger animals. Has Remy undergone a change in size properties? Relationalists say, “No; the only size properties Remy has are plugged properties, and changing the salient comparison class does not result in a change of plugged size properties.” Variabilists say, “Yes; when mice are the salient comparison class, Remy instantiates *being big*. Then, when the salient comparison class switches from mice to animals, Remy undergoes a genuine change of size properties, loses the property *being big*, and gains the property *being small*.” Since intuitively Remy does not undergo a change in size when the salient comparison class switches from mice to animals, the switch-the-index test favors relationalism.

Here is another test: the **real similarity test**. O_1 , a temporary existent, is bent at t_1 , and O_2 , another temporary existent, is bent at t_2 . Are O_1 and O_2 exactly similar in a shape respect? Intuitively, yes. And since O_1 and O_2 do not share any plugged shape properties,

and since exact similarity in a respect is a matter of sharing properties, this is evidence that the unplugged monadic shape properties are instantiated. By contrast, Remy is big relative to mice, and Jupiter is big relative to planets. Are Remy and Jupiter exactly similar in a size respect? Intuitively, no. And since exact similarity in a respect is a matter of sharing properties, this is evidence that the unplugged monadic size properties are not instantiated.

The switch-the-index test and the real similarity test seem to reveal an ontological difference between the relativity of shape to time and the relativity of size to comparison class. We should believe in the unplugged monadic shape properties, and thus we should construe the relativity of shape to time as extensional variation. By contrast, we should not believe in the unplugged monadic size properties, and thus we should construe the relativity of size to comparison class as additional adicity. Moreover, the ontological differences between the cases of shape and size do not seem to be verbal differences. That objects gain and lose shape properties over time has nothing to do with how we talk.

(2) But put these abstract ontological arguments aside. We can debate about the genuineness of the relationalism/variabilism distinction in the abstract, but ultimately the proof is (or is not) in the pudding. The best way to know whether a distinction is genuine is to put the distinction to work. If the work it does is genuine, then the distinction is genuine. If the work it does is mere word chopping, then the distinction is merely verbal. In §2.6, I apply the relationalism/variabilism distinction to two domains: morality and colors. I am happy to let the discussion in §2.6 speak for itself. It seems clear to me that moral variabilism and color variabilism enjoy real and philosophically important

advantages over their relationalistic counterparts, and I conclude, on that basis, that the relationalism/variabilism distinction itself is real and philosophically important.

§2.4 – The Objection from Extensionalism

A second objection arises. One might grant that relationalism and variabilism are distinct, and not mere terminological variants, but insist that the relationalism/variabilism distinction is still trivial because variabilism is always false. Variabilism says that there is a little bit of extra ontology, but one might think that in fact there never is. An argument that variabilism is sometimes or often false would not trivialize the distinction. To trivialize the distinction we need an argument that variabilism is always false.²⁰

I have a particular argument in mind. One could argue that when we appreciate what properties and relations really are, we will see that properties and relations are simply not the sorts of things that can have variable extensions. This objection is likely to come from someone who favors some sort of extensional reduction of predicables, so I call it the **objection from extensionalism**. A dialogue between the extensionalist (EX) and myself (JS) might go like this.

EX: “Properties (and the same goes for relations) cannot have variable extensions, because properties are the sets of their instances, and sets cannot have variable extensions. A set with a variable extension – i.e., a set with one extension relative to one index on a parameter and a different extension relative to a different index

²⁰ This is not quite true. An argument that only the world parameter permits extensional variation might also be said to (perhaps not trivialize but) vitiate the distinction.

on a parameter – is incompatible with the Axiom of Extensionality and is therefore impossible.”

JS: “For certain properties and certain parameters, it is almost apodictic that the extension of the property varies across the parameter. Take the case of shape and world. The extension of *being spherical* is some set *S*. But had there been another spherical thing, *S* would not have been the extension of *being spherical*; rather, *S* would have been a proper subset of the extension of *being spherical*. In other words, *being spherical* has its extension only contingently. (And although it is more controversial, there is some reason to think that *being spherical* has its extension only temporarily, too.) There is a point of incompatibility here, to be sure. If properties are the sets of their instances, then properties cannot have variable extensions. I regard this as a good reason to reject the thesis that properties are the sets of their instances. This supplements the standard reason: that distinct properties can be coextensive.”

EX: “Properties are not the sets of the *actual* instances. Rather, properties are the sets of *all* of their instances, actual and possible. So, again, properties cannot have variable extensions, for properties are sets, and sets cannot have variable extensions.”

JS: “The quick reply to this point is that modal realism is false. Possible worlds are not hunks of rock and space. They are abstract objects. The set of *all* spherical things, and the set of *actual* spherical things, is the very same set. The thesis that properties are the sets of *all* of their instances, and the thesis that properties are the sets of their *actual* instances, is the very same thesis, and that thesis is false.”

EX: “If we put modal realism aside, then properties are not sets. Rather, properties are functions from worlds to sets. Thus, the world parameter stands apart.

There can be properties with extensions that vary across worlds, but there cannot be properties with extensions that vary (so to put it) within worlds. A property cannot have an extension that varies across time, for example, or across types of perceivers.”

JS: “Properties are not functions. Anyone who has seen a color or felt an electrical shock knows as much. Rather, properties are *represented by* functions. And we should not let our habits of representation drive our metaphysics. That philosophers have, as a matter of historical fact, often represented properties as functions from worlds to sets is not an argument against the claim that the extension of a property might vary across time or across types of perceivers.

“An interesting question remains, of course. Let us say that a parameter **permits extensional variation** iff there is (or could be) a property or relation that varies across it. And let us suppose that both the time parameter and the type of perceiver parameter permit extensional variation. There is a tradition, which has proved useful, of representing a property by a function whose output is the extension of the property. If we want to continue in this tradition, what should be the input to the function? We have two options. (i) We can take worlds to be **extensionally incomplete**, i.e., settling which world is actual does not settle the extension of every property and relation. If worlds are extensionally incomplete, then we should stop representing properties as functions from worlds to sets. Rather, we should gather together all of the parameters that permit extensional variation. For simplicity, suppose that there are only three such: world, time, and type of perceiver. Then we should represent properties as functions from $\langle \text{world, time, type of perceiver} \rangle$ triples to sets. (ii) We can take worlds to be **extensionally complete**, i.e., settling which world is actual settles the extension of every property and

relation. If worlds are extensionally complete, then we should continue representing properties as functions from worlds to sets, but we should be open to relativism about actuality. If there are properties with extensions that vary across types of perceivers, for example, then different worlds are actual for different types of perceivers. The choice between (i) and (ii) is not arbitrary; the choice results in different modal consequences. (It is unclear, for example, what can be said about the modal status of properties with extensions that are not settled by which world is actual.) I think that the reasons to prefer (ii) to (i) are many and powerful.²¹ If the time and type of perceiver parameter permit extensional variation, as I think they might, then I maintain that actuality is relative to time and type of perceiver.”²²

The bottom line is this: a proponent of the relationalism/variabilism distinction must adopt a conception of predicables on which predicables are the sorts of things that can have variable extensions. There are conceptions of predicables that are hostile to the relationalism/variabilism distinction. If predicables are sets, then variabilism is always false. (The same goes for a view on which predicables are sums or pluralities or any other kind of entity that has its extension essentially.) I myself am confident that predicables are *not* sets (or sums or pluralities), so this hostility leaves me undisturbed. (I am also

²¹ I say a bit more about relativism about actuality in §2.8.

²² Relativism about actuality is not the bizarre view that different types of perceivers inhabit different concrete universes. Worlds are not universes. They are abstract objects of one sort or another. Perhaps worlds are sets of propositions. In that case, relativism about actuality is the slightly daring but fully coherent claim that a single proposition – say, *that x is green* – can be true (hence part of the actual world) relative to us, but false (hence not part of the actual world) relative to pigeons and inverted-spectrum Martians.

confident that predicables are not functions from worlds to sets, but it should be noted that, so long as we are open to relativism about actuality, the view that predicables are functions from worlds to sets is not hostile to the relationalism/variabilism distinction.)

As I see it, none of the conceptions of predicables that are hostile to the relationalism/variabilism distinction are plausible. In the end, then, I think that a proponent of the relationalism/variabilism distinction need not be too troubled by the objection from extensionalism.

§2.5 – The Truth Relativism Objection

There is a now familiar distinction between **contextualism** and **truth relativism**. According to the next objection, the distinction between relationalism and variabilism is nothing new; it is just the distinction between contextualism and truth relativism repackaged.

Objection: Relationalists and variabilists agree that the unplugged $n+1$ -ary predicables and the plugged n -ary predicables exist and have extensions that are fixed across the parameter. The question is whether there are, in addition, the unplugged n -ary predicables, which (if they exist) have extensions that vary across the parameter. The dispute between contextualism and truth relativism looks exactly the same. Both sides agree that there are the many **relativized** propositions (e.g., the proposition *that O is bent at t_1*). Both sides agree that the relativized propositions have their truth-values absolutely. The question is whether there are, in addition, **unrelativized** propositions (e.g. the proposition *that O is bent*). Both sides agree that *if* there are the unrelativized propositions, *then* the unrelativized propositions have their truth-values relatively. I say

that these debates are not just parallel, but identical! I say that the dispute between relationalists and variabilists is nothing more than the sub-propositional version of the already familiar dispute between contextualists and truth relativists.

Reply: There is a short reply and a long reply to this objection. The short reply is simply this. The dispute between contextualism and truth relativism is a dispute in semantics to be settled by semantical considerations, and the dispute between relationalism and variabilism is a dispute in ontology to be settled by ontological considerations. There are some interesting parallels, to be sure. But the two disputes are separate. In fact, they come apart. I think that there are a number of domains in which the most plausible combination of views is truth relativism at the semantic level and relationalism at the ontological level.

Now for the longer reply.

The first order of business is to clear up some terminological confusion. Some philosophers use the term ‘property’ to mean the semantic value of a predicate. Some philosophers use the term ‘property’ to mean a worldly item that characterizes the objects that instantiate it. Either usage is fine, but we should not equivocate: a semantic value is not the same thing as a worldly item that characterizes. (Consider philosophers who reject disjunctive properties; they do not reject the claim that ‘is round or red’ has a semantic value!) In this essay, I use term ‘property’ to mean a worldly item that characterizes.

The terminological confusion is rampant. One of the most powerful arguments against truth relativism is due to Herman Cappelen and John Hawthorne.²³ C&H object to truth relativism on ontological grounds. They run an Adicity Argument against truth

²³ Cappelen and Hawthorne (2009). Also see Cappelen and Hawthorne (2011).

relativism, arguing that truth relativism is incompatible with truth being an unplugged monadic property. John MacFarlane replies,

Old school relativists might have refused to call propositions “true” or “false” without adding a qualification, but the analytic [truth] relativists Cappelen and Hawthorne are discussing are happy to make room for a monadic propositional truth predicate that behaves disquotationally. [...] Moreover, it is easy to give a semantics for monadic “true” and “false” that works in an analytic [truth] relativist framework and ratifies the disquotational inference. Roughly stated: “true” expresses a property, *truth*, whose extension at a circumstance of evaluation is the set of propositions that are true-at that circumstance of evaluation.²⁴

Old school relativists refused to assign a semantic value to the predicate ‘is true’; they thought that ‘is true’ was semantically incomplete in much the way that ‘is taller than’ is semantically incomplete. But contemporary truth relativists, like MacFarlane, have no reservation in assigning a semantic value to the predicate ‘is true’. Indeed, a distinctive element of contemporary truth relativism is the claim that the semantic value of ‘is true’ varies from one circumstance of evaluation to another. (Truth relativists about matters of taste or epistemic modals are also truth relativists about truth and falsehood.)

²⁴ MacFarlane (2011, 442).

But MacFarlane's reply does not address C&H's objection. As C&H note in their rejoinder,²⁵ when we understand the distinction between properties and semantic values, the objection remains.

In trying to understand the distinction between properties and semantic values, it is helpful to consider an analogy. Consider Ted Sider's stage view of persistence.²⁶ On the stage view, nothing persists. There is Sider-at- t_1 , Sider-at- t_2 , Sider-at- t_3 , and so on. And while these objects are similar and connected in various ways, they are not identical. Identity over time is a misnomer. The English language, of course, contains the name 'Ted Sider', and we use this name at various times. According to the stage view, 'Ted Sider' denotes different objects at different times. At t_1 , 'Ted Sider' denotes Sider-at- t_1 ; at t_2 , 'Ted Sider' denotes Sider-at- t_2 . Suppose the leading semanticists of the day inform us that there is such a thing as the proposition *that Ted Sider is bent*, and moreover that the truth-value of this proposition varies over time. **Q:** Is this semantic fact a threat to the stage view of persistence? **A:** Not at all. What a stage theorist should think is that there is a sort of relativity in truthmaking: different objects are alethically relevant to the proposition at different times. At t_1 , the truth-value of the proposition *that Ted Sider is bent* depends wholly on the shape of Sider-at- t_1 , and the shape of Sider-at- t_2 is alethically irrelevant. At t_2 , the truth-value of the proposition *that Ted Sider is bent* depends wholly on the shape Sider-at- t_2 , and the shape of Sider-at- t_1 is alethically irrelevant.

It is an interesting question whether there is identity over time. I favor the endurance view on which Sider-at- t_1 and Sider-at- t_2 are strictly and literally identical.

²⁵ Cappelen and Hawthorne (2011, 459).

²⁶ Sider (1996).

Sider favors the stage view on which Sider-at- t_1 and Sider-at- t_2 are not strictly and literally identical. But the present point is simply this: the semantic fact of truth relativism does not settle the dispute between the endurance view and the stage view about whether there is identity over time. The fact that the proposition *that Ted Sider is bent* exists and has a truth-value that varies over time is compatible both with (a) the endurance view on which there is an object whose shape varies over time and (b) the stage view on which there is not an object whose shape varies over time.

And exactly the same point applies on the predicate side of things. The semantic fact of truth relativism does not settle the dispute between relationalists and variabilists about whether there is an unplugged n -ary predicable with a variable extension. Let me stick to the same example. Suppose we adopt the endurance view, and set the stage view aside. Since we are endurance theorists, we must also be relativists about shape. What form of relativism should we adopt? We might be relationalists, or we might be variabilists.

Suppose we plump for relationalism. We then countenance the unplugged dyadic shape relations, and the many plugged monadic shape properties, but we do not countenance the unplugged monadic shape properties (*being bent* and *being straight*). Suppose that the leading semanticists of the day inform us that there is such a thing as the unrelativized proposition *that Ted Sider is bent*, and moreover that the truth-value of this proposition varies over time. **Q:** Is this semantic fact a threat to our relationalism? **A:** Not at all. What relationalists should think is that there is a sort of relativity in truthmaking: different properties are alethically relevant to the proposition at different times. At t_1 , the truth-value of the proposition *that Ted Sider is bent* depends wholly on whether Sider (the

continuant) has the property *being bent at t_1* , and whether Sider has the property *being bent at t_2* is alethically irrelevant. At t_2 , the truth-value of the proposition *that Ted Sider is bent* depends wholly on whether Sider has the property *being bent at t_2* , and whether Sider as the property *being bent at t_1* is alethically irrelevant.

Suppose we plump for variabilism instead. We then countenance the unplugged dyadic shape relations, the plugged monadic shape properties, and the unplugged monadic shape properties. Suppose again that there is such a thing as the unrelativized proposition *that Ted Sider is bent*, and that the truth-value of this proposition varies over time. As variabilists we should think that the relativity in the truth-value of this proposition is simply a reflection of the underlying relativity in the extension of the property *being bent*. There is no relativity in truthmaking: the same property is alethically relevant to the proposition no matter what index we choose. Both at t_1 and at t_2 , the truth-value of the proposition *that Ted Sider is bent* depends wholly on whether Sider has the property *being bent*. But, as variabilists, we believe that the property *being bent* has an extension that varies across time, and this fact explains the relativity in truth-value.

We can now see the property/semantic value distinction and why MacFarlane's reply to C&H is inadequate. The semantic value of the predicate 'is bent' is the set of objects to which the predicate applies. Relationalists and variabilists can agree that the semantic value of 'is bent' varies across time. But relationalists and variabilists disagree about whether there is also a property *being bent* with an extension that varies across time. Relationalists think that which property an object must have in order to be in the semantic value of 'is bent' is different from one time to the next. By contrast, variabilists think that which property an object must have in order to be in the semantic value of 'is

bent' is the same from one time to the next. So MacFarlane's reply to C&H is inadequate. If truth is relative, then the question arises whether we should be relationalists or variabilists about truth. (C&H think that we are forced to be relationalists; I disagree.²⁷) It falls out of the truth relativists' semantics that the predicate 'is true' has a semantic value that varies from one circumstance of evaluation to the next. But it does not follow that there is an unplugged monadic property *being true* which also has an extension that varies across circumstances of evaluation. The semantics of truth relativism, as applied to 'is true' and 'is false', is perfectly compatible with relationalism about truth.

In fact, the present point generalizes: *truth relativism about any domain is compatible both with relationalism and with variabilism*. What emerges, then, is a distinction within truth relativism itself. When you combine truth relativism with relationalism, truth relativism is the result of relativity in truthmaking: different properties are alethically relevant to the proposition at different indices. (You can think of it in terms of the correspondence theory of truth. It may be an absolute matter as to what the facts are. Still, the proposition may have a truth-value that varies across the parameter because which fact the proposition corresponds to varies across the parameter.) When you combine truth relativism with variabilism, truth relativism is the result of underlying

²⁷ I think we can reconcile truth relativism with the unplugged monadic property *being true*, and we do so by being variabilists about truth. C&H anticipate this move, and thus they revise the objection. The strongest version of the C&H objection alleges that truth relativism cannot be reconciled with proposition being true *simpliciter*, where a proposition is true *simpliciter* iff there are propositions and they stand in the "simple binary relation" of instantiation to the unplugged monadic property of *being true*. My reply to the strongest version of C&H's objection is contained in §2.7.

relativity with regards to which objects have which properties and relations. (You can again think of it in terms of the correspondence theory. It may be an absolute matter as to which fact the proposition corresponds. Still, the proposition may have a truth-value that varies across the parameter because what the facts are varies across the parameter.)²⁸ Although I do not have the space to argue the point here, I think we get examples of both. When it comes to colors, I am inclined to be a truth relativist and a variabilist. When it comes to epistemic modals, I am inclined to be a truth relativist and a relationalist.

Let me take a step back to summarize. We are familiar with the debate between contextualists and truth relativists. Contextualism is the default view; we need some positive argument to move us to truth relativism. And, typically, arguments for truth relativism are semantic indispensability arguments. Truth relativists draw our attention to certain semantic phenomena – agreement and disagreement, assertion and retraction, eavesdroppers and other third-party assessments, etc. – and argue that we cannot properly explain the semantic phenomena without positing unrelativized propositions that have their truth-values relatively.²⁹ This is just as it ought to be: the question of what

²⁸ Crispin Wright (2008) gestures at a similar distinction *within* truth relativism. He distinguishes the “ternary model” of truth relativism, which corresponds roughly to the relativism about truthmaking that I mention in the text, with a relativism about “truth-conferrers,” which corresponds to more closely to variabilism as I think of it.

²⁹ The literature concerning this debate is vast. See, among many others, Egan (2007), (2010a), (2010b), Kölbel (2002), (2004), Lasersohn (2005), (2008) MacFarlane (2005), (2007a), (2007b), (2009), (2011a), (2011b) Richard (1981), (2004), (2008), Weatherson (2008), (2009). There are many replies on behalf of contextualism. See, among many others, Glanzberg (2007), Schaffer (2011), Wright (2007).

propositions there are, and how the truth-values of these propositions vary across parameters, are semantic questions to be decided by semantic considerations.

The dispute between relationalists and variabilists is similar in many respects. Relationalism is the default view; we need some positive argument to move us to variabilism. And arguments for variabilism are basically ontological indispensability arguments. Variabilists draw our attention to certain ontological phenomena – real similarity, change, property identity, second-order properties, etc. – and argue that that we cannot properly explain the ontological phenomena without positing unplugged n -ary predicables with variable extensions. This, too, is as it ought to be: the question of what properties and relations there are, and how the extensions of these properties and relations vary across parameters, are ontological questions to be decided by ontological considerations.

That is not to say that there are *no* connections between semantics and ontology. Perhaps variabilism implies truth relativism, for example. But the reverse is certainly not the case. No argument from disagreement, or third-party assessments, or assertion and retraction should convince anyone to be a variabilist.

§2.6 – Two Applications: Morality and Colors

§2.6.1 – Taking Stock

This paper contains two new ideas. The first is the distinction between relationalism and variabilism. Of course, the distinction has some precedent. Certain instances of the distinction have received some discussion (although not under that

description). The most developed discussion is in the literature on temporary intrinsics.³⁰ There is also some discussion in the literature on tense³¹ and a bit of discussion in some

³⁰ The definitive statement of the argument from temporary intrinsics is Lewis (1986, 203-204). The response that an object might instantiate one shape property relative to one time and instantiate a different shape property relative to a different time was put forward, in slightly different packages, by four authors at more or less the same time – see Forbes (1987), Haslanger (1989), Johnston (1987), and Lowe (1988) and (1989). Lewis (1988) and (2002) responds by arguing that, even if shape relativism can be reconciled with unplugged monadic shape properties, still shape relativism cannot be reconciled with objects being shaped *simpliciter*. My response to Lewis is contained in §2.7. I argue that shape relativism is compatible with objects being shaped *simpliciter*.

³¹ There are some variabilism-ish views to be found in the literature on time and tense. See Bigelow (1991), Fine (2005b) and (2006), Goodman (1978), Schlesinger (1995), and Tooley (1997). Perhaps the closest cousin of the distinction between relationalism and variabilism is Fine's (2005b) distinction between internal relativism and external relativism. There are two main differences between the internal/external distinction and the relationalism/variabilism distinction. First, the internal/external distinction is between two sorts of facts that might partially constitute reality, whereas the relationalism/variabilism distinction is between two ways for a predicable to be relative to a parameter. Second, according to Fine, the internal/external distinction cannot be stated without a primitive 'reality' operator, whereas the relationalism/variabilism distinction can and has been stated without a primitive 'reality' operator. As it happens, I am inclined to reject Fine's primitive 'reality' operator and any philosophy that makes indispensable use of it. So, while I am a proponent the relationalism/variabilism distinction, I am inclined to reject the internal/external distinction.

recent work on truth.³² But the distinction between relationalism and variabilism does not belong to any domain in particular. The distinction has nothing especially to do with intrinsic properties or with truth. And contrary to what the literature on temporary intrinsics would lead you to believe, the distinction has nothing especially to do with the time parameter. Rather, the distinction between relationalism and variabilism is a perfectly general distinction *in relativity*, and as such applies to any predicables, any parameter, and in any domain. To the extent that the distinction between relationalism and variabilism has been appreciated heretofore, what has gone unappreciated is its generality. The first new idea, then, is a characterization of the distinction between relationalism and variabilism for what it really is: a topic-neutral distinction in relativity. There are two ways for a predicable to be relative to a parameter.

The second new idea involves novel applications of the distinction. In many domains, unfortunately, variabilism goes unnoticed, and relativism and relationalism get treated as one and the same. In a domain in which the most plausible version of relativism is relationalism, the conflation is venial. But in a domain in which (it is even arguable that) the most plausible version of relativism is variabilism, the conflation is a serious mistake. If there are good reasons to think that the apparently n -ary predicables are relative to the parameter, and also good reasons to think that the apparently n -ary predicables are unplugged n -ary predicables, then we should take variabilism seriously. In this section, and the following section, I apply the relationalism/variabilism distinction

³² See Cappelen and Hawthorne (2009), the reply by MacFarlane (2011), and the rejoinder by Cappelen and Hawthorne (2011).

to three domains in which I think variabilism should be taken seriously: morality, colors, and instantiation.

§2.6.2 – Moral Relativism

There is a simple and powerful argument against moral relativism, due to Paul Boghossian, which alleges that moral relativism is an unstable position – that moral relativism implies moral eliminativism.³³ The argument, in its essence, runs as follows. **(P1)** Moral relativism is moral relationalism. That is, if moral relativism is true, then the unplugged monadic moral properties *being morally right* and *being morally wrong* are uninstantiated. The instantiated properties in the vicinity are the plugged moral properties, e.g. *being morally right relative to the omnivore moral code* and *being morally wrong relative to the vegan moral code*. **(P2)** But the plugged moral properties are descriptive properties; they are not normative properties. What it is for an action to instantiate *being morally wrong relative to the vegan moral code* is for the action to be said to be wrong by a certain document, namely, the vegan moral code. But there is nothing normative about being said to be wrong. Being said to be wrong falls on the “is” side of the “is”/“ought” divide. **(P3)** Only normative properties deserve to be called moral properties. If no normative moral properties are instantiated, then moral eliminativism is true. **(C)** Moral relativism implies moral eliminativism.

In effect, Boghossian argues that there are only two possibilities: either the unplugged monadic moral properties are instantiated, or moral eliminativism is true. Boghossian then runs an Adicity Argument against moral relativism – moral

³³ See Boghossian (2006a), (2006b) and, especially, (2011a) and (2011b).

eliminativism is false, so the unplugged monadic moral properties are instantiated, and since moral relativism is incompatible with the unplugged monadic moral properties being instantiated, moral relativism is false.

How should moral relativists respond to Boghossian? The third premise is undeniable. The second premise is surprisingly hard to rebut. After all, the plugged moral properties do not seem to be normative properties; they seem to be purely descriptive properties. Of course, there is no agreed upon test for whether a property is normative, but one popular idea is that there is some sort of internal connection between normativity and motivation. Normative properties are thought to be motivating in and of themselves, having, as John Mackie has put it, a “peculiar, evaluative, prescriptive, intrinsically action-guiding” quality.³⁴ Whatever else might be said, the plugged moral properties are not *intrinsically* motivating or action-guiding.³⁵ If I am an omnivore, then recognizing that a certain action, e.g. eating meat, has the property of *being morally wrong relative to the vegan moral code* gives me no reason, either motivating or normative, not to perform the action. I think that moral relativists should seriously consider granting Boghossian the second premise of the argument, accepting that moral relationalism implies moral eliminativism, and adopting moral variabilism therefore.

Moral variabilism – which, to my knowledge, has not been formulated or defended hitherto – is a very interesting position in metaethics. Take the paradigmatic moral properties *being morally right* and *being morally wrong*. These are monadic, unplugged, nonrelational properties, and it is uncontroversial that they are normative;

³⁴ Mackie (1977, 32). This passage was brought to my attention by Dreier (1990, 9).

³⁵ I myself doubt that the plugged moral properties are action-guiding at all.

they are, after all, the very properties that moral absolutists believe do the normative work. Moral variability is a way of being a relativist about *them*.

I like the moral case because it underscores how important the relationalism/variabilism distinction is. It might matter an awful lot whether the unplugged *n*-ary predicates are instantiated. If Boghossian is right (and many philosophers, myself included, believe that he is), then the only way for there to be moral normativity in the world is for the unplugged monadic moral properties to be instantiated. Thus the importance of moral variability – the only way for there to be *relative* moral normativity is for the relativity to be extensional variation.

Of course, there are many unanswered questions about moral variability. There may be powerful objections to moral variability. My point is not to defend moral variability. My point is simply that moral variability provides a satisfying response to Boghossian's argument and thus deserves serious consideration.

§2.6.3 – Color Relativism

Many philosophers find color relativism attractive. Why so? Because there is color perception variation – the same object in the same viewing environment looks different colors to different types of perceivers – and singling out one type of perceiver among the many that seem normal and non-defective as *the* type that sees colors veridically seems arbitrary and metaphysically unmotivated.

Take a uniformly colored object, e.g. color chip 527. According to color relativism, chip 527 is different colors relative to different types of perceivers. John sees chip 527 as plum (a particular shade of reddish-blue), and Jane sees chip 527 as aqua (a

particular shade of greenish-blue). According to color relativism, both John and Jane might see chip 527 veridically. For John and Jane are different types of perceivers – John is an S_1 , let us say, and Jane is an S_2 – and chip 527 might be plum for S_1 's and aqua for S_2 's. (Note: my aim is not to convince you of color relativism. For that see Cohen (2009), Johnston (1992), and McLaughlin (2003). Rather, my aim is to convince you that color variabilism enjoys important advantages over color relationalism.)

In the literature, color relativism and color relationalism are conflated together. This is unfortunate, for three reasons. First, color relationalism and color variabilism are in fact different forms of color relativism. Second, the arguments marshaled in favor of color relativism support color relationalism and color variabilism equally. Third, many of the arguments marshaled against color relativism, while they bite against color relationalism, are toothless against color variabilism.

The most common argument marshaled against color relativism is the argument that color relativism misidentifies the color properties. Every theory of color must answer this question: which predicables are the colors? A color relationalist has only two options: (a) take the colors to be the dyadic relations: *being plum for*, *being aqua for* ...; or (b) take the colors to be the plugged properties: *being plum for S_1 's*, *being plum for S_2 's*, ... , *being aqua for S_1 's*, However, there are good reasons for thinking that the colors are neither the dyadic relations nor the plugged properties.

Why aren't the colors the dyadic relations? Because colors are not relations. Colors are monadic, not polyadic. Think of it in terms of bearers. There is a basketball in the room. *What* is orange? The correct answer: the basketball. The incorrect answer: a

curious bit of ontological miscellany, viz. the <object, type of perceiver> pair whose first member is the basketball and whose second member is the type of perceiver S_1 .

Why aren't the colors the plugged properties? Let me offer three arguments, in ascending order of strength.

First, color phenomenology.³⁶ Colors do not appear to be plugged properties. Colors appear to be simple, intrinsic, monadic, unplugged, nonrelational properties of their bearers. Identifying the colors with the plugged properties thus makes color phenomenology misleading, and it is strange for phenomenology to be misleading about *colors*.

Second, color exclusion.³⁷ Some colors are determinates of others; some colors are maximally determinate. Intuitively, maximally determinate color properties should exclude one another. It should be impossible for a uniformly colored object to instantiate more than one maximally determinate color property. But if colors are plugged properties, then the maximally determinate color properties do not exclude one another. Both *being plum for S_1 's* and *being aqua for S_2 's* are maximally determinate color properties, and chip 527 instantiates both, and many more besides.

Third, color individuation.³⁸ The plugged properties can be sorted in a variety of ways. One way is by their heads. Two plugged properties are **head-alike** iff they are

³⁶ The color phenomenology argument is pressed against color relativism in, among other places, Armstrong (1986), McGinn (1996), and Tye (2000). For a reply, see Cohen (2010).

³⁷ The color exclusion argument is pressed against color relativism in, among other places, Chalmers (2006), Kalderon (2007), Pautz (unpublished), and Tye (2006).

³⁸ So far as I know, the color individuation objection to color relationalism is novel.

constituted by the same color relation. If we identify the colors with the plugged properties, then there are head-alike color properties, e.g., *being plum for S_1 's* and *being plum for S_2 's*. But that seems an absurd conclusion to me. I think that head-alike color properties are impossible, for I think that color properties cannot be similar to one another in the way that head-alike color properties would have to be. A case helps to bring this out.

The Simultaneous Switch: Suppose that Wyatt and Brody are intrinsic duplicates – both are S_1 's. In the experiment, Wyatt is the control. We sit Wyatt before a uniformly colored screen that occupies his entire visual field. The screen looks a particular shade of forest green to Wyatt. In a duplicate room, we sit Brody before a uniformly colored screen, which occupies his entire visual field. Brody's screen looks to Brody exactly the way that Wyatt's screen looks to Wyatt.

Then, gradually but steadily, we transform Brody's visual system – change a neural connection, alter a rod or cone, change the shape of the eye – but always by non-invasive techniques that are totally undetectable to Brody from the inside. By the end of our tinkering, Brody is a different type of perceiver: Brody has transformed from being an S_1 to being an S_2 . (We could repeat the experiment, if we wanted, and transform Brody into an S_3 , and S_4 , and so on.) If we were to leave the screen unaltered, the screen would look discernibly different to Brody-the- S_2 than it did to Brody-the- S_1 . But we are clever and meticulous scientists. For each alteration to Brody's visual system, we make a simultaneous and counterbalancing alteration to the screen's surface, thus inducing in Brody what

seems to him an uninterrupted, phenomenologically unchanging visual experience as of forest green. In fact, the experience enjoyed by Brody during the course of the experiment is phenomenologically identical to the visual experiment enjoyed by Wyatt in the other room. Wyatt and Brody report, with equal confidence, that the screen before them did not change in color.

Our task is to count color properties. All sides agree that Wyatt has seen only a single color property during the course of the experiment. The question is: How many color properties has Brody seen? If we identify the colors with the plugged properties, then Brody has seen at least two color properties – two head-alike color properties – *being forest green for S_1 's* and *being forest green for S_2 's*. But that seems clearly false to me. Much has changed about and around Brody, but the color he was seeing remained the same.

How are head-alike color properties alike? They are exactly alike in how they look. But I say that color properties cannot be exactly alike in how they look.³⁹ Indeed, I am inclined to individuate colors by how they look. If C_1 and C_2 are color properties, then C_1 and C_2 are identical iff they are exactly alike in how they look. Head-alike color properties are therefore impossible, and thus the identification of the colors with the plugged properties is a mistake.

³⁹ Of course, there can be indiscernible colors, but indiscernible colors are not identical in the ways they are to look. Rather, they are so very nearly identical in the ways they look that we are unable to tell them apart.

All three of these arguments against color relativism are Adicity Arguments that attempt to show that the colors are unplugged monadic properties. Construed as arguments against color relationalism, these arguments seem to me just about decisive. Though there are good reasons for thinking that color is relative to type of perceiver, there are even better reasons for thinking that colors are neither dyadic relations nor plugged monadic properties. But construed as arguments against color relativism, these arguments fail. Color variabilism has a ready reply to all three. About phenomenology variabilists say, “Color phenomenology is not misleading. Colors are simple, intrinsic, monadic, unplugged, nonrelational properties of their bearers, just as they appear to be.” About exclusion variabilists say, “Maximally determinate color properties do indeed exclude one another. Chip 527 has exactly one maximally determinate color properties. It is, of course, a variable matter as to *which* maximally determinate color property chip 527 has.” About individuation variabilists say, “Colors are indeed individuated by the ways they look. Head-alike color properties are impossible and absurd.”

My thesis is not that color variabilism is true, or even that color variabilism is the best version of color relativism. (After all, though color variabilism has strengths where color relationalism has weaknesses, color variabilism may have crippling weaknesses of its own.) My thesis is simply that color variabilism deserves serious consideration. There are good reasons for thinking that colors are relative, and there are good reasons for thinking that colors are unplugged monadic properties. Color variabilism is the way to hold both theses.⁴⁰

⁴⁰ A theory of color with some superficial similarities to color variabilism can be found in Egan (2006a), (2006b), and (2010). Egan’s view and color variabilism are distinct, however. There are

§2.6.4 – Other Domains

And *mutatis mutandis*. There are good reasons for thinking that truth is relative, and there are good reasons for thinking that truth is an unplugged monadic property. Truth variabilism is the way to hold both theses. There are good reasons for believing that shape is relative (to time and world, for example), and there are good reasons for believing that shapes are unplugged monadic properties. Variabilism about shape is the way to hold both theses. In general, whenever we have good reasons for believing that some apparently n -ary predicables are relative to a parameter, *and* we have good reasons for believing that the apparently n -ary predicables are in fact unplugged n -ary predicables, variabilism deserves serious consideration; for variabilism is the way to hold both theses.

three main differences. (1) I draw a clear line between concepts and properties, and Egan does not. I think that some of Egan's claims are not about properties all, but about concepts (understood as the constituents of propositions). (2) Egan's theory of colors is decidedly anti-realist, whereas mine is not. (3) Egan begins from with a possible worlds framework and the assumption that actuality is not relative. He then reasons that since the extensions of colors vary across perceivers, colors must not be properties but 'centering features'. Thus, for Egan, a mere difference in the distribution of colors among objects does not make a difference to which world is actual; it makes a difference only to where the 'center' of the actual world is. But I regard this conclusion as a *reductio*. I reason the opposite direction – colors have extensions that vary across perceivers, and a mere difference in the distribution of colors makes for a difference in which world is actual, so actuality is relative. For a view that is similar to Egan's, see Brogaard (2009).

§2.7 – A Coda on Instantiation

This essay is a defense of two theses of compatibility. Up to this point, I have defended the first. It is widely believed that relativism about some apparently n -ary predicable F is incompatible with F being an unplugged n -ary predicable. Why are relativity and n -ary-ness thought to be incompatible? The short answer is that philosophers conflate relativism with relationalism. When we distinguish relationalism and variabilism, we see that relativity and n -ary-ness are compatible. An apparently n -ary predicable can be both an unplugged n -ary predicable and relative to a parameter.

In this final section, I defend the second thesis of compatibility. It is widely believed that relativism about some predicable F is incompatible with objects being F *simpliciter*. In other words, relativity and **simplicity** are thought to be incompatible. Here are two representative quotations. Michael Rea:

According to [relativism about shape], there are no temporary properties which an object has *simpliciter*; there are only those which it *has-at- t_1* or has *tly*, for some time t .⁴¹

David Velleman:

According to moral relativism, saying that an action is wrong is like saying someone is tall, a claim that is elliptical unless indexed to a reference class, since someone who is tall for an Mbuti may not be tall for a Kikuyu and it make no

⁴¹ Rea (1998, 245). Rea is here paraphrasing Merricks (1994).

sense to ask whether he is tall *simpliciter*. Similarly, says relativism, it makes no sense to ask whether an action or practice is wrong *simpliciter*. Claims of wrongness must be about wrongness-for-members-of- x , where x ranges over different cultures or societies....⁴²

Why are relativity and simplicity thought to be incompatible? The short answer, again, is that philosophers conflate relativism with relationalism.

To have a predicable *simpliciter* is to stand in the unplugged dyadic instantiation relation to it.⁴³ Take the simplest case. Let F be an unplugged monadic property. What is it to be F *simpliciter*? It is a double accomplishment of simplicity; to be F *simpliciter* is to stand in the unplugged dyadic instantiation relation to the unplugged monadic property *being F*. As we might put it: an object is F *simpliciter* iff the object is_{simply} F _{simply}.

To see that we can reconcile relativity with simplicity, let us focus on the case of shape and time. Suppose that shape is relative to time. There are three relativistic positions that we could adopt.

(1) Relationalism. If we are relationalists about shape, then we do away with the unplugged monadic shape properties, and replace them by dyadic shape relations and plugged monadic shape properties. Suppose that O is bent at t_1 , and straight at t_2 . If we are relationalists about shape, then O , at t_1 , is bent, but not bent *simpliciter*. O stands in the unplugged dyadic instantiation relation to a shape property, but not to an unplugged

⁴² Velleman (2013, 1).

⁴³ See Brower (2011, 6), Lewis (2002, 5), Merricks (1994, 170), and Eddon (2010, 609).

monadic shape property. As we might put it: O is_{simply} bent, but it not the case that O is_{simply} bent_{simply}.

Suppose that we adopt variabilism instead. If a predicable has an extension that varies across a parameter, then instantiation is relative to that parameter. Thus, if *being bent* has an extension that varies across time, then instantiation is relative to time.

Whenever a predicable is relative to a parameter, we face the choice between relationalism and variabilism: Should we be relationalists or variabilists about instantiation?

(2) Single variabilism. Suppose that we are variabilists about shape and relationalists about instantiation. If we are relationalists about instantiation, then we do away with the unplugged dyadic instantiation relation, and replace it by (in the simplest case) an unplugged triadic instantiation relation and a large family of plugged dyadic instantiation relations. If we are relationalists about instantiation, then O , at t_1 , is bent, but not bent *simpliciter*. O instantiates the unplugged monadic shape property *being bent*, but O does not stand in the unplugged dyadic instantiation relation to *being bent*. As we might put it: O is bent_{simply}, but it is not the case that O is_{simply} bent_{simply}.

(3) Double variabilism. The view that has gone unnoticed is **double variabilism**. We can be variabilists about shape *and* about instantiation. According to double variabilism, O , at t_1 , is bent, and bent *simpliciter*. O stands in the unplugged dyadic instantiation relation to the unplugged monadic property *being bent*. As we might put it: O is_{simply} bent_{simply}.

The same goes for other cases. Moral relativism is compatible with actions being right or wrong *simpliciter*. Truth relativism is compatible with propositions being true or false *simpliciter*. Relativity and simplicity are compatible.

There is something elegant about this result. We reconcile relativity with n -ary-ness with one application of the relationalism/variabilism distinction, and we reconcile relativity with simplicity with two applications of the relationalism/variabilism distinction.

Now, double variabilism takes some getting used to. We are accustomed to thinking that the world must have some absolutist perch from which all of the facts can be seen together. If double variabilism is true, then there is no such absolutist perch. It is, so to put it, relativity all the way. Relative to one index on the parameter, an object stands in the unplugged dyadic instantiation relation to an unplugged property, and relative to another index on the parameter, the selfsame object does not stand in the selfsame unplugged dyadic instantiation relation to the selfsame unplugged property.

But there is an interesting point to be made here. Absolutists and double variabilists agree about the basic ontological ingredients. They agree, to put the point in deistic terms, that God makes the world by taking an object and an unplugged property and gluing them together with the unplugged dyadic instantiation relation. In this way, the disagreement between absolutists and double variabilists is especially pure. Absolutists and relationalists disagree about the ontology – they disagree about whether the object has a plugged or an unplugged property. Absolutists and single variabilists disagree about the ontology – they disagree about whether the object and the unplugged property are glued together with a plugged or unplugged dyadic instantiation relation. But

absolutists and double variabilists agree about the ontology – they agree that the object and the unplugged property are glued with the unplugged dyadic instantiation relation.⁴⁴

The interesting point, then, is about separability. Absolutists and relativists often disagree about the (first-order) ontology, but the possibility of double variabilism shows that we can remove the (first-order) ontological differences between absolutists and relativists without destroying their disagreement. Absolutists and relativists can agree about the basic ontological ingredients and disagree about whether *those very ingredients* are absolute or relative.

§2.8 – Some Questions and Answers

I wrote this essay almost twelve months ago, and I have since had time to query it. A number of questions have arisen, so I decided to add this final section in order to raise a few of them.

Q: Suppose that we accept the distinction between relationalism and variabilism, and in so doing accept that a predicable can have an extension that varies across a parameter. Only some predicables have variable extensions, of course; many do not. Is

⁴⁴ What, then, do absolutists and double variabilists disagree about? Their disagreement is most apparent when we looked at the plugged properties. Moral relativists, who are double variabilists, think that one and the same action might instantiate *being morally right for Sally* and *being morally wrong for David*. Moral absolutists disagree; they maintain that anything that instantiates *being morally right for Sally* also instantiates *being morally right for David*. Note that whether an action is right or wrong for Sally depends on two factors: which actions are right and wrong relative to which moral codes, and which people *belong* (see fn 16) to which moral codes.

there any explanation for why *these* predicables have variable extensions, whereas *those* do not? Also, is there any explanation for why a given predicable has an extension that varies across *this*, but not *that* parameter? For example, if colors have extensions that vary across types of perceivers, then what it is about the colors that explains why they (unlike shapes) have extensions that vary across types of perceivers?

A: This question raises an issue about which I have so far been silent. In this essay, I say much about what properties and relations are like, but I say almost nothing about why objects have the properties and relations that they have. To address the question of why a given predicable does or does not have an extension that varies across a parameter, we must first ask what it takes to instantiate the predicable.

Let me start with a distinction between basic and non-basic predicables. Sometimes an object instantiates a predicable in virtue of instantiating other predicables. A man has the property *being a bachelor*, for example, in virtue of having the properties of *being male* and *being unmarried*. These properties and relations are therefore **non-basic**. By contrast, some properties and relations are **basic**: objects instantiate them, but not in virtue of instantiating other properties and relations. Perhaps mass and charge are basic.

I believe that even basic properties and relations might have variable extensions. Suppose that the extension of simultaneity varies across frames of reference, as variabilists about simultaneity maintain. There need be no explanation for why this is so. It may be a basic fact. Perhaps it simply lies in the nature of space and time that simultaneity is an unplugged dyadic relation that has an extension that varies across

frames of reference.⁴⁵ If there can be basic predicables with variable extensions, then there is not always an explanation for why a given predicable does or does not have a variable extension.

That being said, many of the most interesting potential cases of variabilism – shapes, colors, values, etc. – involve non-basic predicables. In such cases, there are explanations both for why an object instantiates the predicables and for why the extension of the predicable varies across the parameters it does. I want to consider two cases – first the case of shape, and second the case of color. A pattern emerges.

Imagine a Newtonian world, and consider the variabilist's view, on which shape properties have extensions that vary across time. I am bent at t_1 , straight at t_2 ; and as my shape changes I gain and lose unplugged monadic shape properties. Is there an explanation for why shape properties have extensions that vary across time? – Yes; and the explanation has two parts. First, there is a fact about the nature of the unplugged monadic shape properties themselves. An object instantiates an unplugged shape property, e.g. *being bent*, by virtue of the spatiotemporal relations among the object's parts.⁴⁶ Second, there is the fact that (if objects and their parts endure, as we are

⁴⁵ Of course, it might not be a basic fact. It might not be *basic* – perhaps there is some explanation for why the extension of simultaneity varies across frames of reference. And it might not be a *fact* – as I say in the body of the essay, I think that there is reason to prefer relationalism about simultaneity to variabilism

⁴⁶ What about extended simples? Could an extended simple change its shape over time? Perhaps; and if so, then we will have to modify our conception of shape properties. We will no longer say that an object has the property of *being bent* by virtue of the spatiotemporal relations among its parts;

supposing), then the spatiotemporal relations among the parts are relative to time. Thus we explain the extensional variation: the bent objects are all and only those objects whose parts stand in certain spatiotemporal *R*, and it is a time-relative matter as to which objects have parts that stand in *R*.

Notice that this explains both why shape properties *do* have extensions that vary across time and also why shape properties *do not* have extensions that vary across space or types of perceivers. The spatiotemporal relations among an object's parts are relative to time, but not relative to either space or types of perceivers.

Now consider the case of colors, which I think is especially interesting. Suppose that an object instantiates a particular determinate color property. In virtue of what is this so? What does it take to instantiate a particular color property? As it turns out, this is a highly controversial question in the philosophy of colors, and there are a variety of competing theories. Strictly speaking, color variabilism is neutral between the competing theories; we can couple color variabilism with any of a variety of theories about *why* objects instantiate the color properties that they do. But, for the purposes of illustration, let us plump for a popular and familiar theory. According to a **looks-based** theory of color, an object is a particular color (say, teal) in virtue of looking to be that color.⁴⁷

rather, we will say that an object has the property of *being bent* by virtue of the (quasi-) spatiotemporal relations among its constituting parts or stuff.

⁴⁷ There are many ways to tweak this theory. Perhaps we want to appeal not to actual looks of things but to their potential looks. We would thus be lead to a dispositional theory of color, according to which being a particular shade of color is a matter of being disposed to looks that way. Some think that any sort of looks-based theory of color is viciously circular and therefore a non-starter. I disagree, but this is not the place to try to rebut those charges of circularity.

A color variabilist, such as myself, thinks that the extensions of color properties vary across types of perceivers. The explanation for the extensional variation again proceeds in two steps. It falls out of the looks-based theory of colors that an object is a color property *C* in virtue of looking to be *C*. The color variabilist then maintains that what color an object looks to be is a type of perceiver-relative matter. Thus we explain the extensional variation: the teal objects are all and only those objects that look to be teal, and it is a type of perceiver-relative matter as to which objects look to be teal. (The extension of colors also varies across time, of course, because it is a time-relative matter as to what color objects looks to be. My car, when painted red, looks to be red, and later, when painted blue, looks to be blue.)

We can thus explain why color properties have extensions that vary across types of perceivers, whereas shape properties do not. The instantiation of color properties is determined by the looks of things, the instantiation of shape properties is determined by the spatiotemporal relations among things, and looks are relative to types of perceivers whereas spatiotemporal relations are not.

Q: You claim that this essay is about the nature of relativity, but then you focus on the relativity of predicables to parameters. Why think that all relativity is relativity of predicables to parameters? Here is a hard case: ontological relativity.

Second Answer: In many of the familiar examples, relativity is relativity of predicables to parameters. A moral relativist, or an epistemic relativist, or an aesthetic relativist is someone who argues that certain predicables are relative to certain parameters. The case of ontological relativity is tricky, though. I am not sure whether we

can understand ontological relativity as relativity of predicables to parameters, but what follows is my best attempt to do so.

To make the objection more specific, let us consider relativism about composition: the thesis that whether composite objects exist is relative to one's preferred ontological point of view. There is no absolute fact of the matter about whether there are composite objects: relative to the compositional **universalist's** point of view, there are composite objects, and relative to the compositional **nihilist's** point of view, there are not.

An initial question arises. Is existence a property? 'Existence' is clearly a linguistic predicate. (Consider the sentence, 'Reindeer exist, but Santa Claus does not.')

Much has been written about whether existence is a logical predicate.⁴⁸ Less, though, has been written about whether existence is a property. As I see the dialectical situation, whether existence is a property depends on what properties are. (The question of what properties are is one of the big unanswered question that this dissertation raises but fails to answer.) On one conception of properties, *F*-ness is an item that objects have that makes them *F*. There is clearly no property of existence in this sense, however; for it not coherent to say that there is an item that objects have that makes them exist. Existence must precede instantiation, as it were. On another conception of properties, *F*-ness is an item that objects have in virtue of being *F*. It is hard to see how, on this conception of properties, a property of existence might be controversial. After all, the property is not doing any work in explaining the existence of its bearers. On yet a third conception of properties, *F*-ness just is (in some yet-to-be-specified sense) an object's being *F*. Again,

⁴⁸ See Kant (1929), Nelson (2012), and Russell (1903), (1904).

on this third conception of properties, it is hard to see how we might object to a property of existence. But enough about various conceptions of properties. The bottom line is this: if existence is *not* a property, then clearly ontological relativity cannot be understood as relativity of predicables to parameters.

So, going forward, if only for the sake of argument, let us grant that there is a property of existence. Can we then make sense of ontological relativity on the same model that we have here made sense of moral relativity and aesthetic relativity?

It is clear to me that a relationalist understanding of ontological relativity is inadequate. On a relationalist conception of ontological relativity, there is no such thing as the unplugged monadic property *being existent*. Rather, there are many plugged existence(-like) properties, e.g., *being existence relative to one value of a parameter*, *being existent relative to another value of the parameter*, The ontological relativist, thusly construed, claims that certain objects have some but not all of these plugged existence-like properties. But such a view clearly fails to capture the spirit of ontological relativism, because each of these plugged existence-like properties admits of existential generalization. That is, if an object has the property *being existent relative to one value of the parameter* and lacks the property *being existent relative to another value on the parameter*, then the object exists, period. So one cannot replace *being existent* with many relativized existence (-like) properties and thereby achieve any sort of ontological relativity.

On a variabilist conception of ontological relativity, the property *being existent* has an extension that varies across certain parameters. We must take care in stating the ontological relativist's view. The ontological relativist does not claim that, among the

objects, it is a relative matter as to which instantiate the property *being existent*. That view is Meinong's.⁴⁹ It is the view that there are non-existent objects – namely, those objects that (relative to a value on the parameter) lack the property *being existent*. An ontological relativist does not (or anyway need not) believe in non-existent objects. Rather, the ontological relativist claims that all objects have the property *being existent*, but that it is a relative matter as to which objects there are. The task for making sense of ontological relativity in a variabilist sort of way is making sense of how *being existent* might have a variable extension without there being objects that lack the property.

I think we can make sense of how the property *being existent* might have a variable extension without countenancing non-existent objects. The key, as I see it, is to take our cue from actualists. Many of us believe that it is a contingent matter as to what exists. That is, many of us believe two things: (a) that the extension of *being existent* varies across worlds, and (b) that merely possible objects do not exist. We believe that it makes perfect sense to say that there are possible objects, which do not exist, but which exist relative to certain possible worlds. (It is a matter of some debate as to how exactly we should reconcile (a) and (b), but it certainly seems like it should be doable.⁵⁰)

If (a) and (b) are consistent, then we can simply borrow the story about contingent non-existent and use it as our explanation for ontological relativity. We can understand the relativist-nihilist in a modal way. The relativist-nihilist says, “There are no composite objects, and composite objects exist relative to the universalist point of view.” I say that we should understand the relativist-nihilist as making something very much like a modal

⁴⁹ Meinong (1904).

⁵⁰ See Adams (1974), Fine (2003), Forbes (1985), Lewis (1986), and Stalnaker (1975).

claim: that there are no composite objects, but that composite objects are possible.

(Notice that we are lead again to relativism about actuality.)

We are thus lead to two conclusions, one of which is doubly qualified. The first conclusion: ontological relativity cannot be understood in a relationalistic way. The second conclusion: if we countenance a property of existence and if it makes sense to say that there are possible objects that do not exist, then we can make sense of ontological relativity in a variabilistic way.

Q: You broach relativism about actuality. What is your preferred way of understanding what relativism about actuality is?

A: Think of a **world** as a domain of objects together with a full and complete specification of which objects instantiate which properties and relations. One way to arrive at such a conception of worlds is to adopt a particular form of **linguistic ersatzism**. We focus our attention on **special** propositions, i.e. propositions that predicate of one more object some property or relation (propositions of the form: $R\langle a, \dots \rangle$). A world is then a maximal consistent set of special propositions; for every special proposition, a world contains either it or its negation.⁵¹

Given this sort of linguistic ersatzism, we can define possibility in terms of possible truth, and actuality in terms of truth. A world is **possible** iff it is metaphysically possible for the conjunction of the propositions in the set to be true.⁵² Notice that many

⁵¹ See Adams (1974) and Kment (2006).

⁵² As stated, this is a primitivism about metaphysical possibility. But it is compatible with various sorts of reductions of metaphysical possibility. One can accept this definition and then go on to reduce metaphysical possibility to essence, for example, or to various linguistic conventions.

worlds are impossible. Any world that contains the proposition *that the number four is prime* is impossible, for example, as is any world that contains both the proposition *that O is scarlet* and the proposition *that it is not the case that O is red*. A world is **actual** iff all of its members are true.

If bivalence holds, then actuality is guaranteed to be unique. There is one, and only one, actual world. But the uniqueness of actuality does not imply that actuality is absolute. If different special propositions are true relative to different individuals, then different worlds are actual relative to different individuals.⁵³ This is my preferred way of characterizing relativism about actuality: relativism about actuality is the thesis that different special propositions are (or could be) true relative to different individuals, even if those individuals are both parts of the same universe.

Q: Is there any work that relativism about actuality can do?

A: There are a variety of potential applications for relativism about actuality. I argued above that we can reconcile relativity and simplicity by adopting relativism about actuality. John Bigelow argues that we need to be relativists about actuality in order to make sense of the flow of time.⁵⁴ (Kit Fine can be read as extending Bigelow's idea to spacetime.⁵⁵) One reason that I am excited about relativism about actuality is that it allows to formulate an interesting and attractive form of non-reductive materialism. (*Let me forewarn the reader: What follows is very sketchy and badly incomplete. I am going to try to gesture towards the sort of non-reductive materialism that I am interested in*

⁵³ I do not think that truth relativism by itself implies relativism about actuality.

⁵⁴ Bigelow (1991).

⁵⁵ Fine (2005a), (2006).

exploring, but I am acutely aware that the theory, as it stands, is incomplete and inadequate. I gesture towards the theory only to help illustrate one potential application of relativism about actuality.)

Consider the case of colors, which I think is the purest case. (Values are another interesting case.) Suppose that color variabilism is true. Color variabilism together with the assumption that instantiation is an unplugged dyadic relation implies that relativism about actuality is true: different worlds are actual relative to different types of perceivers. Say that a world w is **inhabited by** an individual S iff w is actual relative to S . Say that a world w is **inhabited** iff w is actual for some individual or other. Relativism about actuality is then the thesis that many worlds are (or could be) inhabited.

What is materialism? ‘Materialism’ is a classic example of semi-technical term. We have an intuitive sense of what materialism is, and we marshal various metaphors to get the idea across to the uninitiated. – *All God had to do in making the world is make the physical. There are no entities over and above the entities posited by physics. Etc.* – David Lewis says,

Roughly speaking, Materialism is the thesis that physics – something not too different from present-day physics, though presumably somewhat improved – is a comprehensive theory of the world, complete as well as correct. The world is as physics says it is, and there’s no more to say.⁵⁶

⁵⁶ Lewis (1983, 361).

Materialism is most commonly characterized in terms of supervenience. A supervenience thesis is a denial of independent variation. It makes sense, *prima facie*, that materialism should be a thesis of supervenience. After all, if materialism is true and physics is a comprehensive theory of the world, then presumably once we know the whole truth about physics we know the whole truth about everything. Take the colors, in particular: if materialism is true, it seems, then it ought to be *impossible* for there to be any variation in the distribution of color properties without some variation in the distribution of physical properties.

Following Kim (1987) and Bennett and McLaughlin (2005), we can draw the familiar three-way distinction among kinds of supervenience.⁵⁷

- (1) *A*-properties **weakly supervene** on *B*-properties if and only if for any possible world *w* and any individual *x* and *y* in *w*, if *x* and *y* are *B*-indiscernible in *w*, then they are *A*-indiscernible in *w*.
- (2) *A*-properties **strongly supervene** on *B*-properties if and only if for any possible worlds *w*₁ and *w*₂ and any individuals *x* in *w*₁ and *y* in *w*₂, if *x* is *B*-discernible from *y* in *w*₂, then *x* in *w*₁ is *A*-indiscernible from *y* in *w*₂.
- (3) *A*-properties **globally supervene** on *B*-properties if and only if for any worlds *w*₁ and *w*₂, if *w*₁ and *w*₂ have exactly the same world-wide pattern of distribution of *B*-properties, then they have exactly the same world-wide patterns of distribution of *A*-properties.

⁵⁷ The following three definitions are quotations from Bennett and McLaughlin (2005).

When materialism is formulated in terms of supervenience, the relevant notion of supervenience is either strong or global.⁵⁸ David Lewis, for example, takes materialism to be a restricted thesis of global supervenience; he says that materialism is true at our world iff “Among worlds where no natural properties alien to our worlds are instantiated, no two differ without differing physically; any two worlds that are exactly alike physically are duplicates.”⁵⁹ Frank Jackson takes materialism to be a slightly different thesis of global supervenience; he says that materialism “is true at a possible world *w* iff any world which is a minimal physical duplicate of *w* is a duplicate *simpliciter*.”⁶⁰

Opponents of supervenience-based formulations of materialism have attacked the sufficiency claim, insisting that the proposed supervenience thesis can be true despite the falsity of materialism.⁶¹ Their complaints are the familiar ones. – *How do we rule out epiphenomenal ectoplasm? How do we rule out emergence? What are we to do in the face of a revisionary thesis about modality? If necessitarianism is true and there is no contingency, then everything globally supervenes on the physical, trivially; but this says nothing about whether physics is a comprehensive theory of the world. Etc.* – As it

⁵⁸ There is good reason for this. Suppose that the *A*-properties only weakly supervene on the *B*-properties. This is compatible with there being a *sui generis* law that connects the *A*-properties with the *B*-properties. If, in addition to the distribution of the *B*-properties, we need some bridge law from the *B*-properties to the *A*-properties to get the distribution of *A*-properties, then clearly there is more to the world than just the *B*-properties and their distribution.

⁵⁹ Lewis (1983, 364).

⁶⁰ Jackson (1998, 12).

⁶¹ See Hawthorne (2002), Horgan (1983), Leuenberger (2008), Jackson (1998), and Wilson (2005), among others.

happens, philosophers who attack the sufficiency claim nevertheless accept the necessity claim, i.e., they believe that the truth of materialism is true only if the proposed supervenience thesis holds.

I think that the various proposed supervenience theses are neither necessary *nor sufficient* for the truth of materialism. I say that materialism could be true, even if the proposed strong or global supervenience thesis is false. The key to severing the connection between materialism and strong or global supervenience is to invoke relativism about actuality.

Consider the many inhabited worlds. These worlds are alike in their world-wide distribution of physical properties. That is, for any n -ary physical property P , the proposition $P\langle O_1, O_2, \dots, O_n \rangle$ is a member of all or none of the inhabited worlds. But the inhabited worlds are chromatically different; they differ in their respective distributions of color properties. In one inhabited world, some colored object, O , has the property *being aqua* and lacks the property *being plum*, and in a different inhabited world, O has the property *being plum* and lacks the property *being aqua*. It therefore follows that the color properties neither strongly nor globally supervene on the physical, even if we restrict our attention to worlds where no alien properties are instantiated, (indeed, even if we restricted our attention to inhabited worlds). There are worlds that are physically indiscernible from the actual world that differ from the actual world in their world-wide distribution of color properties.

So, if the truth of materialism implies the truth of some strong or global supervenience thesis, then color variabilism is incompatible with materialism. But, as I

said above, I am inclined to reject the link between materialism and supervenience.

Indeed, I think that both color variabilism and materialism are true.

Why think that color variabilism is compatible with materialism? (Here the theory gets a sketchy, but I will do my best to gesture in its direction.) Suppose again that we plump for a looks-based theory of colors, on which an object has some color property *C* and in virtue of looking to be *C*. I believe that color variabilism is compatible with materialism because I believe that it might be a wholly physical matter as to what color an object looks to be. Once you fix the type of perceiver, the looks-facts – i.e., the facts about what colors objects look to be – are wholly settled by the objects' physical properties together with the physical properties of the relevant viewing circumstance. And, it might be a wholly physical matter as to what type of perceiver she is. Take you – you are an *S*₁, let us suppose, and you are an *S*₁ by virtue of having a brain like your, eyes like yours, and perhaps also by being a member of a community such as your own. But notice that all of these are physical facts.⁶² The physical facts settle that you are an *S*₁, and given that you are an *S*₁, the physical facts settle what color each object is.

⁶² A delicate question: Is the fact that *you*, <insert your name here>, are an *S*₁ a physical fact?

Some think so; some think not. We do not need to take a stand, however, because the delicate question can be finessed. Suppose you think that physical facts can be individualistic. Then I see no reason for objecting to the claim the fact that *you* are an *S*₁ is a physical fact. Suppose you think that physical facts must be qualitative. There are then two options. If anti-haecceitism, then the qualitative facts determine the individualistic facts; so the fact that *you* are an *S*₁ is a physical fact or is anyway wholly grounded in physical facts. If haecceitism is true, on the other hand, then the fact that *you* are an *S*₁ might not be a physical fact, and might not be wholly grounded in physical facts, either. But this is no problem: if physical facts are perforce qualitative *and*

Thus my objection to the link between materialism and supervenience. I think that we have misunderstood the modal profile of materialism, being too focused on a special case. Materialists who take materialism to imply a thesis of global supervenience maintain that the world-wide distribution of physical properties settles which world is actual. If color variabilism is true, then the world-wide distribution physical properties does not settle which world is actual. But the world-wide distribution of physical properties does something analogous – it settles which worlds are inhabited, and by whom. And I suggest that *this* is the proper modal profile of materialism. The truth of materialism does not require that the physical facts settle which world is actual; it requires only that the physical facts settle which worlds are inhabited, and by whom. In the special case that all individuals inhabit the same world, the physical facts then settle which world is actual – and thus we get global supervenience. But this indeed is a special case.

It should be obvious why this sort of theory of colors is non-reductive. If color variabilism is true, then color properties are neither identical to nor necessarily co-extensive with any physical properties or Boolean combinations thereof.

Many challenging questions remain. The question that I am presently working on is this. Although I have been talking about the modal profile of materialism, I am inclined to think that modal profiles are a derivative metaphysical tool. Ultimately we want a

individualistic facts are not wholly grounded in qualitative facts, then the letter of materialism is false. We should abandon materialism, and turn our attention instead to **materialism+**: the view that the whole of the world is determined by the physical facts and the individualistic facts taken together.

theory, not of modal co-variation, but of metaphysical explanation. That is, we want a theory of what grounds instances of color. But here we face a familiar challenge. The standard conception of grounding rules out the sort of theory that we want to formulate. According to the standard theory of grounding, if some facts Γ wholly grounds the fact that Φ , then Γ necessitates that Φ . That is, in any world in which the Γ facts obtain, so too does the fact that Φ . But we want to reject this claim. We think that color facts are ultimately wholly grounded in physical facts, and yet we think that the physical facts do not necessitate the color facts. So we need to revisit the notion of grounding.

I will leave off there. I have some ideas about how relativists should conceive of grounding, but those ideas are intolerably sketchy. In any case, *(i)* there are the makings of an interesting form of non-reductive materialism in this vicinity, and *(ii)* relativism about actuality helps us to articulate it.⁶³

⁶³ Parts of this paper were presented at Princeton Dissertation Seminar 2011 and NYU Metaphysics Bootcamp 2011. Thank you to those audiences for valuable feedback. Also, a special thank you to David Barnett, George Bealer, Shamik Dasgupta, Nathan Gadd, John Hawthorne, Robert Hirsch, Andrew Huddleston, Boris Kment, Errol Lord, Barry Maguire, Michaela McSweeney, Joe Rachiele, and Gideon Rosen for helpful comments on drafts along the way.

Chapter 3 –

How to Disagree Selectively

§3.1 – Introduction

There are many expressions about which it is controversial whether they are context-sensitive. These **contested expressions** include knowledge ascriptions ('knows'), predicates of taste ('tasty', 'delicious', 'cool'), color ascriptions ('red'), epistemic modals ('might', 'must', 'probably'), deontic modals ('ought', 'may'), and indicative conditionals. A dispute about whether an expression is context-sensitive is a dispute

between a contextualist and an invariantist. A **contextualist** about an expression claims that the expression is context-sensitive, and an **invariantist** denies this.⁶⁴

Although the dispute between contextualists and invariantists is about sub-sentential expressions, it is often helpful to cast the dispute at the sentential level. Let a **contested sentence** be a sentence that contains one contested expression but no other potentially context-sensitive expressions.⁶⁵ The dispute between contextualists and invariantists then centers around the following question: Do utterances of a contested sentence express the same proposition irrespective of the context of utterance? Invariantists say yes; contextualists say no. Invariantists think that there is more cross-context synonymy,⁶⁶ and contextualists think that there is less.

One of the main arguments against contextualism, and in favor of invariantism, is the **argument from lost disagreement**.⁶⁷ The basic idea behind the argument is to use claims of cross-context disagreement to establish claims of cross-context synonymy. If agents in different contexts utter the same contested sentence (plus or minus a negation)

⁶⁴ In setting up the dispute between contextualists and invariantists, I follow Ross and Schroeder (ms, §1). Ross and Schroeder focus on ‘epistemic’ expressions and ‘epistemic’ sentences, i.e., epistemic modals, deontic modals, and indicative conditionals. But as they note (see their fn. 5), a similar dialectic arises for the other contested expressions.

⁶⁵ If context-sensitivity is sufficiently widespread, then there may not be enough contested sentence to do the work.

⁶⁶ Two utterances are ‘cross-context synonymous’ when (i) the utterances are made in different contexts, and (ii) the utterances express the same proposition.

⁶⁷ So-named by MacFarlane (2006).

and thereby disagree, then it seems that there must be cross-context synonymy (plus or minus a negation) between the two utterances.

Take for example the contested sentence w : ‘Water might be an element.’⁶⁸ According to contextualism about ‘might’, utterances of w express different propositions in different contexts. When Thales, in c_1 , utters w , he affirms the proposition *that it is consistent with the evidence in c_1 that water is an element*.⁶⁹ When Cavendish, upon discovering the composition of water, in c_2 , utters $\sim w$, he denies the proposition *that it is consistent with the evidence in c_2 that water is an element*. Contextualism thus predicts that Thales and Cavendish do not disagree; for the proposition that Thales affirms is distinct from, and consistent with, the proposition that Cavendish denies.⁷⁰ By contrast, invariantism seems to predict that Thales and Cavendish do disagree; for if invariantism is true, then Thales affirms the very proposition that Cavendish denies. So the fact that Thales and Cavendish *seem* to disagree tells against contextualism and in favor of

⁶⁸ I borrow this example from Ross and Schroeder (ms).

⁶⁹ Here I use a particularly simple contextualism about ‘might’ to illustrate the point. But note that different forms of contextualism disagree about what Thales, in c_1 , expresses by uttering w .

⁷⁰ There are forms of contextualism on which Thales affirms the selfsame proposition that Cavendish denies. But every contextualism about ‘might’ implies that there are some contexts, c_x and c_y , such that an utterance of w in c_x expresses a different proposition than does an utterance of w in c_y .

invariantism.⁷¹ This is called the argument from lost disagreement because certain cross-context disagreements go missing under contextualism.

In their recent paper ‘Reversibility or Disagreement’, Jacob Ross and Mark Schroeder attack both invariantism and the argument from lost disagreement. Ross and Schroeder draw attention to a phenomenon that they call *reversibility*. (More on what reversibility is below.) According to Ross and Schroeder, invariantists who motivate their view by employing the argument from lost disagreement face a destructive dilemma. Either such invariantists are unable to account for reversibility (in which case their view stands refuted), or they are unable to account for the cross-context disagreements that go missing under contextualism (in which case their view stands unmotivated). Reversibility or disagreement – according to Ross and Schroeder, invariantists can account for one or the other, but not for both.

The aim of this essay is to find a path between the horns of Ross and Schroeder’s dilemma. Invariantists who accept a standard conception of disagreement are stuck with the destructive dilemma, I think, so the apposite question is whether invariantism can be saved by a non-standard conception of disagreement. And I think so. In this essay, I put forward a non-standard conception of disagreement, founded upon a non-standard conception of belief. Invariantists who accept this non-standard conception of disagreement have nothing to fear in Ross and Schroeder’s dilemma, for they can account for reversibility *and* for the disagreements that go missing under contextualism.

⁷¹ As we will see, the case of Thales and Cavendish is under-described. They might disagree, but they might. But the dialectic remains the same whether they disagree or not, for it is possible for an agent in c_1 to utter w , an agent in c_2 to utter $\sim w$, and for the two agents to thereby disagree.

§3.2 – The Disagreement Thesis

The disagreement between Thales and Cavendish is the sort of cross-context disagreement that goes missing under contextualism. How do invariantists account for cross-context disagreements?

I take this to be the standard invariantist story.

Remember the set-up. Thales sincerely utters w , Cavendish sincerely utters $\sim w$, and Thales and Cavendish seem to thereby disagree. According to invariantism about ‘might’, utterances of w express the same proposition irrespective of the context of utterance. To keep things simple, suppose that utterances of w express the proposition *that water might be an element*, and that utterances of $\sim w$ express the proposition *that it is not the case that water might be an element*. We take sincere utterances to be transparent expressions of belief. So, Thales, in sincerely uttering w , expresses his belief that water might be an element, and Cavendish, in sincerely uttering $\sim w$, expresses his belief that it is not the case that water might be an element. Say that an agent **disbelieves** that p just if the agent believes that $\sim p$. Then, according to invariantism, Thales believes the very proposition that Cavendish disbelieves. And it is plausible to think that when an agent believes the very proposition that another agent disbelieves, the two agents thereby disagree.

There are three important steps in this explanation.

- (1) **Semantic invariance:** Utterances of the contested sentence (in this case, w) express the same proposition irrespective of the context of utterance, and likewise for the negation of the contested sentence.
- (2) **Sincerity-belief link:** An agent sincerely utters a sentence only if she believes the proposition expressed by the sentence she utters.⁷²
- (3) **Belief/disbelief:** Any agent who believes that p disagrees with any agent who disbelieves that p .

All three steps are needed. Semantic invariance fixes the semantic facts, but the semantic facts by themselves make no predictions about disagreement. Whether agents disagree is a matter of what propositional attitudes they have. We therefore need to connect the semantic facts to propositional attitudes, and this is precisely what the sincerity-belief link does. Finally, we need a theory about which patterns of propositional attitudes constitute disagreement, and belief/disbelief represents a plausible sufficient condition.

A striking fact about (1)-(3) is that they generalize. Thales expresses a belief by sincerely uttering w , but any agent in any context who sincerely utters w expresses the same belief. Cavendish expresses a belief by sincerely uttering $\sim w$, but any agent in any context who sincerely utters $\sim w$ expresses the same belief. So, if Thales and Cavendish disagree by virtue of the beliefs that they express, then *any* agent who sincerely utters w disagrees with *any* agent who sincerely utters $\sim w$. In other words, (1)-(3) imply what

⁷² If there are counterexamples to the sincerity-belief link, then we should introduce a technical notion of ‘sincerity’ on which the sincerity-belief link is true.

Ross and Schroeder call the **disagreement thesis**: Any agent in any context who sincerely utters the contested sentence disagrees with any agent in any context who sincerely utters the negation of the contested sentence.⁷³

The disagreement thesis does a good job of explaining the case of Thales and Cavendish. It does a good job of explaining other cases, too. Suppose that Neothales is a contemporary of Cavendish. At a conference, presenting his work, Cavendish says, “My results establish that the longstanding belief, that water might be an element, is false. Water is a compound.” Neothales, unconvinced, turns to his colleagues, and says, “I disagree. Water might be an element, never mind Cavendish and his so-called results.” It seems that Neothales and Cavendish disagree *for exactly the same reason* that Thales and Cavendish disagree, which is exactly what you expect if the disagreement thesis were true.

§3.3 – Reversibility and Correct Contrariness

But the disagreement thesis is not true. Ross and Schroeder argue that there are counterexamples to the disagreement thesis, and I find their arguments entirely convincing.

The central component in Ross and Schroeder’s argument is the phenomenon of reversibility. A sentence is **reversible** just if a fully rational agent can sincerely utter it, even under ideal conditions, while correctly believing that she will later sincerely utter its

⁷³ Ross and Schroeder define the disagreement thesis in terms of epistemic sentences, but nothing is lost in the move to contested sentences more generally.

negation.⁷⁴ The simplest and least interesting cases of reversible sentences involve indexicals and demonstratives. Suzy, who is twelve years old, sincerely utters the sentence, ‘I am twelve years old,’ while correctly believing that 365 days later she will sincerely utter the sentence, ‘It is not the case that I am twelve years old.’ But there are more surprising, more interesting cases. As Ross and Schroeder point out, for just about any contested expression, there are contested sentences containing the expression that are reversible. Here are two examples.

Football: Audrey, who is fourteen, sincerely utters the sentence, ‘High school football players are dreamy,’ while correctly believing that in college she will sincerely utter the sentence, ‘It is not the case that high school football players are dreamy.’⁷⁵

The second example involves ‘might’.

Old News: Ankita is the anchorwoman for the *Morning News Hour*. As of this morning, it is unknown whether Axeworthy is the murderer, and so Ankita sincerely utters *m*: ‘Axeworthy might be, and might not be, the murderer.’ She knows, however, that in the afternoon the DNA test will be completed and its results announced, establishing whether Axeworthy is the murderer. Ankita also knows that the anchorman for the *Evening News Hour* is very sloppy, and she

⁷⁴ Ross and Schroeder (ms, §1.3)

⁷⁵ This unpublished example comes from a previous version of Ross and Schroeder’s paper.

expects that this evening he will sincerely utter *m*. And she correctly predicts that when she hears this, she will (rightly) exclaim: “Nonsense! It is not the case that Axeworthy might be, and might not be, the murderer.”⁷⁶

There is nothing odd or irrational about Ankita. The sentence, ‘Axeworthy might be, and might not be, the murderer’, is reversible, and any semantic theory that says otherwise, or leaves no room for reversibility, is thereby shown to be inadequate.

Reversibility, it should be noted, is an instance of a more general phenomenon. Reversibility is the intrapersonal case of what we might call **correct contrariness**.⁷⁷ There are also interpersonal cases. Consider a variation on *Old News*.

Old News and Death: As of this morning, it is unknown whether Axeworthy is the murderer, and so Ankita sincerely utters *m*: ‘Axeworthy might be, and might not be, the murderer.’ She knows, however, that in the afternoon the DNA test will be completed and its results announced, establishing whether Axeworthy is the murderer. Ankita knows that the anchorman for the *Evening News Hour* is very sloppy, and she expects that this evening he will sincerely utter *m*. Ankita

⁷⁶ This example comes from Ross and Schroeder. Note that I where I use the word ‘sincerely’, Ross and Schroeder use the word ‘assertively’. I am assuming that all utterances are assertive. I have also added the parenthetical ‘rightly’.

⁷⁷ Correct contrariness may be equivalent to what Ross and Schroeder label, ‘Apparent Faultless Disagreement.’ (See their §1.3). But ‘Apparent Faultless Disagreement’ is a particularly poor name for the phenomenon, since cases of correct contrariness are not (and often do not even appear to be) cases of disagreement.

will die before the DNA test results are announced, as she is aware. But Ankita predicts that when Bina, her punctilious co-anchor on the *Morning News Hour*, hears the sloppy anchorman sincerely utter *m*, Bina will (rightly) exclaim: “Nonsense! It is not the case that Axeworthy might be, and might not be, the murderer.”

What is important about *Old News* and *Old News and Death* is not that Ankita sincerely utters a sentence and later sincerely utters its negation; nothing turns on who is making the utterances. What is important is the deeper fact: that Ankita judges both that it is correct to sincerely utter a sentence and that later it will be correct to sincerely utter its negation.

Three facts about correct contrariness are especially important.

First, cases of correct contrariness are counterexamples to the disagreement thesis. In *Old News*, Ankita does not disagree with her later self. In *Old News and Death*, Ankita does not disagree with Bina.

Second, if invariantism is true, then cases of correct contrariness are counterexamples to belief/disbelief. If invariantism about ‘might’ is true, for example, then utterances of *m* express the same proposition (call it, p_m) irrespective of the context of utterance. In the morning Ankita sincerely utters *m*, and in the evening she sincerely utters $\sim m$. Hence, if invariantism about ‘might’ is true, then morning-Ankita believes that p_m , and evening-Ankita disbelieves that p_m . But the two temporal parts of Ankita do not disagree, so belief/disbelief is false.

Third, invariantists can account for correct contrariness only by maintaining that reversible sentences express relative propositions.⁷⁸ A proposition is **relative** just if its truth-value can vary from one context of evaluation to another; otherwise the proposition is **absolute**.⁷⁹ Suppose that Ankita knows that invariantism about ‘might’ is true. Then she knows that she currently believes that p_m and will later disbelieve that p_m . A fully rational agent can believe a proposition and believe that she will later disbelieve it only if (a) she believes that her future belief is afflicted by some epistemological defect⁸⁰ or (b) she believes that the truth-value of the proposition is different now than it will be when she disbelieves it. Ankita does not believe that her future belief is afflicted by some epistemological defect; this is precisely what the “even under ideal conditions” clause is the definition of ‘reversibility’ is supposed to say. So, if Ankita is fully rational (as *ex hypothesi* she is), then she must believe that p_m is a relative proposition, which is true relative to the context of evaluation that she currently occupies and false relative to the context of evaluation that she will occupy in the evening.

It is not surprising that invariantists must turn to relativism to account for correct contrariness. After all, invariantists intentionally narrow the gap between sentences and propositions. If m is a reversible sentence and utterances of m invariably expresses p_m ,

⁷⁸ This is a compressed version of the argument in Ross and Schroeder (ms, §2.1).

⁷⁹ A ‘relativist’ as Ross and Schroeder define it (ms, §1.1) is one who, in my terminology, believes that there are ‘relative’ propositions.

⁸⁰ What is an epistemological defect? Any of the motley factors that make one exempt from Bas van Fraassen’s (1984) Reflection Principle. Perhaps one thinks that one’s future self will be less-than-fully rational, or will have misleading evidence, or will lose evidence that is now available. For discussion, see Briggs (2009).

then it stands to reason that p_m would be reversible in an analogous sort of way. We could say that a proposition is reversible just if a fully rational agent can believe it, even under ideal conditions, while correctly believing that she will later disbelieve it. If invariantism is true, then reversibility is not just a sentential phenomenon. It is also a propositional phenomenon.

To summarize this section: if we want to be invariantists about a contested expression and we acknowledge that there are contested sentences containing the expression that are reversible (or more generally, admit of correct contrariness), then we must reject the disagreement thesis and we must maintain that the contested sentences express relative propositions.

§3.4 – The Need for a New Disagreement Thesis

What is the cost to invariantism of rejecting the disagreement thesis?

According to Ross and Schroeder, the cost is very high indeed. Ross and Schroeder say, “What is problematic about invariantism is not that the invariantist cannot reconcile” correct contrariness and the disagreement thesis “(since no one can do so) but rather that while her opponents can happily reject the disagreement thesis, the invariantist cannot easily do so without undermining much of the motivation for her view.”⁸¹ Here we encounter the aforementioned destructive dilemma. Invariantists must account for correct contrariness, since otherwise their view stands refuted. But, as Ross and Schroeder see it, the disagreement thesis is an indispensable part of the argument from lost disagreement – no disagreement thesis, no argument from lost disagreement. And

⁸¹ Ross and Schroeder (ms, §4.0).

since the argument from lost disagreement provides much of the motivation for invariantism, without the disagreement thesis invariantism stands unmotivated.

I see things differently. I agree that the disagreement thesis does important work in the argument from lost disagreement, and I agree that the disagreement thesis implies (wrongly) that there is disagreement in cases of correct contrariness. But I believe that a different conception of disagreement – a *new* disagreement thesis – can do the same work in the argument from lost disagreement while avoiding the implication that there is disagreement in cases of correct contrariness.

What work does the disagreement thesis do in the argument from lost disagreement? It does a bit of negative work and a bit of positive work.

On the negative side, the disagreement thesis delivers a crucial premise in the argument against contextualism. Suppose that a particular form of contextualism has been proposed. This contextualism predicts that an utterance of the contested sentence, *s*, expresses one proposition in *c*₁ and a different proposition in *c*₂. We can rebut this contextualism by identifying a cross-context disagreement that spans *c*₁ and *c*₂. We look for a case in which an agent in *c*₁ sincerely utters *s*, an agent in *c*₂ sincerely utters *~s*, and the agents seem to thereby disagree. But notice that we have rebutted only one form of contextualism. A new form might be proposed. According to the new form of contextualism, an utterance of *s* expresses the same proposition in *c*₁ and in *c*₂. Of course, this new form of contextualism is a form of *contextualism*, so it predicts that there are some contexts – *c*₃ and *c*₄ – such that an utterance of *s* expresses one proposition in *c*₃ and a different proposition in *c*₄. We can rebut this new form of contextualism by identifying a cross-context disagreement that spans *c*₃ and *c*₄. But then, in reply, a *third* form of

contextualism might be proposed. This back and forth can continue *ad infinitum*. But we invariantists think that we have an argument against contextualism in all of its myriad forms. Any contextualism that is substantively different from invariantism predicts that there are some contexts, c_x and c_y , such that an utterance of s expresses one proposition in c_x and a different proposition in c_y . We invariantists say that we can find a cross-context disagreement that spans any two contexts. Call this the **spanning premise**: No matter what form contextualism takes, we can find a cross-context disagreement (or a merely possible cross-context disagreement) that rebuts it. This is the negative work that the disagreement thesis does. If we want to run the argument from lost disagreement against contextualism, then the spanning premise must be true; i.e., it must be true that no matter what form contextualism takes, there is some cross-context disagreement or other that goes missing.

On the positive side, the disagreement thesis provides invariantists with the resources to account for the otherwise missing disagreements. Suppose that an agent in c_x utters s , that an agent in c_y utters $\sim s$, and that the agents seem to thereby disagree. Suppose further that this cross-context disagreement goes missing under the form of contextualism at hand. The positive work that the disagreement thesis does is to enable invariantists to say of this cross-context disagreement that it is, in fact, a disagreement.

We thus have three desiderata for the new disagreement thesis. Continuing the numbering from above, they are:

- (4) **Correct contrariness:** Invariantism together with the new disagreement thesis should not imply that there is disagreement in cases of correct contrariness.

- (5) **Spanning premise:** Invariantism together with the new disagreement should allow for cross-context disagreements that span any two contexts.
- (6) **Accountability:** Invariantism together with the new disagreement thesis should enable invariantism to account for the cross-context disagreements that go missing under contextualism.

To these three desiderata, I want to add a fourth.

We saw in the previous section that cases of correct contrariness are counterexamples to belief/disbelief. In the morning Ankita believes that p_m , in the evening Ankita disbelieves that p_m , but the two temporal parts of Ankita do not disagree. That there are counterexamples to belief/disbelief is surprising, for in many cases a belief and a disbelief of the same proposition suffice for disagreement. I believe that it will rain tomorrow, you disbelieve as much, and we thereby disagree about whether it will rain tomorrow. I believe that there is plutonium on Pluto, you disbelieve as much, and we thereby disagree about whether there is plutonium on Pluto. If we are going to reject belief/disbelief, then we must answer a pressing question: Why do some belief/disbelief pairs constitute disagreement, while others do not?

It is at this point in the dialectic that one encounters a **pragmatic** theory of disagreement. According to a pragmatic theory of disagreement (*contra* what I said above), disagreement is not always wholly a matter of propositional attitudes. Sometimes agents disagree partially in virtue of their assertions. It may be that A and B have the same propositional attitudes, but that A has made some assertions that B has not, and, consequently, while A and C disagree, B and C do not.

I can see some motivations for pragmatic theories of disagreement. (I will talk about one such in §3.8.) Nevertheless, I think invariantists should treat pragmatic theories of disagreement as options of last resort, for two reasons.

First, the leading pragmatic theories of disagreement are Andy Egan's and John MacFarlane's, and Ross and Schroeder have presented formidable (I think decisive) objections against these theories.⁸² Every extant pragmatic theory of disagreement suffers from false positives, predicting that agents disagree when in fact they do not.

Second, and more importantly, when it comes to ordinary disagreements, everyone agrees that certain patterns of propositional attitudes suffice for disagreement.⁸³ Proponents of pragmatic theories claim that assertion is a necessary ingredient for disagreement only for those disagreements that go missing under contextualism.⁸⁴ But, as an invariantist, I am discomfited by anything that makes the disagreements that go missing under contextualism special or different. The argument from lost disagreement attempts to show that there are disagreements (in a fully-fledged sense) that go missing under contextualism, and that therefore there are propositions (in a fully-fledged sense) that contextualism fails to countenance. The argument loses force if the disagreements

⁸² See Egan (2007) and (2010), and MacFarlane (2007), (2011), and (ms). See Ross and Schroeder (ms, §4) for extensive discussion and criticism.

⁸³ What are 'ordinary' disagreements? I have no technical definition in mind. Ordinary disagreements are clear-cut cases that are accounted for by all of the semantic theories in question.

⁸⁴ Strictly speaking, proponents of pragmatic theories of disagreement say that assertion is needed for disagreements about relative propositions; but the disagreements that go missing under contextualism are disagreements about relative propositions.

that go missing are special or different. After all, contextualists can always say of the (allegedly) missing disagreements that they are disagreement-*like* – that there is some lack of co-tenability between the beliefs; that both agents think that they are right; that both agents want to change the other’s mind; etc. The less the (allegedly) missing disagreements are like ordinary disagreements, the more the ‘disagreement-like’ response on behalf of contextualism seems adequate. The same point can be made at the propositional level. The fundamental claim of invariantism is that the contested sentence, s , expresses the same proposition, p_s , irrespective of the context of utterance. According to invariantism, what makes contextualism wrong is that contextualism does not countenance p_s as a proposition, and what shows that contextualism is wrong is that there can be cross-context disagreements about whether p_s . But agents can disagree about an ordinary proposition solely by virtue of the attitudes they take toward it. So the alleged proposition, p_s , is unlike ordinary propositions; it is special and different. But now we start to wonder why we should be so confident that p_s is a proposition, rather than merely proposition-*like*.⁸⁵ The less the (alleged) propositions that contextualism fails to countenance are like ordinary propositions, the less it seems a problem that contextualism fails to countenance them as propositions.

Invariantists, I think, should want more than the pragmatic theory of disagreement can offer. The disagreements that go missing under contextualism should be as much like ordinary disagreements as possible. The propositions that contextualism fails to countenance should be as much like ordinary propositions as possible. Invariantists

⁸⁵ For a defense of contextualism on the grounds that p_s and the like are not propositions but are rather proposition-like, see Kent Bach’s (2009) **radical invariantism**.

should hold out hope that all disagreements, even the disagreements that go missing under contextualism, are wholly a matter of propositional attitudes. Here, then, is the fourth desideratum:

- (7) **Internality:** The new disagreement thesis should say that for any proposition, p , agents can disagree about whether p solely by virtue of the attitudes they take towards p .

Now we know what we want. The new disagreement thesis ought to satisfy the four desiderata, (4)-(7), and explain why some but not all belief/disbelief pairs are disagreements. The positive part of the essay begins in the following section. There is a conception of disagreement that can do all of the work that we ask of it.

§3.5 – Attitudinal Relativism

The theory of disagreement I want to propose begins with a bold suggestion.⁸⁶ We should get rid of belief and disbelief and replace them with finer-grained attitudes. The

⁸⁶ I originally proposed the belief-for framework and the associated conceptions of agreement and disagreement in an unpublished 2008 paper, “Genuine Disagreement and Relativism,” and later in an unpublished 2011 paper, “Belief-for.” In the years since, I have become aware of, and learned from, Mark Richard’s work on disagreement, especially Richard (ms). Although Richard and I came to our views independently, the two views have some important similarities. Both deny belief/disbelief is and affirm internality. There are some differences between the view, especially at the base. My view, unlike Richard’s, is based upon an explicit attitudinal relativism. (I think

idea of replacing belief and disbelief with degrees of belief, or credences, is familiar. But the present proposal has nothing to do with credence. Even holding credence levels fixed, there are many different belief-like attitudes. The goal of this section is put forward the foundations of **attitudinal relativism**.

One way to get into the attitudinal relativist's frame of mind is to think about belief through a *teleological* lens.⁸⁷ There are lots of propositional attitudes. One might pretend that *p*, or assume that *p*, or desire that *p*. So the question arises: what is distinctive about belief? What makes a belief that *p* different from any other attitude one might take towards the same proposition?

Proponents of a teleological conception of belief maintain that part of what distinguishes belief from other attitudes is the special relation that beliefs bear to truth. Beliefs *aim* at truth, where the aiming in question is partially descriptive and partially normative.⁸⁸ On the descriptive side, beliefs are formed, retained, revised, and extinguished in ways that are truth-conducive. Part of what it is to be a belief is to be an attitude that is formed in response to the appearance of truth, revised in response to

that attitudinal relativism provides a firmer foundation for a selective theory of disagreement, and in any case, I think that attitudinal relativism has applications elsewhere.) But for some purposes, including the present purpose of defending invariantism, the two conceptions of disagreement can be treated as more or less the same.

⁸⁷ Note, however, that one can accept attitudinal relativism without accepting a teleological conception of belief.

⁸⁸ There are many proponents of a teleological conception of belief. See, among others, Boghossian (2003), Brandom (1994), Engel (2007), Humberstone (1992), Huddleston (2012), Shah (2003), Shah and Velleman (2005) Velleman (2000), Wedgwood (2002), Williams (1970).

changes in the appearance of truth, and extinguished in response to the appearance of falsehood. On the normative side, truth is the standard of correctness for belief. Part of what it is to be a belief is to be an attitude that is correct iff true.

The attitudinal relativist takes this teleological idea – that beliefs aim at truth – and recast it in a relativistic setting. We are invariantists, and because we acknowledge correct contrariness, we are also relativists. We think that a proposition might be true as evaluated from c_1 and false as evaluated from c_2 . Truth is therefore fragmented. There is not just one positive alethic property, namely, truth. Rather, for each context of evaluation, c_i , there is a **plugged** truth property, truth-at- c_i , and each combination of plugged alethic properties is itself a positive alethic property. The present proposal is that there is a belief-like attitude for every positive alethic property. Just as beliefs ‘aim’ at truth, so these attitudes ‘aim’ at various combinations of plugged truth properties. The basic idea: *relativize propositional attitudes in exactly the same way that we relativize truth.*

Strictly speaking, the fundamental notion is **vouchsafing-for**. Vouchsafing-for- $\{c_1\}$ that p is correct iff p is true-at- c_1 . Vouchsafing-for- $\{c_2\}$ that p is correct iff p is true-at- c_2 . Vouchsafing-for- $\{c_1, c_2\}$ that p is correct iff p is true-at- c_1 and true-at- c_2 . When one’s vouchsafing-for attitude includes one’s own context of evaluation, then one has a **belief-for** attitude. As it turns out, cases of vouchsafing-for, which are not also cases of believing-for, are pretty rare, so for the most part we do fine by focusing on the belief-for attitudes. A belief-for- $\{c_1, c_2, \dots, c_n\}$ that p is correct iff p is true-at- c_1 , true-at- c_2 , ..., and true-at- c_n .

The same goes for disbelief, of course. For every combination of plugged falsehood properties, there is a disbelief-for attitude that is correct iff the propositional object has all of the plugged falsehood properties in the combination.

Notice that belief-for attitudes form a partial order in terms of **area**. Each belief-for attitude has an associated set of contexts of evaluation. If the associated set for the first belief-for attitude is a proper subset of the associated set for the second belief-for attitude, then the first belief-for attitude is strictly **narrower than** the second, or, equivalently, the second belief-for attitude is strictly **more expansive than** the first. Many belief-for attitudes are incomparable in terms of area.

Since the terms ‘belief’ and ‘disbelief’ are familiar and useful, I plan to recoup them. Say that an agent **believes** that p just if an agent has some belief-for attitude or other towards p . Say that an agent **disbelieves** that p just if the agent has some disbelief-for attitude or other towards p .

§3.6 – Belief-For Ascription

For the present purpose of rebutting Ross and Schroeder’s dilemma, the most important difference between the various belief-for attitudes is the normative difference. If p is true-at- c_1 and false-at- c_2 , then a belief-for- $\{c_1\}$ that p is correct but a belief-for- $\{c_1, c_2\}$ that p is incorrect. As we will see in the following section, this normative difference between belief-for attitudes can be parlayed into an account of disagreement that, while delivering the spanning premise and allowing invariantists to account for the disagreements that go missing under contextualism, does not imply that there is disagreement in cases of correct contrariness. But, at present, attitudinal relativism is not

much more than a skeleton of formalism – we need to put some flesh on the bones! We need to get a fuller sense of how these many relativized attitudes differ from one another, and the purpose of the present section is to do precisely that.

It is helpful to compare the relativized attitudes to the more familiar absolute ones. Belief goes together with certain dispositions.⁸⁹ Some of the relevant dispositions are intrapersonal – one who believes that p tends to rely on p as a premise in practical reasoning, tends to rely on p as a premise in theoretical reasoning, tends to abandon the attitude in the face of overwhelming evidence that $\sim p$, etc. Some of the relevant dispositions are interpersonal – one who believes that p tends to assert that p , tends to judge that others who believe that $\sim p$ are mistaken, tends to offer p as a premise for other people in *their* practical reasoning (as when I know that you are looking for a restaurant and I tell you what I believe, namely, that there is a restaurant up two blocks and on the right).

The various belief-for attitudes also go together with certain dispositions. The intrapersonal dispositions are the same. One who takes a belief-for attitude towards p tends to rely on p as a premise in practical reasoning, tends to rely on p as premise in theoretical reasoning, tends to abandon the attitude in the face of overwhelming evidence that $\sim p$, etc. The interpersonal dispositions are the same in kind but different in scope and degree. We are interested not just in whether one is disposed to assert that p , but to whom. A disposition to assert that p to a particular audience T goes together with a belief-for attitude that includes the contexts of evaluation that the members of T occupy.

⁸⁹ By this I mean only that there is a correlation between having a belief and having certain dispositions.

The disposition to judge of a particular agent *S* that she is mistaken in believing $\sim p$ goes together with a belief-for attitude that includes the context of evaluation that *S* occupies. The disposition to offer *p* to a particular agent *R* as a premise in *his* practical reasoning goes together with a belief-for attitude that includes the context of evaluation that *R* occupies. In general: whether one has some belief-for attitude or other towards *p* is settled in the same way that we would have settled whether the agent believes that *p*, and the area of the belief-for attitude is settled by the scope of the interpersonal dispositions.

Start with assertion. One may be disposed to assert that *p* to one audience and not disposed to assert that *p* to another. There are lots of reasons one might have this sort of differential disposition to assert. Perhaps one regards it as polite to assert that *p* to this audience and impolite to assert that *p* to that audience, or perhaps one likes conversing with this audience and dislikes conversing with that audience. But in the cases of interest, the differential disposition to assert is based not on pragmatic considerations but on a differential sense of the proposition's truth-value. In making an assertion one thereby assures the audience that the asserted proposition is true.⁹⁰ And, *for alethic reasons*, one might be willing to be on the hook for the truth of a proposition vis-à-vis one audience, but not vis-à-vis another audience. To illustrate this idea, consider a series of cases involving a pot of soup.

First case: Abe is at a picnic. One of the items on the food table is a pot of soup. Abe tastes the soup and recoils from the bitter taste. Ben walks up and asks Abe whether the soup is bitter.

⁹⁰ See Moran (2005) for more on assertion as assurance of truth. Also see Williams (1970) and Williamson (1996).

Abe likes soup but dislikes bitter soup. Abe believes that the soup is bitter; his belief is part of what explains why he does not pour himself a bowl. Upon hearing Ben's question, Abe wants to be helpful. He expects that Ben, too, likes soup and dislikes bitter soup. No odd or extraordinary pragmatic considerations are in play. The natural thing for Abe to do is respond in the straightforward way: "Yes, Ben, the soup is bitter."

Second case: Abe is still at the picnic, standing near the soup. Abe comes to learn that the soup is flavored with phenylthiocarbamide (PTC, for short). Depending on one's genetic makeup, PTC is either bitter or tasteless. People with gene-X taste PTC as bitter, and people without gene-X taste PTC as tasteless. Abe also learns that he is in genetically mixed company: some of the people at the picnic have gene-X, and others do not. Cam walks up and asks Abe whether the soup is bitter.

There is a noticeable difference between the first case and the second. If given three options – (i) assert that the soup is bitter, (ii) assert that the soup is not bitter, (iii) refuse to make either assertion – Abe may well choose the third. (I would choose the third option, in his shoes.) Abe still believes that the soup is bitter;⁹¹ his belief is part of what explains why he (still) does not pour himself a bowl. But Abe may be unwilling to be on *Cam's* hook as regards to the soup being bitter. As we might describe it from

⁹¹ There is some reluctance, in this case, to say that Abe believes that the soup is bitter. I think that attitudinal relativism is in a good position to explain this reluctance. To say outright that Abe believes that the soup is bitter might implicate, falsely, that his belief is for all of the indices. Abe has a narrower attitude than that. Still, I think, it is strictly speaking true that Abe has some belief-for attitude towards the proposition *that the soup is bitter*. That he has some belief-for attitude is indicated by his actions, by his internal deliberations, etc.

semantic heaven: Abe is willing to commit to the truth of the proposition *that the soup is bitter* as evaluated from his own context, but unwilling to commit to the truth of the proposition *that the soup is bitter* as evaluated from Cam's context. (Abe may try to minimally change the subject, and say something like, "Well, it tastes bitter to me." When one senses that a proposition might be true for some but not all of the conversational participants, a natural thing to do is cast about for a different proposition, which is as closely related to the original proposition as possible, but which has the same truth-value for all of the conversational participants.)

Third case: Abe is still at the picnic, standing near the soup. Abe comes to learn that people at the picnic are dressed according to their genetics. People with gene-X are wearing shirts of one color, and people without gene-X are wearing shirts of another color. Dan walks up and asks Abe whether the soup is bitter. Abe looks at his own shirt, then at Dan's, and notices that the shirts are different colors. A bit later, Ed walks up and asks Abe whether the soup is bitter. Abe looks at his own shirt, then at Ed's, and notices that the shirts are the same color.

Abe may be unwilling to assert *to Dan* that the soup is bitter; his reaction to Dan will be the same as his reaction to Cam. But Abe will be willing to assert *to Ed* that the soup is bitter; his reaction to Ed will be the same as his reaction to Ben. It is in this third case that Abe most clearly exhibits a differential disposition to assert of the interesting variety.

By the lights of attitudinal relativism, in all three cases Abe has some belief-for attitude or other towards the proposition *that the soup is bitter*. But he takes different belief-for attitudes in the three cases. In the first case, Abe has an expansive belief-for

attitude that includes all of the contexts of evaluation that are occupied by people at the picnic. Upon learning that there is PTC in the soup, Abe's belief-for attitude narrows: Abe's belief-for attitude includes his own context of evaluation, but it no longer includes the contexts of evaluation that other people at the picnic occupy. Then, upon learning that people are dressed according to their genetics, Abe's belief-for attitude expands: Abe's belief-for attitude includes the contexts of evaluation that are occupied by those people at the picnic who are wearing a shirt of the same color as his.⁹²

Other cases are easy to generate. When on the phone, I am willing to assert the proposition *that there has never been a female President of the United States*, but not if I think the person on the other end of the line might be from the future. While I believe the proposition *that I, Jack Spencer, might be the only conscious being in the universe*, I am disposed to assert this proposition to myself and to nobody else.

Turn to judgments of mistakenness. When my niece says that dirt is delicious, I judge that she is mistaken. I say, "Stop eating dirt, Finley! Dirt is not delicious; it is gross and not to be eaten." But when aliens, who eat dirt as a staple in their diet, say that dirt is delicious, I do not judge that *they* are mistaken. My disbelief that dirt is delicious extends

⁹² Notice that we can make sense of what Peter Lasersohn (2005) calls the 'exocentric' stance.

Abe believes that the soup is bitter. But suppose that someone in a different color shirt comes rushing over the table, desperate for something to eat. The person-in-a-hurry asks Abe whether the soup is bitter or not, and time permits Abe only a one-word response, so he makes his assertion: "No," he says. Abe believes that the soup is bitter, but he had a vouchsafing-for attitude towards the proposition *that the soup is not bitter* that includes the context of evaluation that the person-in-a-hurry occupies.

to the children playing in my backyard, but not to intelligent worm-like creatures in faraway galaxies.⁹³

There are also examples of differential mistakenness that involve epistemic sentences. Consider another variation on *Old News*.

Old News and Prejudice: Ankita and Byron co-anchor the *Morning News Hour*.

As of this morning, it is unknown whether Axeworthy is the murderer, and so Ankita sincerely utters *m*: ‘Axeworthy might be, and might not be, the murderer.’ Byron, a man of nominal prejudice, thinks that Axeworthy’s name is proof enough that Axeworthy is the murderer. Byron sincerely utters $\sim m$. Ankita judges that Byron is mistaken. At the same time, Ankita knows that in the afternoon the DNA test will be completed and its results announced, establishing whether Axeworthy is the murderer. Ankita correctly predicts that after the DNA tests are revealed she will sincerely utter $\sim m$, and Ankita judges that she will not be mistaken (indeed, that she will be correct) in her future utterance.

According to invariantism about ‘might’, there is a single proposition that morning-Ankita affirms, and that both Byron and evening-Ankita deny. Morning-Ankita judges that Byron is mistaken and that evening-Ankita is not; i.e., morning-Ankita judges that Byron’s belief is mistaken but that evening-Ankita’s belief (of the very same proposition) is not mistaken. We thus have a case of differential mistakenness.

⁹³ For a very interesting discussion of differential judgments of mistakenness, see Richard (ms).

By the lights of attitudinal relativism, morning-Ankita's differential judgments of mistakenness indicate the area of her belief-for attitude. Specifically it suggests that her belief-for attitude includes the context that Byron occupies, but does not include the context that evening-Ankita occupies.

To round out the interpersonal dispositions mentioned above, consider the advice we offer to one another. Here is a variation on the soup example. Suppose that people are to choose between the soup and some dark chocolate. The soup has PTC; the chocolate does not. People with gene-X wear red shirts; people without gene-X wear blue shirts. A line of people approaches. Everyone is in a terrible hurry. Each person asks you whether the soup or the chocolate is less bitter. Time permits you only a brief reply. If you are like me, then irrespective of whether *you, yourself* have gene-X, you tell the people in red shirts that the chocolate is less bitter, and you tell the people in blue shirts that the soup is less bitter.

Let me take a step back. Ordinary people do not have beliefs that are explicitly about contexts of evaluation. But ordinary people do have interpersonal dispositions that arise from their propositional attitudes, and some of these interpersonal dispositions are selective and differential. (Two students come to suspect that moral relativism is true. The first responds in the expansive way by trying to convince others to come around to his way of seeing things; the second responds in the narrow way by becoming more tolerant of others and their contrary moral views.) The fundamental claim that attitudinal relativism makes is that beliefs with a single propositional content, even by agents in the same context of evaluation, are a heterogeneous bunch. They differ both normatively and descriptively, and the normative differences and the descriptive differences go together.

The area of one's belief-for attitude is correlated with the scope of one's interpersonal dispositions, and the area of one's belief-for attitude in turn determines what it takes for the attitude to be correct.

§3.7 – Agreement and Disagreement

With attitudinal relativism on the table, let me turn to agreement and disagreement. Agreement and disagreement are to be defined, not in terms of truth and falsehood, but in terms of correctness. Two beliefs, X and Y , **agree** iff the correctness of X/Y guarantees the correctness of Y/X . Two beliefs **disagree** iff the correctness of X/Y guarantees the incorrectness of Y/X .⁹⁴

For most purposes, we can take guaranteeing to be necessitation. Thus: the correctness of X/Y guarantees the (in)correctness of Y/X iff, necessarily, X is correct iff Y is (in)correct. However, for other purposes, e.g. when we are considering necessary truths and falsehoods, we need a hyperintensional definition of guaranteeing. I suggest one possible hyperintensional definition in the appendix.

The relata of disagreement are, in the first instance, propositional attitudes. Agents agree or disagree only derivatively, and only by virtue of the attitudes they have.

⁹⁴ This definition disagreement is similar to one that John MacFarlane (ms) calls 'Preclusion of Reflexive Joint Accuracy.' MacFarlane maintains that there cannot be disagreement in the sense of 'Preclusion of Reflexive Joint Accuracy' about relative propositions. One of the important advantages of attitudinal relativism is that it allows for disagreement in a very strong sense even about relative propositions.

If attitude X agrees/disagrees with attitude Y , then anyone who has attitude X thereby agrees/disagrees with anyone who has attitude Y .

We can now explain why some belief/disbelief pairs constitute disagreement and others do not. If p is an absolute proposition, then any belief-for attitude towards it disagrees with any disbelief-for attitude towards it.⁹⁵ If p is a relative proposition, however, then whether a belief/disbelief pair constitutes a disagreement can and often does depend on the area of the attitudes. If the attitudes are expansive enough, then there is disagreement; if the attitudes are narrow enough, then there is no disagreement.

(It is actually quite interesting to look at different ways that relative attitudes can combine to produce disagreement. In a standard two-way containment case, A 's belief-for attitude includes B 's context, and B 's disbelief-for attitude includes A 's context. A conversation between A and B would play out like a prototypical disagreement, both agents trying to get the other to change her mind. There are also one-way containment cases, however. A 's belief-for attitude includes B 's context, but B has a narrow disbelief-for attitude that does not include A 's context. A and B still disagree, for the correctness of either attitude guarantees the incorrectness of the other. In a one-way containment case, the conversation between A and B is quite different. A would try to get B to change her mind, whereas B would try to get A to back off and let a thousand flowers bloom. (In some one-way containment cases, B even has a vouchsafing-for attitude towards $\sim p$ that

⁹⁵ This is easy to show. The belief-for attitude towards p is correct only if p has certain plugged truth properties. But since p is an absolute proposition, p has some plugged truth properties only if p has all plugged truth properties. And if p has all plugged truth properties, then p has no plugged falsehood properties, so any disbelief-for attitude towards p is incorrect.

includes A 's context.) Finally, there are no containment cases. In a no containment case, the conversation between A and B is different yet again. Neither would try to change the other's mind, but both would try to get the other to narrow their attitude as regards the contexts in the overlap. For example A might say, " B , I know you hate country music, and that's fine. But don't go around telling *the students* that country music is bad." And B might reply, "Well, don't go around telling the students that country music is good!")

The resultant theory of disagreement is **selective** in the following sense. A and A^* might occupy the same context of evaluation and both have a belief-for attitude towards p ; B and B^* might occupy the same context of evaluation and both have a disbelief-for attitude towards p ; yet while A and B disagree about whether p , A^* and B^* do not. My niece and the dirt-eating aliens both believe *that dirt is delicious*, and I disbelieve as much. I disagree with my niece, and I do not disagree with the aliens. But if I had a more expansive disbelief-for attitude, then I would disagree both with my niece and the aliens. In *Old News and Prejudice*, Morning-Ankita believes that p_m , and both Byron and Evening-Ankita disbelieve that p_m . Morning-Ankita and Byron disagree about whether p_m , and morning-Ankita and evening-Ankita do not. But if morning-Ankita had a more expansive belief-for attitude, then she would disagree both with Byron and her later self.

§3.8 – Reversibility and Disagreement

Ross and Schroeder claim that invariantists are either unable to account for reversibility or unable to account for the disagreements that go missing under contextualism. But this is false; invariantists can account for both.

When it comes to reversibility (or correct contrariness, more generally), invariantists have two burdens to discharge. First, they must explain how a perfectly rational agent can undergo a case of reversal. Second, they must explain why cases of reversal are not cases of disagreement. Invariantists discharge the first burden by maintaining that the reversible sentences express relative propositions. They discharge the second burden by adopting attitudinal relativism. In *Old News*, for example, morning-Ankita has a narrow belief-for attitude towards p_m that does not include the context of evaluation that evening-Ankita occupies. (Morning-Ankita may also have a vouchsafing-for attitude towards $\sim p_m$ that includes the context of evaluation that evening-Ankita occupies.) Evening-Ankita has a narrow disbelief-for attitude towards p_m that does not include the context of evaluation that morning-Ankita occupies.⁹⁶ (Evening-Ankita might also have a vouchsafing-for attitude towards p_m that includes the context of evaluation that morning-Ankita occupies.) There is no disagreement because p_m is a relative proposition that can differ in truth-value between the context of evaluation that morning-Ankita occupies and the context of evaluation that evening-Ankita occupies.

What about the argument from lost disagreement? Invariantists need to vindicate the spanning premise, and, good news, they can. According to invariantism, anyone who sincerely utters the contested sentence, s , has some belief-for attitude towards the proposition, p_s , and anyone who sincerely utters $\sim s$ has some disbelief-for attitude towards p_s . That the two utterances have been made does not settle whether the agents

⁹⁶ There are cases and cases. On one variation of *Old News*, evening-Ankita comes to have an expansive disbelief-for attitude towards p_m . In that case, morning-Ankita and evening-Ankita have a disagreement of the one-way containment sort.

disagree. That the one agent has a belief-for attitude towards the very proposition that the other has a disbelief-for attitude does not settle whether the agents disagree. But, in principle, anyone from any context can take a maximally expansive attitude. So, if both agents take maximally expansive attitudes, then they disagree, no matter what context they are in. That is: there can be cross-context disagreements (about whether p_s) that span any two contexts.

Can invariantists account for the disagreements that go missing contextualism?

Yes. An agent in c_1 sincerely utters s , an agent in c_2 sincerely utters $\sim s$, and the two agents seem to disagree. In order for it to be true that the agents disagree, it is necessary but not sufficient that the one's belief-for attitude and the other's disbelief-for attitude have the same propositional content. So, contextualism is unable to account for the cross-context disagreement. Invariantists, however, can account for the disagreement, by claiming that the attitudes in question are expansive.

Do we need to adopt a pragmatic theory of disagreement? No. Agents can disagree about any proposition solely by virtue of the attitudes they take towards it. There is some interaction between belief and assertion, of course. The area of one's attitudes is determined in part by the scope of one's dispositions to assert. But I think that this interaction tells in favor of the attitudinal relativist's approach.

Let me revisit a point I made abstractly in §3.4. Consider a puzzle.⁹⁷ Finley believes that Teletubbies are cool, and I do not. While Finley and I certainly do not have the same opinion as to whether Teletubbies are cool, the claim that we *disagree* strikes me as false. Here, though, is the puzzle. If you imagine Finley and I discussing whether

⁹⁷ For an interesting discussion of 'cool' and other social predicates, see Haslanger (2007).

Teletubbies are cool, making assertions and evincing reasons in our own favor, then it seems that we do disagree. Finley says, “Teletubbies are cool!” I typically shrug this sort of comment off, saying, “I’m glad they bring you such joy, sweetheart.” But suppose instead that I turn around and say what I believe. “No, Finley. Teletubbies are not cool. Science is cool; flowers are cool; art is cool. If Teletubbies were cool, then hipsters (being the experts on cool) would like them, and hipsters, so far as I know, *hate* Teletubbies.” Says Finley, “Yes, they are cool!” And back and forth we go. This seems to be a genuine disagreement between Finley and me about whether Teletubbies are cool.

I used to regard this puzzle as evidence in favor of a pragmatic theory of disagreement, but I now think that attitudinal relativism provides a better diagnosis. What explains why Finley and I do not disagree is that our attitudes are narrow. I do not assert to Finley that Teletubbies are cool, although I do make that assertion to my adult friends; I do not think that Finley is mistaken in her belief that Teletubbies are cool, but I think that adults who believes that Teletubbies are cool are indeed mistaken; when Finley is looking for a cool new toy, I point her in the direction of the Teletubbies toys; etc. When we imagine the counterfactual scenario in which Finley and I are arguing about whether Teletubbies are cool, we are not holding the underlying attitudes fixed. We are imagining, *inter alia*, that Finley and I have more expansive attitudes. So, while Finley and I do not actually disagree about whether Teletubbies are cool, we would have disagreed *by virtue of our attitudes* had we been arguing about whether Teletubbies are cool. (Notice that we can get the same disagreement without the assertions. Suppose that I never assert that Teletubbies are not cool, but that I am disposed to assert to Finley that Teletubbies are

not cool, and moreover that I judge that Finley is mistaken in her belief that Teletubbies are cool. Finley and I disagree, then. No assertions needed.)

§3.9 – Conclusion

The task of this essay is thus complete. We have found a path between the horns of Ross and Schroeder's dilemma. Invariantists should adopt attitudinal relativism, for by so doing they get the best of both worlds; they can account for correct contrariness *and* for the disagreements that go missing under contextualism. Moreover, the charge against contextualism stands: if it seems possible to generate a cross-cross disagreement that spans any two contexts, then there are disagreements that go missing under contextualism, and this provides us with a powerful reason to prefer invariantism over contextualism.

§3.10 – Appendix: Guaranteeing

Agreement and disagreement are defined in terms of 'guaranteeing'. A definition of 'guaranteeing' in terms of necessitation is inadequate, however. If I believe that four is prime, and you believe that three is prime, then, necessarily, your belief is correct iff my belief is incorrect, but we do not thereby disagree. How do we improve upon the modal definition of guaranteeing?

One idea is to define guaranteeing, not in terms of truth and falsehood, but in terms of truthmaking and falsemaking. Intuitively, a proposition's truthmaker is that bit of reality that makes the proposition true. More specifically, a proposition's truthmakers are the states of affairs the obtaining of which explain why the proposition is true. A

proposition's falsemakers are the state of affairs the obtaining of which explains why the proposition is false. Truthmaking and falsemaking are non-monotonic world-to-semantics explanatory relations.

If we help ourselves to truthmaking and falsemaking, then we can introduce two notions. A state of affairs **makes a belief correct** just if the state of affairs is a truthmaker for the content of the belief, and a state of affairs **makes a belief incorrect** just if the state of affairs is a falsemaker for the content of the belief. If we set attitudinal relativism aside, then the following might be adequate: the correctness of X/Y guarantees the (in)correctness of Y/X iff every state of affairs that makes X/Y correct also makes Y/X (in)correct. How do we extend this idea to attitudinal relativism?

One idea is to posit two world-to-semantics explanatory relations for every context of evaluation, namely, **truth-at- c -making** and **false-at- c -making**. A proposition's truth-at- c -makers are the states of affairs the obtaining of which explain why the proposition is true-at- c . A proposition's false-at- c -makers are the state of affairs the obtaining of which explain why the proposition is false-at- c . A belief-for- $\{\dots\}$ that p has an associated set of contexts of evaluation. Consider a set of ordered pairs $\langle c, z \rangle$, where c is a circumstance of evaluation, and z is a state of affairs. A set of such ordered pairs **makes a belief-for correct** just if (i) for each context included in the belief-for attitude, there is exactly one ordered pair that has the context as its first member, and (ii) every ordered pair in the set is such that z is a truth-at- c -maker for the content of the attitude. Say that an ordered pair $\langle c, z \rangle$ **makes a belief-for incorrect** just if (i) c is included in the belief-for attitude, and (ii) z is a false-at- c -maker for the content of the attitude. Then the following might be adequate: the correctness of X/Y guarantees the

correctness of Y/X iff every set that makes X/Y correct also makes the Y/X correct; and the correctness of X/Y guarantees the incorrectness of Y/X iff every set that makes X/Y correct contains at least one element that makes Y/X incorrect.

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