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Jennifer McKittrick

University of Nebraska-Lincoln, jmckitrick2@unl.edu

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Dispositional Pluralism

JENNIFER MCKITRICK

In this paper, I make the case for the view that there are many different kinds of dispositions, a view I call dispositional pluralism. The reason I think that this case needs to be made is to temper the tendency to make sweeping generalization about the nature of dispositions that go beyond conceptual truths. Examples of such generalizations include claims that all dispositions are intrinsic, essential, fundamental, or natural.¹ In order to counter this tendency, I will start by noting the extent to which it is at odds with the semantics of dispositions, according to which there are many kinds of disposition ascriptions. From there, I will try to support a metaphysical claim that there are different kinds of dispositions. To bridge the gap between semantics and metaphysics, I appeal to epistemology. I'll consider the question "when do we have good reason to believe that a disposition ascription is true?" If our disposition ascriptions are true, then we are right about what kinds of dispositions things have, and what kinds of dispositions there are. I claim that our evidence for different kinds of dispositions is on a par; we have reason to believe that various kinds of dispositions are instantiated.

There might be good reasons to want to distinguish between different kinds of dispositions. One might want to focus on the intrinsic dispositions, or the fundamental dispositions. One might want to go further and say that other properties aren't really dispositions at all. However, the question "which are the *real* dispositions?" becomes a terminological issue. One can decide not to call certain properties "dispositions," even when they otherwise seem like dispositions, because they fail to satisfy certain conditions. This might be a harmless terminological decision. However, I think it is preferable to keep the concept "disposition" closer to its ordinary English usage as a more general concept.

Defending dispositional pluralism involves arguing against extremist or absolutist positions about dispositions – views according to which all dispositions are necessarily this or that. Debates about dispositions are often presented as dichotomies between two extremes.² These dichotomies include intrinsic versus extrinsic, grounded versus ungrounded, reducible versus irre-

1 For example Ellis 2002; Molnar 2002; Heil 2005.

2 For example, see Ellis 2002, 59-60.

ducible, fundamental versus derivative, essential versus non-essential, first-order versus higher-order, natural versus unnatural, causally inert versus causally efficacious, and non-existent versus universal. However, there's room in logical space for mixed or moderate positions along each of these dimensions.

1. Dispositions Talk

A number of English words are roughly synonymous with "disposition": tendency, power, force, predisposition, liability, susceptibility, propensity, potentiality, proclivity, inclination, ability, capability, faculty, and aptitude. There are different connotations and shades of meaning, between, for example, a power to act and a liability to be acted upon. Some terms, such as "proclivity" suggest rational agency, while others such as "force" suggest fundamental properties of matter.

Many terms in English are dispositional. They cover a broad range of qualities, from fragility to courage. They include: terms from various branches of science, such as charge, energy, reactivity, conductivity, malleability, solubility, elasticity, fitness, and fertility; character traits, such as integrity, or being punctual, neat, kind, considerate, and shy; common qualities of physical objects, such as being elastic, comfortable, flammable, intoxicating, or hazardous; and complex social concepts, such as marketable, redeemable, tax-deductible, collectible, humorous, provocative, titillating, recognizable, and enviable. Obviously, dispositional terms are quite diverse.

At this point, the reader may wonder, on what grounds do I classify these terms as dispositional? I suggest that a term is dispositional if it has the following marks of dispositionality:

1. The term is associated with an event type – the manifestation of the disposition;
2. The term is associated with an event type in which the manifestation occurs – the circumstances of manifestation;
3. The term is ascribable to an object when the manifestation is absent;
4. If a dispositional term is ascribable to an object, then a certain subjunctive conditional to the effect that "if the circumstances of manifestation were to occur, then the manifestation would occur" is true;
5. The term is semantically equivalent to an overtly dispositional locution – "the disposition to so and so."³

I offer these marks of dispositionality as rules of thumb, not as an analysis. They do strike me as jointly sufficient, since I cannot imagine a term bearing all five marks and yet failing to be a disposition term. However, I hesitate to

3 This is an adaptation of the marks of dispositionality for properties (McKittrick 2003, 156-158).

assert that each is necessary. Counter-examples to conditional analyses suggest that the fourth mark is not always true of disposition terms. The carefully packed glass is still fragile, but the counterfactual "if it were struck, it would break" is not true of it.⁴ Also, if there are some disposition terms which are not applicable in the absence of the associated manifestations, then the necessity of the third mark is called into question as well. For example, we call a structure "stable" as long as it stays intact. When the structure falls down, it no longer manifests stability, nor is it stable. If "stability" is a disposition term, it is one that is not attributable in the absence of its manifestation. But putting aside odd exceptions, a wide variety of terms bear these marks of dispositionality.

2. Philosophical Distinctions

Philosophers have made a number of philosophical distinctions between different kinds of dispositions. Aristotle makes a distinction between rational and non-rational capacities. Non-rational dispositions of objects, including human bodies, manifest in circumstances of manifestation due to physical necessity. Examples of non-rational dispositions include the disposition of a rock to fall, and the disposition of human skin to tan in sunlight. Rational dispositions, on the other hand, are dispositions of rational agents to perform certain actions if they so choose, such as playing a musical instrument, or speaking a language.⁵

Ryle distinguishes single-track or specific dispositions on the one hand from multi-track or generic (general) dispositions on the other.⁶ Some dispositions are triggered in just one kind of circumstance and manifest themselves in only one way. For example, the only manifestation of solubility is dissolving, and being immersed in liquid is its only circumstances of manifestation. Perhaps there are some differences between particular immersions or dissolvings, but they must be similar enough to all count as the same kinds of events. However, other dispositions, such as bravery, have different kinds of manifestations which occur in different kinds of circumstances. Various circumstances, such as fires, battles, amusement park rides, medical procedures, and intimidating social situations can trigger acts of bravery. The manifestations are as diverse as rushing into a burning building, or taking an unpopular po-

4 For a discussion of counterexamples to conditional analyses of dispositions, see Smith 1977, Johnston 1992, Martin 1994; Bird 1998.

5 See Ludger Jansen in the volume for more on Aristotle's many distinctions among dispositional properties and the like.

6 Ryle 1949, 118.

litical stand. Perhaps the circumstances and manifestations can be given a unifying abstract characterization such as fear-inducing situations which involve danger or substantial personal risk and confronting that fear or danger. However, the types of events that count as manifestations and circumstances of manifestation of multi-track dispositions are diverse and only count as the same kind of event at some very high level of abstraction.

C. D. Broad distinguishes hierarchies of dispositions, of first, second, or higher order.⁷ A higher-order disposition is a disposition to acquire or lose a disposition. Magnetizability is a higher-order disposition, on Broad's terminology. Some pieces of metal are magnetic – are disposed to attract or repel other metals and magnets. However, other pieces of metal aren't magnetic, but can become magnetic if they are subject to a strong enough magnetic field. These non-magnetic metal pieces are thus magnetizable. They have a second-order disposition – the disposition to acquire the disposition of being magnetic.

Rom Harre, following Aristotle and Locke, distinguishes powers and liabilities, also known as active powers and passive powers.⁸ If something has power to A, it will *do* A in certain circumstances. On the other hand, if something has a liability, it has a disposition to suffer change. In the case of liabilities, the thing that changes is the disposed object, and situation that produces change is external to the object. Fragility is supposed to be a liability. The fragile thing is subject to an external force and changes internally. External circumstances, such as the strike of a hammer, trigger the manifestation. Poisonousness, on the other hand, is supposed to be a power. When someone is poisoned, the cause of poisoning is in the disposed object – the poison. The locus of manifestation is not in the disposed object, but external to it. The poison has an effect on something else, and the manifestation is that something else changing.

One may argue that this distinction does not hold up to scrutiny as metaphysical, but is merely pragmatic. The manifestations of dispositions have multiple causal factors. Whether the salient causes are internal or external to the disposed object is determined by the relevant interests and background assumptions. In the example above, the solidity of the striking hammer is considered to be causally relevant to the shattering, but the fragility of the glass isn't. But it's not clear on what grounds we make that distinction. Consider explosiveness, which intuitively seems like a power. But the manifestation of explosiveness is the explosion, which typically destroys the explosive object. The cause of the explosion has to do with the nature of the bomb, but also with being ignited – a cause external to the bomb itself. When explosive-

7 Broad 1925, 432.

8 Harre 1970, 84; Aristotle 1941; Locke 1990, 105-107.

ness is manifest, the bomb ends up in little scattered pieces as a result of an external cause. Structurally, that sounds a lot like fragility, which was supposed to be a liability. One may argue that, in the case of explosiveness, things external to the bomb are affected as well. However, this doesn't clearly distinguish it from fragility, since things external to the struck glass may be affected when its shards go flying.

Despite the suspicion that the active/passive distinction is merely pragmatic, perhaps other distinctions are more robust. Philosophers often distinguish sure-fire or deterministic dispositions on the one hand, and tendencies or probabilistic dispositions on the other. In the case of a sure-fire disposition, when the disposed object is in the circumstances of manifestation, the occurrence of the manifestation is physically necessary or exceptionless. In the case of tendencies, when the disposed object is in the circumstances of manifestation, the manifestation might occur, but it might not. Examples of probabilistic dispositions include the disposition of enriched uranium to decay and probably most behavioral dispositions. A sociable person typically engages in conversation but may neglect to on occasion. One might want to say that a thing has a probabilistic disposition if it manifests that disposition in the circumstances most of the time. However, something may be a tendency even if it doesn't usually happen in the circumstances of manifestation. The recovering alcoholic has a tendency to drink, but resists it.⁹

So, a disposition is probabilistic if there are occasions, or even if it is merely possible that the disposed object is in the circumstances of manifestation and yet the manifestation does not occur. However, if that were all that it took for a disposition to be a tendency, then it is not clear whether there would be there any sure-fire dispositions. Many counterexamples to conditional analyses consist of imagining a possible scenario in which a disposed object is in the circumstances of manifestation yet fails to manifest the disposition. They seem to show that virtually all dispositions are such that, if objects which instantiate them are placed in the circumstances of manifestation, it's possible that the manifestation does not occur. This is because the disposition might be masked, an antidote to the disposition might be delivered, or the disposition might be finkish.¹⁰

However, there still seems to be a difference between probabilistic and sure-fire dispositions even if we can't perfectly articulate it. Perhaps a sure-fire disposition is such that, if the disposed object were in the circumstances of manifestation under ideal conditions, the manifestation would necessarily occur, while the probabilistic disposition is such that, even if the disposed object were in the circumstances of manifestation under ideal conditions, the

9 See Jansen on tendencies (2006).

10 See Johnston 1992; Martin 1994; Bird 1998.

manifestation only has a certain probability of occurring. Even if there is no funny business such as masks or finks, the manifestation of a probabilistic disposition might not occur in the circumstances of manifestation. Perhaps we cannot specify a way to determine if we are dealing with a probabilistic disposition or a thwarted deterministic disposition, but that's the conceptual distinction at least.

3. Semantic Support for Pluralism

Because philosophers have distinguished so many different dispositional concepts, and the terms that bear the marks dispositionality are so diverse, dispositional semantics does not support absolutist claims. Dispositional terms attribute a wide variety of kinds of properties to objects: intrinsic and extrinsic properties, reducible and irreducible properties, essential and non-essential properties, natural and unnatural properties, and so on. Absolutist claims do not fall out of an analysis of the concept of a disposition, nor do they follow from particular dispositional concepts, such as fragility.

Probably the most sweeping absolutist claims about dispositions are that they are non-existent, or on the other extreme, that they are universal. In other words, either all properties are dispositions, or all properties are non-dispositional. However, it seems clear that some terms bear marks of dispositionality and others do not. Even absolutists who say there are no dispositions and others who say that all properties are dispositions acknowledge a distinction between dispositional and non-dispositional predicates.¹¹

A commonly made generalization about dispositions is that they are all intrinsic properties. One could also claim that they are all extrinsic properties, a view that Brian Ellis attributes to Humeans.¹² Dispositions might appear to be extrinsic if what dispositions a thing has depends upon the prevailing laws of nature. Another reason one might have for thinking dispositions are extrinsic is that they are relations an object has to possible events – the manifestations. However, if the third mark of dispositionality obtains even sometimes, then it is possible for a thing to have a disposition and not exhibit its manifestation. If the particular manifestation event does not occur, and dyadic relations require the existence of both relata, then the disposition cannot be a relation. The best way I can see of saving the idea that dispositions are relations and thus extrinsic is to make the hard case that there is a sense in

11 For example see Armstrong 1973, 15; Shoemaker 1980, 211. However, others suggest that there's no clear way to demarcate a dispositional/non-dispositional distinction even at the conceptual level (Mellor 1974, 171; Goodman 1983, 41).

12 Ellis 2002, 60.

which mere possibilities, such as merely possible events, exist.¹³ So, I will leave aside this reason for thinking that all dispositions are extrinsic.

The idea that all dispositions are intrinsic, or that they are all extrinsic, has no semantic support either. Dispositional concepts would be concepts of intrinsic properties if they were necessarily equally applicable to perfect duplicates. However, while some dispositional predicates are equally applicable to perfect duplicates, others are not. For example, 'fragility' applies equally to perfect duplicates: One would be hard-pressed to justify calling one glass fragile but not its perfect duplicate. 'Vulnerability,' on the other hand, is a dispositional term that can apply differentially to perfect duplicates. For example, a newborn infant left alone in the woods is more vulnerable than his perfect twin at home in his crib. 'Visibility' also differs in its applicability to perfect duplicates. While duplicate glasses are equally fragile, the glass that's hidden in a dark room is not visible, but its well-light, out-in-the-open duplicate is. The applicability of the dispositional predicate is not merely a matter of the object being in the circumstances of manifestation of the disposition, but of it being in the circumstances of possession of the disposition.¹⁴

Another dimension of absolutism concerns the natural/unnatural distinction. One might argue that all dispositions are natural properties, or, perhaps that all dispositions are unnatural properties. The primary reason for thinking that all dispositions are natural properties is the view that the only real properties, and hence the only real dispositions, are the natural ones. This view naturally goes along with the idea that not every predicate corresponds to a property.¹⁵ While I agree that some predicates, such as 'non-self-instantiating' do not correspond to any property, suffice it to say that dispositional pluralism fits best with a fairly liberal ontology of properties.¹⁶ But like the disputes about "real" dispositions, the dispute about the sparseness or abundance of properties might have a terminological interpretation as well. While the sparse property theorist distinguishes between the predicates that refer to properties and those that don't, the liberal property theorist allows that most predicates refer to properties, and distinguishes between natural and unnatural properties. The liberal property theorist need not have a bloated ontology if she can allow that unnatural properties are reducible to natural properties, or that property claims are true in virtue of actual features of particulars. In fact, the fundamental ontologies of the sparse and liberal theorists could be the same, and they differ only in what they choose to call a property.

13 Rosenberg 2004, 211.

14 See McKittrick 2003 for an extended defense of extrinsic dispositions.

15 Armstrong 1996, 18.

16 An example of a liberal, or abundant view of properties is that of David Lewis, according to which there is a property for every possible set of possibilities (1983).

To arrive at the opposite conclusion that dispositions are unnatural, one might reason as follows. A disposition is a secondary property (a property which consists in having some property or other) and is thus multiply realizable. Multiply realizable properties can be shared by objects with different realizer properties, so they are equivalent to disjunctive properties, and disjunctive properties are unnatural.¹⁷

But once again, our linguistic practices do not support either extreme. Some dispositional predicates are applicable only to things that are similar to one another in some important way, while other dispositional predicates seem applicable to a diverse, gerrymandered group. For example, things which are 'electrically conductive' probably have certain compositional and structural similarities. However, things which are 'provocative' form a diverse group with no relevant respect of intrinsic similarity. So, it seems that some dispositional predicates seem to pick out natural properties, while others pick out unnatural properties.

Dispositional essentialists claim that all dispositions are essential properties of the objects which instantiate them.¹⁸ An object with a certain disposition cannot lose that disposition and still be the same object. A plausible example of a disposition which is essential to its possessor is the electrical charge of an electron. Arguably, a particle without the disposition to repel negatively charged particles could not be an electron. On Ellis' view, all genuine dispositions are similarly definitive of the objects which instantiate them. On the opposite extreme is the view that dispositions are non-essential properties. On such a view, an object could lose any of its dispositions if, for example, it were subject to different laws of nature.

However, attributions of dispositional predicates follow not such strictures. On the one hand, some disposition ascriptions seem contingent. The courageous person might have been otherwise, given a different upbringing. The fragile doll house could have been put together with a stronger adhesive. On the other hand, some disposition ascriptions seem necessarily true. In other words, there are some disposition predicates such as 'having negative charge' that apply to certain objects in every circumstance in which that object exists.

Furthermore, disposition ascriptions do not distinguish between grounded and ungrounded properties, reducible and irreducible properties, fundamental and derivative properties, or first-order and higher-order properties. If I attribute a disposition to an object, learning that the disposition ascription was true in virtue of the fact that the object had some distinct property would not give me a reason to withdraw my disposition attribution. For

17 Lewis suggests this sort of picture (1986, 224).

18 Ellis 2002, 59.

example, suppose I claim that Joe is irritable. Then I'm told that Joe is irritable in virtue of some of his neurological features – his irritability derives from or is based on these neurological features. I withdraw neither my claim that Joe is irritable nor my belief that his irritability is a disposition. Even if my claim that Joe is irritable were reducible to a claim about some distinct property, reduction is not elimination, and I have no reason to withdraw my disposition ascription.

On the other hand, if I attribute a disposition to an object, learning that that object had no distinct property in virtue of which that claim was true would give me no reason to withdraw my claim. For example, suppose I claim that a massive object is disposed to attract other massive objects. If I learned that the object has no distinct property in virtue of which this is true, that this was a fundamental, irreducible feature of the object, I would not withdraw my disposition claim. So, there seem to be disposition terms that attribute derivative, grounded, and perhaps reducible properties to things, and others that could attribute fundamental, ungrounded, irreducible properties to things. The semantics are consistent with there being all of these kinds of dispositions.

Furthermore, whether any or all dispositions are causally inert or causally efficacious cannot be determined by examining language. The causal power, or lack-there-of, is not always part of the dispositional concept. (Notable exceptions are dispositional kin concepts such as 'power' and 'capability'.) Finding out that a property is causally inert or efficacious does not necessarily lead one to withdraw a disposition claim. When the doctor attributes a 'dormitive virtue' to the sleeping pill, many seem convinced that he has not revealed any causally efficacious property of the pill. If this is right, then some dispositional ascriptions are not attributions of causally efficacious properties. Could one consistently maintain that other disposition ascriptions do attribute causally efficacious properties? That depends on one's reasons for thinking that dormitivity is inert. Those reasons may or may not apply to all disposition terms. For example, if you think that dormitivity is a second-order property – a property of having some property or other that causes sleep upon ingestion, then you might think all the causal work is done by the lower-order property, and so the dormitivity is inert.¹⁹ However, that is consistent with there being some first-order dispositions that do not lose out in a causal exclusion argument, and so they can be considered causally efficacious.

To summarize what I have said so far, philosophers have distinguished several different disposition concepts. Natural language, English anyway, presents a wide variety of disposition terms and concepts. We can and do

19 Such causal exclusion arguments are put forth by Kim 1993, 353; Prior, Pargetter, and Jackson 1982, 255.

attribute a variety of dispositional predicates: intrinsic and extrinsic, natural and unnatural, essential and non-essential, higher-order and fundamental. Our disposition ascriptions are neutral with respect to whether the dispositions are reducible or irreducible, bare or grounded, essential or non-essential, inert or efficacious.

4. Beyond Conceptual Analysis?

I've argued that we employ numerous and diverse dispositional concepts. What does that tell us about the world? I hope it is not too naïve to think that a long entrenched tradition of employing certain concepts with apparent success gives some reason for thinking that those concepts are related to the world in a meaningful way. I am supposing that, if our disposition ascriptions are true, then the dispositions we ascribe to things exist, in whatever sense properties exist (as universals, tropes, natural kinds, genuine similarities, etc.). I am well aware that this assumption stands in opposition to a major project of the last century, to semantically reduce disposition ascriptions. If that project were successful, one could say that disposition ascriptions are true, but not because dispositions exist, but because the ascriptions are merely ways of asserting something that is consistent with the non-existence of dispositions, such as a conditional, or a claim about non-dispositions. Just as the claim that "The average American woman has 1.5 children" doesn't commit one to the existence of the average American woman nor half-children, it is thought that claims such as "x has a disposition to so and so" doesn't commit one to the existence of dispositions. However, it is not easy to say what disposition ascriptions mean if there are no dispositions.²⁰ The denier of dispositions is in the uncomfortable position of either claiming that all of our numerous and varied disposition ascriptions are false, or explaining how they could be true if there are no dispositions.

If we accept that the truth of disposition claims gives us evidence for the existence of dispositions, then we know that dispositions exist to the extent that we know that disposition ascriptions are true. So, what is our evidence for truth of disposition claims? Dispositions are not directly observable; however, their manifestations often are. Simply put, when we observe that an object regularly exhibits a certain manifestation in certain circumstances, then we have reason to believe that the object has a disposition to exhibit that manifestation in those circumstances. We are also sometimes justified in be-

20 See Markus Schrenk's paper in the volume for a recap of the unhappy history of that project. However, even some non-reductionist, such as George Molnar, reject the view that ascribable dispositional predicates correspond to genuine dispositions (Molnar 2003, 27).

believing that an object has a disposition even if we have never observed that particular object manifesting that disposition. In that case, we have reason to believe that it is relevantly similar to objects which have regularly exhibited that manifestation in those circumstances. I think that something like this is all the reason we ever have for believing that something has a particular disposition. Of course, we are fallible, and we might over-generalize or misidentify the relevant respect of similarity. The process is more detailed and controlled in a scientific experiment, and of course, the case is much more complicated when the manifestation is itself unobservable, such as the manifestation of an electron to repel other electrons. (The question of how to determine when unobservable manifestations occur is answered by however we determine that any unobservable state of affairs obtains.)

It seems to me that the evidence we have for different disposition claims does not discriminate between different kinds of dispositions. The evidence for the assertibility of our ascriptions of different kinds of dispositions seems to be on a par. For example, though flammability may be a more natural property than provocativeness, our evidence that a red cape is provocative is not unlike our evidence that it is flammable: When it, or capes like it, are waved in front of a bull, the bull charges; when they are ignited, they burn. Favorable evidence is not exclusive to natural properties.

In a similar vein, I could argue that we have evidence for dispositions on both sides of each distinction. However, I'm going to concentrate on what strikes me as the hardest case – ungrounded or bare dispositions. Is the evidence for bare dispositions on a par with our evidence for grounded dispositions? One might think that, in the case of bare dispositions, even if an object has exhibited a certain manifestation in the past, since the disposition is not grounded in any other property of the object, the object might have mysteriously lost the disposition in the mean time.

However, if we are going to be that skeptical about the stability of dispositions, this skepticism would not single out bare dispositions as possibly fleeting. Suppose I pick up a rubber band, stretch it, then put it down. It resumes its former shape, I figure that it has the disposition of elasticity, and I presume there's something about its structure and composition that accounts for this. But a minute later, if I want to adopt a skeptical attitude, for all I know, its underlying structure might have changed, and it's no longer elastic. In fact, it has happened that I opened my drawer and picked up a rubber band that appears to be the same as it did the last time I used it, but when I go to use it again, I find that it has lost its elasticity and has become brittle. Of course, this loss of elasticity takes much longer than a minute, and my practice of assuming that, other things being equal, things retain their dispositions, serves me pretty well. I don't see where the ground of the disposition, or lack-

there-of, makes a difference in my confidence that things retain their dispositions when they are not manifesting them.

What about when a particular instance of a bare disposition has never been manifest? How do we know it is there at all? As mentioned above, in general, when an object has never manifested a particular disposition, our evidence that it has that disposition is its similarity to other objects which we have observed to manifest that disposition. But in the case of bare dispositions, one may argue, it's not clear what the relevant respect of similarity is. Since the disposition is bare, there is no observable property that objects share, which grounds the disposition in question. This suggests that our evidence for unmanifested bare dispositions would be inferior to our evidence for unmanifested grounded dispositions.

While this argument seems plausible, it assumes that our evidence for unmanifested grounded dispositions is the observation of a causal basis shared with manifested dispositions. However, this is unlikely. Consider your reasons for believing that something has an unmanifested grounded disposition, such as a tablet that is water-soluble. Your evidence for the tablet's water-solubility is the observable properties it shares with things that have dissolved in the past. But the observable properties are unlikely to be the causal basis of the tablet's water-solubility. You do not observe a particular molecular structure, or anything that is a plausible candidate for being a causal basis of solubility. Similar points can be made about unmanifested elasticity, fragility, inflammability, etc. So, either we are not justified in believing such ascriptions of unmanifested grounded dispositions, or the claim that we are only justified in believing an ascription of an unmanifested disposition when we observe its causal basis is false.

I think we are justified in making ascriptions of unmanifested dispositions in the absence of any observation or knowledge of a causal basis. So, our evidence for dispositions which may happen to be bare is on a par with grounded dispositions. That is not to give evidence for the *bareness* of those dispositions. For that, we have the (defeasible) evidence that the property in question is fundamental.²¹

5. Property Dualism

Dispositional pluralism, the view that there are many different kinds of dispositions, is obviously inconsistent with the denying that dispositions exist. An absolutist who claims that all properties are non-dispositional is unlikely to be convinced by my claims that we have evidence for the truth of disposition

21 See arguments for the ungrounded disposition in Mumford 2006; Molnar 2003, 131-132.

ascriptions and thus evidence for the existence of dispositions. Though we seem to have both dispositional and non-dispositional predicates, and true sentences ascribing dispositional predicates to objects, one might argue that the fact that a predicate bears the marks of dispositionality doesn't show that the property it picks out is a disposition. It is thought that the dispositional concept, tied as it is to a causal role, is just an oblique way to referring to what is in fact a non-dispositional property. On such a view, when we are better acquainted with the occupant of this causal role, we can jettison the dispositional talk if we choose.²² So, while "magnetic" for example may bear the marks of dispositionality, if it picks out a property, on this view, it nevertheless picks out a non-dispositional property. Hence one can recognize both dispositional and non-dispositional predicates and yet deny the existence of dispositions. So, a full defense of dispositional pluralism should include an argument against anti-dispositionalism, if you want to call it that.²³

What about pandispositionalism – the view that all properties are dispositions? Pandispositionalism is consistent with the view that there are different kinds of dispositions, so I need not rule out pandispositionalism in order to defend dispositional pluralism. However, property dualism (in this context, the view that there are both dispositional and non-dispositional properties) is more in the spirit of pluralism, and happens to be the view that I favor. But like the anti-dispositionalist, the pandispositionalist is unlikely to be convinced by my semantic/epistemic arguments. The pandispositionalist can acknowledge ascribable non-dispositional predicates, and yet maintain that all properties are dispositions. Such a theorist might point out that bearing the marks of dispositionality is not necessary for a term to pick out a disposition. For example, one may point out that the term 'red,' as ordinarily understood, does not bear the marks of dispositionality: it has not strong conceptual association with triggering events, manifestations, or conditionals, nor is it normally thought of as equivalent in meaning to an overtly dispositional locution. Nevertheless, one might maintain that to be red is nevertheless to have a disposition to cause certain types of visual experiences. So, a defense of property dualism cannot rest on the evidence for the truth of both disposition ascriptions and non-disposition ascriptions. Even when the truth of those ascriptions is not at issue, whether the predicates they employ refer to disposition is.

Finding plausible examples of nondispositional properties is good reason to reject pandispositionalism. While the pandispositionalist might talk you

22 Proponents of this "promissory note" conception of disposition terms include Quine (1969, 20) and Armstrong (1973, 15).

23 I will not give that argument here, for lack of space and of anything new to say. For a defense of dispositions over Humean views, see for example, Molnar 2003, 111-121; Ellis 2002, 60-65; Mumford 1998, 170-191.

into thinking that shape and mass are dispositional,²⁴ other properties seem immune to such strategies. Molnar makes a plausible argument for the view that spatio-temporal relations are irreducible, non-dispositional properties.²⁵ Also, arguably, we have evidence for non-dispositional qualities of our own experiences. Even if redness is a disposition to produce certain visual experiences, some properties of those visual experiences seem non-dispositional.

Whether or not one finds such examples plausible, pandispositionalism is called into question by the so-called “always packing, never traveling” (APNT) objection.²⁶ If all properties are dispositions, when objects manifest their dispositions, they merely acquire new dispositions. Each object packs and repacks its trunk full of properties, but it never takes off.

One might not think that this regress is vicious. Instead, one might think a disposition to produce a disposition to produce a disposition is no worse than a cause which produces an effect which is also a cause for a further effect, onward into the future. If there's anything to the objection, there must be an important difference between APNT and a simple causal chain. To make the objection clearer, we should take it beyond the metaphorical level.

When an object manifests a disposition, some object acquires new properties, either the disposed object, some other object(s), or both: the elastic band takes on a new shape; the provocative cape changes the bull's mood; the soluble table dissolves and the surrounding liquid approaches saturation, etc. Furthermore, it seems reasonable to grant that sometimes the manifestation of a disposition involves the acquisition of new dispositions. Dispositions to acquire dispositions are the second-order dispositions discussed by Broad, with magnetizability being a plausible example. But could it be the case that all dispositions are like that – merely dispositions for further dispositions? Could every manifestation of a disposition involve nothing more than the acquisition of new dispositions? Here's one way of formalizing APNT in an attempt to clarify just what's wrong with this picture:

1. A manifestation of a disposition is constituted by a particular acquiring some properties: If some particular, *a*, manifests a disposition, then some particular *b* acquires some properties. (Possibly $a = b$, throughout.)
2. If all properties are dispositions, and if *a* manifests a disposition, then some *b* acquires some dispositions (and does not acquire any non-dispositions).
3. A disposition is either manifest or latent (producing no manifestation).

24 That's one interpretation of what's going on in Mellor (1974, 171) and Goodman (1983, 41).

25 Molnar 2003, 159.

26 This objection appears in many places. A nice discussion appears in Molnar 2002, 173-181.

4. If all properties are dispositions and b acquires some dispositions, then either b's new dispositions remain latent or some c acquires some dispositions.
5. If all properties are dispositions and c acquires some dispositions, then either c's new dispositions remain latent or some d acquires some dispositions.
6. If all properties are dispositions and d acquires some dispositions, then either d's new dispositions remain latent or some e acquires some dispositions.
7. etc.
8. Therefore, if all properties are dispositions, every manifestation of a disposition is constituted by either
 - a. a particular having a disposition that produces no manifestation, or by
 - b. a particular having a disposition that gives something a disposition, which produces no manifestation, or by
 - c. a particular having a disposition that gives something a disposition, which gives something a disposition, which has no manifestation, or by
 - ...
 - d. a particular having a disposition that gives something a disposition, which gives something a disposition, ad infinitum.
9. It is not plausible that every manifestation of a disposition is constituted by a, b, c, or ... d.
10. Not all properties are dispositions.

The strength of this argument depends on premise 9. The disjunctions enumerated in premise 8 are supposed to bring out the sense in which nothing really happens in the pandispositionalist world.

One response that's often made against the APNT argument is that it illegitimately assumes that dispositions are not fully real, and so that when something gains a disposition, nothing really happens. However, I acknowledge that something gaining a disposition is an event, or something happening. However, I find it odd to suppose that all that ever happens is that things loose and acquire dispositions.

Maybe what's wrong with the scenario described in premise 8 above is that it's not clear how one could ever observe a manifestation of a disposition. This thought inspires the following variation on the APNT argument:

1. A disposition is either latent or manifest.
2. If a disposition is latent, it is not observable.
3. If a disposition is manifest, the disposition itself is at most indirectly observable.
4. Therefore, dispositions are never directly observable.

5. Therefore, if all properties are dispositions, no properties are directly observable.
6. The only way to indirectly observe a property is to directly observe some other property.
7. Therefore, if all properties are dispositions, all properties are unobservable.
8. Some properties are observable.
9. Therefore, not all properties are dispositions.

This argument relies on the contingent claim that some properties are observable and perhaps the argument would not be sound in a world where observation is impossible. If one wants to oppose pandispositionalism in such a world, perhaps a dispositional account of “observable” could make it work. Never the less, the 8th premise above seems obviously true in the actual world, which is probably good enough to show that pandispositionalism is not true in the actual world.

To summarize this section, one of the contrasting pair of absolutist positions concerning dispositions warrant further discussion, anti-dispositionalism (the view that no properties are dispositions) and pandispositionalism (the view that all properties are dispositions). I have argued that we have reasons to think that disposition claims are true, which gives us reason to think that dispositions exist. If the anti-dispositionalist remains unconvinced, my case needs to be supplemented with other arguments for the existence of dispositions. While dispositional pluralism is consistent with pandispositionalism, property dualism (the view that both dispositional and non-dispositional properties exist) is more in line with the spirit of pluralism, and is a more plausible view in its own right. The APNT objection shows pandispositionalism to be an unattractive metaphysical picture.

6. Conclusion

Semantic and empirical evidence are consistent with there being different kinds of dispositions. Dispositions are a broad and heterogeneous kind of property. You may be interested in a certain kind of disposition – the natural, intrinsic, or fundamental. However, that focus should not be presented as an absolute claim that all dispositions are such and such. This may be a personal, linguistic preference on my part, but it is not an arbitrary preference.

For one thing, dispositional pluralism is closer to ordinary English – both the term ‘disposition,’ its synonyms, and other recognizably dispositional predicates. I think it is better, other things being equal, to use terms in readily recognizable ways. Otherwise, one should clarify with a *précising* definition – stipulating that this loose, umbrella term is going to be used in a more specific

way. Mentioning that you are using 'disposition' in the philosopher's and not the lay person's sense is insufficient.²⁷ Even the "philosopher's sense" is quite pluralistic, as the philosophical distinctions at the outset show.

A second, pragmatic issue is the usefulness of theorizing about dispositions. Often, dispositional theorists try to generate interest in dispositions by pointing out how pervasive dispositional concepts are. This is false advertising if a scant minority of these concepts actually corresponds to real dispositions, on the theorists' view. Many of the things theorists say about dispositions can shed light on "so-called" dispositional theories of value, belief, colors, beauty, knowledge, fitness and others. Theorists would be prudent not to undercut the importance of their work by using the term "disposition" so narrowly that the concept is not relevant to these other philosophical concerns.

Thirdly, dispositional pluralism facilitates rather than restricts discussion among dispositional theorists. Often, those with sparse theories of dispositions express their willingness to yield to science the last word about fundamental properties. Therefore, on such views, whether any property, such as charge or mass, is a disposition, might be an unresolved scientific question. If so, we cannot confidently give any examples of genuine dispositions. Then we've traveled a long way from the useful concept that pervades our daily lives to one which we scarcely know how to apply. What are those things that we used to think of as dispositions? Are they non-dispositional properties, or nothing at all? How are we supposed to make sense of the ways we have been speaking? Speaking of numerous and various dispositions, and then considering, if we wish, whether any of these are ungrounded, extrinsic, derivative, or what have you, seems more helpful to metaphysical inquiry than starting off by stipulating away the existence of such dispositions.

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²⁷ Prior 1985, 1.

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