Dispositions and Ergativity

John T. Maier

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Abstract

Attempts to give necessary and sufficient conditions for demarcating 'dispositional' predicates (such as 'is fragile') from other predicates are generally acknowledged to fail. This leaves unresolved the question of what it is about paradigm instances of dispositional predicates in virtue of which their application to an object constitutes a disposition ascription. This essay proposes that dispositional predicates are generally derived from *ergative* verbs, those verbs that allow for certain entailments from transitive to intransitive forms (as 'Sam broke the glass' entails 'The glass broke'). The connection between disposition ascriptions and ergativity is shown to have consequences for the metaphysics of dispositions.

1. Introduction

The topic of dispositions is a metaphysical one, but much philosophical discussion of dispositions has focused on the linguistic topic of disposition *ascriptions*. It is not surprising that this has been so. An adequate and systematic account of the semantics of disposition ascriptions would be at least a useful thing for the metaphysician to have, and it has seemed, at times, an attainable one. Such an account would be, if not the last word on dispositions, perhaps at least the first word.

Once we decide to attend to disposition ascriptions, we face a question: how are

dispositions ascribed? Dispositions are of course ascribed in many ways, and there are endless subtleties in properly understanding the differences among them. But at a very general level, we may distinguish between two species of disposition ascriptions: those that involve an dispositional *predicate*, and those that involve a dispositional *clause*. Examples of predicative disposition ascription are:

(1a) The glass is fragile

(1b) The rug is flammable

(1c) The bear is irascible

Examples of clausal disposition ascriptions are:

(2a) The glass is disposed to break when struck

(2b) The rug is disposed to burn when ignited

(2c) The bear is disposed to get angry

In a number of classic discussions of dispositions and their ascriptions, such as [Goodman 1954], the focus was on sentences like those listed under (1), or predicative disposition ascriptions. In the more recent literature, such as [Fara 2005] and [Manley and Wasserman 2008], the focus has tended to be on sentences like those listed under (2), or clausal disposition ascriptions. Why the change?

A main reason for the change is that there does not appear to be any principled way of demarcating the class of 'dispositional predicates'. We might try to do this

morphologically, for instance by the presence of certain suffixes. But this will not do, as Goodman himself points out:

> A tell-tale suffix like “ible” or “able” is not always present. To say that a thing is hard, quite as much as to say that it is flexible, is to make a statement about potentiality. If a flexible object is one capable of bending under appropriate pressure, a hard object is one capable of resisting abrasion by most other objects [Goodman 1954: 40]

Alternately, we might try to demarcate the class semantically. Several authors, under the influence of the idea that there must be some essential tie between dispositions and conditionals, have suggested that dispositional predicates are just those whose ascription entails the truth of a conditional. But this does not distinguish dispositional predicates from any other predicates, as emphasized by Fara:

> What is it about certain predicates, like ‘‘fragile’’ or ‘‘soluble’’, in virtue of which they express dispositions rather than properties of some other kind? This question is typically answered in the literature by saying that a predicate expresses a disposition iff the application of the predicate to an object entails a conditional of some kind. Of the statement that a certain glass is brittle, for example, David Armstrong says, ‘‘It is uncontroversial that [it] entails a counterfactual statement along these general lines: If this glass had been suitably struck, then this striking would have caused the glass to shatter’’. That may be so, or it may not; but it will

> hardly help differentiate the dispositional from the non-dispositional. For the application of any predicate to an object entails a conditional along some general lines, if only for the trivial reason that there are conditionals that are true as a matter of necessity. [Fara 2005: 44]

Thus Fara proposes to 'to solve this problem by bypassing it altogether' by moving to clausal descriptions of the form of (2).

The move from predicative to clausal disposition ascriptions was therefore a well-motivated one. But the move leaves us entirely in the dark about the nature of predicates such as 'is fragile', and in virtue of what they manage to ascribe dispositions. I propose in this essay to shed some light on this topic, and to inquire into what it is about predicates like these that allows them to figure in disposition ascriptions. In addition to its intrinsic interest, this inquiry will turn out to have consequences for the metaphysics of dispositions.

2. Susceptibility predicates

Let us begin by being unabashedly morphological, and demarcating the class of English adjectives that take '-able', '-ible', and '-ile' as suffixes. To avoid begging any questions, let us simply call these *susceptibility predicates* (henceforth SPs), where this is simply stipulative shorthand for the morphological class just described[1]. From the morphological point of view, there are good grounds for treating these suffixes as a unified class: the minor differences between them (variation in the initial vowel, the presence or

[1] Strictly speaking, these are susceptibility *adjectives*, which constitute susceptibility *predicates* only when conjoined with a form of the verb 'to be' (as 'fragile' is an adjective that constitutes a predicate only in the larger construction 'is fragile'). To avoid needless verbosity, I will use 'predicate' loosely to denote either the adjectives that constitute predicates or the predicates themselves.

absence of 'b') are adequately explained by phonetic pressures or simple accidents of history.[2]

One might worry that, by focusing on a morphological property of English, one is fixing on a category that cannot antecedently be expected to be of any philosophical interest. This is a reasonable worry to have, but it does not in this case apply. These suffixes in English mark a species of what are called *derived nominals*. Derived nominals, and in particular those English predicates that we are classing as SPs, turn out to have played an important role in the recent history of syntax and semantics, notably in the arguments of [Chomsky 1970]. But the point for now is simply that the category of SPs, and the more general category of derived nominals of which it is a species, represents something more than a mere morphological accident.

Once we focus on this class of predicates, we see that the converse of Goodman's point is also true. As the use of a SP is not necessary for the ascription of dispositions, neither is it sufficient. Consider:

(3a) The bread is edible

(3b) The work is commendable

[2] Thus the *Oxford English Dictionary* entry for '-ble' notes that such suffixes originally derive from the Latin -bilem, nominative -bilis, 'forming verbal adjs., with the sense 'given to, tending to, like to, fit to, able to'; as in *sta-bili-* 'like, fit to stand." The Latin form of the suffix is retained in 'fragile,' but typically it is not, and the departures from the Latin form follow a kind of pattern, though not an entirely consistent one:

> When the verb lives in French, a modern adj. in *-able* has always taken the place of the earlier *-ible* form, as in *vendable*, *croyable*, *préférable*, for Latin *vendibilis*, *credibilis*, **præferibilis*. But in English there is a prevalent feeling for retaining *-ible* wherever there was or might be a Latin *-ibilis*; while *-able* is used for words of distinctly French or English origin, as *conceivable*, *movable*, *speakable*. Hence, where there is a verb in French and English, as well as in Latin, English usage is distracted by conflicting and irreconcilable analogies.

(3c) The weather is miserable

These clearly do not entail, let alone are synonymous with:

(4a) The bread is disposed to be eaten

(4b) The work is disposed to be commended

(4c) ??

Bread that is edible need not be disposed to be eaten (for instance, a somewhat stale loaf), and craftsmanship that is commendable need not be disposed to be commended (for instance, elegant craft that is not easily noticed). Note that the problem here is *not* the absence of 'stimulus conditions' for the proposed disposition. Irascibility appears to lack a stimulus condition, but this is no obstacle to the approximate equivalence of our earlier (1c) and (2c).

The pair (3c) and (4c) raises an independent consideration about SPs. SPs are, as we have said, derived nominals. Sometimes the verbs from which they are derived are manifest in their morphology and extant in the language, as with, for instance, 'commendable' (where the verb is simply *commend*). In still other cases, there is a verb extant in the language which intuitively bears on their truth conditions, though it is not always manifest in their morphology; this is the case with, for instance, 'fragile' and 'flammable' (where the verbs are *break* and *burn*, respectively). Let us call cases of either of these types *live* SPs: in these cases there is a semantic if not morphological link between the predicate and a particular English verb. These are to be contrasted with *dead* SPs (by

a rough analogy with 'dead metaphors'): here there is no longer even a verb in English that is clearly relevant to the semantics of the predicate. 'Miserable' in (3c) is such an SP; others include 'seasonable', 'probable', and 'possible'.[3]

Given our interests – which are not to give a general syntax and semantics for SPs but simply to give an account of those SPs that are used to ascribe dispositions – we may set dead SPs to one side. For, from the examples that we have canvassed, it would appear that all dispositional SPs are live SPs. This is indeed so, and it is clear what it must be so. Insofar as our criterion for dispositionality demands the availability of certain clausal disposition ascriptions, and insofar as these require particular verbs for their arguments, a dead SP will not even provide the appropriate arguments for a dispositional clause. This was one reason why (3c) did not entail a clausal disposition ascription, quite independently of the obstacles to such an entailment posed by (3a) and (3b).

Implicit in the argument of the previous paragraph, and indeed of the entire discussion thus far, is a principle that bears making explicit. The principle is that an SP is *dispositional* only if its application to an object entails a clausal disposition ascription regarding that object. This is the link implicit in the earlier move from predicative to clausal dispositional ascriptions, and why that change in the literature did not simply constitute a change of subject. Our discussion of live SPs allows us to further constrain this principle. When an SP is dispositional, it will be semantically associated with some verb V, and the clausal disposition ascription that it entails will take V as an argument. Putting these observations together, we can state the following general principle:

[3] A range of further examples are provided at Chomsky 1970: 220-221.

(Disp) An SP 'F' is dispositional only if

(i) 'F' is semantically associated with some verb V, and

(ii) if F(x), then x is disposed to V (when C)

We might simply take (*Disp*) to be a stipulative definition of what it is for an SP to be 'dispositional'. But we need not and ought not do this. We need not because dispositionality is a topic on which we have a pretheoretical, if admittedly crude, grasp, such that it need not be *defined* in terms of the availability of clausal disposition ascriptions. We ought not do this because some recent discussions have led some to deny the relevance of clausal disposition ascriptions, as opposed to predicative ones, to the metaphysics of dispositions. These discussions are I think, on this point at least, mistaken, and we should uphold (*Disp*). But on pain of trivializing this debate we should regard (*Disp*) as a substantive principle linking dispositionality and certain disposition ascriptions, rather than a mere verbal definition.

3. Susceptibility predicates and 'can'

One important recent opponent of (*Disp*) is Barbara Vetter [Vetter ms.]. Her discussion marks a notable exception to the tendency in the recent philosophical literature to attend to clausal, rather than predicative, disposition ascriptions.

Vetter's immediate concern is with opposing accounts of disposition ascriptions that link them to conditionals. She writes:

Despite dominating the current literature, this preoccupation with conditionals is

> oddly in tension with the linguistic means that we use to ascribe dispositions in ordinary life, adjectives such as the ones I have used: 'fragile', 'transmissible', 'irascible'. Typically, those adjectives are formed from a verb (not always extant in English: 'frag-' is from the Latin *frangere,* 'to break'; 'irasc-' from the Latin *irasci*, to get angry) and various contractions of the suffix '-able' (including '-ible' and '-ile'). These adjectives display two features that are worthy of note in the present context. First, they provide us with only one half of the putative conditional. In the cases I have cited, it is the second half, the disposition's manifestation: breaking, being transmitted, and getting angry. Second, the most natural paraphrase for the suffixes that go into their formation is not a conditional, but 'can' and other expressions of possibility. [Vetter ms.: 2]

The first point here, the absence of stimulus conditions, is important for Vetter's project, but not so much for our present one. As we have said, our immediate concern is not with the link between dispositions and conditionals but with the distinctive behavior of dispositional SPs. SPs do not demand stimulus conditions, but, as indicated by our pair (1c) and (2c), clausal disposition ascriptions do not demand stimulus conditions either. So this does not indicate a distinctive feature of SPs, but a more general feature of the way in which we ascribe dispositions. This feature of dispositional language is indeed a concern for linking dispositions to conditionals, since conditionals are an essentially dyadic construction, but it is one that we may for present purposes set to one side.

The link between SPs and 'can' claims is a more promising one. But the claim to *paraphrasability*, if intended as a general thesis about the suffixes involved in SPs, seems

much too strong in light of the various cases that we have considered. Most obviously, dead SPs such as 'miserable' are not be paraphrasable in such terms, for, just as they do not provide a verb to serve as an argument for clausal disposition ascriptions, so they do not provide a verb to serve as an argument for 'can'.

We may set aside this problem, at least, by focusing our attention again on live SPs. But even once we have done this, the point about paraphrasability, understood as a general thesis about live SPs, fails. Consider again (3b). Work that is commendable is not work that can be commended. It is rather, very roughly, work that *ought* to be commended. Insofar as (3b) admits of a paraphrase in terms of a modal auxiliary, then, it is a deontic rather than an agentive modal. Nor is 'commendable' an outlier. Other predicates that behave similarly include 'despicable', 'enviable', 'laudable', and 'pitiable'.

Given our aims – which are, again, to give an account of dispositional SPs rather than a syntax and semantics for SPs generally – we may once again narrow our focus. Let us drop Vetter's claim to paraphrasability in favor of a more modest claim to *entailment*. And let us simply set aside what we might call *evaluative* SPs, which are roughly those SPs whose application to an object entails some kind of normative claim. Let us then focus on *descriptive* SPs, which are simply those live SPs that are not in this sense evaluative. And then there would appear to be something plausible in the thought that descriptive SPs entail certain 'can' claims.

But what kind of 'can' claims do descriptive SPs entail? Vetter is not entirely explicit on this point. Sometimes she puts matters in terms of what we can call *active* 'can' claims, of the form: x can V. Other times she puts matters in terms of what we can call *passive* 'can' claims, of the form: x can be Ved, where 'V' is put in the passive voice. Thus we can pose

the following question: if descriptive SPs do indeed entail certain 'can' claims, do they entail active or passive 'can' claims?

Consider the following sentences, some of which we have already encountered:

(5a) The glass is fragile

(5b) The rug is flammable

(5c) The bear is irascible

(5d) The bread is edible

(5e) The writing is legible

(5f) The game is winnable

The candidate 'can' claims are then:

(6a) The glass can break/can be broken

(6b) The rug can burn/can be burnt

(6c) The bear can get angry/can be angered

(6d) The bread can eat*/can be eaten

(6e) The writing can read*/can be read

(6f) The game can win*/can be won[4]

We can now ask again: if descriptive SPs do indeed entail certain 'can' claims, do they entail

[4] The asterisks here do not denote ungrammaticality, but rather that the resulting sentence is not at all plausibly entailed by the corresponding predicative sentence. Thus, for instance, 'The bread can eat' is grammatical and perhaps meaningful, but is not entailed by (5d).

active or passive 'can' claims? And the list indicates that it is their entailment of passive 'can' claims that is the only plausible candidate. Some descriptive SPs ('fragile', 'flammable', 'irascible') may entail active 'can' claims, but all descriptive SPs that we have considered appear to entail passive 'can' claims. It is the latter therefore that promises to mark a distinguishing aspect of descriptive SPs generally.

It is an interesting question why some descriptive SPs *also* entail active 'can' claims, and whether it is a coincidence that it is precisely these that also allow for paraphrase in terms of clausal disposition ascriptions. I will eventually argue that this is not at all a coincidence, and marks a defining aspect of dispositional SPs. But this is something to which we shall return.

It appears therefore plausible that any descriptive SP entails a certain 'passive' can claim. Since all dispositional SPs appear to be descriptive SPs, this allows us to state another very general thesis about dispositional SPs:

(*Can*) An SP 'F' is dispositional only if

(i) 'F' is semantically associated with some verb V, and

(ii) if F(x), then x can be Ved

Like (*Disp)*, (*Can)* is not offered as a definition of what it is for an SP to be dispositional, but simply as a general thesis about dispositional SPs and their entailments.

But now we face a puzzle. According to (*Disp*), application of a dispositional SP entails that its bearer is disposed to *act* in a certain way. But according to (*Can*), application

of a dispositional SP entails that its bearer can be *acted on* in a certain way, and indeed in the very same way (that is, in the way expressed by the associated verb 'V'). But to act is one thing, and to be acted on in quite another. The former generally does not entail the latter, and in general appears to exclude it. So there would appear to be some tension between (*Disp*) and (*Can*); the former holds that dispositional SPs entail certain claims in the active voice, whereas the latter holds that dispositional SPs entail certain claims in the passive voice.

One way to resolve this tension would be to deny either (*Disp*) or (*Can*). This is Vetter's strategy.[5] She is skeptical of (*Disp*) if it is intended in anything other than a verbal definition. She writes:

> In discussing properties such as fragility, solubility, and irascibility, philosophers have often found it convenient to switch from these terms to the apparently more transparent 'disposed to . . . if . . .' locution, and to examine their linguistic intuitions regarding those constructions rather than the terms that the debate was initially concerned with, such as 'fragile'. In this context, it is easy to forget that the locution, used in this way, is almost entirely an artifact of philosophy, a theoretical term introduced as a placeholder to capture whatever it is that fragility, solubility and so on have in common qua dispositional properties. Note that 'disposed to', if I am correct, contrasts sharply with dispositional adjectives such as 'fragile' and 'soluble': it is precisely our pretheoretical grasp of those

[5] Vetter herself would not put the tension in quite this way, for she does not regard the passive aspect of the thesis that we are calling (*Can*) as an essential feature of the thesis. But, in light of the considerations appealed to above, this is how the thesis ought to be regarded.

> dispositional predicates that philosophers have been trying to capture with the theoretical term ‘disposed to’. [Vetter ms.: 18]

This is, I think, partly correct and partly not. It is partly correct in that the philosopher's use of the phrase 'disposed to' is quite different from the ordinary one. It is incorrect in that it suggests that the very connection between predicative and clausal disposition ascriptions is a philosopher's artifact. The fact that dispositional SPs may so easily be reexpressed in terms of clausal constructions that nowhere use those predicates is a striking fact about disposition ascriptions, one that requires a deeper explanation than this. It is likely that the term 'disposed' is indeed a technical one; 'tends to' or 'inclines to' probably hew closer to ordinary speech. But the idea that predicative disposition ascriptions admit of clausal restatements does not itself seem to be merely a philosopher's invention.

I propose then that we at least attempt to retain (*Disp*), while acknowledging the pseudo-technical use of 'disposed'. For the basic idea behind (*Disp*) does not turn on this use of 'disposed'. The basic idea rather is that the application of dispositional SPs entails certain clausal claims, and crucially that the verbs occurring in these causal claims take the *active* voice. The puzzle is rendering this compatible with (*Can*), according to which the application of dispositional SPs entails claims where these very same verbs occur in the *passive* voice. Indeed, a version of the puzzle would remain even were we to deny (*Disp*), for we would still need to explain the puzzling asymmetry between (6a-6c) and (6d-f), and why it is precisely dispositional SPs that allow for this kind of indifference to the voice of the verbs that occur in the 'can' claims that they entail. To solve these puzzles, we need to attend more carefully to the verbs from which dispositional SPs are derived.

4. Ergative verbs

We have been asking: in virtue of what are certain SPs dispositional SPs? Since every dispositional SP is a live SP, and every live SP is associated with a certain verb, we may reframe our question. Is there something about the verbs with which dispositional SPs are associated such that these SPs are dispositional? And this question turns out to have an affirmative and intriguing answer. In order to give this answer, we need to make a brief digression into the linguistic topic of *ergativity*.

Ergativity is, in the first place, a property of languages. In certain languages, the fundamental distinction in the arguments of verbs is the distinction between the *subject* and the *object* of verbs. In certain other languages, the fundamental distinction in the arguments of verbs is that between the subject of *transitive* verbs on the one hand and the subject of intransitive verbs along with the object of transitive verbs on the other. Languages of the latter kind are said to display *ergativity*. Many of the world's languages display ergativity, but the phenomenon has often escaped notice because most such languages are indigenous languages of Australia and the Americas and only one such language (Basque) is European.[6]

English itself is not then a language that displays genuine ergativity.[7] But it does have what are called, by a kind of analogy, 'ergative verbs'. These are verbs where the fact that some entity x was the *object* of V, read transitively, entails that it was the *subject* of V, read intransitively.[8] Thus, the following sentences are clearly true:

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[6] See [Dixon 1994: 2-5].
[7] Though for a contrasting view see [Lemmens 1998: 30].
[8] In the standard work on ergativity [Dixon 1994], R.M.W. Dixon protests against this usage of 'ergative',

(7a) Sam broke the glass, so the glass broke

(7b) Sam burned the rug, so the rug burned

(7c) Sam angered the bear, so the bear got angry

On the other hand, the following are not:

(8a) Sam commended the work, so the work commended*[9]

(8b) Sam ate the bread, so the bread ate

(8c) Sam read the writing, so the writing read

Thus, *break*, *burn*, and *anger* are said to be ergative verbs, whereas *commend*, *eat,* and *read* are not.

These patterns should strike us. It is precisely those SPs which are dispositional that are associated with ergative verbs. This pattern suggests a third highly general conjecture about dispositional SPs:

(*Erg*) An SP 'F' is dispositional only if

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regarding the extension of the term to strictly non-ergative languages such as English as a lamentable 'misuse' [Dixon 1994: 20]. But the protest is unwarranted: these verbs demonstrate what Dixon himself regards at the outset, the 'most generally accepted sense' of 'ergativity,' namely 'a grammatical pattern in which the subject of an intransitive clause is treated in the same way as the object of a transitive clause, and differently from transitive subject' [Dixon 1994: 1].

[9] (8a) is ungrammatical here since 'commend' has only a transitive reading, and thus demands an object. It is a consequence of the link between dispositional SPs and ergative verbs that verbs that do not have an intransitive reading cannot be associated with a dispositional SP; another consequence is that verbs that do not have a transitive reading cannot be associated with a dispositional SP either. An apparent counterexample is 'breathable' (of a fabric), associated with the intransitive verb *breathe*. The question of how to treat outliers to the ergativity hypothesis will be discussed at greater length in section 5 below.

(i) 'F' is semantically associated with some verb V, and

(ii) V is ergative

If (*Erg*) is true, it explains why (*Disp*) and (*Can*) are compatible, and indeed why the former explains the latter.

The explanation goes via two subsidiary principles about verbs, one about verbs generally and one about ergative verbs in particular. These are:

V_i For any V, if x is disposed to V (when C), then x can V

V_{ii} For any ergative V, if x can V, then x can be Ved

The first principle, V_i, is exceedingly plausible. The second principle, V_{ii}, simply says that ergative verbs behave the same way when embedded under 'can' as they do when not so embedded, and can be verified by reviewing our earlier instances of ergative verbs. Thus:

(9a) The glass can break, so the glass can be broken

(9b) The rug can burn, so the rug can be burned

(9c) The bear can get angry, so the bear can be angered

It will be clear that, if every dispositional SP is indeed associated with an ergative verb, these principles entail that any predicate that satisfies (*Disp*) must also satisfy (*Can*).

Independently of considerations about (*Disp*), ergativity also explains the puzzling phenomenon noted above, namely that dispositional SPs appear to be indifferent as to

whether the 'can' claims that they entail take active or passive verbs in their complement, in the way indicated by (6a-6c), as opposed to (6d-6f). This puzzle is explained by V_{ii}, conjoined with a third principle about 'can' and ergative verbs:

V_{iii} For any ergative V, if x can be Ved, then x can V

This principle is simply the converse of V_{ii}, and can be verified by simply reversing the sentences we have already considered:

(10a) The glass can be broken, so the glass can break

(10b) The rug can be burned, so the rug can burn

(10c) The bear can be angered, so the bear can get angry

The conjunction of V_{ii} and V_{iii} predicts that, when an ergative verb is embedded under 'can', the shift from the active to the passive voice, or conversely, makes no semantic difference. And this is precisely what we find in (6a-c).

5. On the category of dispositionality

I have argued that any predicate satisfying *(Disp)* and *(Erg)* must also satisfy *(Can*), and that this fact explains some of the linguistic patterns described above. But I have not argued for a couple of other entailments. First, I have not argued that any predicate that satisfies *(Disp)* must satisfy (*Erg)*. Nor have I argued that any predicate that satisfies (*Can)* must (whether or not it satisfies *(Erg)*) satisfy (*Disp*). If these entailments fail – as I think

they do – then they raise the issue of how the present account is to reckon with those predicates that satisfy some, but not all, of these conditions on dispositionality.

Let me begin with a general methodological remark. One project, discussed in the opening section, was to give an *analysis* of what it is for a predicate to be dispositional, in the sense of giving necessary and sufficient conditions for dispositionality in terms that nowhere appeal to dispositional predicates. This is not my project. For reasons given in the opening section, and in light of other phenomenon discussed above – notably the semantic diversity of derived nominals – I suspect that this project is a hopeless one.

But this is not the only useful project available. We may learn something about dispositional SPs by trying to identify their most salient and general characteristics. This is I think the proper way of conceiving of *(Disp)*, *(Can)*, and *(Erg)*. The appropriate methodological model here is not analysis but the more modest project of articulating platitudes. Certain predicates, like 'fragile', satisfy (*Disp)*, *(Can),* and (*Erg*). Such predicates are clearly dispositional. Certain other predicates may satisfy one or two of these conditions, but not all of them. The question of whether such predicates should be counted as genuinely 'dispositional' may not be one with a fully determinate answer. It should come as no surprise if the boundaries of the dispositional, like the boundaries of most categories of everyday thought, turn out to be vague.

This is not to say that we should simply disregard such outliers. If the outliers are relatively sparse and unusual, then we may regard them as accidents admitting of some local explanation. If, however, the outliers are widespread, and fall into a significant patters, then we want some general explanation of how these outliers are related to those predicates that we are counting as (strictly) dispositional. It seems to me that we are in fact confronted

here with one case of the former sort, and two distinct cases of the latter.

Sparse and unusual are those SPs that satisfy *(Disp)* but not (*Erg*). A clear case is provided by the predicate 'breathable', as applied to clothing, as in:

(11) The jacket is breathable

'Breathable' satisfies (*Disp*): the truth of (11) entails that the jacket is disposed to breathe. But since 'breathe' is an intransitive verb, 'breathable' does not satisfy (*Erg*) (nor does it satisfy (*Can*)).

As I say, it is difficult to find other SPs that behave like 'breathable'. This is in itself evidence for the close tie between disposition ascriptions and ergativity that I have emphasized here. For as the case of (11) shows, there is no purely linguistic obstacle to constructing SPs that satisfy (*Disp*) from verbs that are not ergative. The paucity of such predicates in the lexicon is then something that calls for an explanation. And it is explained, on the present view, precisely by the constitutive connection between dispositions and ergativity. Cases like (11) are then to be explained by some 'one-off' explanation of why they violate this otherwise robust pattern.[10]

The other kind of outliers – those that satisfy *(Can*) but not (*Disp*) – are far more common, and demand a more principled explanation. Some of these satisfy (*Erg)* as well, as in:

[10] In the case of 'breathable', this explanation might go by way of the observation that this usage of 'breathable' is parasitic on an earlier use, where it is predicated of air and means, according to the *Oxford English Dictionary*, 'fit or agreeable to breathe'. 'Breathable' in this sense is attested as early as 1731, while the application of the verb 'breathe' to clothing is first attested only in 1969, in advertising (specifically in the Sears catalogue). 'Breathable' in its original sense is an evaluative SP of the kind that we set aside above.

(12a) The liquid is boilable

(12b) The ship is sinkable

(12c) The patient is revivable

In each of these the associated verb is ergative: these are, respectively, 'boil', 'sink', and 'revive'. Thus these satisfy (*Erg*). In other cases, the associated verb is not ergative, as in:

(13a) The disease is transmissible

(13b) The eclipse is observable

(13c) The crystal is sublimable

Here the associated verb is not ergative: these are, respectively, 'transmit', 'observable', and 'sublime' (as in chemistry, meaning to transfer directly from solid to vapor). Thus these fail to satisfy (*Erg*), as well as *(Disp*), though they clearly satisfy (*Can*).

Each of these patterns is in fact systematically explicable, though the explanations are of different forms. Consider first (12a-12c). Here the explanation turns, I think, on contingent facts about our environment. Consider 'boilable'. The boiling of liquid is something that takes, as it happens, extended time and effort (as does the sinking of a ship, or the reviving of a patient). The breaking of a glass is, in contrast, something that can be done easily and with little effort. On the present view, it could well be that a linguistic community quite different from our own – for instance, one whose ambient temperature tended to hover around the 'boiling point' for the liquid in question – would count 'boilable'

as a dispositional predicate. For in such an environment, liquid that is boilable would be disposed to boil, and so 'boilable' would satisfy (*Disp*). The failure of 'boilable' to satisfy (*Disp*) (despite its satisfying (*Can*) and (*Erg*)) is therefore explicable, though the explanation does not turn on any significant semantic or metaphysical fact.

Consider then (13a-13c). Here the explanation is not interest-relative, or at least not entirely so. Consider 'transmissible'. The transmission of a disease (at least a highly contagious one) is, like the breaking of a glass, something that can happen easily. The failure of 'transmissible' to satisfy (*Disp*) is then purely linguistic. It just so happens that 'transmissible' does not, like fragile, furnish an ergative verb of which the transmitted disease serves as a subject. If it did, then 'transmissible' would indeed satisfy (*Disp*). But, for purely linguistic reasons, it does not.[11]

What lessons are to be drawn from these explanations? It may be objected that an account on which the boundaries of the divide between the dispositional and the non-dispositional turn on these sorts of environmental and linguistic accidents cannot be capturing a divide of any metaphysical significance. This objection is partly correct, and partly not. It is correct that the present account is one on which the divide between the dispositional and the non-dispositional is not one of much metaphysical significance. But it does not follow that the present account finds *no* divide of any metaphysical significance. Rather, close attention to the semantics of SPs reveals that the divide of metaphysical significance is elsewhere from where most contemporary discussions have tended to place it.

[11] Sometimes the explanation will *also* be interest-relative. Thus 'sublimable', like 'transmissible', is not associated with an ergative verb. But it also, like 'boilable', concerns a process that happens to take extended time and effort.

The divide of real significance is to be located as follows. Let us call all those SPs that satisfy *(Can) affordance predicates*, and the properties denoted by those predicates *affordances*.[12] It is customary in the recent philosophical literature to regard affordances as a relatively marginal phenomenon, secondary to and perhaps reducible to the more fundamental category of dispositions.[13] On the present view, this has things exactly the wrong way around. Dispositions turn out to simply be a special case of affordances. And the features in virtue of which they are a special case turn out to involve accidents of environment and language: they are those affordances that concern processes that can easily happen, and whose associated predicates happen to be derived from ergative verbs. In this sense, if any divide is of metaphysical significance, it is not the divide between the dispositional and the non-dispositional (or between the dispositional and the 'categorical') but rather between affordances and non-affordances (or between affordances and the 'categorical').

The point may also be made by adverting to a still older terminology. In early modern authors such as Locke [Locke 1689] and Reid [Reid 1788], it was customary to speak of 'active powers' and 'passive powers'. This terminology has largely passed into disuse, and the foregoing offers a possible explanation as to why it has. Dispositions, as they figure in contemporary philosophy, are both active (in virtue of satisfying *(Disp)*) and passive (in virtue of satisfying *(Can)*). But, on the present view, it is the passivity of dispositions that is their more fundamental aspect, one which they share with other properties (such as transmissibility) that happen not to be associated with an ergative verb.

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[12]. I borrow the term from J.J. Gibson [1979], and my use of the term is, I think, roughly coextensive with his. I remain neutral, however, on the various theses about affordances defended by Gibson and his followers, for instance the view that affordances are in some sense perceptible.

[13] Such a reduction is proposed, for instance, in [Scarantino 2003].

The appearance of activity is, as it were, an illusion created by the phenomenon of ergativity. In this sense, dispositions turn out to be (as was held by Locke and Reid) fundamentally passive powers.

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