THE TRUTHMAKING ARGUMENT
AGAINST DISPOSITIONALISM

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Abstract
According to dispositionalism, *de re* modality is grounded in the intrinsic natures of dispositional properties. Those properties are able to serve as the ground of *de re* modal truths, it is said, because they bear a special relation to counterfactual conditionals, one of *truthmaking*. However, because dispositionalism purports to ground *de re* modality *only* on the *intrinsic* natures of dispositional properties, it had better be the case that they do not play that truthmaking role merely in virtue of their being embedded in some particular, extrinsic causal context. This paper examines a recent argument against dispositionalism that purports to show that the intrinsicality of that relation cannot be maintained, due to the *ceteris paribus* nature of the counterfactuals that dispositions make-true. When two prominent responses are examined, both are found wanting: at best, they require unjustified special pleading, and at worst, they amount to little more than *ad hoc* conceptual trickery.[1]

In the realm of contemporary modal metaphysics, there has recently been a rise in defenders of a theory of *de re* modality known as *dispositionalism* (**D**).[2] Roughly, **D** is the thesis that *de re* modality is grounded in/founded upon/etc. the particular causal profiles ("causal roles", "nomic roles", etc.) of dispositional properties. According to the defenders of **D**, if we wish to come to know the shape and size of the genuine "modal landscape", we must defer our enquiry to dispositional properties. The object of that enquiry, according to **D**, is the *intrinsic nature* of these properties – that is, *what it is about them* that grounds modal truths and justifies our inductive, inferential practices. According to **D**, the 'modal profiles' of dispositional properties, being *intrinsic*, characterise those properties on account of neither their relation to a set of

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[2]   Recent notable defenders include Ellis (2001), Molnar (2003), Heil (2003), Bird (2007), and Mumford & Anjum (2011).

higher-order natural laws, nor to a flotilla of independently exist-ing, causally isolated (concrete or *ersatz*) "possible worlds": the topology of modal space is not a constructed, higher-order, emer-gent phenomenon, ideally to be explained away by analytic reduc-tion – it is rather a representation of the very fabric of ontology, one woven together by the natures of properties themselves.

The by now familiar explication of those properties' ability to ground *de re* modality is that they serve as *truthmakers* for subjunc-tive conditionals, and especially counterfactual conditionals.[3] On the most prevalent formulations of **D**, if something (a property exemplification, a state of affairs, etc.) is possible, it is so because it features as a consequent of a conditional that is made-true by the existence of a particular dispositional property.[4] So, on **D**, because the truth-value of each particular counterfactual condi-tional depends upon the intrinsic nature of a particular disposi-tional property, we can make reliable inductive inferences about *how things could be*, or *how things might have been*, based solely on the existence (or instantiation) of those properties. Thus, we can track *de re* modality by tracking the nature of dispositional properties – that is, by discovering the various conditionals which individual dispositional properties make-true.

Unfortunately, the cornerstone of **D** – the intimate connection between dispositional properties and conditionals – has also become its primary stumbling block, on account of 'problem of interferers', or the phenomenon of 'masking': the antecedent can be met (the stimulus obtains), and the dispositional property can remain so disposed (by the object continuing to possess the "cat-egorical base" of that property), and yet the consequent fail to be true (the manifestation does not occur), simply because some other property was causally "in play" that was not mentioned in the antecedent – the "masker".[5]

[3]   For simplicity's sake, this paper is concerned only with the link between a disposi-tional property and a *single* counterfactual. While I think it necessary to conceptualise dispositions as linked with multiple, fine-grained counterfactuals, the focus of this paper applies equally to a conception of dispositions linked with *one* or *many* counterfactuals.
[4]   There are of course more generalised versions of **D** that might be defended: **D** could be upheld in an account where *multiple* dispositional properties and their *extrinsic* relations to one another ground the truth of a single counterfactual, or **D** could remain silent about *intrinsic* relations and amount to a kind of simple 'global dependence' claim that "all counterfactual truth is grounded in the nature of dispositional properties". However, this paper confines itself to the strongest form of **D** – where there is a one-to-one correspond-ence between dispositional properties and counterfactuals – because it is by far the most prevalent in the literature.
[5]   See Bird (1998) for the canonical formulation of this problem.

Due to this problem, it is generally acknowledged that dispositional properties do not *necessitate* the truth of their associated counterfactuals – and the proponents of **D** have had to adjust the finer points of the theory accordingly. There have been recent attempts, on account of the problem of interferers, to *abandon* the truthmaking link between dispositional properties and counterfactuals altogether – but this type of response is, to my mind, a non-starter. Borghini and Williams (2008), and Vetter (2013) following them, for instance, have proposed that **D** does not require dispositions to make-true counterfactuals: for these authors, **D** is simply the claim that for some state of affairs P to be possible is just for there to exist a dispositional property that is *directed towards* P, where "dispositional directedness" is a primitive. Mumford and Anjum's (2011) recent theory that dispositional directedness is a novel, *sui generis* type of modality, one that connects them with manifestation states in a fashion that is more than mere contingency, though less than absolute necessity, is an attempt to flesh-out that type of picture.

Unfortunately, to my mind, the appeal to primitiveness can only do so much work: without some substantial illumination as to how it is that "being directed at P" somehow translates into "making it possible that P", this does not appear to be an especially promising enterprise. In the end, I do not think I am alone in thinking that if we *abandon* the truthmaking link between dispositional properties and counterfactuals, we abandon our best model of how those properties might determine and shape the *de re* modal landscape, and furthermore that replacing our tried and tested model with an entirely novel "dispositional modality" on account of the problem of interferers is really to replace a puzzle with a mystery, which is certainly of no service to **D**.

That said, I think there is only one way forward for the defender of **D**, and that is to confront the problem of interferers head-on by acknowledging that dispositional properties make-true their associated counterfactuals only *ceteris paribus*. The necessity of taking into account *ceteris paribus* conditions when evaluating counterfactuals has typically been utilised as an argument against dispositional realism, one that suggests that an adequate analysis of dispositional properties is in principle impossible. However, as most defenders of **D** are unconcerned with the irreducibility (via a proper analysis) of dispositional properties, what is more pressing about the necessary inclusion of *ceteris paribus* conditions is that it appears to threaten the

viability of the truthmaking link between those properties and conditionals.

In particular, the necessity of taking *ceteris paribus* conditions into account when determining the truth-value of a conditional associated with a particular dispositional property suggests that that property cannot adequately function as the truthmaker for that conditional – its mere existence/instantiation is not, and *cannot* be, the "final word" with respect to whether that conditional is true. This is a serious challenge for **D**: if, in the singular case, particular dispositional properties cannot be shown to be ultimately responsible for the truth-value of their associated conditionals, and the intimate link between those properties and conditionals cannot be maintained, the main tenet of **D** – that *de re* modality is grounded in the nature of dispositional properties – is seriously called into question. I present this line of thought, which I call 'The Truthmaking Argument' against **D**, below. As I see it, there are two main strategies for responding to that argument, both of which, I argue, are of little help: at best, they require an unjustified case of special pleading, and at worst, they amount to little more than *ad hoc* conceptual trickery.

1. The Truthmaking Argument Against Dispositionalism

Though this type of argument against **D** has been partly expressed by many authors, I will here be giving it more flesh, and exploring its general theme.[6] The thrust of the argument is as follows: **D** requires that the truthmaking link between dispositional properties and counterfactuals is an *intrinsic* one, but the requirements of making-true counterfactuals is incompatible with the intrinsicality of that link.

First things first – which definition of 'intrinsic' is operative here? The one that seems most congenial to the ideology of **D**, and the one that ultimately seems to be in the mind of its detractors, is something along the lines of 'context-independence' – in the relevant cases here, this can be cashed out as "had not in virtue of any particular *causal* context obtaining", where a 'causal context' is just a roughly demarcated complex of instantiated properties. The 'context-independence' of a particular property possession can be understood as obtaining just in case neither the

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[6]   Most prominently perhaps by Heil (2003), Merricks (2007), and Eagle (2009).

presence nor the absence of any particular causal context has any bearing on whether the property is instantiated by the object. In short, an *intrinsic* property is one which is possessed "in virtue of" only the object that instantiates it. An intrinsic relation between two objects then is one that requires *nothing over and above* the existence of those objects in order to obtain, which is just another way of saying that it is 'context-independent' – neither the presence nor the absence of any causal context has any bearing on whether the relation obtains.[7]

Why think that **D** requires that the link between dispositional properties and counterfactuals is an *intrinsic* one? There are two important reasons. Firstly, as has already been mentioned, the defenders of **D** tout it as a theory that is diametrically opposed to other theories regarding how modality is grounded. On other, competing theories – *categoricalism, modal realism, et al.* – it is the *extrinsic* relations that properties bear to other entities – higher-order natural laws, possible worlds, etc. – that establishes those properties' modal profiles. In contrast, **D** offers a theory of the grounding of modality that concerns properties *alone*. More specifically, it is a theory on which the facts about *de re* modality (at a world) depend upon the *intrinsic* facts about those properties – namely, on which conditionals those properties make-true.

Secondly, because on **D** the link between dispositional properties and counterfactuals is one of truthmaker to truth-bearer, that link must be an intrinsic one, as the truthmaking relation is an intrinsic relation: it obtains solely in virtue of the existence of its relata – when you have the relata, you have the holding of that relation.[8] Given that the link between dispositional properties and counterfactuals is one of truthmaking, it had better be the case that the truth of those counterfactuals depends upon the intrinsic natures of those properties, lest it be the case that they could exist/be instantiated and yet their associated counterfactuals be false.

So it is utterly important, on **D**, that the link between a dispositional property and its characteristic counterfactual be *intrinsic*, and it is just at this point that a powerful objection against **D** can be raised. For given that if **D** is going to get off the ground it must properly confront the problem of interferers in the context of the

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[7]   I will describe the nature of these relations as 'intrinsic' instead of 'internal' in what follows in a conscious attempt to avoid the baggage that comes along with the "Doctrine of Internal Relations".
[8]   cf. Lewis (2001), Armstrong (1997).

truthmaking relation, we apparently must countenance *ceteris paribus* conditions as among the truthmaker of the counter-factuals that dispositional properties make-true. What we require is a truthmaker that not only lists the existence/instantiation of the dispositional property, but also the proviso "all else being equal". If the truthmakers for those counterfactuals include *ceteris paribus* conditions, the problem of interferers may be neutralised, but another important problem looms large: when those condi-tions are explicated, they invariably refer to properties *other* than the dispositional property in question.

This is a problem for **D** for a very simple reason: if one must take into account – or rather, if the *world* must take into account – a complex of properties *besides* the relevant dispositional prop-erty in the determination of the truth of the counterfactual asso-ciated with it, the *intrinsicality* of the truthmaking relation between that property and that counterfactual looks unattainable. In other words, due to the phenomenon of masking, it is not the case that "once you have the relata, you have the relation" – one also requires the presence or absence of a complex of properties which represent "background" conditions. Antony Eagle (2009: 12) succinctly lays out the worry:

> [The defender of **D**] can say that [an electron] is such as to cause like charges to move away in the absence of interferers; this, while true, doesn't look like it depends only on the intrin-sic properties of [the electron], because we would have to be assured additionally of the lack of interferers

If the truth of the counterfactual is dependent upon the disposi-tional property *and* some other complex of properties, in what sense is there an *intrinsic* link between the disposition and that counterfactual? This is 'the truthmaking argument' against **D**, and it suggests that if an *intrinsic* link between dispositional properties and counterfactuals cannot be secured, neither can a theory of *de re* modality whose foundation is built upon the natures of those properties.

2. A First Response: Reforming the Truthmaking Relation

The first response to 'the truthmaking argument' against **D** consists in reforming the truthmaking relation by denying the

doctrine of *truthmaker necessitarianism* (**TN**). The move is to jettison *ceteris paribus* clauses entirely, retaining the "classical" counterfactuals associated with dispositional properties, and claim that the truthmaking link between those properties and counterfactuals is *not* one of *necessitation*. Put formally, where 'τ→' is the truthmaking relation:

$$(\textbf{NN}): \sim[(Dx\; \tau\!\to\, <Sx \;\square\!\to M x>) \to (Dx \to [Sx\; \square\!\to M x])]$$

On **NN**, the claim is that the truthmaking relation is not a "truth-necessitating" relation: an entity's/property's/state of affairs' existence does not necessitate the truth of the proposition that it is the truthmaker for. It is quite common to see this claim crop up in the case of dispositions.[9] Take, for instance, Alexander Bird (2007: 438):

> [**D**], the claim that fundamental sparse properties are essentially linked with characteristic subjunctive conditionals, is consistent with a denial that the instantiation of the disposition in question necessitates the truth of the corresponding conditional . . . In another possible world the disposition might not in fact make the conditional true[10]

With this problem in mind, Heil (2003: 63) remarks generally that '[d]ifficulties of this kind threaten a particular formulation of the truth-maker idea, but not the idea itself'. However, I do not expect that the most truthmaker theorists will feel quite so unthreatened by such a suggestion. Even if, with Heil (*ibid.*), one understands the 'fundamental thesis' of truthmaking theory to be that 'if an assertion is true in one situation and false in another, the situations must differ in some way', or, with Lewis (2001: 606), one understands it amounting to the fact that '. . . every difference between worlds requires a difference-maker', it is difficult to believe that **TN** can be so easily dispensed with.

Consider Armstrong's (2004: 6–7) *sufficiency argument for TN*: if we discover a case wherein a property P is correlated with the truth of a proposition <p> in W_1, but not W_2, we should not think that that P does not necessitate the truth of <p> in W_2, but rather that

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[9] Cf. Heil (2003), Merricks (2007), Cameron (2005).
[10] Bird here is not really endorsing **NN**, but he is certainly rejecting **TN** in the context of a defence of **D**.

we have left out some other property or complex of properties that, together with P, suffices for the truth of <p> in both W_1 *and* W_2. Perhaps your intuitions simply do not pull that way, and you see Armstrong's sufficiency argument as little more than a plain insistence upon the truth of **TN**. But even if that is the case, it cannot be denied that the intuition behind it matches neatly with *both* **TN** and the "more fundamental" formulations of the truthmaking theory – difference in truth requires difference in situations, or difference between worlds requires difference-makers.

Given that this is the case, it is hard to see (in this context) what motivation one could have for rejecting **TN** *apart from* the desire to salvage the plausibility of **D**, given the problem of interferers. If one feels the intuitive pull behind the sufficiency argument – as I suspect most do – then should not one claim that it is not a disposition *alone* that makes-true its associated counterfactual, but rather, that disposition and a complex of properties whose exist-ence represents *ceteris paribus* conditions? For if the disposition *alone* cannot do the job – read: is not sufficient for the truth of its associated counterfactual – then presumably there must be some complex of properties which, *together with* the disposition, *can* do the job, and the most plausible candidate for these properties are whichever must be mentioned in a *ceteris paribus* clause.

Clearly, if we accept that a complex of properties summarised in a *ceteris paribus* clause must be included in the truthmaker for the counterfactuals associated with dispositions, we are back to the extrinsicality worry, and back to rejecting **D**. But, in the context of **D**, do we have any *independent* reason for rejecting **TN**? It may very well be true that dispositional properties' "intimate connection" to counterfactuals is a fact that is more *natural,* or more *obvious* than the formalised, theoretical truth of **TN**, but our desire to capture *that* fact does not seem reason enough to jettison **TN** from our model of truthmaking; especially given that we can typically find instances of that relation that obey **TN**. Further-more, what independent reason is there to consider the relation between dispositional properties and counterfactuals as our paragon of the nature of the truthmaking relation? In the absence of any such reason, this move just strikes me as a case of special pleading: we are essentially being asked to reject **TN** on the grounds that, if true, **D** would be false. Thus, I think, *pro tanto,* we ought to treat strategies that utilise **NN** as a means of responding to 'the truthmaking argument' with suspicion.

3. A Second Response: Reforming Counterfactuals

Instead of reforming the truthmaking relation, the more popular response to 'the truthmaking argument' against **D** is to reform the counterfactuals that dispositional properties make-true by moving the *ceteris paribus* clauses from the truthmaker complex in to those counterfactuals.[11] The thought is that if we reform the counterfactuals, so that the "correct" conditions are included therein, we have no need of reforming the truthmaking relation, and we no longer have any extra-dispositional ontology in our truthmaker either: a dispositional property *alone* can make-true the proposition that "*if* it were appropriately stimulated *and* in the correct conditions, *then* it would have manifested". If the link between a dispositional property and its characteristic counterfactual can be one of truth-necessitation *and* be such that it is *independent* of any other entities/properties/states of affairs, it seems that the extrinsicality worries of 'the truthmaking argument' can be avoided.

For the purposes of illustration, Jonathan Jacobs (2011: 16–17), in an attempt to salvage the link between dispositional properties and counterfactuals writes:

> Finks and antidotes do not show that there are no true counterfactuals connected with powers or dispositions. They show, rather, that the true counterfactuals connected with powers or dispositions are more complicated than we might have thought . . . How, then, are we to complicate the counterfactuals that [dispositions] are sufficient to make true, in order to accommodate antidotes (and finks, if need be)? A notion of causal completeness is needed. The property complex specified in the antecedent must be causally complete – it must either include or rule out the various possible antidotes

Why 'causal completeness' instead of '*ceteris paribus*'? The fact is that many now consider *ceteris paribus* clauses to be the wrong *type* of reformation: their inclusion in a counterfactual is seen as striking an unfortunate balance between rendering that

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[11] Although only one type is considered here, there are a family of views here that require causal completeness clauses, even if they do not explicitly acknowledge it – in general, any theory of dispositional properties that claims that dispositions make-true multiple counterfactuals, each with distinct antecedents.

counterfactual both vague and vacuous.[12] Better then to consider a more refined account, where the "correct context" is more explicit in ruling out "maskers", etc.: what the antecedent requires is a state of causal closure, which obtains just when the conditions in the antecedent are *all there is and nothing more*; more precisely, all the *causally relevant* conditions and nothing more. But what is the content of a 'causal completeness condition'?

One can cash-out what 'causal completeness' amounts to in a few different ways, but the main lines are probably that a causal completeness condition amounts either to a type of true negative existential, or else a true "totality fact".[13] On the first option, the nature of a causal completeness condition is something like

CC1: <there are no other causally relevant entities/properties/states of affairs>

and a context is 'causally complete' just in case that that proposition is made-true by that context. Clearly **CC1** is a type of 'negative existential' – a proposition whose truth seemingly depends upon the non-existence of something. Deciding precisely what *could* function as a truthmaker for negative existentials has engendered a large debate. There are two main candidates in the literature: either negative existentials are made-true by the existence of reified absences (or "negative facts"), or else by nothing at all. The first candidates are entities which are, as Molnar (2000: 76) puts it, 'not abstract, not things (not entities), not properties, not causally operative, and not causally powerful; and . . . they are states of the world, first-order, and causally relevant'. To which kinds of beings this definition might apply, I have not a clue. Generally, on account of this kind of confusion, reified absences are rejected as a genuine ontological category.[14]

The second candidate for the truthmaker of **CCI** denies 'truthmaker maximalism' (the thesis that *every* truth has a truthmaker), and it amounts to claiming that *nothing* makes those propositions true – their truth is an ontological free lunch.[15] On this view, when a negative existential is true, it is not so on account

[12] Cf. Martin (1994); Bird (1998); Mumford (1998); Molnar (2003); Fara (2005).
[13] These two ways may end up being equivalent restatements of one another, but they are generally treated separately due to their supposedly requiring distinct types of truthmakers, as we will see.
[14] See Cameron (2008), and Lewis (2001).
[15] For defenders, see Simons (2005), Melia (2003), and Mellor (2000).

of something's existence, but rather, as Lewis (1999: 204) put it, it is 'true for lack of falsemakers'. If *nothing* (literally, *no thing*) makes negative existentials true, they are simply true whenever there are not any entities/properties/states of affairs that *would* make them false. Of course, many have found this option untenable as well: either it collapses back into reified absences, or else we give up the intuitive idea that "truth is grounded in being".[16]

There is a second option that the reformed counterfactual view can opt for

> **CC2**: <these are all of the causally relevant entities/properties/ states of affairs>

Following Armstrong (1997), claims like **CC2** are often referred to as 'totality facts' – they are facts/propositions/states of affairs whose content is something like ". . . and that is all", cashed-out as a local, "second-order" state of affairs of the form '*x* is *all* there is (or all there is that is causally relevant) in context C' – call it **T**. [17] If one is already committed to a 'state of affairs' ontology, and presumably does not mind a *quantitative* increase thereof, it may even be plausible to think that **CC2** is preferable to **CC1**: perhaps the only way to have an adequate truthmaker for negative existentials is via the existence of a totality fact; this was historically the case, with Armstrong et al.[18] But, of course, rather notoriously, states of affairs like **T** are not without their own demerits. Even if we agree with Armstrong (2004: 71) that states of affairs like **T** are merely "limiting", and simply place an existential "cap" on what there already is, because they do not supervene upon any collection of (local) matters of fact concerning existing entities/states of affairs and hence, as Armstrong (1997:198) himself puts it, do not 'come for free', they are a nonetheless a genuine (and genuinely odd) ontological addition.[19]

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[16] See Cameron (2008), Mumford (2007), and Molnar (2000).

[17] Cameron (2008) has an account wherein the world's "essence" is a kind of totality fact, but I do not think that kind of account will be particularly useful here for a variety of reasons: the non-locality (and causal irrelevance) of a 'global' truth, the implausibility of the truth of singular counterfactuals depending upon *the entire world*, etc.

[18] Of course, one might consider the objection that Armstrong (1997: 200) pre-empted: 'totality facts' are just rather obtusely stated negative existentials – they state that "no other facts exist/are true". But then again, even if that is the case, perhaps **CC2** might still be preferable over **CC1** in that, if we *must* have negative existentials, it is better (or at least more parsimonious) to have *one* whose existence accounts for *multiple* other negative existentials, rather than (probably) *innumerable* negative existentials.

[19] See Keller's (2007) for a good review of the various oddities concerning 'totality facts'.

3.1 Reformation, or Obscured Orthodoxy?

I think it is clear from the above discussion that, either way one wishes to cash-out 'causal completeness', it is no simple, innocuous conceptual move to include causal completeness causes into the counterfactuals that dispositional properties make-true: admitting reified absences or second-order totality states of affairs into one's ontology is no easy pill to swallow – and all this to salvage **D**? The situation strikes me as the desperate grappling of death throes but, for the sake of argument, let us allow it. Even granting it, I think there is a fair case to be made that the 'reformed counterfactual' account simply amounts to quite a bit of *ad hoc* manoeuvring that, at best, only *appears* to avoid 'the truthmaking argument', and at worst, just amounts to a kind of conceptual trickery.

Recall the reason *why* the counterfactuals that dispositional properties make-true were in need of reform: the defender of **D** wants to avoid having to include *other*, *non-dispositional* entities/properties/states of affairs *within* the complex of the 'truthmaker' for <Sx $\Box\!\!\rightarrow$ Mx>; with *extrinsic* entities/properties/states of affairs included in that truthmaker, you salvage **TN**, but abandon **D**.[20] Given that the fact that certain *extrinsic* conditions *must be met* in order for that counterfactual to be true, the only way to retain both **TN** and **D** is to, in a certain sense, "move" the satisfaction of those conditions *into* the counterfactual – and the result is counterfactuals amended with **CC**.

Now it is certainly true that if dispositional properties serve as the truthmaker for reformed counterfactuals, **TN** is upheld – "come what may", whenever a particular dispositional property exists, its associated counterfactual is going to be true – but the problem is, as far as I am concerned, that this swapping of conceptual places (from 'truthmaker' to 'antecedent') *does not amount to altering the ontological role* of those conditions. To my mind, the **CC** clauses (of either form) embedded in the antecedents of reformed counterfactuals appear to still be *functioning* as conditions/states of the world in which the non-esoteric <Sx $\Box\!\!\rightarrow$ Mx> is true. Consider what role the **CC** clauses are playing within those counterfactuals: they may have been moved within the antecedent of the counterfactual, but they certainly are not playing a similar role as the other conditions in the antecedent – they do not look to be proper 'stimulus' conditions that are responsible

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[20]   This is precisely what Cameron (*forthcoming*) opts for in his broad defence of **TN**.

for "activating" the property's manifestation; unlike, say, the 'striking' of a match, there does not seem to be anything *active* or *dynamic* about reified absences, plain absences, or totality facts.

I think that, upon inspection, it is rather clear *how* **CC** is functioning within the reformed counterfactual, and that is just the way it is *outside* of the counterfactual: it is operating to pick-out some (extra-dispositional) part of the world – either a reified absence, or a totality fact, or what have you – which, *in conjunction* with a dispositional property, is sufficient to make-true $<Sx \,\square\!\rightarrow Mx>$. But this is, of course, just to say that is *operating* as part of the *truthmaker for* $<Sx \,\square\!\rightarrow Mx>$.

Ask yourself *why it is* that any plausible defence of **D** must somehow incorporate **CC** into its counterfactuals. Presumably because the conditions represented in **CC** are *required to obtain* in order for the counterfactual $<Sx \,\square\!\rightarrow Mx>$ to be true. Moving **CC** (and whatever it ontologically entails) *within* the counterfactual does not seem to change *that* fact – and what does that fact amount to, if not a simple restatement of what it is for something to be a truthmaker for that counterfactual? If this is what is going on, *ontologically*, and the conditions listed in **CC** are made-true by entities/properties/states of affairs *extrinsic* to a dispositional property, I suggest that, the conceptual reshuffling of the 'causal completeness clause' to within the counterfactuals that dispositional properties make-true notwithstanding, the extrinsicality worries of the 'truthmaking argument' against **D** still stand.

Even if one remains unconvinced of the above argument, I contend that the reformed counterfactual defence ought to be met, at the very least, with a healthy dose of suspicion, as it has all the signs of being little more than a kind of *ad hoc* conceptual trickery. When the defender of **D** is met with the objection that a particular dispositional property's truthmaking relation to its associated counterfactual fails to pass the characteristic test of necessity – the test of monotonicity – due to the fact she cannot allow the addition of *just any* state of affairs to Dx (in other words, due to the fact that *cetera* must be *paria*), she is confronted with two options, given that, somehow or another, the "satisfactory" conditions (say, in the form of **CC**) *must* be taken into account, if Dx is going to be the truthmaker for it associated counterfactual: she can either (a) include **CC** in the truthmaker for $<Sx \,\square\!\rightarrow Mx>$, so that the existence of $(Dx \cdot \textbf{CC})$ necessitates the truth of $<Sx\,\square\!\rightarrow Mx>$, or else (b) include those conditions in the counterfactual itself, so that existence of Dx necessitates the truth of $<Sx \cdot \textbf{CC} \,\square\!\rightarrow Mx>$.

The problem is that neither way looks like a respectable way out: accepting (a) amounts to rejecting **D** and, what is worse, both (a) and (b) appear to be simply cutting the Gordian knot, rather than untying it. For, importantly, it is one thing for a relation to *pass* the test of monotonicity, and quite another thing to simply *disallow* that test from being performed: in (a), for instance, all we have done is stipulate, by mere *fiat*, that when Dx is the case *and absolutely nothing else is the case*, then necessarily, <Sx $\square\!\!\rightarrow$ Mx> is true.[21] While it is true that the conceptual strategy employed in (a) gets the result that we now have a bit of the world whose existence necessitates the truth of <Sx $\square\!\!\rightarrow$ Mx>, this strikes me, as I think it will many, as too quick and slippery a way to achieve such a necessary connection – it may not be vacuously or trivially true, but it does appear to be a kind of artificial, manufactured truth. And the question is: if (a) allows us to find the truthmaker for <Sx $\square\!\!\rightarrow$ Mx>, but does so on the cheap, by mere decree, then why ought we to lend credence to (b), given that it makes use of that same *ad hoc* strategy? It may be a "winning" strategy for the defender of **D**, but it does not look to be any kind of victory worth bragging about.

Summing Up

'The truthmaking argument' against dispositionalism represents a serious challenge to that theory: if an *intrinsic* link between dispositional properties and counterfactuals cannot be secured, neither can a theory of *de re* modality whose foundation is built upon the natures of those properties. Given that the problem of interferers and the reality of *ceteris paribus* conditions must be addressed within the context of the truthmaking relation, I have suggested that there are two main options for responding to 'the truthmaking argument' – either reform the truthmaking relation, or else reform the counterfactual linked by that relation. I have argued that, even putting the ontological costs aside, neither of these responses is compelling, and that in both of these cases we are either again inexorably confronted with the extrinsicality worries raised by 'the truthmaking argument', or else are given an account that looks unconvincingly *ad hoc*. I contend then that the

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[21] Mumford & Anjum (2011:70) make a similar point in their rejection of 'causal necessitarianism'.

argument stands, and that if the defenders of dispositionalism cannot adequately answer, or else otherwise circumvent it in a principled fashion, their theory ought to be rejected.

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