Bird, AJ. (2012). Can There be Intrinsic Finks and Antidotes.
Abstract

One might suppose that dispositions cannot have intrinsic finks and antidotes (masks). For what would then be the difference between having a disposition that for intrinsic reasons does not yield its manifestation, and not having that disposition at all? If that is right, then standard answers to certain important problems fail, for example the dispositional accounts of rule following or of intentional action, which require the existence of intrinsic finks and antidotes in order to respond to standard objections. In this paper I examine whether the dismissal of intrinsic finks and antidotes just given stands up, and if not, what does make the difference between possessing such a disposition and not possessing it. I argue that the case has not hitherto been made for the possibility of intrinsic interference. Nonetheless, I conclude by conjecturing that alleged cases of intrinsic interference can be interpreted such that it is the function of the interferer to prevent the manifestation in question. In such cases there is no overall disposition and so no intrinsic interference with it. But in other cases there may be intrinsic interference.

1 Introduction—dispositions and their interferers

Propositions ascribing dispositions would be equivalent to subjunctive or counterfactual conditionals, were it not for finks and antidotes. Consider a disposition $D_{(S,M)}$ with stimulus $S$ and manifestation $M$; predicating that disposition of some object $x$ ought to be equivalent to a conditional:

(CA) $D_{(S,M)} x \leftrightarrow S x \Box \rightarrow M x$
(CA), the (simple) conditional analysis of dispositions, is however false. A finkish disposition is one whose context is such that although it exists at the time it receives its stimulus, it ceases to exist soon thereafter, sufficiently swiftly that the manifestation fails to come about (Martin 1994). Normally dispositions need to remain in place in order that a process of interaction between them and their stimuli can occur that will lead to the manifestation. If the disposition is caused to go out of existence too soon, the process leading to the manifestation might be cut short and the manifestation will not occur at all. The cause of the disposition's disappearance might well be its own stimulus $S_x$ (although it need not be), operating via a secondary mechanism, independent of the disposition's own mechanism. An antidote (or mask) operates differently (Johnston 1992, Bird 1998). It interferes not with the disposition itself but with the other (e.g. environmental) conditions normally required for the disposition to manifest itself. The process whereby the disposition and stimulus interact in order to produce the manifestation may extend beyond the intrinsic causal basis of the disposition. And if the process is interfered with in that part that does go beyond the causal basis, then the manifestation might be thwarted but without removing the disposition. This is an antidote to the disposition. (Both finks and antidotes I shall refer to as interferers.)

While the objections raised above are to the left-to-right implication of $(CA)\rightarrow (CA\leftarrow)$, finkish and mimicking cases can be constructed that also refute the right-to-left implication—$(CA\leftarrow)$. Just as a disposition can disappear shortly after receiving its stimulus, a disposition can come into existence shortly after the occurrence of an event that is its stimulus, sufficiently soon for that stimulus to cause it to yield its manifestation. In a reversal of the antidote case, extrinsic events can mimic a disposition—the stimulus event $S_x$ may cause the manifestation event $M_x$ but not via the disposition $D_{(S,M)}$ but rather via some chain of events extrinsic to $x$. So it could be that it is false that $D_{(S,M)}x$ is false but true that $S_x\rightarrow M_x$.

One might wonder whether the alleged failures of $(CA\leftarrow)$ are really ones where there is a disposition but a false conditional. Why should we not regard them as cases where there is no disposition of the sort alleged? Why is the finkish case not just a fancy way of not having a disposition at all? And likewise for the antidote case? (Mutatis mutandis, why do not the alleged counterexamples to $(CA\rightarrow)$ show that there is a disposition of the relevant sort in play?)
For the case of dispositions that are intrinsic to their bearers, an answer is available. In such cases there are intrinsic duplicates of bearers of these finkish and antidoted dispositions that unquestionably possess the dispositions in question (Choi 2003). Since the dispositions are intrinsic properties and the intrinsic duplicates possess them, then so do the finkish and antidoted originals. Likewise, there are intrinsic duplicates of the entities in the counterexamples to (CA←) that unquestionably do not have the intrinsic dispositions at issue. We can present the argument against (CA) more formally as follows. We can find cases of two intrinsically identical objects a and b where a has an intrinsic disposition D(S,M) but where it is not true (thanks to interference by fink or antidote) of b that were b to undergo S, b would undergo M. Since b is identical to a, it follows that b has D(S,M), and so b constitutes a counterexample to (CA). We can cast the argument against (CA) more formally as a reductio:

(CA)  ∀x(D(S,M)x → Sx□→Mx)

(i)  a and b are intrinsically identical
(ii)  Sa□→Ma
(iii)  D(S,M)a  (from (CA) and (ii))
(iv)  ¬(Sb□→Mb)  (thanks to a fink or antidote)
(v)   D(S,M)b  (from (i) and (iii))
(vi)  ¬(D(S,M)b → Sb□→Mb)  (from (iv) and (v))
(vii) ¬∀x(D(S,M)x → Sx□→Mx)  (from (vi))
(viii) (CA)→¬(CA)  (from (CA) and (vii))

Note, however, that this argument against (CA) does not work if the finks and antidotes are themselves intrinsic. For then the intrinsic duplicates will possess them also, and it will not be unquestionable that the intrinsic duplicates genuinely possess the dispositions in question. The intrinsic fink or antidote that ensures that (iv) is true, i.e. that the counterfactual does not hold of b, will also be a property of a, thanks to (i). In that case, since a has the fink or antidote, the counterfactual will not hold of it either, and (ii) will be false and the reductio will fail.

Thus the argument for the existence of antidotes and finks—interferers that render (CA) false—depends on those interferers being extrinsic. So although we have an argument for the existence of extrinsic interferers, we lack an argument for the exist-
ence of intrinsic interferers. How do we tell whether some object has a disposition? The classic test for a disposition is the conditional test (cf. Choi 2005). If it is true that some object would give manifestation M in response to stimulus S, then we may infer that it is disposed to M when S. The conditional test is licensed by (CA). The conditional test is not definitive—it can be trumped by the existence of extrinsic interferers, since these show (CA) to be false. But in the absence of a parallel argument for intrinsic interferers, we should not regard the conditional test as trumped. That is, an alleged case of intrinsic interference should be regarded as an elaborate way of not having a disposition.

The central question of this paper is: are there any reasons to reject the conditional test for intrinsic interferers? Can there be genuine cases where a disposition is present but is accompanied by a fink or antidote that is intrinsic to the bearer of the disposition? As I explain in the next section, dispositional accounts of the mind require a positive answer to this question.

In what follows I shall concern myself exclusively with dispositions that are sure-fire. There are many concepts that are disposition-like (ability, capacity, tendency, propensity). Some of these (tendency, propensity) do not imply that the manifestation will occur, even if the right stimulus occurs and circumstances are propitious (no finks or antidotes); rather they imply that the manifestation has some chance of occurring. A sure-fire disposition is one that will always manifest in the right circumstances. Jennifer McKitrick (2003) makes a convincing case for the existence of dispositions that are extrinsic to their bearers. For simplicity I shall also concentrate primarily with intrinsic dispositions; but I shall also point out that the discussion can be extended to some cases of extrinsic dispositions. Our central question is, therefore, whether an object a can have a sure-fire disposition D that is intrinsic to a while also having a further intrinsic property that acts as a fink or antidote to D.

2 The dispositional account of rule-following—objections and defences

The question of the possibility of intrinsic finks and antidotes is significant not only in its own right but also because it has implications for the prospects for a disposi-
tional account of mind. The issue is this. In order to save the dispositional view of mind from counterexamples and objections, we need to draw upon the fact that dispositions can have finks and antidotes. However, the finks and antidotes in question are ones that are typically intrinsic. So the possibility of a dispositional account of mind seems to require that there can be intrinsic finks and antidotes, despite the prima facie argument given against them in the preceding section.

I start with the dispositional account of rule-following, which may be regarded as the basis of dispositional accounts of meaning, understanding, and intentionality. What makes it the case that someone understands the word ‘plus’ as referring to the addition function when they hear ‘what is 18 plus 37?’ or mean that function when uttering the same expression? The dispositionalist response to this question says that it is a disposition of the subject that fixes what they understand or mean: according to a simple dispositional account, to understand the addition function by the term ‘plus’ is to be disposed to answer with the response ‘z’ when given the question ‘what is x plus y?’ and z = the addition of x and y. The fact that subject answers ‘55’ in response to ‘what is 18 plus 37?’ does not itself suffice to fix the function they understand by ‘plus’ as addition, since that answer is consistent with their understanding quite different functions by ‘plus’, including Kripke's quaddition, the function whose value is the (addition) sum of the arguments when both are less than 57 and whose value is 5 otherwise (Kripke 1982: 9). The advantage of the dispositional account of rule-following is that the one (multi-track) disposition can have a set of determinate potential manifestations in response to determinate potential stimuli, even if the object (or any object) with that disposition never receives those stimuli nor exhibits those manifestations. This correlation between potential stimuli and manifestations is part of the nature of the disposition even if never actualised. My bathroom scales have a disposition to have its pointer go to ‘35’ when someone or something weighing 35kg is placed upon it. But nothing of that mass has ever been placed on the scales and might never be. Nonetheless, that disposition is part of the nature of the scales. Likewise, in hearing the word ‘plus’ in the query ‘what is 18 plus 37?’ our subject will have that disposition whose actual manifestation in response to that actual question is ‘55’ and whose (non-actual) possible manifestation is ‘125’ in response to the possible but non-actual stimulus ‘what is 68 plus 57?’. So that disposition distinguishes our subject from the subject whose overt behaviour is
the same (i.e. responding ‘55’ to ‘what is 18 plus 37?’) but who in fact understands quaddition by ‘plus’ rather than addition; this second subject is disposed to answer ‘5’ to the possible but non-actual stimulus ‘what is 68 plus 57?’.

As is well known, Kripke (1982) raises problems for the dispositional account of rule-following. The first concerns the possibility of error. We think that it is possible for someone to understand addition by ‘plus’ when hearing ‘what is 68 plus 57?’ yet err, giving the answer ‘123’. But if, when asked ‘what is 68 plus 57?’ they give the answer ‘123’, they were disposed to give that answer—if that stimulus (the question) brings about that response (the answer) from, the subject, then the subject was disposed to give that answer to that question. In which case, according to the dispositional account of rule-following, they did not understand addition by ‘plus’ but some other function whose value is 123 for the arguments 68 and 57. The second problem raises a related point. Rules are normative, determining what we ought to do, whereas dispositions are not normative. They determine what we in fact do, which (as the error example shows) might be quite different from what we ought to do. The third problem points out that our dispositions are finitely bounded whereas the functions in question are not. Even though a subject is disposed to answer ‘125’ to ‘what is 68 plus 57?’ there are addition sums to which she is not disposed to give the right answer simply because the arguments are too large for her even to contemplate let alone add.

A sophisticated dispositional account of mind can take these objections in its stride. Kripke's objections implicitly assume (CA). I shall focus on the problem of possible error. That objection can be reconstructed thus:

(i) N. answers ‘123’ to ‘what is 68 plus 57?’;
    therefore
(ii) N. would answer ‘123’ to ‘what is 68 plus 57?’;
    therefore
(iii) N. is disposed to answer ‘123’ to ‘what is 68 plus 57?’;
    therefore
(iv) N. understands some 'bent' function or rule by 'plus'.

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1In my view the first and second problems are in effect the same point. The concept of error is normative: an erroneous answer is a wrong answer, an answer one ought not to have given. So a failure to account for error is a failure to account for normativity and vice-versa.
Furthermore:

(v) N. does not answer ‘125’ to ‘what is 68 plus 57?’;

therefore

(vi) N. would not answer ‘125’ to ‘what is 68 plus 57?’;

therefore

(vii) N. is not disposed to answer ‘125’ to ‘what is 68 plus 57?’;

therefore

(viii) N. does not understand addition by ‘plus’.

The inferences from (iii) to (iv) and from (vii) to (viii) are licensed by the dispositionalist account of understanding—it is the legitimacy of these inferences that is questioned by the opponent of dispositionalism on the ground that they lead to the absurd conclusions (iv) and (viii).

Note, however, that the inference from (ii) to (iii) is an instance of \((CA \leftarrow)\), while the inference from (vi) to (vii) is an instance of the contrapositive of \((CA \rightarrow)\). But, as we saw in Section 1, \((CA)\) is false in both directions. Defenders (e.g. Martin and Heil 1998) of the dispositional account of rule-following can therefore argue that where there is a divergence between what a subject ought to do and what they in fact do, there is a fink or antidote at work. In such cases the subject is disposed to give the right answer, but something interferes to prevent them from so doing. *Pace* Kripke a subject can be disposed to do something although they don’t do it, even

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2The inferences from (i) to (ii) and from (v) to (vi) are licensed by the standard Lewis–Stalnaker semantics for counterfactuals. One can question that semantics and these inferences. However, that is not likely to be a satisfactory line of defence for the dispositionalist, since the relevant cases of error, finite limitation, and so forth can be described in such a way that it is clear that (ii) and (vi) are true.

3Note that one could make the inference to (vii) directly from (iii) without use of \((CA \rightarrow)\) if it is false that something can both be disposed to \(M\) in repose to \(S\) and also be disposed to \(M’\) in response to the same stimulus \(S\), where \(M\) and \(M’\) are incompatible manifestations (e.g. answering ‘123’ and answering ‘125’ in response to the same question). The impossibility of being oppositely disposed is accepted by those discussing the dispositional account of rule-following, but is denied by same philosophers, e.g. David Lewis (1997) and Randolph Clarke (2010). I note in Section 3 below that Lewis’s reason for accepting this possibility is that it is a consequence of his reformed analysis of dispositions. But as I then show, the feature of the reformed analysis that allows for opposite dispositions is the feature that leads to absurdity. Even if it is acceptable for there to be some cases of co-existing opposite dispositions, it would be be an unwelcome feature of a dispositional account of rule-following that in every case of error the subject is both following the bent rule *and* following the straight rule.
in the presence of the appropriate stimulus. And this seems a plausible diagnosis. Suppose a subject is asked, 'what is 68 plus 57?'. In the middle of his calculations a fly lands on his ear, momentarily distracting him. He answers '123'. In this case we may be able to say that our subject was disposed to answer ‘125’, and indeed would have given that answer were it not for the lapse of concentration induced by the fly. That distraction acts as an antidote, or perhaps a fink (depending on the details of the operation of the mechanism for adding), to the underlying disposition.

As we shall see in the next section, other dispositional accounts of aspects of the mind can respond to apparent objections by referring to the falsity of (CA). These include a capacity/dispositional account of moral responsibility, the dispositional account of perceptual experience, and the existence of character traits. However, these accounts, as well as the dispositional account of rule-following, all require the interferers, in some cases, to be intrinsic to the bearers of the dispositions. Note that the principal aim of this paper is not to defend dispositionalist account of mental states, but rather to investigate, given that such dispositional accounts of the mind require the possibility of intrinsic finks and antidotes, whether such a possibility is genuinely coherent.

3 The problem of intrinsic finks and antidotes for the dispositional account of mind

The various dispositional accounts of mind can be defended against counterexamples by appealing to the possibility of finks and antidotes. However, the finks and antidotes in question are often intrinsic properties of the bearer of the disposition. For example, in following the plus-rule I may make a mistake by misremembering the results of an earlier stage in the calculation. The incorrect result is not a counterexample to the dispositional account of rule-following so long as my memory failure can count as a fink or antidote to my adding disposition. In this case, the memory-failure will be an antidote since we do no suppose that I lose my adding disposition. We can imagine other cases where the disposition is intrinsically finked: a sudden seizure during an addition calculation might rob me of the disposition I had when I started the calculation. My memory failure is intrinsic to me, as is my seizure; a du-
PLICATE of me would have had the same memory failure or seizure. As Handfield and Bird (2008) argue, the case for defending the dispositional account of rule-following presented by Martin and Heil against Kripke, is only as strong as the case for intrinsic interferers. But this case, as mentioned in Section 1, is problematic.

Similar issues arise in other areas of the philosophy of mind. For example, Frankfurt (1969)'s famous cases show that a subject can be morally responsible for \( \Phi \) even though one could not have done otherwise than \( \Phi \). In the example, Black wishes to ensure that Jones does \( \Phi \), by implanting in Jones's brain a device controlled by Black that would prevent Jones from not \( \Phi \). should Jones show any sign of doing otherwise than \( \Phi \). As it happens, Jones does \( \Phi \) without any need for Black to interfere. However, as Michael Smith (1997) argues, it is true that Jones could not have done otherwise, but it might also be true that he was able to do otherwise. According to Smith, moral responsibility is a matter of two capacities, the capacity to make correct judgments and the capacity to act as one judges. We may think of these capacities as dispositions. Although Smith does not give an explicit characterization, the essence of the issue can be seen if we choose to regard the capacity to \( \Psi \) as being the disposition to \( \Psi \) should one so choose, as Michael Fara (2008) proposes.4

Assuming that Jones had the capacity to judge that not \( \Phi \) was the right thing to do, did he also have the capacity to not \( \Phi \)? That is, was he disposed not to \( \Phi \) had he choses not to \( \Phi \)? If (CA) were true, then we must deny this disposition, because he would still have \( \Phi \)ed, whatever he chose, thanks to Black's device. But we can resist this conclusion by pointing to the falsity of (CA). Black's potential interference is naturally seen conceived of as a fink or antidote that would remove or interfere with Jones's disposition.

So far so good. But as Cohen and Handfield (2006) point out, this approach faces problems with other cases, most notably the willing addict. In this story the addict would experience an irresistible craving were he to go without his drugs for an extended period. But he never goes without drugs for that long because he is entirely happy to take the drugs and has a ready supply of them. So it is the ordinary desire for the pleasure of the drugs that drives his regular ingestion of them, not the addiction, of which he may not even be aware. Given that fact, one ought to say that the addict is responsible for those acts of ingestion. On the other hand, it is not true

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4Fara provides a perspicuous analysis of the Frankfurt cases that is similar in key respects to Smith's.
that he could have not ingested them, for had he chosen not to, the addiction would have kicked in. It looks as if the case is analogous to the case of Jones and Black's device. Even though the counterfactual 'had he chosen to not ingest the drugs, he would not have ingested them' is false, the falsity of (CA) permits the truth of 'he was disposed not to ingest the drugs if he chose not to'. Cohen and Handfield argue that this case is importantly different from the case of Jones and Black's device, because in this case the interference with the supposed disposition is intrinsic to the addict (something to do with glutamate or dopamine receptors in the subject's brain). If intrinsic finks and antidotes are not possible, then this defence of the claim that the willing addict is responsible for his actions fails.

Another case is Armstrong's dispositional account of perceptual experience: to have the perceptual experience that \( p \) requires being disposed to believe that \( p \) (plus other conditions) (Armstrong 1961; cf. Ashwell 2010). But in the case of well-known illusions we don't have the disposition: on measuring the Müller–Lyer lines we do not believe they are different lengths although they still appear that way (similarly with the bent spoon in the glass of water, mirrors and so on). It seems that the disposition must be held in check, that is, it is an antidote (or mask) in operation. The antidote is intrinsic—it is one's state of knowledge that prevents the illusion leading to belief. Again, if intrinsic antidotes are impossible, then this defence of the dispositional account of perception is illegitimate.

A final case concerns character traits. Traits we may regard as behavioural dispositions. However, some authors have denied the psychological reality of traits (Harman 1999, 2000; Doris 2002). Our behaviour is too variable and context-dependent to permit any useful explanation in terms of a relatively long-standing behavioural disposition. One possible line of response is to hold that the traits do exist but can have their normal manifestations masked by an antidote, and that changing contexts can supply such antidotes. While in many such cases it will be appropriate to think of those antidotes as being extrinsic, in many other cases the antidotes are intrinsic. Consider the notorious Millgram experiment. Does it show that there is no trait of compassion? Or does it show that such traits can be masked by a stronger disposition of obedience to authority? But if the latter, the mask is intrinsic to the subject.
So several different dispositional approaches to mental phenomena require the possibility of an intrinsic antidote or fink. However, as we saw in Section 1 there is at least *prima facie* reason to doubt the possibility of finks and antidotes that are intrinsic to the bearers of the disposition in question. Our problem is this: the dispositional account of mind depends on (CA) being false; the argument for the falsity of (CA) depends on the relevant finks and antidotes being extrinsic, not intrinsic; but the relevant problem cases for the dispositional account of mind, those requiring us to reject (CA), include cases where the fink or antidote must be intrinsic.

*(Note concerning extrinsic dispositions)* A complication is that many of dispositions required by the dispositional account of mind will be extrinsic. For example externalism about meanings may require the meaning disposition to be extrinsic in some cases. But this further complication can be shelved while we consider the challenge to the dispositional account from mental states that would correspond to intrinsic dispositions. That account may reasonably suppose that meaning addition by ‘plus’ is intrinsic. However, it is worth noting that the preceding discussion can be extended to extrinsic dispositions and to those intrinsic interferers that operate other than by interfering with the extrinsic component of the causal basis of the extrinsic disposition. Consider the argument given above in Section 2 that is a *reductio* of (CA). As it stands this argument depends on the disposition in question, \( D(S,M) \), being intrinsic, in order to infer line (iv) from (iib). Now consider a case where \( D'(S,M) \) is an extrinsic disposition of \( b \). We can divide the causal basis of \( b \)'s possession of \( D'(S,M) \) into an intrinsic component, \( B_i \), and an extrinsic component, \( B_e \). Now let \( F \) be an extrinsic fink that interferes with \( B_i \) that is consistent with \( B_e \). In order to make the argument above valid, we need only add the premise that \( B_e \) holds of \( b \). I.e.

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\begin{align*}
\text{(o)} & \quad B_e \, b \\
\text{(i)} & \quad \text{\textit{a} and \textit{b} are intrinsically identical} \\
\text{(iii)} & \quad D'_e(S,M) \, a \\
\text{entail} \\
\text{(v)} & \quad D'_e(S,M) \, b 
\end{align*}
\]

allows the derivation of line (iv) and the rest of the argument goes through as before. For example, let us take the disposition to open my front door to be an extrinsic
disposition of my key, a. It is extrinsic because the key would lose that disposition if I were to change the lock on the door; so the causal basis of this disposition is composed of $B_i$, the structure of the key, and $B_e$, the structure of my door. Let b be an intrinsically identical key. Being intrinsically identical to a it possesses $B_i$ and so if we keep the nature of my door fixed ($B_e$), then b also possesses the extrinsic disposition to open my door. We can now imagine that there is an extrinsic fink to that disposition: a sorcerer has cast a spell that will turn b to rubber should it come near my door. So it is false that were I to try to open my door with b, it would open. Hence, the problem of finks (or antidotes) can arise also with at least some extrinsic dispositions. But again the argument does depend on the source of interference being extrinsic to the disposition bearer. For if it is intrinsic, then line (i) above is false.)

The dialectic to this point is as follows. Dispositional accounts of mind require it to be possible that there are intrinsic finks and antidotes as well as extrinsic finks and antidotes. But Section 1 shows that the argument for existence of finks and antidotes only licences the existence of extrinsic finks and antidotes. So the dispositional accounts of mind need arguments in addition to the original arguments for finks and antidotes in order to establish the possible existence of intrinsic finks and antidotes. In the absence of such arguments, Choi's conditional test should dispose us to reject such a possibility. My aim is not to defend the dispositional account of mind, but to consider what arguments in the metaphysics of dispositions might be put forward to support the idea that there can be intrinsic interferers to dispositions.

The dialectic from here is as follows. In Section 4 I consider a principled argument for intrinsic finks from Lewis. It is principled because it follows from his reformed conditional analysis of dispositions. However, I shall show that Lewis's reformed analysis is fatally flawed. Indeed it is flawed in precisely the respect that permit intrinsic finks. It permits intrinsically finked dispositions because it permits far too many dispositions, dispositions that clearly do not exist.

McKitrick (2003: 81) remarks that 'Arguments against a conditional analysis of dispositions assume the Intrinsic Dispositions Thesis. Absent this assumption, these arguments are undermined.' That may be true of those arguments as presented. But that does not mean that such arguments cannot be fairly easily reconfigured in order not to depend on that thesis—as this paragraph shows.
In the absence of a principled argument, supporters of intrinsic interferers, such as Randolph Clarke and Lauren Ashwell, resort to arguing from intuitions about cases. In Sections 5 and 6 I shall argue that these arguments are unconvincing. I do not argue that these cases are, in every instance, definitively not cases of intrinsic interference. Rather the aim will be to argue that as described, they do not force us to regard them as cases of intrinsic interference; the descriptions underdetermine whether they are cases of intrinsic interference or not. Why do they fail to make the case they intend to? One reason, I conjecture, is that they tacitly appeal to something like Clarke’s constitution principle. But the latter, I argue in Section 7, is either trivial or mistaken; either way there is no legitimate and informative application of the principle.

So it looks as if there are no clearly satisfactory arguments for the possibility of intrinsic interference. In Section 8 I ask what would be required in order to make the case for intrinsic interference. This allows me in Section 9 to suggest that there is a way of interpreting some of the cases presented in a way that does allow for intrinsic finking after all. In concluding I make a conjecture as to why this is so that depends on the notion of a function. This explains why the descriptions of the cases as presented by Clarke and Ashwell underdetermine whether they are cases of intrinsic inferences, because they are described with insufficient detail to determine whether the relevant functions are present or not.

4 Lewis’s reformed conditional analysis and intrinsic finks

Above I stated that we do not have a principled reason for believing in the possibility of intrinsic finks in the way that we do for extrinsic finks. However, as Randolph Clarke (2007: 514) points out, David Lewis’s (1997: 157) ‘reformed’ conditional analysis of dispositions does have the consequence that intrinsic finks are possible. In this section I shall show that the very feature of Lewis’s analysis that permits intrinsic finks is the feature that shows the analysis to be false.

David Lewis’s (1997: 157) ‘reformed’ conditional analysis of dispositions is the following:
Something \( x \) is disposed at time \( t \) to give response \( r \) to stimulus \( s \) iff, for some intrinsic property \( B \) that \( x \) has at \( t \), for some time \( t' \) after \( t \), if \( x \) were to undergo stimulus \( s \) at time \( t \) and retain property \( B \) until \( t' \), \( s \) and \( x \)'s having of \( B \) would jointly be an \( x \)-complete cause of \( x \)'s giving response \( r \).

The idea is that a fink works by removing the disposition's causal basis before the manifestation can occur. Correspondingly, the above analysis identifies such a basis as being that intrinsic property which would cause the response (manifestation) \( r \), in conjunction with the stimulus \( s \) were it to remain for long enough (an \( x \)-complete cause of \( r \) encompasses all the causal factors intrinsic to \( x \) that are relevant to the production of \( r \)).

Now we can see how this analysis permits intrinsic finks. Let \( B \) be the intrinsic causal basis for \( D_{(S,M)} \). Let \( F \) be another intrinsic property of \( x \) such that \( x \) has \( B \) and \( F \) together and were \( x \) to undergo stimulus \( S \), then \( S \) and \( F \) would together cause the removal of \( B \) before \( M \) could occur. What would happen under the counterfactual supposition that \( S \) occurs but \( B \) remains? For one thing, presumably either \( F \) does not remain or is interfered with. But either way, one would expect \( S \) plus \( B \) together to produce \( M \). So we can say that \( x \) does in fact have the disposition \( D_{(S,M)} \), even though it also has the property \( F \) that is a fink for \( D_{(S,M)} \).

Does Lewis's analysis provides an adequate reason for accepting the possibility of intrinsic finks? As Bird (1998) argues, that analysis is liable to objections from antidotes/masks. Consequently, even if Lewis's account were approximately correct—correct as far as the treatment of finks is concerned—which would allow the possibility of intrinsic finks, it cannot show that intrinsic antidotes are possible. But intrinsic antidotes are rather more frequently what is needed by the dispositional account of mind; for example, we think that a poor memory or lapse in concentration that interferes with correct addition mask the understanding of 'plus' rather than remove that understanding.

More importantly, Bird also points out that the analysis suffers from being excessively liberal with its attributions of dispositions. As we shall see, Lewis's treatment of finks is badly flawed in this respect. Many systems, natural and man-made, are homeostatic. For example, such a system may act so as to keep the value of some
parameter within certain bounds most of the time. I say ‘most’ of the time, because such a system might operate such that when the value of the parameter goes outside its bounds, a subsystem is brought into play that shifts the parameter back to its permitted range. A common example might be a temperature regulation system with a thermostat, when the temperature falls below a certain level, the heating system will fire up until the temperature rises into the permitted range. If it rises beyond its upper limit, the air-conditioning will be activated until the temperature falls back into the allowed range. Such a system will thus allow temperatures outside the permitted range albeit briefly.

This case of a homeostatic mechanism provides a counter-example to Lewis's reformed conditional analysis:

*Sweaty Betty* The human body has a temperature regulation system centred on the hypothalamus that operates to keep temperatures between 36.0°C and 37.5°C. The bounds are such that if exceeded for a sufficiently long period, some unfortunate outcome would occur. For example, should the body remain above 37.5°C for too long, that person will suffer from heatstroke. However, in a normal body, with fully functioning thermoregulation, the body is always cooled by perspiration, vasodilation, and other means well before heatstroke could occur. Betty is a fit and healthy individual. At time t her temperature has been raised to 38.0°C, as a result running to catch a bus in hot weather. Betty’s temperature regulation system kicks in, and her temperature falls shortly after t to 37.0°C. It is true that had Betty’s temperature remained at 38.0°C for long enough, she would have suffered from heatstroke and its associated symptoms (hypotension, tachycardia). But such things would not happen to her because of properly functioning thermoregulation.

According to Lewis’s analysis, we have to say that at time t Betty was disposed to suffer from heatstroke, hypotension, and tachycardia; correspondingly, we must regard thermoregulation as an intrinsic fink. That is not correct: if we consider Betty in the round, we can see that at no point was she disposed towards heatstroke—she has a well-functioning system precisely to prevent heatstroke. (Now, this is not to say that there is no finking going on here. If we consider Betty-minus-her-hypothalamus, we
can say of this object, that it was disposed to the ill-effects if high temperature, and that thermoregulation acted as a fink to this disposition of this object. Note that in this case the fink is extrinsic. And attributing dispositions and finks to a part of some object (in this case, Betty-minus-her-hypothalamus) does not legitimise attributing them to the whole (Betty).)

Here is a pair of cases concerning an artefact:

Two-Colour Lamp This device that sometimes shines red and sometimes green, thanks to the following design. There are two circuits, the red circuit and the green circuit, which share one on-off switch and a toggle. When the toggle is in position A, the green circuit is completed and if the switch is on, the device shines green; when the toggle is in position B, the red circuit is completed and if the switch is on, the device shines red. Let us designate the property of having a green circuit with toggle in position A by ‘G’ and the property of having a red circuit with toggle in position B by ‘R’. Clearly this device cannot shine both red and green at the same time. (Furthermore I’ll assume that nothing can be red and green at the same time). Let the toggle be in position A. The device thus (i) is disposed to shine green when I throw the switch to ‘on’ and (ii) is G.

Modified Two Colour Lamp Now let us imagine that I decide that I want the device only ever to shine red (when on) and never to shine green.
So I modify the device by connecting the switch and the toggle: when I throw the switch, the toggle very quickly moves from A to B, before the current can light up the device. What disposition does the device have? For one thing, it is clearly disposed to shine red when I flick the switch. I’ve designed it precisely so that it will do this. On the other hand, before I throw the switch, the device has the G property, and it is true that were it to retain the G property and I throw the switch, the device would light green as a result.

Thanks to the final line of *Modified Two Colour Lamp*, Lewis must say that the modified device is disposed to shine green when the switch is on (a disposition which suffers from an intrinsic fink). So the device is both disposed to shine green (when the switch is on) and is disposed to shine red when the switch is on. This is at the very least an uncomfortable result. Note, furthermore, that in coming to the conclusion that the device is disposed to shine green, we asked counterfactually: what would happen if the device retained its G property while the switch is thrown? But to make such a counterfactual presumption is precisely to presume that the switch and toggle are not coupled. Thus in coming to the conclusion that the device is disposed to shine green, we have in effect to ignore the very modification that was put in place to prevent the device from shining green. That, I suggest, is clearly an illegitimate way of arguing that the modified device is still disposed to shine green.

What these cases show is that one can use Lewis's reformed conditional analysis for the purpose of showing the possibility of intrinsic finks only by exploiting a feature of that analysis that in fact should be taken to show its falsity. The analysis allows a disposition to remain despite an intrinsic fink, because holding fixed the unfinkish aspect of the causal basis will lead to the normal dispositional manifestation. But we can do this for any actual intrinsic property of the object and its effects, leading to such effects being classed as manifestations of a disposition. Here is an example. A fragile glass is struck forcibly and breaks. Let us call the microstructure of the unstruck class ‘U’. U includes the fact that the glass is not broken. Now consider the counterfactual condition in which the glass is struck and U remains. It is difficult to say quite what would happen in the nearest possible world where the fragile glass is struck forcefully but retains its unbroken microstructure. But one thing
is clear, it doesn’t break. Let us say that there is some miraculous absorption of the
energy of the striking and the glass just vibrates a bit, emitting a pleasant ring (just
as a glass does when tapped without breaking it). Now consider Lewis’s analysis. We
substitute \( U \) for the intrinsic property \( B \) in the analysis. Thus the retention of the
unbroken microstructure, \( U \), plus the striking cause the glass to vibrate a little and
emit a pleasant ring. Hence Lewis’s analysis gives the result that the fragile glass has
the following disposition: the disposition to vibrate a little and emit a pleasant ring in
response to being struck forcefully. Yablo (2002: 133) mentions a case of an ordinary
egg which breaks when dropped onto a hard floor. Had it retained its actual ovoid
shape, it would not have broken but would have bounced. Hence Yablo’s egg is, by Lewis’s
analysis disposed to bounce when dropped (since the ovoid shape and being dropped
together cause it to bounce—in the nearest world where it retains its ovoid shape. \(^6\)

These examples suggest a recipe for generating dispositions that, clearly, objects
do not have. The object \( x \) has the disposition \( D_{(S,M)}x \). We aim to construct a counter-
disposition \( D_{(S,M^*)}x \), where \( M^* \) is incompatible with \( M \). We find some intrinsic prop-
erty \( B^* \) of \( x \) whose retention until some time \( t^* \) is incompatible with the occurrence
of \( Mx \). We now look at the nearest possible world where \( Sx \) occurs and \( B^* \) is retained
until \( t^* \). In that world we should expect to find some event that is the effect of both \( Sx \)
and \( B^* \) that one would not get in the ordinary case when \( x \) manifests \( M \). That event
will do as the manifestation \( M^*x \) of our counter-disposition \( D_{(S,M^*)}x \). Of course, we
may not in every case be able ourselves to think of the property \( B^* \) and effect \( M^*x \).
But such a property and effect will exist, and so also, according to Lewis’s analysis,
does the counter-disposition.

In Section 2, footnote 3, I noted that Lewis (1997: 157) was willing to contemplate
dispositions with identical stimuli but incompatible manifestations:

A surprising, but unobjectionable, consequence of our reformed conditional analysis is that the same thing, at the same time, may be disposed in two opposite ways: as it might be, to break if struck and also not to break if struck. Of course, one of the two opposite dispositions will have to be finkish. Further, it will have to be the kind of finkish dis-

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\(^6\)Stephan Leuenberger has also independently raised such cases in correspondence and in conversation.
position that involves a compound disposition rather than an extrinsic intervention. That may not be the best kind for convincing the resister, but I myself still think it is one possible kind of finkish disposition.

The finkishly fragile glass has intrinsic properties $B$ and $B^*$. $B$ is an $x$-complete causal basis for breaking if struck; $B^*$ is an $x$-complete causal basis for losing $B$ if struck, and also for not breaking if struck. Thanks to $B$, the glass is finkishly disposed to break if struck. Yet thanks to $B^*$ it also is non-finkishly disposed not to break if struck.

Note that Lewis is here thinking about the case of a finkishly fragile glass, where, furthermore, the fink is intrinsic. He seems to think that such cases are unusual, and says that an object may be disposed in two opposite ways. Thus Lewis is not contemplating every object with a disposition having a counter-disposition, in particular he does not seem to countenance objects with ‘ordinary’, unfinked dispositions having counter-dispositions. What is significant about the argument of this section is that it shows that every object with a disposition has a counter-disposition. I suggest that Lewis was willing to countenance opposing dispositions residing simultaneously in the same object, because he took such cases to be unusual. A few, unusual cases of opposing dispositions would not do any harm to the concept of disposition. However, we have shown that every disposition has a counter-disposition, and so every object that had any disposition is oppositely disposed. Such ubiquitous opposing dispositions would deprive the concept of disposition of any function.

5 Clarke’s cases of intrinsic finks

I have argued above that we have no satisfactory principled argument for intrinsic finks and antidotes/masks. We may however gain some reason to believe in their possibility by considering particular cases.

Let us now consider examples that might suggest that there are intrinsic finks or antidotes. Mark Johnston (1992) discusses the following case:

*Shy Chameleon* is green but turns red as soon as he is about to be seen.
According to Randolph Clarke (2007) this chameleon has the disposition to appear green when viewed, even though it is the case that were he to be viewed he would appear red.

It is difficult to find Clarke’s use of Johnston’s *Shy Chameleon* entirely convincing, since the relationship between colour and dispositions is so uncertain and subject to dispute. This would be a case of intrinsic interference if a simple dispositionalist account of colour, according to which green things are disposed to look green when viewed, were true. As Clarke anticipates, a natural response is to deny this. Indeed, the simple dispositionalist account of colour is falsified by a range of perceptual phenomena. One example is the phenomenon of chromatic adaptation: green objects can look yellow even when viewed under normal illumination when surrounded by appropriate contextual clues. At the same time several alternative accounts imply or accommodate the rejection of Clarke’s claim that the chameleon has the disposition to appear green when viewed. Different objectivist accounts regard colours as objective physical properties of objects; for example, colours may be identified with certain spectral reflectance properties. Thus green things possess certain spectral reflectance properties that do in fact normally dispose their possessors to look green when viewed. Normal objects that are green (i.e. normal objects with these spectral reflectance properties) are disposed to look green. But the shy chameleon is clearly not a normal object, and so there is no reason to infer from its being green that it is disposed to appear green when viewed. Furthermore, how might we describe the chameleon’s shyness? One way is to say the the chameleon is disposed to appear red when viewed. So according to Clarke, the chameleon is disposed to appear red and disposed to appear green. As mentioned, Lewis does accept the possibility of things being oppositely disposed. But we have already seen the Lewis’s ground for admitting that possibility is flawed. That this account of the chameleon’s colour requires it to be oppositely disposed is a *prima facie* mark against it. For these reasons, *Shy Chameleon* should be set aside: it is far from being a compelling instance of an intrinsic fink.

Clarke (2007: 513) mentions a second example:

*Strong Man* A man might be strong, with a power to lift heavy objects. He might acquire a new (intrinsic) property possession of which will sap
his strength when (and only when) his hands touch heavy objects. When not touching such an object, he possesses his power; this is what he will lose should he touch a heavy object.

While a potentially more promising as an example of an intrinsic fink, it is impossible to judge that it is indeed an intrinsic fink so without more information as to how the ‘strength-sapping’ operates. Consider the following case:

_Muscle Animal_ An ancestor of this creature developed an impressive musculature in order to give it the strength to fight off predators. In fact much of the selective advantage of these muscles was provided by their appearance, which frightened off potential aggressors. A later advantageous mutation led to the development of a much bigger brain. However, this development had a disadvantage. If a typical member of the species exerted its strength to the fullest degree, it would very likely have a fatal haemorrhage. One further variant avoided this by having a smaller musculature: but those animals were much more susceptible to predation because of their less impressive appearance. Another variant was selectively much more successful. This creature developed a gland such that whenever its muscles are stressed beyond a certain degree a fluid is released into the muscles that paralyses them. Consequently this final adaptation, _Musclen Animal_, can never exert too much muscle power. But it retains much of the benefit provided by having big muscles, because the majority of predators are still scared away.

The ancestors of _Muscle Animal_ have evolved from being strong animals to being less strong animals. Big muscles do not suffice for a creature’s being strong, although they may be necessary. Evolution has found a way of making this creature weak (a good thing, in order to avoid haemorrhage) while retaining its big muscles.

Clarke’s description of _Strong Man_ is consistent with _Strong Man_’s being very much like _Muscle Animal_. If that is right, then we ought to wonder whether _Strong Man_ really is strong, as Clarke declares. Since Clarke does not tell us how the alleged...
intrinsic fink works or why it is there, it is very difficult to assess his case; we cannot conclude that it shows there is a disposition plus an intrinsic fink here, rather than no disposition at all.

However, Clarke aims to reinforce the intuitive power of this example by adding that this man can prevent the strength-sapping property from acting by wearing gloves. Clarke says that the gloves do not make the man strong, but rather they prevent the manifestation of an intrinsic fink. But that interpretation is not mandated.

Return to Muscly Animal. Imagine that there is some drug that can interfere with the operation of the muscle-paralysing gland. When administered to the animal it now can exert a large force (albeit at the high risk of haemorrhage). Does the fact that such a drug exists mean that the animal in its normal state, without the drug, is strong after all? I do not see that the possibility of such a drug should cause us to revise our opinion that the animal is weak. Indeed my claim is consistent with what we say about performance enhancing drugs in sport. Many such drugs work by overcoming fatigue or the pain of exertion. Consider a cyclist who was an average performer but wins a stage in Tour de France because he took amphetamines to overcome fatigue and oxycodone to overcome the pain of lactic acid accretion in his muscles. What we do not say is that this cyclist always was a very fast cyclist, only that the fatigue and pain worked as an intrinsic interferer to his being a fast cyclist rendering his performance merely average. We do not think of these drugs working, as Clarke alleges for the protective gloves, to prevent interference with the disposition to cycle very fast. Clarke has given us no reason to regard Strong Man as different from Muscly Animal or from our average cyclist.

6 Parts and wholes—Ashwell on intrinsic antidotes

Indigestible Berry is poisonous, although due to its indigestible skin it is prevented from having a poisonous effect on those who ingest it. An in-

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conditions understood as ordinary relative to D by standard possessors of the concept 'D'. The individual in Strong Man does attempt to lift the weight under ordinary conditions for strength but fails, and so does not count as strong. That conclusion is a consequence of Choi's theory: Muscly Animal is supposed to show that this conclusion is an intuitively acceptable one. Later I introduce a case, Painful Blisters, which gives less support to Choi's view.
trinsic property of the berry—its having an indigestible skin—prevents
the berry from having its noxious effect. When it is skinned, it is not that
the berry becomes poisonous—its disposition to harm those that ingest
it is simply unmasked.

Is such a berry poisonous, as Lauren Ashwell (2010) suggests? The case is similar to
*Strong Man*, except that the skin allegedly acts as an antidote/mask rather than as a
fink. Just as those cases are unconvincing, so is this one. The berry has a poisonous
flesh. Why should the berry be poisonous just because some proper part of it is? If
one fills out this story as follows, our intuitions go against Ashwell’s.

*Safe Berry* is a berry fitting the description in *Indigestible Berry*, with the
following addition. The berry has evolved this kind of flesh because that
flesh is a good nutrient for the seeds it contains. It is a by-product of this
nutritious flesh that it is poisonous to animals that digest that flesh. But
that is a disadvantageous to the berry species, since it is better for the
propagation of the seeds that it should be excreted by a healthy animal
rather than lodged in the stomach of a dead animal. Hence the berry has
evolved the tough, indigestible skin so that it will not poison an animal
that eats it but will be excreted whole.

Once we tell this story (with clear anaologies to *Muscly Animal*) there is little in-
cclination to say that the berry is poisonous. It has evolved precisely so as not to be
poisonous. Since the berry in *Indigestible Berry* is consistent with being the berry in
*Safe Berry* we cannot infer that the former is poisonous.

Compare *Indigestible Berry* with the following case:

*Nuclear Reactor* consists of a uranium pile, boron control rods, and a
failsafe system. The pile is disposed to chain react explosively when its
mass is raised above critical. However, the failsafe mechanism detects
any rising of radiation levels and lowers the moderating rods into the
pile where they absorb the neutrons, preventing any explosive chain re-
action.

*Nuclear Reactor* (Bird 1998) is another homeostatic mechanism. Let us consider a
situation where boron rods are raised (out of the pile) and the pile's mass has been
raised to above critical. Is the reactor disposed to explode? I say no—the mechanism is designed precisely to avoid such an outcome, and is working as designed. However, it is true that the pile is disposed to chain react explosively. That disposition is masked by the failsafe mechanism and the boron rods. In the case of Indigestible Berry the flesh of the berry is certainly poisonous. In this case, the skin acts like the boron rods and failsafe mechanism of the reactor. It masks the poisonous disposition of the flesh. And as a result the berry as a whole is not poisonous.

In general, a part of a complex system can have a disposition, and that disposition can be finked or masked by some other part of the system. Let us take a case where object X has a disposition D, and a non-overlapping object Y possesses an extrinsic antidote, A, to X’s disposition D. Now consider the object X+Y, that is the fusion of X and Y. If one were correctly to ascribe D to X+Y, then A is now an intrinsic antidote to that disposition. But it is not in general sound, being usually invalid; it is usually invalid to infer from D’s being a disposition of X to D’s being a disposition of X+Y. In general properties of parts are not properties of wholes, and dispositions are no exception to this. My brain weighs 1.4kg, but I do not. That point is of course obvious, and has been made above with respect to the differing disposition of Betty and Betty-minus-hypothalamus. In the absence of any principle that legitimizes such an inference in a case such as Indigestible Berry, we must regard the inference as fallacious, transferring a property from a part to the whole. If there is some special principle that permits the inference in certain special cases, then that principle needs to be enunciated. But so far it has not been.

7 The constitution test

The challenge for the supporter of intrinsic interference is to show the the cases in question are cases of disposition plus intrinsic interference rather than cases of not having the disposition at all. In this section I shall examine the case for ascribing the former that is made on the basis of the constitution of the objects in question.

Note that the challenge laid down has an analogue in a challenge that can be laid before the critic of (CA). What makes these cases of disposition plus extrinsic interference rather than cases of not having the disposition at all? The answer comes from the intrinsic duplicates argument. But note that this argument holds only if the
disposition in question is an intrinsic one. It is assumed that the fragility of a delicate glass is intrinsic. But might that not be challenged? Bird (2007: 30) suggests that our intuitions are that fragility is intrinsic and that it contrasts with McKitrick's (2003) example of an extrinsic disposition, *vulnerability*. When Lewis's sorcerer protects his glass with an extrinsic enchantment, the extrinsic disposition of vulnerability is removed. But its fragility remains, since it is an intrinsic property. After all, it is natural to say that the sorcerer is concerned to protect his glass *because it is so fragile*.

Ashwell (2010) argues this kind of argument must work equally well for intrinsic masks. Ashwell invites us to consider a case of intrinsic enchantment.

*Magic Wrap* A sorcerer enchants the glass so that the enchantment causes bubble-wrap to appear around the glass, should the glass be about to be struck, in time to save the glass from shattering. The glass, therefore, would not break if struck. (Ashwell stipulates that the enchantment is an intrinsic property of the glass.)

Ashwell maintains that this glass is fragile. One reason is that one can argue, just as in the case of extrinsic enchantment, that the sorcerer cast the enchantment *because his glass is fragile*. If, on the other hand, one is inclined to deny that the intrinsically masked *Magic Wrap* glass is fragile, one must then explain the sorcerer's enchantment as being due to the fact that *were it not enchanted, it would be fragile*. If that is a satisfactory explanation, then so is a parallel explanation in the case of the glass protected by Lewis's extrinsic enchantment: that too is non-fragile; it is enchanted because it would be fragile without the enchantment. So it looks as if the case for the fragility in Lewis's case being (a) intrinsic, and (b) persistent through the extrinsic enchantment is no better than an analogous case for the fragility in *Magic Wrap* being (a) intrinsic, and (b) persistent through the intrinsic enchantment.

Our intuition that the extrinsically enchanted glass is protected *because* it is fragile is a piece of abductive evidence. Abductive support is contextual. The fragility explanation in the case of the unenchanted glass is a simpler explanation than the would-be fragility explanation; our intuitions are strongly that it is fragile (boxes of such glasses, even well-protected by extrinsic antidotes, say ‘fragile’ on them; they don’t say ‘beware: contents liable to be fragile if unwrapped or not handled gently’);
the glasses are intrinsically identical to unwrapped, unenchanted glasses, which are paradigmatically fragile. Now consider the analogous explanation in the case of the enchanted Magic Wrap glasses. It is true that the fragility explanation here is also simpler than the would-be fragility explanation. But the context is different. Our intuitions are certainly not unequivocally that these glasses are fragile; they could equally be regarded as glasses that are in some ways like unenchanted glasses but in fact have a very unusual kind of robustness. And they are not intrinsically like any paradigmatically fragile glasses. Far from it, they are intrinsically enchanted. It is notable that when we make intrinsic changes to things in order to prevent them from manifesting dispositions, those things are regarded as not having those dispositions: glass incorporating wire mesh is not fragile; a car with a catalytic converter is not disposed to emit toxic exhaust fumes. In contrast we do think that a glass that is in a polystyrene box is still fragile. In summary there are numerous reasons for thinking that the explanation of an intrinsic change (as in Magic Wrap) is that the object would have a certain disposition without the change (not that that do have a disposition which persists through the change), and these reasons do not apply in the case of extrinsic change.

While some hold that the contrived nature of the sorcerer examples deprives them of any evidential force, I regard them as shortcuts that save us the work of devising complex physical mechanisms that would do the same work (but with more distractions). In the case of extrinsic finks and antidotes, the difference between magical and physical mechanisms makes no difference to our intuitions. However, when it comes to the intrinsic enchantment, we need to be rather more careful. An enchantment is an intangible sort of thing. It is tempting to think that adding an enchantment to something, even when it is stipulated that the enchantment is intrinsic, will merely add to the object’s intrinsic properties. The enchanted object is just like the unenchanted object, except that it also has the enchantment in addition to its previous properties. This, I suspect, makes it tempting to agree that since an unenchanted glass is fragile, then so is the enchanted glass.

Such temptations must be resisted. Adding an intrinsic property $P$ always removes another intrinsic property, the intrinsic property of lacking $P$. (A moment’s reflection shows that the complement of an intrinsic property is also an intrinsic property.) So it is not the case that the enchanted glass has all the intrinsic prop-
erties of the unenchanted glass, plus the enchantment property. And so there is no straightforward inference from the fragility of the unenchanted glass to the enchanted glass being fragile. Still, the intangibility of the enchantment might persuade us that the enchanted glass possesses all the substantive intrinsic properties of the unenchanted glass, such as fragility. But in the absence of a general principle, such an inference needs a specific argument in its favour. Reflect that some physical process must occur, as in the following:

\textit{Nanobags} Nanotechnological devices are implanted all over a glass just below its surface; these cause millions of tiny airbags to inflate very quickly and temporarily whenever the glass is struck. Consequently, the glass does not break when struck.

Just as adding the airbag facility to a car changes it substantive intrinsic properties, removing the property of being dangerous and adding that of being fairly safe, the nanotechnological devices added to the glass changes its substantive properties, removing fragility and adding robustness. Since the structural intrinsic properties of such a glass are different, one might well imagine that the dispositional intrinsic properties are different too. And that verdict should be made with no less confidence just because we have employed the device of a sorcerer's enchantment.

Anthony Everett (2009) has suggested the following case of intrinsic interference:

\textit{Radioactive Fragility} A radioactive substance S has a very weak crystal structure found in highly fragile things. S has an extremely short half-life so that a newly made sample of S very rapidly decays into material M which is not at all fragile but very strong. If we apply a stress to a newly made sample of S, call it \textit{a}, then \textit{a} will decay into strong and sturdy M well before it shatters.

According to Everett we should say that \textit{a} is fragile, in virtue of its possessing the weak structure of S, even though it will not break when stressed. The decay of \textit{a}'s matter from S to M acts as an intrinsic fink to its fragility. Everett's case is an instance of what Bird (2007: 26) calls 'acausal' finkishness. In a standard case of finkishness, the stimulus to the disposition is also the initiating cause of the finkish process. The striking of the sorcerer's fragile glass also causes the spell to operate, making the
glass non-fragile. But as Bird points out, the counterfactual ‘the glass would break if struck’ would be false as $t$ even if, quite independently, the sorcerer had set his spell to turn the glass from fragile to non-fragile at $t + \delta$. The change from fragile to non-fragile was going to happen anyway at $t + \delta$. It just so happened that a striking occurred fractionally before this, and so did not bring about a breaking. Everett’s case is like this; a was going to become non-fragile due to the decay of its S-matter; it was stressed just before it did so.

While the case of the extrinsic acausal finkishness really is a case of finkishness, the same is rather less clear for Everett’s case. Objects do change their dispositions as a result of internal processes. For example, a piece of paper, due to the chlorine used in its manufacture, will become brittle over time. But at what point does it become brittle (ignoring problems of vagueness)? At the time $t$ when its fibres have acquired the physical character typical of weak fibres? Or at the very, very slightly earlier time $t - \epsilon$ when it become true that if one were to stress the paper it would crumble?

Everett cites Clarke’s (2007: 516) constitution test:

[I]n many standard cases of dispositions, we find intrinsic structural features which, given the laws, suffice for the possession of those dispositions. Having a certain molecular structure and bonding suffices, given the laws, for being soluble. We need not take into account all of a thing’s intrinsic properties in determining whether it has a given disposition. Hence, in many cases, there is a third kind of test for the possession of a given disposition: determine whether the object has an intrinsic property possession of which has been found to suffice for having the disposition.

Everett says, for example, that we may take possession of the electro-negativity and atomic characteristics of arsenic to suffice for its being poisonous.

A first remark to be made about the constitution test is that the examples given by Clarke and Everett that give the principle plausibility concern kinds, whereas my discussion (and indeed theirs) concerns particulars. What is the relevance of the former for the latter? To say that certain structural and bonding properties of sodium chloride (call them ‘$S$’) suffices for its being soluble in water, implies that any
particular that is a pure sample of a substance with properties S will be soluble in water. It is not at all clear that a particular that is made up of some combination of such a substance and some other substance will be water soluble (e.g. the particular that is made of a sealed plastic tube plus salt within the tube is not soluble). To say that a sample is ‘pure’ is to say that it does not have other intrinsic properties (other than the shape of the space it occupies) of the sort that would be relevant to its dissolving.

Are there any intrinsic properties of particulars that nomically suffice for their possessing a certain disposition? Yes, when the intrinsic properties exclude the addition of further intrinsic properties. Let B be a complete description of the positive intrinsic properties of some fragile glass $g$. Let $B^*$ be the property of possessing B and no other intrinsic properties. Certainly anything that is $B^*$ is fragile. But then anything that is $B^*$ is an intrinsic duplicate of $g$, and so the constitution test just collapses into the duplicate test. As explained above, the duplicate test is perfectly reliable. But as also explained, it cannot be applied to provide an answer to the question of intrinsic finks and antidotes precisely because the test cases are not intrinsic duplicates of the paradigm cases.

If we don't make a stipulation that in effect limits the additional intrinsic properties a particular may have (as in both the two preceding paragraphs), then it becomes unclear whether the constitution test is genuinely applicable. For it is unclear whether possession of the relevant intrinsic property really is nomically sufficient for possession of the relevant disposition. An intrinsic property—for example being made of very thin, ordinary glass—might typically suffice for an object's being fragile. But is it nomically sufficient? If we are in a world whose laws permit sorcerers’ spells, then that is not clear, for one might think that the delicate glass protected by a sorcerer's intrinsic spell is not fragile. Whether the constitution test is applicable will thus turn on the very issue it is supposed to pronounce upon, whether a particular case is one of intrinsic interference.

I maintain that the constitution test cannot be applied in a manner that is dialectically unambiguous, and so its application is illegitimate. Everett argues that the constitution test tells us that in Radioactive Fragility the sample is indeed fragile. Likewise it might suggest that the piece of paper is not fragile from $t - \epsilon$ but only from $t$. But should we be confident that possession of the property S by some par-
ticular suffices for being weak? Normal objects, which are intrinsically disposed to retain S, are indeed fragile. But what about an object that has further intrinsic properties that dispose it to lose S very rapidly? Is it fragile? That is just what is up for debate. Consequently it is question-beggingly illegitimate to apply the constitution test to Everett’s radioactive sample in order to determine that it is indeed fragile.

I believe that something like Clarke’s constitution test may be being employed—implicitly, and illegitimately—in many of the cases where proponents of intrinsic interference see intrinsic finks and antidotes. In Magic Wrap we are told that the glass has the intrinsic properties of a fragile glass plus an intrinsic spell. The former component seems to compel us to say that the enchanted glass is fragile, in accord with the constitution test. Similarly, in other cases, such as Strong Man, where we infer from the large muscles the subject possesses that he must be strong and have related dispositions. In many ordinary cases, the constitution test may be an epistemically reliable guide to dispositions. If we do not wish to risk breaking a glass, we may infer whether it is fragile from an investigation of its structure. In a normal case, we may be able to see from the delicate, thin glass that it is fragile. But this does not help us in the unusual cases that are under discussion. As my response to Magic Wrap shows, this way of thinking is both deeply misleading and ill-founded when we come to allegedly intrinsic interferers. The fact in Magic Wrap the interferer is just labelled ‘an intrinsic spell’ makes it seem innocuous and scarcely any change at all, hardly relevant to the inference from the clear, physical feature that is the intrinsic basis (normally) for fragility to fragility itself. The mere reference to ‘an intrinsic strength-sapping property’ in Strong Man similarly invites us to apply the constitution test.

I suggest, therefore, that we are tempted to make illegitimate applications of the constitution test because objects possess highly salient intrinsic properties that are typically responsible for bearers also possessing certain dispositions. But we have seen already that such temptations must be resisted. For in Muscly Animal and Nanobags as well as Modified Two Colour Lamp and Sweaty Betty, the subjects all have intrinsic features that in many cases will be the causal bases of dispositions (to move a heavy weight, to break when struck, to shine green when switched on, to suffer from heatstroke). But in these cases, where the salient property is supplemented by some further significant intrinsic property it is clear that we must deny that these
objects possess the dispositions in question. Thus the constitution test cannot be used to settle the issue of the existence of intrinsic finks or antidotes.

(I should mention that Everett (2009) also argues that his radioactive sample $a$ is fragile by the duplicate test. Since the radioactive decay is probabilistic process, there is a small but finite chance that $b$, which is intrinsically identical to $a$ would not turn into a sample of M but would remain made of fragile S. In $b$'s case the striking is followed by shattering, and so it is true that were $b$ struck, $b$ would shatter. Because there is no interference or mimicking, $b$ should be regarded as fragile according to the conditional test. And since $b$ is fragile, so is its intrinsic duplicate $a$.

But is $b$ really fragile? The probabilistic nature of this case makes such judgments very difficult. The argument appeals to Lewis's centering condition for counterfactuals and subjunctives: $F \land G \Rightarrow F \land G$ ($b$ was struck and shattered, therefore were $b$ struck, $b$ would shatter). While the centering condition may be a useful idealization, it is quite plausibly false; for example, since I will finish the paper and the Moon is made of rock, ‘were I to complete this paper, the Moon would be made of rock’ comes out as true. The centering condition is particularly objectionable when combined with the conditional test, for then we get it coming out as true that the Moon is disposed to be made of rock in response to my completing this paper. Most relevantly to our current case, as Alan Hájek (2007) argues, we should not be quick to endorse conditionals such as ‘were $b$ to be struck, it would shatter’ when the consequent is an indeterministic event. More generally, consider some object with a propensity such that when it is struck has a 0.5 chance of rapidly acquiring a constitution that leads to shattering and a 0.5 chance of rapidly acquiring a constitution that leads to its ringing like a sturdy bell (i.e. not shattering at all). Since this is an indeterministic case, we can consider intrinsic duplicates $c$ and $c'$ which are struck and then behave respectively in the each of the two ways described. If we accept centering and apply the conditional test, then $c$ is fragile and $c'$ is sturdy. But this outcome contradicts the duplicate test (assuming that no object can be both fragile and sturdy). Consequently, if one wishes to apply the duplicate test, as Everett does, one must either deny centering or the conditional test. But Everett needs both if he is to establish that $a$'s duplicate, $b$, is fragile.)

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8But see above and Clarke for doubts about this assumption
8 The privileging problems

Above I argued that in thinking that *Indigestible Berry* is poisonous one is committing the fallacy of inferring that X has D because some part of S has D. Ashwell anticipates this response and notes that the physical part-whole relation is not the same as the relation between one of the properties of a thing and the thing itself, and remarks, ‘for the Part/Whole objection to save [the thesis that there are no intrinsic finks and antidotes], it has to be a plausible error theory for all cases of apparent intrinsic finks or masks.’ I do not regard the part-whole response as a general error theory, not need it be. It is a particular case of a more general diagnosis of why it is tempting to think that there are intrinsic interferers in cases such as *Indigestible Berry* and *Strong Man*.

The more general diagnosis, which also covers the temptation to make illegitimate applications of the constitution test, says that in these cases the object has a salient property $\Phi$, where the possession of $\Phi$ by an object typically means that the object has disposition D. In some cases $\Phi$ might be the possession of D by a part of the object. Typically, having a poisonous flesh will make a berry poisonous as a whole. In other cases $\Phi$ might concern the constitution of the object. We should not regard *Strong Man* as an instance of the part-whole fallacy, since muscles are not strong in the same sense of ‘strong’ as people are. Nonetheless, almost always large, strong muscles man a man strong, and so it is tempting to think that a man endowed with impressive muscles is strong. The fallacy, then, is one of inferring from the fact that $\Phi$ implies the presence of disposition D in typical cases to its implying D in the particular cases that are alleged to be those of intrinsic finks and antidotes.

Of course, the fact that an inference from P-type propositions to Q-type propositions is in general invalid does not mean that there are not some cases where the an inference from a P proposition to a Q proposition is valid when supplemented by a suitable true principle. In this section I ask what such a principle would need to be like.

Let us return to the rule-following case, where a subject’s manifestations of the addition rule are constrained by a finite memory. In that case it is tempting to think of the subject in a modular sort of way. There is a recursive arithmetic module that understands and implements the addition rule; and there is a memory module for
storing data. In performing some actual sum, the arithmetic module needs to make use of the memory module. But the mathematics, so to speak, really happens only in the arithmetic module. One might think of a calculator or computer being built like this, with clearly distinct parts for performing the addition and for storing data. The constraints on the actual performance of large sums can be adjusted by adding more memory. Such changes don't affect any mathematical disposition, the latter being contained in the distinct arithmetic module. With such a picture in mind it is very tempting to say that the subject had a perfect understanding of the plus rule. Her constrained performance is not due to any failure of understanding but simply due to the limited size of a non-mathematical component, her memory.

Let us assume that in some cases conclusions such as that reached in the preceding paragraph are correct. Then we are faced with at least some cases where an object is oppositely disposed. Take Indigestible Berry; if Ashwell is correct it is poisonous. On the other hand, since it in fact does pass through the digestive system undigested, it is difficult to deny that it is disposed to pass through the digestive system undigested. The falsity of (CA←) means that this inference is not mandated. But cases where it fails are cases of the stimulus finkishly causing the disposition to come into existence or cases of mimics. And neither seems applicable here. The berry's constitution doesn't change, so the former is not applicable. And the berry doesn't mimic an indigestible berry, it is indigestible. Hence the berry has two opposing dispositions: it is disposed to poison when eaten and it is disposed to pass through the digestive system undigested when eaten. While Lewis's overgeneration of such opposing dispositions is objectionable, some such opposing dispositions may be permissible in special cases. But where they do occur, they present a prima facie problem. For in the rule following case a subject with a poor memory will have opposing dispositions with the stimulus 'what is 68 plus 57?'. One of these is the disposition to give the answer '125'. But another is the disposition to give the answer '123' (the answer actually given, as a result of the poor memory). So which is the disposition we should identify with the rule-following disposition for 'plus'? This is what Handfield and Bird (2008) call the Privileging Problem.

One route to solving the Privileging Problem is to identify a related problem, which I will call the Privileging Proto-Problem. Note that in the above cases, one of the opposing dispositions is manifested (in the case of the berry: the disposition
to pass through the digestive system undigested; in the case of the rule follower: the disposition to give the answer ‘123’). That is the disposition whose existence would be legitimised by the conditional test. The opposing dispositions (to poison; to answer ‘125’) are not manifested. These are the ones whose existence would not be legitimised by the conditional test, and whose existence is dialectically problematic, as this paper has argued. The Privileging Proto-Problem asks: when is it legitimate to ascribe a disposition to an object even though it fails the conditional test because of the interference by some property intrinsic to the object? How do we distinguish such cases from cases where is it correct to deny that there is disposition at all? Modified Lamp, Sweaty Betty, Muscly Animal, and Safe Berry are all cases where there is some property (toggle set to green, elevated temperature, large muscles, poisonous flesh) that in other, similar cases would be the basis of a disposition (to shine green, to die, to exert a great force, to poison) which in these cases we deny. If Clarke and Ashwell are right, then some cases are superficially like these but are importantly different in that the objects do have these dispositions but do not manifest them (because of intrinsic interference). If there were a principled basis for making such a distinction, then we would in effect be privileging certain properties in this way: in some cases the fact that an object a possesses property Φ means that it is correct to ascribe disposition D(S,M) to a, even though a is intrinsically prevented from manifesting M in response to S (whereas in other cases an object might possess Φ and it is correct to deny that the object has D(S,M)).

In many cases the property Φ will be a matter of the object possessing some part that on its own possesses D(S,M). Indigestible Berry, if Ashwell is right, is poisonous because its flesh is poisonous. In some other cases, Φ will be a matter of the object possessing some part that is typically the principal component of the disposition D(S,M) of the whole. According to Clarke Strong Man is strong because of his large muscles. Although we talk of ‘strong muscles’, strictly speaking muscles are not strong in the sense that people are strong. In yet other cases, it is may not be possible to identify a specific part that is responsible for ascribing D(S,M). The relevant property Φ will be a property of the whole that is not identifiable with some parts and its properties. If the first paragraph of this section is correct, then we ascribe the disposition to calculate the addition function on the basis of a part that is the addition module. However, in certain designs of computer (e.g. massively distrib-
uted or connectionist systems) it may not be possible to identify particular parts that perform the relevant functions. Nonetheless, it may be possible to identify distinct functional properties of the whole (the recursive addition calculating property and the memory property). In this case, the Privileging Proto-Problem asks why it is that we regard the system as possessing the ability to add in virtue of the the recursive addition calculating property, even though it will not manifest that disposition (because of the limitations of the memory property). Such cases will be most analogous to those we are interested in when we consider dispositional theories of mind.

If there were a principled answer to the Privileging Proto-Problem, I conjecture that it might provide an answer to the Privileging Problem as posed by Handfield and Bird. If we can find a reason why we should privilege a property $\Phi$ in determining that a subject has disposition $D$, despite interference, then we may also have a reason for privileging $D$, when it comes to deciding which rule it is that the subject is following.

9 Intrinsic interference after all?

In the forgoing I have not argued that intrinsic finks and antidotes are impossible. Rather I have argued that their advocates have failed to make the case for their existence. For all that I have said, it might still be the case that there are cases of intrinsic interference. I now want to propose that there may be such cases after all, and that attempts to identify them hitherto have failed because those who want to argue for their possibility have been looking in the wrong place. My proposal is speculative but has *prima facie* plausibility in the light of the forgoing discussion and some further examples.

The proposal employs the concept of *function*. This concept is in wide use in biology. And it is also commonly used in the description of artefacts. Its significance in both areas has led to a lengthy philosophical literature aiming to provide analyses of function (for a selection see: Hempel 1965; Nagel 1961; Wright 1973; Hirschmann and Manser 1973; Achinstein 1977; Purton 1979; Millikan 1989; Neander 1991; Griffiths 1993; Antonelli 1996; Walsh 1996; Manning 1997; Houkes and Vermaas 2010). Furthermore, many of these authors believe that a unified account can be given of function that covers both biological and artefact function. The difference between
these authors on matters of detail does not affect what follows. Talk of functions may give the impression that my proposal is drawing upon Aristotelian teleology that is outmoded and should be rejected by anyone with naturalistic commitments. To what extent that is true depends on what account of function one gives. Certainly many of the authors just mentioned aim to give a naturalistic account of function, for example relating biological function to effects that contribute to evolutionary fitness.\(^9\)

Because the notion of function applies to biological organisms and to artefacts, the following proposal does not aim to cover naturally occurring non-living objects, such as icebergs, planets, snowflakes, etc.\(^10\) In the light of the discussion above, I regard it as *prima facie* implausible that such entities can have intrinsic finks or antidotes. Consequently, fundamental particles in particular will not have intrinsic interferers, and so the teleological element that appeal to function has introduced will not apply at the fundamental level. This means that dispositional essentialists, those who think that fundamental natural properties are essentially dispositional in character, need not be concerned that the proposal I am making would have the consequence that these essences are tainted, from a naturalistic point of view, by teleology. I note that some authors (e.g. Place 1996 and Ellis 2002) do wish to make a connection between teleology and dispositional essences, a view which has been rejected by Bird (2007: 114–31).

Recall that I argued that Clarke’s *Strong Man* could be interpreted as being analogous to *Muscly Animal*. The subject of *Muscly Animal* is not strong. So we cannot be confident that the subject of *Strong Man* is strong. On the other hand there may be other ways to interpret *Strong Man*. Consider:

*Painful Blisters* This case is just like *Strong Man* except that we add that the intrinsic reason why the subject cannot lift the weight when he touches it is that his has very painful blisters on the palms of his hands, and

\(^9\)Whether such accounts are to be regarded as rejections of Aristotelian teleology or as naturalistic versions of it, I leave to others to decide, though I do note that Aristotle’s teleology encompasses inanimate natural objects (such as stones) whereas I have rejected the application of the notion of function to such objects.

\(^10\)Perhaps the notion of function might apply to some such objects if they used in a particular way. If it is correct to do so, then my account may apply to such cases too.
the pain prevents him from lifting the weights. (But if he wears special
gloves, the pain is soothed and he can lift the weight.)

Elaborated thus, then we are inclined to accept that the painful blisters are an in-
trinsic fink.\footnote{I noted above in footnote 7 that while *Strong Man* supports Choi's (2011) account, *Painful Blisters* is a counter-example to it, because in this case the subject is strong and is attempting to lift the weight under (extrinsically) ordinary conditions but does not lift it. Arguably Choi should extend his notion of 'ordinary condition' to include intrinsic properties. Suffering from painful blisters ought not be regarded as an ordinary condition for demonstrating strength by attempting to lift a weight. I suggest that the functional account I go on to give might help distinguish ordinary from extraordinary conditions.}

We can say analogous things about *Indigestible Berry*. Ashwell's description of this case was consistent with its being *Safe Berry*. But it is also consistent with its being:

*Dangerous Berry* This berry is of a kind of berry that normally has a thin, digestible skin and so the berry does poison those who eat it, causing them to vomit. This is an adaptation, since this provides the berry's seeds with rich nutrients from the animal's stomach. However, this particular berry is suffering from a fungal disease which causes its skin to thicken.

In this case we are much more apt to agree with Ashwell that the berry is poisonous, and that an animal that eats it and is not poisoned, is the beneficiary of the fungal infection causing the skin to thicken and thus mask the disposition of the berry to poison.

We thus have two cases where the basic description, as given by Clarke and by Ashwell, fails to determine whether they are cases of intrinsic interference. When elaborated in one way, we decided that they are not cases of intrinsic interference, but when elaborated in a different way it is much more plausible that there is intrinsic interference. This raises two questions: (i) what is it about the different elaborations that allows for intrinsic interference in certain cases but not in others? and (ii) why is it that Clarke and Ashwell have failed to see that their descriptions under-determine which dispositions an object has?

Considering question (i) the difference between *Muscly Animal* and *Painful Blisters* is that in the former the source of the interference, the paralyzing gland, has the
function of interfering to prevent the manifestation in question. It is the biological
d function of that gland to prevent the muscles from being able to exert any significant
force. Whereas the interference in Painful Blisters comes from a source that does not
have the function of interfering. Likewise, in Safe Berry the indigestible skin has the
function of preventing its flesh from poisoning animals that eat it, whereas in Danger-
ous Berry the disease-thickened skin does not have that function. (In all these
cases the verdicts about functions are endorsed both by our intuitions and by the
standard accounts of function cited above.)

Above I characterized the attempts hitherto to establish intrinsic interference as
making an inference from the fact that an object has a salient property $\Phi$ that typ-
ically causes objects to have a disposition $D_{(S,M)}$, to the conclusion that an object
that is $\Phi$ has $D_{(S,M)}$, even when there is an intrinsic interferer to $D$. That is a fallacy in
general, but might be acceptable in certain kinds of case. If so, we need to articulate
a principle that says which kinds of case permit such an inference. The above cases
point towards such a principle—when the interferer has the function of interfering,
then the inference remains invalid, but when the interferer does not have that func-
tion, then the inference is valid. We are now in a position to see a possible answer
to the Privileging Proto-Problem. Bearing in mind that in other cases, an object may
possess $\Phi$ without possessing disposition $D_{(S,M)}$ (i.e. $\Phi$ is not nomically sufficient for
$D$), what privileges $\Phi$ in those cases where the object does possess $D_{(S,M)}$? We can
distinguish three cases:

(i) In virtue of possessing $\Phi$, the object unproblematically manifests $M$
in response to $S$. In this case the object possesses $D_{(S,M)}$.

In many such cases $\Phi$ might be the causal basis of $D_{(S,M)}$. $\Phi$ might be an incomplete
characterization of the object, for example being a characterization only of a proper
part of the object. But if no other part interferes with the production of $M$, then
the attribution of $D_{(S,M)}$ to the object is unproblematic. For example, in the case of
Two-Colour Lamp $\Phi$ would be the structure of the green circuit with the toggle in
the green position, which on its own is disposed to shine green. No other part of the
lamp interferes with this, so the lamp is disposed to shine green. In another case my
stomach and gut are disposed to digest food, and if I am healthy this is not interfered
with by any other part or system of mine, so I too am disposed to digest food.

(ii) While in other cases, the object would have disposition $D_{(S,M)}$ in virtue of possessing $\Phi$, in this case the object fails to manifest $M$ in response to $S$, as a result of interference arising in virtue of some functional property $\Psi$, where $\Psi$ is functioning normally and has the function so to interfere. In this case the object does not possess $D_{(S,M)}$.

In some instances of this type, a part or subsystem may possess $D_{(S,M)}$, but the object does not have this property since some other subsystem has the function of interfering. *Modified Two Colour Lamp* is not disposed to shine green, since the modification exists to prevent it from shining green and to ensure that it shines red. *Safe Berry* is not poisonous because its skin functions to prevent it from poisoning any animal that eats it. Other cases of this kind include *Nuclear Reactor* and *Nanobags*. In other cases the object may possesses properties that might otherwise confer $D_{(S,M)}$ on the whole object, but which do not thanks to further properties whose presence has the function of interfering. The delicately constructed glass with the intrinsic sorcerer's spell might be such a case.

(iii) The object possesses $\Phi$ which would normally confer the disposition $D_{(S,M)}$ on the object and so would normally lead to the object manifesting $M$ in response to $S$. In this case the object does not manifest $M$ because of interference brought about by another property $\Xi$, where $\Xi$ does not have the function of interfering to prevent $M$. In this case the object does possess $D_{(S,M)}$.

This is the interesting case because it is the one where we *do* privilege $\Phi$ in conferring a disposition, even though that dispositions's manifestation is prevented from occurring thanks to other properties of the object. The sort of property $\Xi$ that can interfere with the disposition without removing it from the whole will be one that does not haver the function of so interfering. $\Xi$ will often be: (a) the interference of transient or accidental factors, or (b) the malfunctioning of other subsystems, or (c) a byproduct of the action of some other subsystem. For example, *Painful Blisters*
the man is strong, because although the blisters prevent him from lifting the heavy weight, it is not their function so to do. The blisters may be thought of as a malfunctioning of the skin. Even if one were to think of blisters as involving proper functioning, that function is not the function of preventing the man rom lifting heavy weights, even if it has that effect as a by-product. Likewise, *Dangerous Berry* is poisonous, although that disposition is masked, since the masking comes about as a result of the berry being diseased. *Broken Two Colour Lamp* is disposed to shine green despite the interference of a loose part of mechanism, since that interference is accidental.

It is worth remarking that my verdict as regards (iii) has precedents elsewhere. Chomsky, for example, makes the distinction between *competence* and *performance*. Thanks to productivity, the recursive nature of grammar, our linguistic competence is unbounded. But our performance, the sentences we can actually understand, is severely limited. Our linguistic dispositions are infinite, but their manifestations are not. To make such a distinction is to privilege the property of speakers that is the implementation of the recursive rules of grammar. That is correct in the light of (iii), for whatever interferes with our ability to parse very long and complex sentences, such as the limitations of memory, it is not that interferer's function to stop us from parsing long and complex sentences. Fodor and Pylyshyn make the analogy with a Turing machine.

[T]here are a number of considerations which suggest that, despite de facto constraints on performance, one's knowledge of one's language supports an unbounded productive capacity in much the same way that one's knowledge of addition supports an unbounded number of sums...

Classical theories are able to accommodate these sorts of considerations because they assume architectures in which there is a functional distinction between memory and program. In a system such as a Turing machine, where the length of the tape is not fixed in advance, changes in the amount of available memory *can be affected without changing the...*

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12 Note that functional ascriptions are non-truth-functional.
computational structure of the machine; viz. by making more tape available. (Fodor and Pylyshyn 1988; original emphasis)

This section has broached a speculative proposal concerning the proto-privileging problem. A property $\Phi$ can confer a disposition $D_{(S,M)}$ on an object even when that object has some other property $\Xi$ that prevents manifestation $M$ from occurring.

10 Conclusion

In this paper I have asked whether an object can have a disposition and also an intrinsic fink or antidote to that disposition. I have argued that there are no general arguments from the nature of dispositions to show that there must be. Arguments such as that based on Lewis's reformed conditional analysis fail. At the same time I do not find the particular cases presented as potential cases of intrinsic interference very convincing, for the reasons given. Nonetheless, I have concluded that there are, after all, cases of intrinsic interference.

Why should both the general arguments and the arguments from cases have failed to establish a proposition I ultimately conclude is true? In the light of my conclusion we can see why these attempts have failed. Note that whether or not a particular structure has a function $F$ is not an intrinsic matter: two object may be intrinsically identical although one has the function $F$ and the other does not. And whether an object has certain disposition $D$ which is intrinsically finked depends on the function if the interferer, and so may be an extrinsic matter. Consequently, a specification of an object's intrinsic properties may underdetermine whether is has disposition $D$ intrinsically finked or lacks the disposition altogether; it is generally assumed, and we now see falsely assumed, that whether an intrinsic disposition is intrinsically finked will be an intrinsic matter. For example, the argument based on Lewis's reformed conditional analysis entails that if $D$ in $a$ is intrinsically finked, then $D$ will be intrinsically finked in all intrinsic duplicates of $a$. The cases presented by Clarke, Ashwell, and others are given by description of their intrinsic properties, on the basis of this false assumption. Since the assumption is false, it is in fact underdetermined whether their cases are indeed cases if intrinsic finks, which is why it was possible to add detail concerning extrinsic facts (such as function) that could push
the cases either in the direction of intrinsic interference (*Painful Blisters, Safe Berry*)
or away from it (*Muscly Animal, Dangerous Berry*).

My tentative conclusion in the preceding section was that whether intrinsic interference arises depends on the functions of the relevant parts. Consequently whether a disposition in some object is intrinsically finked or not is not itself an intrinsic property of the object. I argued that *Broken Two Colour Lamp* has an intrinsically masked disposition whereas *Modified Two Colour Lamp* does not—but they might be intrinsically identical. It is for this reason that many of the arguments given above fail or are at best inconclusive. In *Strong Man* we are not told how the intrinsic sapping of his strength occurs. But without being told how it occurs we cannot tell whether, as in the case of *Muscly Animal*, it occurs as a result of a proper functioning, or whether it occurs as a result of a malfunctioning. This is one reason why intrinsic antidotes introduced by sorcerer’s enchantments are misleading. Not knowing how they work, and regarding them as somehow mere additions to the properties of an object, we are apt to make fallacious inferences. Furthermore, insofar as we take these enchanted modifications to have the purpose of protecting the glass. They are precisely the kind of example that cannot establish intrinsic interference, since they are deliberately not cases of malfunction. Consequently they must be treated like *Sweaty Betty*.

The question of whether there can be intrinsic finks and antidotes/masks is important for our understanding of dispositions. As we saw, it arises in particular in the philosophy of mind, where it looks promising to give dispositional accounts of various mental capacities. For such accounts to work, it often need to be the case that the mental dispositions in question are subject to intrinsic finks and antidotes. This paper does not aim to defend the dispositionalist accounts of mind, but rather to address a metaphysical question raised by that approach. Nonetheless, it is natural to ask whether the answer given in Section 9 to the metaphysical question provides what defenders of dispositional accounts of the mind need. A full exploration of that question is beyond the scope of this paper. But we can see that in at least some of the cases the prospects are promising. Our central case was the dispositional account of rule following. There the account demands the possibility of intrinsic interference in order to handle cases where the disposition to follow the rule is not manifested because of a lapse of concentration, or because of a carrying error, or because death
intervenes before a long calculation can be completed. In none of these cases is the interference the result of the proper functioning of some part of the person; on the contrary, the interference with the disposition in each case is the result of malfunction, or possibly the result of a temporary or transient state, and in consequence sits squarely within category (ii), which permits intrinsic interference. The case where one could not carry out a large addition because of a limited memory or ability to hold large numbers in one's head is a case where the basic function to add is interfered with by a limitation in another component, one's memory, and so is analogous to the tape in a (physical realization of a) Turing machine as mentioned above. The second instance were the dispositional account of mind wished to appeal to intrinsic finkishness concerned the willing addict: the addict's ability to choose would be finked as a result of any attempt not to take the drugs. Again, were that to happen, it would not be the result of the proper functioning of any part of the addict, and so falls into category (ii). Turning to the Millgram experiments, one could argue that, for normal people, the disposition to obey authority figures may interfere with their compassionate disposition, but it is not the function of that disposition to interfere in that way—again category (ii). Of course, there may be other individuals who have been trained or who have trained themselves to obey orders in order to overcome what they may think of as emotional weaknesses. Such individuals would fall into category (iii) and so would not count as having a finked or masked disposition—and indeed it does seem plausible to say that these individuals are not compassionate.

On the other hand, Armstrong's account of perceptual experience as a disposition to believe requires intrinsic interference in order to account for the Müller–Lyer lines, since it would have to be the case the disposition to believe that the lines are of different lengths can be overridden by knowledge that they are the same length provided by measuring them. In this case, it would seem that it is the function of that knowledge to override any disposition to believe falsely. Certainly it is not a malfunction or some transient interference. Consequently, this looks like a case of (iii), and so not a case of intrinsic interference at all. That is no reason to doubt the account of intrinsic interference presented here. After all it might be a reason instead to doubt this account of perception (and philosophers have presented other reasons to doubt it). Furthermore, one reason to doubt the account of perception may require only a modification to make it consistent with the present view of intrinsic interference.
One's perceptual experience should not be thought of as dispositions to believe. It is, rather a reason to believe, but not all reasons to believe suffice to make us believe, even considered in isolation and without any kind of interference. Evidence may favour a proposition, but not enough to make belief rational. Consequently, a dispositional view of mind needs in any case an account of reasons to believe does not equate them with a disposition to believe. One place to look for a possible analogy is with component forces. Here the idea is that component forces are not themselves dispositions to make things move. But they do contribute additively (via the parallelogram of forces rule) to a resultant force which is a disposition to make something move. In the absence of any other component forces a single component force will lead to an equivalent resultant force. Likewise, reasons to believe contribute to an all-things-considered state that may be a disposition to believe. And a strong reason to believe (although not a weak one), in the absence of any other reasons, can lead to a disposition to believe, without being identical to it; and perceptual experience, it might be suggested, is like this.

The speculative proposal in Section 9 seems therefore to provide an account of intrinsic interference that gives an answer to the Privileging Proto-Problem and so to the Privileging Problem and thereby provides a promising basis for the dispositional accounts of mind. But even if this proposal should be found wanting by future investigation, this paper allows us to see more clearly what is required in order to make the case for intrinsic interference. First, we can see that the case has not been made hitherto: while Lewis's reformed analysis gives a principled reason to accept intrinsic finks, that analysis is fatally flawed. The cases of Strong Man and Indigestible Berry are inconclusive. And the Constitution test cannot establish intrinsic interference without begging the question. Secondly, because Strong Man and Indigestible Berry can be elaborated with extrinsic detail that can either turn us away from intrinsic interference or incline us towards it, it follows that if there is any principle that will permit intrinsic interference, that principle must appeal to both intrinsic and extrinsic features of the object in question. This is another reason why the Constitution test is unsatisfactory, for while it would provide an answer to the Privileging Proto-Problem, it does so only on the basis of the intrinsic properties of the object. My proposal in terms of function is one explanation of why this is. Looking at the issues more broadly, a naturalistic approach would enjoin us to
draw upon the relevant science of the entities in question to decide questions such as whether a feature of an object is an intrinsic fink. Authors hitherto have, in effect, seen this in in reductive terms, regarding it a sufficient to look only at the object itself (e.g. its constitution). But the life sciences in particular (and one may add the human and social sciences when thinking about artefacts) also appeal to extrinsic properties of things as explanatorily significant, function (understood in a suitably naturalistic way) being a prime example of this.

References


