Abilities to do otherwise

Simon Kittle

Introduction

In this paper I want to outline a number of features of intrinsic dispositions and abilities and discuss how these features are relevant to free will when the latter is understood as requiring the ability to do otherwise. In the first section I will argue that dispositions and abilities are properly characterised or defined not simply by a set of stimulus conditions and a manifestation type, but in addition by a set of circumstances (against which that manifestation is to be expected, given the stimulus conditions). In the second section I will show how this undermines the account of the ability to do otherwise given by Vihvelin (2013), a prominent new dispositionalist about free will. In the third and final section I discuss the nature of ability properties as characterised in section 1. I explore some of the different ways that ability properties might relate to each other, and develop a number of principles which help in determining whether an ability is relevant to an agent's ability to do otherwise.

1. The spectrum of intrinsic ability properties

The first point I want to argue for is that intrinsic dispositions and abilities cannot be defined by a stimulus and manifestation alone but, in addition, require a set of circumstances to complete the definition. More accurately, the claim is that the event types typically cited as stimulus conditions and manifestation types are too general to fully specify a disposition or ability property. Consider the following putative attribution of a disposition:

(1) This lump of salt is disposed to dissolve when placed in water

My claim is that as stated such a statement will not succeed in picking out a single disposition. To succeed in this task the statement would need to have a form more like the following:

(2) This lump of salt is disposed to dissolve when placed in water at standard temperature and pressure

One result of this is that the event types typically cited as stimulus conditions (e.g. being placed in water) and manifestation types (e.g. dissolving) may be combined with different sets of circumstances and for each

combination a different disposition or ability will be ascribed. Roughly then, the claim is that a disposition or ability is defined by a set of stimulus conditions, a manifestation and a set of circumstances.[1]

To begin, I want to highlight a logical limit on the possible situations to which a disposition or ability property might be applicable. Consider the following example: if someone has the intrinsic ability to walk, that does not mean that he or she can walk *in any situation whatsoever*. Cases of finks and masks are well known, but I do not have in mind cases where the exercise of the ability is frustrated in some way. Rather, I have in mind situations where the ability has no application at all. Walking, for example, requires a surface hard enough to step on and enough downwards force to stop the agent floating upwards. If we ascribe to an agent the ability to walk, we say nothing about what the agent is able to do when these kinds of minimal conditions are not met. Here's an extreme example: suppose that an agent, S, has the intrinsic ability to walk but exists in a universe which is shrinking, and suppose too that the universe shrinks to a point where there is just enough room for S to survive but not enough room for S to walk around in. In this example S still has the intrinsic ability to walk, but the ability has no application to his circumstances.

In these cases the agent's ability is not finked or masked. Rather, the ability fails to apply in some way. It is plausible to think for a given action type, A, there will be some set of minimal preconditions which need to be met if an action of that type is to be performed. For walking, two of the minimal preconditions will include the presence of a relatively hard surface and an appropriate downward force. It is plausible to think of these preconditions as deriving from the action type: if an agent, floating in space, were to make back and forth leg movements, then even if it looked a bit like walking, it wouldn't be walking. For abilities, I will call the set of conditions which are prerequisites for the very possibility of performing the type of action in question the *action-realisation conditions*. The action-realisation conditions could be thought of as defining the set of all possible situations in which an action of the given type might be performed. If the agent is not in circumstances of that type, the performance of the action will not be possible.

This begins to get at the idea that ability properties do not "apply" to all circumstances. Still, if the ability to A was always and only associated solely with the action-realisation conditions for action type A, and such conditions were derivable from the type of action, then the ability to A would, in effect, be defined entirely by the action type A and the point would be of little interest. This, however, is not the case. Ability

[1] The picture is in fact more complicated than this, for there is good reason to think that dispositional properties also vary along another dimension, namely, the strength of connection between the stimulus and the manifestation (sometimes called modal force or strength). I will return to this issue in section 3.

properties may be defined by a set of circumstances which is a proper subset of the set of all the possible circumstances in which an action of that type might be performed (i.e. the set defined by the action-realisation conditions). From now on I'll speak of the set of circumstances which (partly) define an ability as the ability's *definitional circumstances*.

The following example which illustrates this last point: Ann plans to take her elderly father, Julian, out for coffee and, having not visited in a while, she asks her brother whether their father can walk or whether he'll need the wheelchair (suppose that Julian is getting frail, but likes to walk whenever possible). Knowing that the route from her father's bungalow to the car is less than 50m and across a flat driveway, and that the route from the car (once parked) to the coffee shop will be similar, Ann is asking whether Julian has the ability to walk very short distances across flat surfaces. She's not asking whether Julian has the ability to walk up inclines of 10%, nor is she asking whether he can walk for 40 minutes straight or in heat of 40 degrees C. Furthermore, Ann is not asking whether Julian has "average" walking capabilities such that he can walk in "ordinary conditions," whatever those might be. She's interested solely in whether Julian has a power or ability to do something in a relatively narrow range of situations, a range of situations far narrower than those demarcated by the action-realisation conditions for walking. Ann asks about this ability because of the interests she has, and different interests might lead to different questions: Ann's brother might ask whether his dad can walk a few meters down a 10% slope because he has a very steep driveway.

It is important to emphasise here that both Ann and her brother are asking about Julian's *intrinsic abilities*. The move from talking about the *ability to walk* to the *ability to walk very short distances across flat surfaces* need not mean a move from talking about intrinsic abilities to talking about extrinsic abilities. The details we've added to the description of the ability *do* concern the agent's external environment, but they *do not* play the role of specifying those circumstances in which the ability is *possessed*. Ann is *not* asking about whether Julian *would have* the ability to walk (simpliciter) *if he were* near a flat surface. Rather, she is asking about whether Julian has an ability which could accurately be characterised as *the ability to walk very short distances across flat surfaces*.[2] The detail that we've added here becomes part of the ability's definitional circumstances. The action-realisation circumstances for an action type are, if you like, the limit

[2] This characterisation of the ability is not complete in itself. If we understand this characterisation to implicitly include all the detail from the action-realisation conditions for walking, then it *might* be complete. But whether it is or not depends, I suggest, in part on what Ann intends to ask about. (Which is not to say, of course, that Julian's *possession* of that ability depends on what Ann's intends to ask about.)

case for definitional circumstances – the largest set of possible circumstances that could theoretically define an ability to perform a given action type. For most (if not all) of the abilities we ascribe, the definitional circumstances will be a proper subset of the action-realisation conditions for the given action type. In our example, Ann is asking about an ability to walk which is defined by a set of circumstances much narrower than the action-realisation conditions for walking.

This thought – that we're still talking about intrinsic abilities – can be supported by highlighting the difference between definitional circumstances and opportunities: if an agent has, at t, an intrinsic ability to A, nothing is said one way or the other about whether the agent is, at t, *in* circumstances which are of the same type as the ability's definitional circumstances. For example, I may have (at t) the ability to walk but might not be (at t) on a hard surface. What's being said, roughly, is that *were* the agent in such circumstances, a certain action *would be* possible. By contrast, if I have an opportunity to walk, then *I am in* a set of circumstances which match the type of the definitional circumstances for some corresponding ability to walk.[3] Definitional circumstances concern a set of circumstances (the set in which it is possible for the agent to perform an action) which *may or may not* be actual; opportunities concerns *the actual* circumstances that the agent is in. This distinction is crucial and is discussed further below.

Another way to support the claim that by combining a different set of definitional circumstances with the same stimulus and manifestation we arrive at a different ability property is as follows. It might be that Julian is able to walk short distances across flat surfaces and yet unable to walk down steep slopes. Alternatively, it might be that Julian is able to walk short distances across flat surfaces and also able to walk down steep slopes. If we accept the view that abilities are defined in part by a set of circumstances we have a ready explanation: in the first scenario Julian has one intrinsic ability (the ability to walk short distances across flat surfaces) and lacks another (the ability to walk down steep slopes), in the second scenario he has both of those abilities.

Similar kinds of consideration hold for the dispositions of inanimate objects. Water has the disposition to boil at 100 degrees C, but only at a pressure of 1 atmosphere. At a pressure of 2 atmospheres water will boil at roughly 119 degrees C. It's not that water loses that disposition to boil at 100 degrees when it is subject to a different pressure; rather, the point is that if you use the manifestation type to pick out a disposition,

[3] Perhaps the idea of opportunity is wider than this, and includes my being in circumstances where I could easily get into a position to exercise an ability. Whether or not this is so, and how exactly such a qualification could be spelled out, is a non-trivial matter, but it does not affect the substance of the point being made.

you also need to include a set of surrounding conditions. Note once more that we're still talking about intrinsic dispositions even though we've had to clarify the property we're talking about by adding reference to the external circumstances. These points have been noted before. Prior (1985) pointed out that if it were not the case, dispositional ascriptions would not be able to play the classificatory role we assign them. For example, there is an everyday use of the dispositional term 'soluble' in which salt is soluble and nail polish is not. But if we don't presuppose a set of circumstances which fills out the characterisation of the disposition being ascribed then the distinction collapses. This is because although nail polish doesn't dissolve in water at standard temperature and pressure, it does dissolve in other circumstances: in acetone at standard temperature and pressure, in water at very high temperatures and pressures, and so on (Prior 1985: 5–6). If being soluble was just a matter of dissolving in *some circumstances or other*, then both salt and nail polish (and pretty much every solid) would come out as soluble. As Prior summarises the point: "dispositional predicates would lose [the power to classify objects] if our criterion for ascribing disposition D to an item were simply that that item would manifest that disposition under *some* set of conditions" (Prior 1985: 6).

It is useful to introduce a convention to indicate when a set of circumstances forms part of the definition of a disposition or ability. I will follow Bird (1998: 232) and Whittle (2010) and use hyphens to indicate this. For example, the ability that Ann is interested in would be written *the-ability-to-walk-very-short-distances-across-flat-surfaces*. Prior's salt/nail polish example could be summarised as follows: salt has, and nail polish lacks, *the-disposition-to-dissolve-in-water-at-standard-temperature-and-pressure*, while both salt and nail polish have *the-disposition-to-dissolve-in-water-at-very-high-temperatures-and-pressures*.

Prior, in her discussion of this issue, noted another way the idea might be resisted. We might accept that dispositions and abilities are partly defined by a set of circumstances but we might argue that these circumstances do not vary. Each disposition and ability is tied exclusively to just one set of privileged circumstances or conditions, and this would be so for both covert dispositional terms such as 'solubility' and also overt dispositional locutions such as 'is disposed to dissolve when placed in water.' On this way of looking at it, salt has the disposition to dissolve in water but nail polish does not, even though nail polish does dissolve in water at a high enough temperature and pressure. On this view we can say that there are circumstances in which nail polish dissolves in water, but we cannot say that it is disposed to dissolve in water. With abilities, someone would count as having the ability to A only if they can A in the privileged set of conditions. In the Ann/Julian example used above, we would have to decide which single set of

circumstances the ability to walk is to be associated with. Clearly, whichever we choose has undesirable consequences. Indeed, we wouldn't want to privilege either *short distances across a flat surface* or *very short distances down a very steep slope* but would probably want to privilege a broader set of circumstances which more adequately captures the diversity of conditions found in everyday life. But in that case, Julian will be too frail to count as having the ability to walk (suppose he can reliably walk a short distance across a flat surface but he couldn't walk more than, say, 50m).

Consider another example. I have the ability to jump 1.2m but I don't have the ability to jump 6.8m. If we were fleshing out the circumstances which define these abilities we would include various features of the environment, an important one being the level of gravity. My ability to jump 1.2m is the ability-to-jump-1.2m-in-earth-like-gravitational-conditions. If we were to recognise only a single ability property for each action type, tying it to some set of privileged circumstances, then these would be the circumstances we choose. But then when I visit the moon and find myself able to jump 6.8m (the moon's gravity is such that if I can jump 1.2m on earth I will be able to jump roughly 6.8m on the moon), we would have to say that although *I'm able* to jump 6.8m I do not have *the ability* to jump 6.8m. I don't have the ability to jump 6.8m because *the ability* to jump is a property which is tied to earth-like gravitational conditions. To have *the ability* to jump 6.8m is thus to have the-ability-to-jump-6.8m-in-earth-like-gravitational-conditions. We would have to say instead that *I'm able* to jump 6.8m because I have the ability-to-jump-1.2m-in-earth-like-gravitational-conditions. This apparent solution, however, does not work, because we are now left without an explanation for the properties ascribed by the phrase 'is able to' and the same problem will arise all over again.

I take these considerations to count decisively against the view which attempts to tie dispositions and abilities to one set of privileged conditions. Prior agrees. She says that although ordinary language does associate an expression like 'fragility' more with one set of circumstances than another, ordinary language does not preclude applying terms like 'fragility' in non-standard contexts (Prior 1985: 7). In addition, says Prior, the practice of scientists follows this view: for example, scientists recognise fragility-at-20-degrees-C and fragility-at-minus-260-degrees-C as distinct properties (Prior 1985: 7–10). Cross is another advocate of this kind of view; he says that dispositional ascriptions "must presuppose certain conditions to be informative" and that because the conditions presupposed vary with context, terms like 'fragility' "do not name a single property" (2005: 324).

The current suggestion then, is as follows. For a given action type there is a set of action-realisation conditions which is the set of all scenarios in which it is possible for an action of that type to be performed. And for at least some subsets of that set, there is an ability defined by that subset and the action type. For example, we characterised the action-realisation conditions for the ability to walk (very roughly) as being circumstances where there is a hard surface and a suitable downward force. One subset of all such circumstances includes just those possible cases where the temperature is 30 degrees C and another includes just those cases where the temperature is 31 degrees C. The suggestion is that there is an ability property for each such subset: i.e. the-ability-to-walk-in-heat-of-30-degrees-C and the-ability-to-walk-in-heat-of-31-degrees-C. Of course, many of these ability properties will be uninteresting and many will be intimately related, perhaps being realised by the same underlying properties (which is not to say that the underlying properties are not themselves dispositional). The central idea could be expressed by saying that for each action type there will be a spectrum of ability properties, a spectrum produced by combining that action type with different sets of definitional circumstances.[4] In the following section I will look at how this point undermines Vihvelin's dispositionalist account of free will.

2. Vihvelin's account abilities and the 'can' of doing otherwise

2.1. A sketch of Vihvelin's three kinds of ability property

Vihvelin is a classical compatibilist, one of the so-called new dispositionalists, who thinks that abilities are dispositions (or bundles thereof), and so should be treated on a par with the dispositions of inanimate objects. Her defence of this position is one the most developed and sophisticated defences of classical compatibilism to date. In this section I will outline in broad strokes Vihvelin's account of free will and in particular how she understands the ability to do otherwise. In section 2.2 I will argue that Vihvelin's failure to recognise the point established in section 1, namely that dispositions are not defined by a stimulus and manifestation alone, undermines the account she gives of the ability to do otherwise. I do not claim that this mistake is made by all the new dispositionalists; nevertheless, the dominant position treats dispositions as

[4] In their discussions of the role which circumstances play in dispositional properties, both Cross (2005: 324) and Choi (2011) have suggested that recognising the above point will produce a solution to the problem of finks (Choi also thinks it solves the problem of masks). But it is important to note that the central point – that abilities are defined in part by a set of circumstances, something which leads us to recognise a spectrum of such properties – is independent of those claims. Moreover, and to reiterate, the action type and the ability's definitional circumstances, which together define the ability property, imply nothing whatsoever about the agent's actual circumstances – they imply nothing about the opportunities the agent possesses, nor about the presence of finks and masks.

defined by a stimulus and manifestation and so any account of the ability to do otherwise based on this model risks falling into the trap.

Vihvelin recognises three senses of the term 'able.' First there is the idea of a *skill*. When you learn how to play the piano, you gain a skill (or set of skills) which we describe by saying that you now have the ability to play the piano. Skills are highly stable properties of persons that persist through fairly substantial changes in both the person and his or her environment.

Second is Vihvelin's notion of a *narrow ability*. When someone has the narrow ability to perform an action, he or she has all the skills and competences required, and also something more: "the psychological and physical capacity to use those skills" (Vihvelin 2013: 11). An example illustrates what Vihvelin is getting at here: Suppose Selene and Tom are equally good cyclists. It is midday and Selene is awake, alert and fully in control of her faculties. Tom, by contrast, has just finished off an entire bottle a vodka and as a result can hardly stand up. Although both Selene and Tom have the skill to ride a bike, there is clearly a sense in which Selene is able to ride a bike while Tom is not. This is what it is to have the narrow ability (Vihvelin 2013: 11). Narrow abilities are intrinsic properties.

The third sense of 'able' that Vihvelin recognises concerns what she calls a *wide ability*. Wide abilities introduce and incorporate the idea of an *opportunity*. For example, suppose Selene is locked inside her house without a key. Then we might say that 'she's able to ride her bike, she's just doesn't have the opportunity.' Here the 'able' could be referring to a skill or a narrow ability. Sometimes, however, we use 'able' (and 'ability') in a wider sense which takes into account the presence or absence of an opportunity. In the Selene example, it would be equally natural to say 'She's unable to ride her bike, she's locked in her house.' Being locked in the house, Selene has lost her opportunity, and so also her wide ability, to ride the bike. Wide abilities are extrinsic properties. Agents who have the narrow ability to A, will gain and lose the wide ability to A as they gain and lose the opportunity to A (Vihvelin 2013: 169–70). An agent has an opportunity to A when the surroundings are "friendly," which means that the surroundings must not contain any extrinsic factors that would stop the agent from exercising their narrow abilities. They must not, for example, contain a locked door (Vihvelin 2013: 174, 209).

Vihvelin writes that "understanding the difference between narrow and wide ability is ... the key to understanding the nature of the disagreement between compatibilists and incompatibilists, as well as to

understanding the nature of free will." (Vihvelin 2013: 12). In part, this is because for each sense of 'able' there is a corresponding sense of 'can' (Vihvelin 2004: 432; Vihvelin 2013: 197–8), and so without clear distinctions, talk of what the agent can do and is able to do are liable to get confused. Which kind of ability does Vihvelin think is in play when it comes to the ability to do otherwise? Vihvelin says it is wide abilities which matter here, although the wide abilities that matter are not always the ones we think we have (sometimes they only concern what an agent can try to do). That is, an agent will have free will if he or she has both the narrow ability and the opportunity. In the next sub-section I will present Vihvelin's account of narrow ability in more depth, and then show how it fails to accommodate the two points highlighted in section 1. This failure means that while the agent does have the ability Vihvelin attributes, that ability is not relevant to free will.

2.2. Vihvelin's notion of narrow ability and its deficiencies

Vihvelin's account of narrow ability properties is as follows (Vihvelin 2013: 187):

(**LCA-PROP-Ability**)
S has the narrow ability at time t to do R in response to the stimulus of S's trying to do R **iff**,
for some intrinsic property B that S has at t, and for some time t' after t,
if S were in a test-case at t and S tried to do R and S retained property B until time t',
then in a suitable proportion of these cases, S's trying to do R and S's having of B would be an S-complete cause of S's doing R.

Here *R* stands for response (i.e. the manifestation) while the stimulus conditions have the form *S's trying to R*. The account is based heavily on Lewis's (1997) reformed conditional analysis of dispositions, and inherits from Lewis the idea of a causal basis which underlies the disposition or ability (intrinsic property B above).

An important notion in the above account is that of the *test-case*. A test-case is a possible scenario against which we judge whether the agent has the ability. The set of test-cases associated with an ability might appear to be superficially similar to my notion of definitional circumstances. However, Vihvelin does not introduce them out of any general concern with the nature of disposition or ability properties. Rather, the idea of a test-case is introduced as a way of solving the problem of masks which plagues conditional analyses of dispositions. A mask is something which interferes with the operation of a disposition such that it doesn't manifest even though the stimulus or triggering conditions obtain. For example, consider a fragile glass cup protected by sturdy packaging. Its fragility is not manifested when the glass is struck because the

packaging interferes with the causal processes that would otherwise occur – the packaging *masks* the fact that the glass is fragile (Johnston 1992: 233).

To solve this problem Vihvelin advocates the use of the so-called "getting specific strategy." This strategy stems from some brief remarks made by Lewis which hinted at how he envisaged handling these cases. The basic idea is that the stimulus and manifestation conditions have to be made specific enough – hence the name – to exclude all cases where something interferes with the outcome (Manley and Wasserman 2008: 63ff). The first step in understanding dispositions, then, is to correctly specify the stimulus and manifestation. Only after the stimulus and manifestation are correctly specified are we able to apply any analysis or account of dispositions. On this view, covert dispositional terms like 'fragility' and simple overt dispositional expressions like 'disposed to break when struck' are expressions which do not fully describe or characterise the dispositional property to which they refer. Lewis's example is the property of *being poisonous*: we might start by characterising this as *disposed to cause death when ingested*, but we'd quickly recognise that if the poison is ingested with its antidote then it won't cause death. What we need to do is make the stimulus conditions more specific in order to exclude cases where the antidote is taken. It thus becomes *disposed to caused death if ingested* ***without its antidote***. Other factors which mask the effect of the poison will also need excluding. By adding such detail to the stimulus and manifestation conditions, the getting specific strategy effectively incorporates a set of circumstances into the definition of each disposition, although this is rarely commented on by its users.

How does the getting specific strategy relate to Vihvelin's notion of a test-case? Vihvelin does not quite apply the approach as Manley & Wasserman envisaged Lewis applying it. This is because she does not use it to refine the stimulus and manifestation directly. On Vihvelin's view, the stimulus for the narrow ability to A is fixed as *trying to A* and the manifestation is fixed as *A-ing*. Still, application of the getting specific strategy fills out the content of what counts as a test-case and thus contributes to what defines the narrow ability to A (Vihvelin 2013: 186). To illustrate, consider again my ability to jump 1.2m high. The manifestation is *my jumping 1.2m high* and the stimulus condition (according to Vihvelin's account) is *my trying to jump 1.2m high*. Now suppose I try to jump but I fail because a sorcerer appears and gives a quick tug on my leg which prevents me from rising more than 10cm off the ground. Clearly the sorcerer is a mask and so needs to be excluded. As is clear from the earth/moon jumping example above, non-earth-like gravitational

circumstances will also need to be excluded. Each potential mask puts a restriction on what counts as a valid test-case.

It is important to be clear about where this takes us. According to Manley & Wasserman, the proponent of the getting specific strategy will be committed to the idea that all covert dispositional terms, and many overt dispositional locutions (those too simple to exclude many masks), actually attribute *highly specific* dispositional properties such as the following, which is envisaged as a refinement of 'is fragile' (Manley and Wasserman 2008: 63):

> (**Specific Disposition**) N is disposed to break when dropped on Earth from one meter up onto a solid surface with a Shore durometer measurement of 90A, through a substance with a density of 1.2 kg/m^3.

Now, as mentioned, Vihvelin does not use the getting specific strategy to fill out the stimulus and manifestation types. But by using it to fill out the content of what counts as a test-case the effect is much the same: the property her account ascribes will have the kind of highly specific content that Manley & Wasserman envisage, albeit tucked away in the notion of a test-case rather than explicitly articulated in the stimulus and the manifestation.

It might be thought that the getting specific strategy bears a certain resemblance to the approach to defining dispositions I argued for in section 1. After all, applying the getting specific strategy appears to result in the attribution of a highly specific disposition and that added specificity, it might be suggested, is akin to the notion of definitional circumstances outlined above. For example, in the proposed refinement of fragility above, **Specific Disposition**, the added specificity seems to include just the kind of added detail concerning a set of circumstances which I argued was necessary to complete the definition of a disposition. And if this is right, then it's hard to see how Vihvelin's reliance on the getting specific strategy could undermine her dispositionalist position on free will.

Despite the apparent similarity, however, there is a fundamental difference between the two approaches, even if the results appear the same. What I want to suggest is that the getting specific strategy is in fact parasitic on the approach outlined in section 1. That is, the getting specific strategy cannot be used in a standalone manner to convert a minimal dispositional locution such as 'is disposed to break when dropped' into a fully defined dispositional property. This is because it is not possible to determine whether some feature counts as a mask without first completing the definition of the disposition or ability in question.

Consider an example: suppose you have seen Marty memorise the order of a shuffled pack of cards on a number of occasions. But you also know that Marty fails at this task whenever there is too much ambient noise. Should we attribute to Marty the ability to memorise the order of a shuffled pack of cards? On Vihvelin's account, the answer to this depends on whether Marty succeeds in memorising a pack of cards in a "suitable proportion" of relevant test-cases. But what counts as a relevant test-case? In particular, should cases where there is lots of background noise count as test-cases? If the background noise counts as a mask, then it should be excluded from the definition of the ability, and as a result we can still attribute to Marty the ability in question despite his failure. If it doesn't count as a mask, Marty's failure threatens to undermine his possession of the ability. But it does not seem as if the getting specific strategy can help with this question. When Lewis proposed the strategy he used the example of being poisonous. But this is a term the application conditions for which are well understood and for which we have clear intuitions. I want to suggest that our understanding of the term 'poisonous' includes at least a rough understanding of what I have called the definitional circumstances, and it is this which allows us to proceed with the getting specific strategy in this case. The memorisation example is useful inasmuch as its unusualness makes it unlikely that we have firm intuitions. And this helps make it clear that the correct answer to whether or not background noise should count as a mask in the Marty example just depends on what we mean to say in ascribing the ability to Marty. Here are two ways the story could be filled out which illustrate this point. Suppose that Marty is hoping to use his memory skills to his advantage in a casino. If he is to succeed in this endeavour, he will need to have the ability-to-memorise-a-pack-of-cards-whether-or-not-there-is-background-noise. If this is the ability in question then the presence of background noise will not count as a mask. If Marty invariably fails to memorise a pack of cards when there is background noise, then it's not that he has the ability mentioned above but that it is masked by the background noise; rather, he simply fails to have the ability. In Vihvelin's terminology, cases including background noise count as valid test-cases for the ability in question and so failing to exhibit the behaviour in such cases will almost certainly mean that Marty does not have this ability.

On the other hand, suppose that Marty is interested in entering a memory competition. In this case what's important is whether he's able-to-memorise-a-pack-of-cards-with-no-background-noise. If during a practice in front of friends, a loud noise disturbs him and he fails to memorise the pack, his friends would miss the mark if they advised against entering on the grounds that Marty wasn't able to do it. Marty would

rightly point out that the loud noise interfered with (i.e. masked) his ability, and in making this claim he'd be referring to his ability-to-memorise-a-pack-of-cards-with-no-background-noise.

Each of these abilities is a genuine, intrinsic ability. The circumstances in question *complete the definition* of the ability property; they are not simply those circumstances in which the ability is *possessed*. Nor are they a description of some opportunity that Marty has. To say Marty has the-ability-to-memorise-a-pack-of-cards-when-there-is-no-background-noise is not to say that Marty has the ability-to-memorise-a-pack-of-cards and he has an opportunity to exercise that ability. In attributing such an ability nothing is said one way or the other about the circumstances Marty is actually in. Moreover, Marty's *possession* of each of the two abilities mentioned is independent of his interests. Of course, which ability he *picks out* with the phrase 'the ability to memorise a pack of cards' will depend on his interests, but his possession of these abilities is not interest-relative.

How does the above cause a problem for Vihvelin's account of free will? The problem lies with her account of the ability to do otherwise, and its root cause is the assumption that dispositions are individuated by a stimulus and manifestation alone (encoded for Vihvelin, as we have seen, in her use of the getting specific strategy). What this assumption does is preclude from view a whole set of ability properties. For any given action type, A, people who make this assumption recognise just one ability property: *the* ability to A – and this is the case even if, as with Vihvelin, they take the definition of this ability to require filling out by use of the getting specific strategy.

The problematic consequence of this assumption is that when proponents of this view come to ask whether a particular agent is able to do otherwise in some situation, they are not sensitive to the whole spectrum of abilities that the agent might possess. This brings with it two risks. They might incorrectly judge that the agent in question is not able to do otherwise because the single ability they do recognise is not possessed (but some other ability which they are blind to is possessed). Alternatively they might incorrectly judge that the agent in question is able to do otherwise because the single ability they recognise is possessed but this ability is not relevant, or not the ability most relevant, to the question of whether the agent is able to do otherwise.

This point will be clearer from a consideration of Vihvelin's **BIKE** example (2008). In brief, Jones is considering whether to go for a bike ride or for a walk. Jones is subject to a Frankfurt-style intervener – an

agent who would cause Jones to go for a walk if he were to get close to deciding to go for a bike ride. We are told that Jones actually went for a walk at t and we are asked to consider whether Jones was able to go for a bike ride at t – if he was, then he was able to do something other than walking, and so had the ability to do otherwise.[5] Vihvelin's answer to this question will be that Jones is able to go for a bike ride at t if Jones has the narrow ability to go for a bike ride at t, where the definition of that narrow ability is completed by an application of the getting specific strategy. Moreover, on Vihvelin's account there is just that single narrow ability to go for a bike ride to consider. But as we've seen, not only is the getting specific strategy (on its own) inadequate for filling out the definition of the ability, there is more than one way the definition can be filled out.

Suppose we accept that, by default, when the getting specific strategy is used it operates by presupposing a set of definitional conditions for the ability in question that are derived from ordinary usage. Then Vihvelin's account is going to ascribe abilities that are defined by the action type and this set of ordinary conditions (this will be similar to Choi's 2008 proposal for conventional dispositions).[6] On the approach to abilities developed in section 1, there *is* such an ability property. But there are also many others which share the same action type. There will be ability-to-go-for-a-bike-ride-in-heat-of-30-degrees-C, the ability-to-go-for-a-bike-ride-in-the-rain, and, perhaps most relevant, the-ability-to-go-for-a-bike-ride-when-a-Frankfurt-style-intervener-is-present. Each of these abilities is obscured from Vihvelin's view. But when asking whether Jones is able to go for a bike ride we need to consider such abilities and decide which one is the most relevant to what Jones is able to do given the situation he's in. In the following section I will formulate three principles which allow us to evaluate which ability properties are the most relevant to an agent's ability to do otherwise.

3. Abilities to do otherwise

This section discusses the nature of (intrinsic) abilities when conceived as suggested in section 1 and formulates three principles which describe how different ability properties relate and when a given ability property is relevant to what the agent can do given his or her particular circumstances.

[5] Vihvelin rightly thinks that free will concerns what she calls wide abilities: narrow (i.e. intrinsic) abilities and opportunities. But as having the wide ability requires having the narrow ability, the current discussion – which is limited to narrow abilities – is not missing the point.

[6] There will be serious problems for those who want to combine such an approach with a conditional analysis that doesn't permit exceptions; they will have to provide a mask safe characterisation of the dispositional property to be analysed. But Vihvelin's account does not fall prey to this problem because she permits exceptions.

The first point I want to make is that an ability's definitional circumstances are hypothetical in the sense that they may or may not obtain. An ability's definitional circumstances are a set of possible circumstances in which (if the agent has the ability) it is possible for the agent to perform the action. But if an agent has the ability-to-A-in-C, where C are the definitional circumstances, to ascribe that ability is to say nothing whatsoever about whether circumstances of type C currently obtain. This is why it is wrong to think of definitional circumstances as opportunities. An agent might possess an ability-to-A-in-C and yet not be in circumstances C. To say that the ability's definitional circumstances are hypothetical in the sense just outlined is not to say, as Ryle did (1967: 41), that the ability itself is hypothetical in the sense that ascriptions of abilities do not describe real states which agents are in. That is not what is intended here.

An ability is a genuine property which marks a real difference between those agents who have it and those who don't. What this does mean, though, is that intrinsic abilities do not necessarily tell us much about what the agent is able to do right now. I accept the view, shared by Vihvelin (2013: 7 n.24), that for any ascription of ability there is a corresponding 'can' statement. Abilities are modal properties and that modal component can be expressed using some corresponding 'can' statement.[7] So if an agent has an intrinsic ability to A-in-C then there is a sense in which she can A-in-C. But that does not mean she can A right now, and one reason why this entailment might fail is that the agent need not be in circumstances C, which are definitional for the ability.

This feature of intrinsic abilities is sometimes described by saying that the ability is "general." The literature on free will makes wide use of a distinction between, on the one hand, "general" or "global" abilities, and on the other, "specific" abilities (Mele 2003), "particular" abilities (Honoré 1964), or "local" abilities (Whittle 2010). But there are two senses in which an ability might be general, and they are often conflated in the literature. One sense in which an ability might be general is that the ability's definitional circumstances are hypothetical in the above sense. Abilities are "general" in this sense because they are not necessarily applicable to the actual, particular circumstances that the person is currently in. Intuitively, the 'can' associated with an intrinsic ability does not connect with the current circumstances because the ability just isn't about such circumstances. Note that this sense of general has nothing to do with how much detail is included in the definition of an ability. Consider the following two abilities:

[7] This follows as long as one thinks that the modal truths entailed by a true ascription of an ability can at least be approximately expressed using the current orthodox semantics for 'can' (i.e. Kratzer's 1977; 1981), even if one thinks that this current orthodoxy cannot fully capture all the details of such modal truths.

(**A1**) the ability-to-walk-up-4%-inclines

(**A2**) the-ability-to-walk-6-mph-up-4%-inclines-against-a-head-wind-of-12-mph

These abilities vary in how much detail the definitional circumstances contain. But both of them are general in the above sense.

A second sense of 'general,' however, *is* highlighted by the difference between **A1** and **A2**. It is very natural to label abilities like **A1** 'general' and abilities like **A2** 'specific.' This is to employ a different sense of 'general.' Here, 'general' and 'specific' are being used to characterise the range of circumstances to which the ability applies. Ability **A1** applies to many more circumstances than **A2** and is in this sense 'general.' This is how I will use the term 'general' as it applies to abilities (and dispositions). Used in this way, 'general' and 'specific' are comparatives which operate against a scale: one ability might be more or less general than another. For example, the-ability-to-walk-6-mph-up-4%-inclines-against-a-head-wind-of-12-mph is specific when compared to ability-to-walk-up-4%-inclines but it might be general when compared to an even more fully specified ability.

One possible reason why there is so much confusion surrounding the notion of general abilities is that skills, which most accept as not relevant to free will, are plausibly thought to be general in both of the above senses. If you are skilled at a particular activity then chances are you're able to perform the associated actions in a wide variety of circumstances (after all, to be skilled in many activities involves being able to accommodate and cope with variations in external circumstances). So skills will typically be quite general in the sense in which 'general' contrasts with specificity. But skills, being intrinsic properties, are also general in the first sense: the circumstances which (partly) define a skill are hypothetical in character: to have a skill is not necessarily to have an opportunity to exercise that skill.

These points lead us to our first principle, for although there is nothing about the nature of an intrinsic ability that makes it relevant to the circumstances an agent is currently in, that doesn't mean such abilities are irrelevant. The first principle captures this point:

> (**P1**) Intrinsic abilities (narrow abilities included) are relevant to what the agent can do in the particular circumstances he finds himself in only if the circumstances which define the ability match those circumstances which obtain.

Consider the following example: suppose I'm stood on a road in the middle of nowhere. What things can I do in that situation? Among other things, I can walk, jump and do cartwheels. Each of those options is

partly grounded by an intrinsic ability I possess (an ability to walk, jump or do cartwheels) whose definitional circumstances match my current circumstances. In contrast to my walking, running and cartwheeling abilities, none of my swimming abilities are relevant to the above situation. I have, for example, the ability-to-swim-in-calm-seas as well as the ability-to-swim-in-choppy-seas, but neither is relevant to what I can do *given that I'm in the above situation*.

How is this relevant to free will? The current approach is to construe the ability to do otherwise as a complex ability which is possessed when someone has the ability to do at least two things (both of which cannot be performed at the same time). So when stood on a road in the middle of nowhere, I have free will only if I have the ability to do (at least) two things (which cannot be done simultaneously). If I have the ability-to-walk-on-flat-roads and the ability-to-cartwheel-on-flat-roads, then I satisfy the criterion. The current point is that the ability-to-swim-in-choppy-seas is not going to count as an ability which could ground the ability to do otherwise when I'm stood on a road in the middle of nowhere, miles from the nearest sea.

This point applies to Vihvelin's narrow abilities – that is, it's not *just* applicable to those intrinsic abilities which we call skills. An agent has a narrow ability to A if, *were he in a test-case for that ability* and he tried to A, he would (in a suitable proportion of cases) succeed in A-ing. When stood on the road miles from any water, I am such that *if I were in a test-case for my swimming abilities* and I tried to swim, then I would swim. So I have that narrow ability. But given I'm miles from any water, my possessing that narrow ability shouldn't count towards my having more than one thing open to me.

The importance of the first principle becomes more evident once two further principles are introduced. These principles, **P2** and **P3**, are needed to qualify the first principle. Intuitively, principle **P2** says that if I possess an intrinsic ability to perform an action in a wide set of circumstances, it does not follow that I possess the ability to perform that action in a narrower range of circumstances.[8]

To appreciate this point, however, a small digression is needed. Dispositions and abilities are modal properties that affirm a connection between the stimulus and manifestation. According to the conditional analysis this connection can be expressed in terms of a counterfactual: 'if the stimulus were to obtain, then the manifestation would occur.' Such an analysis of the modal content permits no exceptions: once the

[8] A similar point has been ably made by Whittle (2010: 3), but her scheme differs from that presented here as her global/local distinction cuts across the intrinsic/extrinsic distinction.

stimulus (plus the definitional circumstances) obtain, the manifestation occurs. This has caused no end of problems for the conditional analysis and it is for this reason that Vihvelin incorporates into her latest account[9] Manley & Wasserman's solution to this problem. Instead of requiring that the agent would perform action A, she requires only that the agent would *in some suitable proportion* of cases perform action A (2013: 187). In other words, exceptions are permitted. Manley & Wasserman (and Vihvelin) make this amendment because of the challenge posed to conditional analyses by the phenomenon of masks. But there are other reasons why one might think that the connection between the stimulus conditions and the manifestation – which we could call, following Vetter (2010: 21), the "modal force" of the disposition – should not be modelled using a form of restricted necessity. One is that the ordinary dispositional terms we employ seem to vary in modal force. So while the solubility of a portion of salt seems to require a high modal force (it wouldn't count as soluble if it didn't dissolve in all (or almost all) cases where it's put in water), the irascible man might count as irascible even if he only gets angry in, say, 40% of all angry-making scenarios, and an American football player might count as disposed to score even if he only scores one out of every five times he takes a hand off (Clarke 2010: 153).

The idea that dispositions can vary in modal force in this way thus seems well motivated, even aside from considerations about the conditional analysis. Principle **P2**, which is more formally stated below, follows if we accept this idea:

> (**P2**) If an agent possesses the intrinsic ability-to-A-in-C it does not follow that he possesses the intrinsic ability-to-A-in-C', where C' is a subset of C.

The idea can be illustrated with an example: Consider Rachel, who has the ability described in **Running-1** but lacks the ability described in **Running-2**:

> (**Running-1**) the ability-to-run-on-surfaces-with-inclines-between-0-and-5%-and-in-heats-of-between-0-and-32-degrees-C
> (**Running-2**) the ability-to-run-up-inclines-of-5%-in-heats-of-between-0-and-32-degrees-C

The idea here is that the ability **Running-1** describes what an agent can do in a wide range of circumstances. **Running-2** pertains to a much smaller range of circumstances, but that set of circumstances is a subset of the circumstances that **Running-1** pertains to. Rachel has **Running-1** because she can run in whatever proportion of the test-cases associated with **Running-1** is needed in order to count as having that

[9] That is, the account presented in *Causes, laws and free will* (2013). Vihvelin's (2004) account did not permit exceptions in the way outlined.

ability.[10] However, she fails in some of the **Running-1** test-cases; in particular, she fails in many of those cases where the incline is 5%. Maybe Rachel has a long standing knee injury that flares up if she attempts to run up inclines of 5%. Whatever the cause, it is because **Running-2** concerns *only* such cases that Rachel lacks that ability. But her failure in these cases doesn't stop her possessing **Running-1** even though such cases are included in the test-cases for **Running-1**. Rachel succeeds in enough of the other **Running-1** test-cases to count as having that ability.

Now suppose that Rachel is facing an incline of 5%. The circumstances she's in are a test-case for both **Running-1** and **Running-2**. Or, as we could now put it: according to **P1** both abilities are relevant to Rachel's current situation. If we want to know whether Rachel *can*, in her particular circumstances, run up the incline, which ability should we ask about? Should we answer using the 'can' statement associated with **Running-1** or the 'can' statement associated with **Running-2**? The correct answer, as I think most would agree, is the latter. In the same way that we judge that, in the sense relevant to free will, someone who is tied up *cannot* walk, despite having, e.g., the narrow ability to walk in ordinary circumstances, so we recognise that Rachel cannot run up the incline, despite having the ability **Running-1**. This produces our third principle:

> (**P3**) If two intrinsic abilities (narrow abilities included) have definitional circumstances which match the circumstances that the agent is currently in, then the one with more circumstantial detail in its definition takes precedence.

This emphasises an important lesson about the nature of the 'can' claim associated with narrow abilities, namely that the truth of such a 'can' claim does not entail that the agent can perform the action here and now. Part of the reason for this is that, on the view currently being entertained, intrinsic abilities (narrow abilities included) incorporate a claim about the modal force of the connection between the stimulus and the manifestation. Once we understand the modal force in this way we open up the following possibility: there is a set of circumstances, X, such that S can perform A in a "suitable proportion" of X-cases to count as having the-ability-to-A-in-X, and there is a set of circumstances Y, such that Y is a subset of X, and S cannot perform A in a "suitable proportion" of Y-cases to count as having-the-ability-to-A-in-Y. This is the structure of the Rachel case above and in such cases the ability with the most definitional detail takes precedence.

[10] In Vihvelin's account, this is encoded as the demand that the agent A in a "suitable proportion" of the test-cases, where "suitable proportion" is determined by the action type.

Here is an elaboration of the Rachel case which underscores the point. Suppose now that Rachel has **Running-1** and *also has* **Running-2**, however, she lacks **Running-3**:

(**Running-3**) the ability-to-run-up-inclines-of-5%-in-heat-of-32-degrees-C

Again, the idea is that the definitional circumstances for **Running-2** and **Running-3** are subsets of the definitional circumstances of **Running-1**. Now suppose that Rachel is currently standing at the bottom of a dip which has a 5% incline on every side. Moreover, it's currently 32 degrees C. Can Rachel run out of the dip she's in? The correct answer, if the above is all we're told, is no. The set of circumstances Rachel is in are a test-case for each of the three running abilities. And although Rachel possesses abilities **Running-1** and **Running-2**, and so *can* run in the sense of 'can' associated with those two abilities, neither is the final word on what Rachel can do in her current situation because both abstract away from an important feature of that situation. That is why, if asked whether Rachel could run out of the dip, we would use the 'can' statement associated with **Running-3** – it doesn't abstract away from that important feature.

These principles allow us to see in more detail why Vihvelin's account has a problem when it comes to an agent's ability to do otherwise. Recall the **BIKE** story from section 2: Jones is subject to a Frankfurt-style intervener who wants him to go for a walk. Vihvelin maintains that Jones has the ability to do otherwise because he has the ability to go for a bike ride. I pointed out that this is only part of the story. The ability Vihvelin ascribes is:

(**Ride-1**) the-ability-to-go-for-a-bike-ride-in-ordinary-conditions

But there are other ability-to-go-for-a-bike-ride properties that Jones might possess and, crucially, might be more relevant to whether he's able to go for a bike ride given his particular circumstances than the ability Vihvelin ascribes. Above I mentioned the following properties

(**Ride-2**) the ability-to-go-for-a-bike-ride-in-heat-of-30-degrees-C
(**Ride-3**) the ability-to-go-for-a-bike-ride-in-the-rain
(**Ride-4**) the-ability-to-go-for-a-bike-ride-when-a-Frankfurt-style-intervener-is-present

but there will of course be many more. The principles articulated help us determine which ones we should be interested in. If, for example, it is currently raining, then the ability **Ride-2** should take precedence over **Ride-1**. This is because although **Ride-1** will include circumstances when it is raining – presumably rain counts as ordinary – it might be that Jones rides his bike in a "suitable proportion" of the ordinary

conditions such that he counts as having ability **Ride-1** even though he is in fact incapable of riding his bike in the rain (there are no possible raining situations where he rides his bike).

Of course, whether or not it's raining isn't likely to be the real point of dispute concerning Jones's free will. The real dispute will arise when we consider **Ride-4**. Principles **P1**-**P3** tell us that this ability should take precedence over **Ride-1** because, again, it contains more definitional information. Does Jones have this ability?

It's not clear what Vihvelin would say here because, tying abilities to just one set of circumstances, she doesn't recognise the existence of these further abilities. One thing is clear enough though: Jones doesn't go for a bike ride in a "suitable proportion" of cases where the Frankfurt-style intervener is present because he doesn't go for a bike ride in *any* such cases. Unless one thinks that zero can count as a suitable proportion of cases, then, it would seem that Jones does not have this ability. As this ability matches the circumstances Jones finds himself in, we should conclude, contra Vihvelin, that he cannot do otherwise.

To sum up: I have argued that intrinsic abilities are defined in part by a set of circumstances. This led us to the recognition that phrases like 'the ability to A,' devoid of any additional information, do not pick out a single ability property. To succeed in picking out an ability property we need to include more information in the characterisation of the ability, but, because we may include different information – because the definitional circumstances may vary while the stimulus and manifestation are kept the same – we are led to accept a spectrum of abilities to A. I formulated a number of principles which described some of the ways ability properties on this spectrum relate to each other and when they are relevant to the sense of 'able' that is relevant to free will. Consideration of these points showed that one prominent new dispositionalist account of free will, Vihvelin's, missed the mark inasmuch as its account of the ability to do otherwise focused on the wrong ability properties.[11]

[11] I would like to thank Eric Olson and Jess Leech for much valuable discussion on these topics, as well as an anonymous referee who provided helpful comments.

References

Bird, A. (1998) Dispositions and antidotes, *The Philosophical Quarterly*, 48/191: 227–234.
Choi, S. (2008) Dispositional Properties and Counterfactual Conditionals, *Mind*, 117/468: 795–841.
—— (2011) Intrinsic Finks and Dispositional/Categorical Distinction, *Noûs*, 46/2: 289–325.
Clarke, R. (2010) Opposing Powers, *Philosophical Studies*, 149/2.
Cross, T. (2005) What is a Disposition?, *Synthese*, 144/3: 321–341.
Honoré, A. (1964) Can and Can't, *Mind*, 73/292: 463–479.
Johnston, M. (1992) How to Speak of the Colors, *Philosophical Studies*, 68/3: 221–263.
Kratzer, A. (1977) What 'must' and 'can' must and can mean, *Linguistics and Philosophy*, 1/3: 337–355.
—— (1981) The notional category of modality, in H. Eikmeyer and R. Rieser (eds.) *Words, Worlds and Contexts*. *New approches in word semantics.* : Wiley Online Library.
Lewis, D. (1997) Finkish dispositions, *The Philosophical Quarterly*, 47/187: 143–158.
Manley, D. and Wasserman, R. (2008) On linking dispositions and conditionals, *Mind*, 117/465: 59–84.
Mele, A.R. (2003) Agents' abilities, *Noûs*, 37/3: 447–470.
Prior, E. (1985) *Dispositions* : Elsevier Science Ltd.
Ryle, G. (1967) *Concept of Mind* 7th edn.: Hutchinson.
Vetter, B. (2010) Potentiality and Possibility, DPhil (Oxford, UK, Oxford University).
Vihvelin, K. (2004) Free will demystified: A dispositional account, *Philosophical Topics*, 32/1: 427–450.
—— (2008) Foreknowledge, Frankfurt, and Ability to Do Otherwise: A Reply to Fischer, *Canadian Journal of Philosophy*, 38/3: 343.
—— (2013) *Causes, laws, and free will*: *Why determinism doesn't matter* . New York: Oxford University Press.
Whittle, A. (2010) Dispositional Abilities, *Philosophers' Imprint*, 10/12.