

Inexact Ability

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Abstract

The problem of inexact ability is widely viewed as motivating revisionary logics and semantics of ability. In this paper, I offer a novel formulation of the puzzle which affords greater insight into its structure, and I explore a semantically and logically conservative solution to the puzzle which explains inexactness in many of our abilities via the inexactness of intentional action.

Many of our abilities appear to be *inexact* in the following sense: they are abilities to do a given *determinable action* which, for certain levels of specification, don't seem to imply the ability to do any of its *determinates*. For instance, reflecting on my own abilities, I find claims like the following natural:

- (1) a. I'm able to raise my voice, but not by a precise decibel level.
- b. I can wiggle my ears, but not at a precise speed.
- c. I'm able to hit the dart board, but not a precise area.

The puzzle of inexact ability comes into view once we notice that we are not able to do a determinable action *without* doing at least one of its determinates (at the relevant level of specification). For instance, I'm not able to raise my voice without raising it by a precise decibel level. So if I'm not able to raise my voice by a precise decibel level, how on earth am I able to raise my voice?

Slightly more rigorously, given basic modal reasoning, (2) and (3) would seem to entail (4):

- (2) I'm able to raise my voice.
- (3) I'm not able to raise my voice without raising it by a precise decibel level.

(4) I'm able to raise my voice by a precise decibel level.

(2) and (3) are difficult to deny and would seem to jointly entail (4). But the conjunction of (2) and (4) contradicts (1a). Nevertheless, (1a) is coherent, and has a prominent true reading. What could explain these data? This, in a nutshell, is the puzzle of inexact ability.

Puzzles of this kind are widely viewed as motivating revisionary logics and semantics of ability.¹ By contrast, this paper explores a logically and semantically conservative solution to the puzzle which explains the inexactness of many of our abilities via the inexactness of intentional action. To gain a clearer understanding of the structure of the puzzle, as well as the space of possible solutions, I begin by laying out the puzzle in significant more detail than has previously been done in the literature (§1). Next, I set out the positive proposal. Building on work by Mele (2003) and Schwarz (2020), I present what I call the “Enrichment Hypothesis” according to which many ability reports of the form ‘ S is able to V ’ receive enriched readings of the form ‘ S is able to intentionally V ’ (§2). My argument for this hypothesis is mostly abductive: it is a simple hypothesis which would not only dissolve the puzzle of inexact ability but which would also account for a range of other observations about ability reports which are more puzzling from the point of view of alternative theories of ability. Thus, the hypothesis enjoys considerable abductive support. I go on to explore how the proposed intentionality enrichments might be generated within a logically and semantically conservative theory of ability, presenting novel data constraining the implementation of the view (§§3-4). After replying to objections (§5), I conclude by placing my findings in the wider context of debates on the nature of ability (§6).

1 The Puzzle

A puzzle of “discriminatory skill” goes back to Anthony Kenny (1976: 215f.) and features centrally in arguments for revisionary logics and semantics of ability. Consider the following two claims in the mouth of a novice darts player:

(5) I'm able to hit the dartboard.

¹The conclusion goes back to Kenny (1976). Concrete proposals for a logic and semantics of ability which would align with Kenny's conclusions have been made, among others, by Cross (1986), Brown (1988), Horty and Belnap (1995), Fusco (2021), Willer (2021), Santorio (ms).

(6) I'm able to hit the top of the dartboard.

(7) I'm able to hit the bottom of the dartboard.

Kenny claims that (5) can be true even if (6) and (7) are both false. He concludes that ability does not distribute over disjunction—the following principle is invalid:

Distribution: For any agent S and actions A and B , if S is able to A or B , then either S is able to A or S is able to B .

If true, the conclusion would be significant since it would imply that ability does not have normal modal logic. This, in turn, would rule out the plausible view that ability is an ordinary species of restricted possibility, as proposed by Hilpinen (1969), Lewis (1976, 1979), and Kratzer (1977); Kratzer, 1981 (2012). It would also speak against a sophisticated version of the conditional analysis recently defended by Mandelkern et al. (2017), which validates **Distribution**.²

In presenting this case as a counterexample to **Distribution**, Kenny relies on background modal reasoning. In particular, he assumes that (5) entails (8).

(5) I'm able to hit the dartboard.

(8) I'm able to hit the top or hit the bottom.

On the assumption that (8) does not entail (9), we would then have a counterexample to **Distribution**.

(9) I'm able to hit the top or I'm able to hit the bottom.

Dialectically this is significant, for one would expect the kind of modal reasoning which underlies the inference from (5) to (8) to also validate the inference from (2) to (4), which is all we need to get the puzzle going on my quantified formulation.

(2) I'm able to raise my voice.

(4) I'm able to raise my voice by a precise decibel level.

For instance, the modal principle invoked in my initial presentation of the puzzle is an analogue of the modal axiom \mathbf{K}_\Diamond :

²For their nuanced discussion of Kenny's puzzle, see Mandelkern et al. 2017: §6.3.

K_{able} : For any agent S and actions A, B , if S is unable to A without B -ing, then if S is able to A , S is able to B .³

Reasoning with **K_{able}**, we'd get that since no one is able to hit the dartboard without hitting the top or hitting the bottom, anyone who is able to hit the dartboard is able to hit the top or hit the bottom. Likewise, since no one is able to raise their voice without raising it by a precise decibel level, anyone who is able to raise their voice is able to raise their voice by a precise decibel level.

Of course, it would be odd to rely on **K_{able}** in setting up a counterexample to **Distribution**. After all, the latter can be derived in systems including the former.⁴ But notice that even a weaker principle, one which does not imply **Distribution**, is sufficient to derive both (8) from (5) and (4) from (2). All we need is that ability is closed under agentively necessary equivalence.

Ability Closure: For any agent S , and actions A, B , if S is unable to A without B -ing and B without A -ing, then if S is able to A , S is able to B .⁵

Since no one is able to hit the dartboard without hitting the top or hitting the bottom and hit the top or hit the bottom without hitting the dartboard, (5) implies (8) given **Ability Closure**. Likewise, since no one is able to raise their voice without raising it by a precise decibel level and raise their voice by a precise decibel level without raising their voice, (2) implies (4) given **Ability Closure**. Further weakenings of the closure condition could be considered, e.g., closure under necessary or logical equivalence. But to the extent that such weakenings still secure the inference from (5) to (8), we'd expect them to secure that from (2) to (4) as well.

These observations raise the question of what those who propose to solve Kenny's puzzle by denying **Distribution** would say about the quantified version of the puzzle of inexact ability. After all, (2) is hard to deny. But if (2) entails (4), we once more face the question of how (1a) could be coherent:

³Or, slightly less idiomatic, but more recognizably in the form of the modal axiom **K_◇**: If S is unable not to B if they A , then if S is able to A , S is able to B .

⁴More carefully, **Distribution** is a theorem of logics including the appropriate analogues of the modal axiom **K** and a rule of necessitation, as well as *Modus Ponens*.

⁵Or, less cumbersome, but with greater risk of not latching on to the intended agentive modality: If S has to A iff they B , then if S is able to A , S is able to B .

(1a) I'm able to raise my voice, but not by a precise decibel level.

It is not immediately obvious how denying **Distribution** helps explain these data.

Nor is it clear that Kenny's puzzle is very compelling if we *don't* rely on the inference from (5) to (8) in setting it up. Intuitions about (8) and (9), considered by themselves, are less clear than one would hope. Try to expunge the kind of closure reasoning sketched above from your mind, and consider the following fresh:

(8) I'm able to hit the top or hit the bottom.

(9) I'm able to hit the top or I'm able to hit the bottom.

Reflecting on my own abilities, (8) does not strike me as obviously true considered in isolation. And to the extent that I can convince myself of (8), I'm tempted to also accept (9). Indeed, as Fusco (2021) and Willer (2021) have observed, the stronger *free choice* inference from (8) to (10) is tempting (Fusco, 2021; Willer, 2021):

(10) I'm able to hit the top and I'm able to hit the bottom.

It is then not entirely clear whether compelling arguments against **Distribution** can be made without relying on the kind of closure reasoning which would be sufficient to get the quantified version of the puzzle going. It is often suggested in discussions of paradoxes like the Liar or the Sorites that we gain a deeper understanding of the structure of a puzzle by considering different formulations of it. The same appears to be true for the puzzle of inexact ability. A satisfactory solution must extend to the quantified version of the puzzle.

There is a natural way of extending the **Distribution** denying strategy to the quantified version of the puzzle. To say that ability does not distribute over disjunction is to insist that the *scope* which the connective takes with respect to the ability modal matters. Given the close relation between disjunction and existential quantification, a natural analogue of the **Distribution** denying strategy would then be to insist that the scope which the existential quantifier takes with respect to the ability modal matters. Such scope effects are familiar from other expressions. Consider an example by Robert Stalnaker (1981):⁶

⁶For early discussions of the phenomenon see Russell (1905, 1910) and Quine (1956). Note that

- (11) a. President Carter must appoint a woman to the court.
- b. There is a woman whom President Carter must appoint to the court.

- (12) a. President Carter intends/hopes/is believed to appoint a woman to the court.
- b. There is a woman whom President Carter intends/hopes/is believed to appoint to the court.

(11a) and (12a) have prominent readings on which they are true even if no woman is *distinguished* with respect to the relevant property. Thus, (11a) has a prominent reading on which it can be true even if none of the women (actual or possible) is such that she must be appointed to the court. And the variants in (12a) have prominent readings on which they can be true even if none of the women (actual or possible) is such that Carter intends, hopes, or is believed to appoint her. It is much harder to get such readings for (11b) and (12b).

A natural analogue of denying **Distribution** for the quantified version of the puzzle would then be to insist that (4) has two non-equivalent readings, where these can be brought out by (13a) and (13b) respectively:

- (13) a. I'm able to raise my voice by some precise decibel level (or other).
- b. There is a (particular) precise decibel level by which I'm able to raise my voice.

The suggestion would be that on natural ways of filling in the details of the case, (4) is true only on the reading brought out by (13a). By contrast, (1a) is true only when the second conjunct receives the reading brought out by (13b). There is no reading on which both (4) and (1a) are true. And so the puzzle dissolves.

Against this background, the space of possible solutions to the puzzle, emerges more clearly. For notice that the central thesis underlying the proposed solution is that sentences like (13a) do not entail sentences like (13b). However this hypothesis will not be borne out on more conservative theories of ability. So long as the property of being a decibel level is *rigid* with respect to the agentive

while I think the relevant readings can be brought out more clearly via scope distinctions, I do not wish to commit to them being *generated* that way. An alternative proposal in the recent literature is to generate the different readings via domain restriction. See, for instance, von Stechow (1999) and Hawthorne and Manley (2012).

modality, i.e., does not gain or lose instances across the relevant space of worlds, (13a) will entail (13b) both on a standard possibility analysis of ability and on the sophisticated conditional analysis of Mandelkern et al. (2017).⁷

To draw a wedge between (13a) and (13b) and make room for inexact ability, one branch of the literature likens (4) to (11) claiming that there is a tacit element of *necessity* in the overall content of an ability report which gives rise to the relevant scope distinctions. Precise implementations of this view differ. One suggestion, emerging from the “STIT” tradition, is to analyse *agency* in terms of a necessity-like operator ‘sees to it that’ (Horty and Belnap, 1995; Horty, 2001; Fusco, 2021). Ability is understood as the possibility for agency, and hence as the possibility to necessitate an outcome; the view is usually spelled out in a branching time framework, though see Brown (1988) for development of the view within neighbourhood semantics.⁸ According to a related proposal by Santorio (ms), a necessity like element is part of the not-at-issue content of ability modals, possibly taking the form of a homogeneity presupposition. Conditional analyses of ability, too, can be seen as incorporating a necessity element into the meaning of ‘can’ and ‘able’—at least so long as they don’t interpret the conditional by way of the selection function semantics of Stalnaker (1968, 1975) which collapses the distinction between conditional ‘would’ and conditional ‘could’. On all of these views, (13a) does not entail (13b), as the fact that one can necessitate that one raise one’s voice by some precise decibel level does not imply that there is a precise decibel level such that one can necessitate raising one’s voice by it.

While this is one way of making room for inexact ability, the above examples suggest already that it is not the only way. Instead of likening (4) to (11) and incorporating an element of *necessity* into the meaning of ability reports, one could liken (4) to (12) and exploit the relation between an agent’s abilities and their *attitudes* to recover the relevant scope distinctions. Roughly, the idea would

⁷More carefully, *being rigid* is defined relative to a modality as the following property of properties: $\lambda F.\forall G(\exists x(Fx \wedge \Diamond Gx) \leftrightarrow \Diamond \exists x(Fx \wedge Gx))$ (Linnebo, 2013; Bacon and Dorr, forthcoming). While it might not be obvious that *being a decibel level* is rigid with respect to especially broad notions of possibility, it is harder to deny for the kind of highly restricted modalities plausibly identified with ability. Similar thoughts apply to the sophisticated conditional analysis of Mandelkern et al. (2017) which would also collapse (13a) and (13b) given the rigidity of *being a decibel level*, and a selection function semantics for the conditional. It should be flagged that Mandelkern et al. (2017) propose to account for the inexactness data via the genericity of ordinary ability reports. I will come back to this proposal below.

⁸While Brown and Fusco analyze ‘able’ as a complex modal, Horty and Belnap locate the necessity element in the action report itself rather than in the modal.

be that there is a tacit attitudinal element in the overall content of many ability reports which gives rise to the relevant scope distinctions. Judgments about what an agent is able to do tend to somehow track judgments about what they are able to do *intentionally*. While implementations will again differ, a view of this kind can be traced back to Mele (2003) and comes close to what is proposed by Schwarz (2020).⁹ It is a version of this second strategy, I shall develop and defend in the remainder of the article.

A final bit of housekeeping is required before we can move on. So far, I have glossed over a subtlety not unimportant for a proper understanding of inexact ability. As Mandelkern et al. (2017) and Maier (2018) point out, many ability reports are tacitly *generic*. Consider:

(14) Morty can swim.

On a natural reading, (14) does not specify when or where or under what circumstances Morty is able to swim. The claim somehow generalizes over times, places, and circumstances. Following popular views in the literature on generics, Mandelkern et al. (2017) propose that ability reports like (12) are, in fact, embedded under an unpronounced operator ‘GEN’, roughly equivalent to ‘generally’, which binds a time variable in the prejacent, though, assuming that we generalize not just over times, a situation variable might be more suitable. We’d get:

(14LF) GEN s (Morty can swim in s).¹⁰

The genericity of many ability reports is relevant to our discussion, since there are scopal interactions between the generic operator and the existential quantifier. Consider simple generic action reports like (15):

⁹Schwarz argues that agentive ‘can’ and ‘able’ are ambiguous between what he calls an “effective” and a “transparent” reading. S is able to ϕ effectively iff it is possible for S to ϕ in some way or another; S is able ϕ transparently iff S ϕ s “as a result of a volitional state which warrants believing that [S] will ϕ provided that ϕ -ing is under [their] volitional control” (Schwarz, 2020: 13). Schwarz’s key contention is that there is an *epistemic* constraint on transparent ability. On his view whether doing transparently coincides with doing intentionally depends on whether an epistemic view of intentional action of the kind proposed by Anscombe (1957), Velleman (1989), or Setiya (2008) is correct (Schwarz, 2020: 13). I take the opposite attitude: what’s central to my account is the appeal to intentional action. I’m much less sanguine on there being an epistemic constraint on ability. For recent discussions of epistemic theories of intentional action see Beddor and Pavese (2022), Pavese and Paul, Henne (2023), Shepherd and Carter (2023), and Blumberg and Hawthorne (ms).

¹⁰As Mandelkern et al. (2017: 330) note, which situations are quantified over will likely be sensitive to the content of the prejacent.

(15) Morty meets a friend on Sundays.

- a. $\text{GEN}_s \exists x(\phi(x) \text{ in } s)$.
- b. $\exists x \text{ GEN}_s (\phi(x) \text{ in } s)$.

On one reading, Morty meets some friend or another on Sundays, not necessarily the same one. On another, there is one particular friend whom Morty meets on Sundays. Mandelkern et al. (2017) propose to account for the inexactness data via tacit genericity in many ability reports. Like the above solutions, the idea would be to say that (4) can be interpreted in two non-equivalent ways brought out by (13a) and (13b), respectively, where the two readings are traced back to the scope interactions between the existential quantifier and generic operator.

The proposal is elegant, and it might go a long way in explaining some of the inexactness data—in fact, it might play an important role in explaining non-agential inexact abilities, a point to which I’ll return in §2. However, it cannot be the whole story. Consider:

- (16)
- a. I’m able to raise my voice right now, but not by a precise decibel level.
 - b. I can wiggle my ears right now, but not at a specific speed.
 - c. I’m able to hit the dart board right now, but not a particular area.

These inexact ability reports are no less coherent than (1a)-(1c). But given the explicit reference to a time, it is implausible that they should be tacitly generic. So while we need to be careful in distinguishing generic from situation-specific ability reports, and while this distinction might have a role to play in an account of non-agentive inexact ability, the distinction by itself is not sufficient to solve the puzzle of inexact ability.

2 Able to do intentionally

We often make assumptions about the intentionality of people’s actions. Consider:

- (17)
- a. Ann is reading some Shakespeare.
 - b. Ann might be reading some Shakespeare.

- c. Ann will read some Shakespeare later.
- d. Bill thinks Ann is reading some Shakespeare.

In each case, it is natural to envisage Ann as *intentionally* reading Shakespeare (or for Bill to believe this), as opposed to accidentally absorbing a line of Shakespeare on a bill board, or the like. I'd like to suggest that such intentionality assumptions have an important role to play in our assessment of ability reports. The suggestion is that for a range of ability reports it is natural to read them as ascribing not just *any* ability to the agent, but the ability to do the action in question *intentionally*. More carefully, where S ranges over agents, and V over actions:

Enrichment Hypothesis: Sentences of the form $\lceil S \text{ can/is able to } V \rceil$ often receive enriched readings of the form $\lceil S \text{ can/is able to intentionally } V \rceil$.

Following Chatain and Schlenker (ms), I use the term “enrichment” without prejudice as to whether the enriched content is generated by syntactic, contextual, or pragmatic mechanisms, a question to which I'll return in §3.

The **Enrichment Hypothesis**, henceforth **EH**, is deliberately restricted to agents and their actions. It would be implausible to claim that all sentences of the form $\lceil S \text{ can/is able to } V \rceil$ receive readings enriched with “intentionally”. Consider examples of the kind discussed by Santorio (ms):

- (18) a. The theory is able to explain all the data.
- b. I'm able to digest a hearty meal quickly.

Since theories don't have intentions, we don't take (18a) to be saying that the theory is able to explain the data intentionally. And since digesting food is not an action, we don't take (18b) to be saying that I'm able to intentionally digest a hearty meal quickly. The **EH** does not apply to cases where S picks out a non-agent or V picks out a non-action.¹¹ The cautious formulation of ability reports *often* receiving such readings is to mark the fact that intentionality enrichments are defeasible. Like the linguistic status of the proposed intentionality enrichments, I'll defer discussion of their defeasibility to §3.

¹¹I'll return to questions about non-agential inexact abilities in §5.

My argument for the **EH** is mostly abductive. It is a simple hypothesis which would not only account for our inexactness data (§2.1) but would also make sense of a range of other data surrounding ability reports which are more puzzling from the point of view of alternative theories (§2.2).

2.1 Inexact Ability

As we've seen in §1, (2) and (3*) would entail (4) even given the kinds of modest closure conditions on ability expected to hold in non-normal modal logics.

(2) I'm able to raise my voice.

(3*) I'm not able to raise my voice without raising it by a precise decibel level and to raise my voice by a precise decibel level without raising my voice.

(4) I'm able to raise my voice by a precise decibel level.

(2) and (3*) are hard to deny, but the conjunction of (2) and (4) contradicts (1a).

(1a) I'm able to raise my voice, but not by a precise decibel level.

And yet, (1a) is coherent and has a prominent true reading. What could explain these data? Given the **EH**, we can formulate a straightforward answer. (1a) has a true reading when enriched with 'intentionally'. But what (2) and (3*) jointly entail cannot be the content enriched with 'intentionally'. As long as we admit that being able to do something non-intentionally is consistent with not being able to do that thing intentionally, the puzzle dissolves. The remainder of this section sets up the proposed solution step by step.

Step 1. Notice that it is independently plausible that non-modal intentional action reports of the form $\ulcorner S \text{ intentionally } Vd \urcorner$ give rise to the kinds of scope distinctions which we've identified to be at the heart of the puzzle. Consider:

(19) I intentionally let the tea brew for a precise number of minutes.

Two readings of (19) are available in principle, naturally brought out by (20a) and (20b) respectively.

- (20) a. I intentionally let the tea brew for some precise number of minutes (or other).
 b. There is a (particular) precise number of minutes by which I intentionally let the tea brew.

The reading brought out by (20b) is by far the more natural one in this case. But given the right contextual background, the reading brought out by (20a) becomes accessible. For instance, consider a case where you take an old-fashioned egg timer and just randomly wind it up to some point, letting the tea brew until the timer rings. The data is robust with respect to tense; the same two readings can be distinguished for (21) and (22):

- (21) I'm intentionally letting the tea brew for a precise number of minutes.
 (22) I will intentionally let the tea brew for a precise number of minutes.

This observation is relevant since it is sometimes suggested that the prejacent of ability reports of the form $\lceil S \text{ is able to } V \rceil$ are $\lceil S \text{ will } V \rceil$ Santorio (ms: 4).¹²

Step 2. Given the **EH**, we'd expect (1a) to receive the following enriched reading. Where the crossed out phrases correspond to the elided material, we'd have:

- (1aE) I'm able to intentionally raise my voice, but not ~~able to intentionally raise my voice~~ by a precise decibel level.

Furthermore, given our independent observations about intentional action reports, we'd expect (1aE) to afford two non-equivalent readings which can be brought out as follows:

- (1aE) a. I'm able to intentionally raise my voice, but I'm not able to intentionally raise my voice by some precise decibel level (or other).
 b. I'm able to intentionally raise my voice, but there is no precise decibel level by which I'm able to intentionally raise my voice.

¹²Many linguists insist that the future *will* is not a tense but a modal universally quantifying over possible histories (see, for instance, Klecha, 2014). On such views one might expect "will" itself to give rise to scope ambiguities. But as Cariani and Santorio (2017) point out, that prediction is not borne out: "I will see a friend this weekend but there is no friend whom I'll see this weekend" is incoherent. Their selection function semantics reconciles the scoplessness of "will" with it being a modal.

While (1aEa) is presumably false for anyone who possesses the concept of a decibel level, (1aEb) is arguably true in the mouths of most people.

Step 3. Return to the inference from (2) and (3) or (3*) to (4). The key observation is that an intentionality enriched reading of either (3) or (3*) is not remotely plausible, independently of how scope is disambiguated. Consider:

- (3E) a. I'm not able to intentionally raise my voice without intentionally raising it by some precise decibel level (or other).
- b. I'm not able to intentionally raise my voice without there being a (particular) precise decibel level by which I'm able to intentionally raise my voice.

No concept of a decibel level is required to be able to intentionally raise one's voice. So, to the extent that (3) and (3*) are heard as true, they receive a reading not enriched with 'intentionally'. But notice that for the argument from (2) and (3) or (3*) to (4) to be *valid*, the premises must be interpreted uniformly throughout. For the argument to be *sound*, (3) and (3*) must receive a non-enriched reading. Thus, what (2) and (3) or (3*) jointly entail—even given \mathbf{K}_{able} —is only the unenriched reading of (4).

Step 4. The puzzle dissolves so long as being able to do something does not imply that one is able to do it intentionally. That assumption strikes me as independently plausible. It is also supported by the observation that claims such as the following are entirely coherent:

- (23) I'm able to raise my voice by precisely 22.5 decibel, just not intentionally.

A final point is worth mentioning. (4) considered in isolation from the kind of closure reasoning just rehearsed is expected to receive an intentionality enriched reading. Notice that just like (1aE), (4E) is expected to have two non-equivalent readings.

- (4E) a. I'm able to intentionally raise my voice by some precise decibel level (or another).
- b. There is a (particular) precise decibel level by which I'm able to intentionally raise my voice.

Arguably, (4Ea) is true and (4Eb) false in the mouth of an ordinary speaker possessing the concept of a decibel level. Thus, we'd expect (4), as considered by itself, to have a true and a false reading. That prediction seems adequate.

The **EH** makes good sense of our inexactness data. This lends it some abductive support. We can further bolster the abductive case for the **EH** by considering how it would account for other puzzling data surrounding ability reports.

2.2 Ability and Luck

Like knowledge, ability seems to sit uneasily with luck. As Santorio (ms) points out, there is something odd about speeches like the following:

(24) Of course, Ann is able to hit the bull's eye—even beginners can get lucky!

Nor does high probability of success seem to suffice for ability. (25b) is no better than (25a):

- (25) a. Ann is able to win tonight's lottery.
b. Ann is able to lose tonight's lottery.

Theories on which ability involves an element of necessity predict and explain data such as these. After all, if ability requires the possibility to *necessitate* the outcome, then ability is incompatible with even the smallest amount of luck.

However, the way ability interacts with luck is much more nuanced than such theories would predict. For instance, claims like the following are regularly made by sports fans:

- (26) a. Pujols is able to hit a home run on this trial.
b. Mahomes is able to complete this Hail Mary pass.
c. Messi is able to score this penalty kick.

While the chances of success are much better for such skilled sportsmen than for most ordinary folk, it is difficult to deny that an element of luck is still required for success. Theories on which ability is incompatible with luck would predict that (26a)-(26c) pattern like (25a)-(25b). But that prediction is not borne out.

A much more nuanced take on the relation between ability and luck comes into view given the **EH**. For notice that intentional action reports play with luck in similar ways. Consider the lottery examples first:

- (27) a. Ann intentionally won tonight's the lottery.
- b. Ann intentionally lost tonight's lottery.

In a first case, Ann buys a ticket hoping that she'll win, and wins. In a second case, Ann buys a ticket hoping that she'll lose (maybe to prove a point to someone), and loses. Despite the fantastically high probability of losing, (27b) seems no better as a description of the second case than (27a) as a description of the first case. Next, consider the sports examples:

- (28) a. Pujols intentionally hit a home run then.
- b. Mahomes intentionally completed the Hail Mary pass.
- c. Messi intentionally scored this penalty kick.

In cases where Pujols, Mahomes, and Messi had the relevant intentions and did succeed, the following claims are felicitous, and arguably true.¹³

From the point of view of theories which incorporate an element of necessity into the meaning of ability reports, these data are puzzling. If ability is incompatible with any amount of luck, (26a)-(26c) should be as bad as (25a)-(25b). By contrast, given the **EH**, we'd expect the ability data to mirror the intentional action data. If (27a)-(27b) are bad and (28a)-(28c) are fine, it is not surprising that (25a)-(25b) are bad while (26a)-(26c) are fine.

A final case which brings out parallels between intentional action and ability in their relation to luck, is *Kraemer's puzzle*.¹⁴

Killing Bill. Ann is given the opportunity to push a button which will send a lethal arrow shooting down one of ten specified paths. The paths are labeled from one to ten. Ann has no idea which path the arrow will travel down if she pushes the button. But she does know that Bill is standing on path three. Ann hates Bill and wants him to die.

¹³In the literature on intentional action, several authors have used examples of this kind to argue against epistemic theories of intentional action, the point being that intentional action appears to be compatible with luck in a way in which knowledge is not. For instance, Shepherd and Carter (2023) argue that while Pujols would not have *known* that he'd hit a home run then (he could easily have been wrong!), his hitting a home run would nevertheless have been intentional. Further examples suggesting that intentional action is compatible with luck in a way in which knowledge is not are explored by Blumberg and Hawthorne (ms: ch.8).

¹⁴The case is taken from Blumberg and Hawthorne (ms) who trace examples of this kind back to Butler (1978) and Kraemer (1978).

Against the background of this case consider:

- (29) a. Ann is able to kill Bill.
b. Ann is able to shoot the arrow down path three.

It is quite tempting to judge (29a) more favourably than (29b). But that's surprising given that the odds of succeeding are the exact same! Given the **EH** these data are less surprising. For as people in the literature on Kraemer's puzzle have pointed out, that's exactly how intentional action reports pattern.

Hold fixed the above set-up and suppose Ann presses the button, and the arrow shoots down path three, killing Bill. Now consider:

- (30) a. Jane intentionally killed Bill.
b. Jane intentionally shot the arrow down path three.

Again, it is quite tempting to judge (30a) more favourably than (30b). Since given the **EH**, the ability reports in (29) are expected to receive readings enriched with 'intentionally', the fact that we get a Kraemer effect at the level of ability is unsurprising. In sum, ability reports play with luck in just the way one would expect if the **EH** were true. This lends the **EH** further abductive support.

It is worth being clear on one point. I don't mean to suggest that the way intentional action plays with luck is not itself puzzling or that the intentional action data do not themselves require an explanation. My point is just this: those data need explaining either way, quite independently of our concerns with ability. Given the **EH**, we can adopt whatever turns out to be the right explanation of the intentional action data to explain the patterns we observe with ability reports.

I've argued that the **EH** would not only dissolve the puzzle of inexact ability, but would also advance our understanding of the relationship between ability and luck. I conclude that the hypothesis enjoys considerable abductive support.

3 Intentionality Enrichments

So far, I've said little about the linguistic mechanisms by which intentionality enrichments are generated. The aim of this section is to work out in more detail the linguistic profile intentionality enrichments must have in order to play their

intended role, and to consider concrete mechanisms by which intentionality enrichments may be generated. Those less invested in these questions are invited to skip ahead to §4.

3.1 Linguistic profile

Two observations will constrain the linguistic mechanisms by which the kinds of intentionality enrichments postulated by the **EH** might be generated.

The first observation is that intentionality enrichments are *defeasible* in that (i) they are not invariably generated and (ii) can be explicitly “cancelled”. Consider once more:

(31) I’m not able to raise my voice without raising it by some precise decibel level or other.

(32) I’m able to raise my voice by precisely 22.5 decibel.

(33) I’m able to raise my voice by precisely 22.5 decibel, just not intentionally.

(31) has a prominent true reading and, to my ears, lacks a false reading. This suggests that no enriched reading is generated for (31). After all, one need not have the concept of a decibel level to be able to intentionally raise one’s voice. Likewise, (32) has a prominent false reading, suggesting that it receives the intentionality enrichment. Yet, (33) is coherent. This suggests that the enriched content is somehow cancelable.

The defeasibility of the proposed intentionality enrichments might be taken to suggest that intentionality enrichments are not part of what ability reports semantically express, but merely of what they pragmatically convey. However, a second observation puts pressure on this conclusion. Intentionality enrichments, if they are to do their intended work, must sometimes be generated *locally*, within the scope of other operators. To see this, consider the following examples:

- (34) a. I’m not able to raise my voice by precisely 22.5 decibel.
b. If Ann is able to raise her voice by precisely 22.5 decibel, she is truly exceptional.
c. Bill wonders whether Ann is able to raise her voice by precisely 22.5 decibel.

Ordinary speech is at around 60 decibel, a scream at around 120. So, raising one’s voice by 22.5 is well within the range of an ordinary speaker who is not already screaming at the top of their lungs. Nevertheless, (34a) and (34b) have prominent true readings, and (34c) is naturally read as ascribing a rational attitude to Bill, even if he is aware of these numbers. The **EH** offers an explanation of these data. After all, *intentionally raising one’s voice by 22.5 decibel* is not a possibility for most people, so that, on their enriched readings, (34a) is false (at least in the mouth of an ordinary speaker), (34b) is true, and (34c) does not ascribe an irrational attitude to Bill. Crucially, for the **EH** to explain these data, the postulated intentionality enrichments must be generated locally here.

While the matter is not entirely uncontroversial, that intentionality enrichments arise locally puts pressure on the hypothesis that they are pragmatically conveyed, rather than semantically expressed. Indeed, the observation that so-called “scalar implicatures” arise locally has convinced many linguists to favour semantic over pragmatic theories of such inferences.¹⁵ To get a feel for the worry, notice that Gricean implicatures are calculated on the basis of complete assertions, taking as inputs the proposition semantically expressed by an utterance in a context.¹⁶ It is therefore difficult to see how implicatures could arise at a sub-sentential level. For instance, someone who utters (34b) (‘If Ann is able to raise her voice by precisely 22.5 decibel, she is truly exceptional’) does not express the proposition that Ann is able to raise her voice by precisely 22.5 decibel. So how could Gricean reasoning with (34b) produce an intentionality enriched reading of the antecedent?¹⁷

The data in (34) also suggest that intentionality enrichments differ from “not-at-issue” content, like presuppositions or appositive relative clauses. One of the hallmarks of “not-at-issue” content is that it projects out of environments like negation, conditionals, and questions. Consider:

- (35) a. Bill quit smoking.
 b. Bill did not quit smoking.

¹⁵See Cohen (1971), Chierchia (2004), and Sauerland (2004).

¹⁶I’m bracketing manner implicatures, as the proposed enrichments aren’t plausibly based on violations of maxims of manner.

¹⁷For a careful analysis of the problem and a Neo-Gricean response, see Simons (2010). Other Neo-Gricean accounts of embedded implicatures have been proposed by Levinson (2000) and Geurts (2010).

- c. If Bill quit smoking, so did Ann.
- d. Did Bill quit smoking?

(35a)-(35d) all imply that Bill used to smoke. The proposed intentionality enrichments do not behave that way. Clearly none of (34a)-(34c) imply that Ann is able to intentionally raise her voice by precisely 22.5 decibel.

Taken together, the above observations lend credence to the view that the intentionality enrichments postulated by the **EH** are part of the semantic “at-issue” content of ability reports when generated, but that they are not invariably generated.

3.2 Generating intentionality enrichments

Given their linguistic profile, there are at least two ways in which intentionality enrichments could be generated. They might be generated *contextually*, by particular ways of setting some of the contextual parameters relative to which ability reports are evaluated. Or, they might be generated *syntactically*, by way of an optional, covert operator which, when present at the level of logical form, yields the enriched reading. I’ll consider both strategies in turn.

Ability reports are notoriously context-sensitive, and so a natural suggestion would be that the enriched readings just correspond to a particular resolution of that context-sensitivity. One suggestion of how intentionality enrichments may be derived in context stems from Schwarz (2020) who suggests that one of the contextual parameters determining the interpretation of an ability modal is a variable for an adverbial modifier which is “passed on to the embedded verb phrase” so that a sentence of the form $\lceil S \text{ is able}^{Gly} \text{ to } V \rceil$ is true if and only if $\lceil S \text{ is able to } V \text{ } Gly \rceil$ (Schwarz, 2020: 15). On this view, context imposes constraints on relevant ways of doing the prejacent of an ability report.

As Schwarz points out, there is some reason to think that such contextual constraints on the manner of performance are independently motivated. Consider the case of someone who, due to a shoulder injury, can lift their left arm only in the way in which one lifts other objects; here, by picking up the injured arm with the non-injured arm. We can get ourselves both into a headspace where (36) seems true and into one where (36) seems false:

- (36) I’m not able to lift my left arm.

This observation would have a natural explanation on Schwarz’s proposal. So long as ‘able’ is interpreted as something like ‘able^{*intransitively*}’, (36) would be true. If that restriction is lifted, (36) is false.¹⁸

My main worry with this proposal is that it will overgenerate true negated ability reports. Notice that when context makes salient certain ways of doing, we’d expect sentences of the form $\lceil S \text{ is not able to } V \rceil$ to have true readings in such contexts if the agent is not able to V in the salient way. But it is not clear that this prediction is borne out. Consider the following case:

Substitutes. At a dinner party, a guest working for the local orchestra relates how their second violin can’t perform due to a broken wrist. A substitute is needed. Knowing that Carla has been playing the violin as a hobby since childhood, another guest puts forth Carla’s name.

In this context, constraints on the quality of performance are salient. At issue is something like: playing the violin at the level of a professional violinist. We would then expect (37a) and (37b) to have true readings in this case:

- (37) a. Carla is not able to play the violin.
 b. Carla can’t play the violin.

Speaking for myself, I find it hard to hear (37a) and (37b) as true in the envisaged case. It would of course be somewhat misleading for Carla to say ‘I’m able to play the violin’ against the background of this case. But it is a stretch to say that she’d say something *false*. I suspect the point to generalize: when someone is able to do something in a normal way, it will be hard to hear $\lceil S \text{ is able to } V \rceil$ as false when S is unable to V in some special way—even if that way of doing is contextually salient. These observations don’t establish that different contextual resolutions of a “*way* parameter” can’t generate intentionality enrichments. But

¹⁸We should be careful not to make too much of examples like (36). Verb phrases like ‘lift’, ‘move’, ‘raise’ are usually regarded as genuinely ambiguous between a transitive and an intransitive meaning. The fact that we can be in two minds about (36) might therefore have a different explanation specific to this example. Schwarz (2020: 15) considers and rejects the *general* hypothesis that the different readings are generated via ambiguities in the verb phrase, and rightly points out that we’d then expect non-modal negated action reports to generally admit of false readings when the action is not performed in the salient manner, a prediction that is simply not borne out. For instance, when someone raises their voice unintentionally, perhaps in the grip of passion, one would be hard-pressed to find a context in which ‘I didn’t raise my voice’ is true. I’m not quite sure what to say about ‘I did not lift my arm’.

they bring out that not just *any* contextually salient way of doing has a bearing on the interpretation of an ability report.¹⁹ One would like to know more about why we tend to enrich with ‘intentionally’, and why the proposed parameter cannot easily be set to other contextually salient values.

There is a different contextual parameter in the interpretation of natural language modals which could be used to generate intentionality enrichments, as well as other restrictions on ways of doing, albeit in a more circumvent manner: so-called “ordering sources” (Kratzer, 1981 , 2012). Consider:

(38) I’m not able to go to your party, I have to watch the kids.

(38) is felicitous and it is not difficult to think of circumstances where we’d judge it to be true. Initially this is puzzling. Not only is it hard to deny that there is an accessible world where the speaker goes to the party, but stronger claims are true also: they would go the party if they tried to go; they can “see to it that” they go etc. So how could (38) be true? To account for such data, it is often assumed that contexts make salient different *ideals* which induce an *ordering* on the modal domain (Kratzer, 1981 , 2012: 39f.). Amongst the accessible worlds, we look only at those coming closest to fulfilling the contextually salient ideals when assessing modal claims—the “best” of the accessible worlds. In the above case, salient ideals might be norms of parenting (e.g., you don’t leave your children home alone) or of party etiquettes (e.g., you don’t bring your children to parties). So long as any accessible world where the agent attends the party is strictly “worse” than any of the ones where they don’t attend, (38) would come out true on this view, as desired. Though developed by Kratzer within a standard possible worlds semantics, other semantics for ability modals can incorporate ordering sources into their theories, too.²⁰

Notice that such contextually determined ideals can put constraint on the *way* in which one must be able to *V* in order to count as being able to *V*. Consider the following case:

¹⁹Nor will it do to insist that the standard resolution of the “*way* parameter” is something like ‘in a normal way’. ‘Carla is unable to tell when a glass is full’ is not true of a blind person who is able to tell when a glass is full by listening to how the pouring sounds, but who isn’t able to tell when a glass is full in the normal way, by looking. Worse, the normal way of raising one’s voice by precisely 22.5 decibel is certainly not doing this *intentionally*. So we wouldn’t even get the desired intentionality enrichments out of this proposal.

²⁰For implementations within a standard modal semantics, see Schwarz (2020), for use of orderings within conditional analyses of ability, see Mandelkern et al. (2017).

Commute. Dariya has a bad knee and can walk only slowly. Still, she walks to work almost every day. One morning, having overslept and running late, Dariya deliberates about how to get to work. A quick walker could still make it to her workplace in time, but Dariya would get to work late if she walked.

Against the background of this case, both (39a) and (39b) have clear true readings as uttered by Dariya:

- (39) a. I'm unable to walk, I have to drive.
b. I can't walk, I have to drive.

Although there are accessible worlds where Dariya walks to work, all of them are worlds where she walks slowly. But it is natural to assume that Dariya values getting to work on time, and hence to interpret her utterance relative to an ordering which ranks the accessible worlds where Dariya is late strictly lower than those where she isn't. To the extent that none of the accessible worlds where Dariya walks are among the "best" worlds, (39a) and (39b) are evaluated as true in this context. Notice that in a more circumvent manner we also get constraints on *how* Dariya would have to be able to walk for 'I'm able to walk' to be true in this context: she would have to be able to walk quickly.

Intentionality enrichments could be generated in a similar fashion. There would have to be something like an "agency ideal" which induces an ordering on the modal domain that ranks worlds where the action is done intentionally higher than worlds where it is not done intentionally. A sentence of the form $\ulcorner S$ is able to $V \urcorner$ would only be true if there was among the accessible worlds a highest ranked world where S V s. If the ordering is induced by such an agency ideal, this would be tantamount to requiring S to be able to V intentionally to count as able to V . If the only worlds where S V s are one's where they don't V intentionally, ' S is not able to V ' would come out as true as evaluated relative to the ordering induced by the agency ideal.

Invoking such a general agency ideal does not strike me as *ad hoc*. After all, it is only intentional actions which are properly *attributable* to an agent and figure in our concerns with responsibility, praise, and blame. Moreover, the restrictions of the **EH** to agents and their actions, on which I insisted in §2, would have an explanation on this way of generating intentionality enrichments. Though not without promise, interesting questions remain for this approach. For instance,

could an agency ideal of this kind be subsumed under the broader category of teleological or bouletic ordering sources?²¹ And how might one account for cases where intentionality enrichments are not generated on this view? More work would be needed here.

Let me turn to the second strategy. Instead of generating intentionality enrichments *contextually*, one could instead generate them *syntactically*, by way of an optional, covert operator **Int**, roughly with the meaning of ‘intentionally’. When that operator occurs at the level of logical form, ability reports receive the enriched reading. When it is absent they don’t. Enrichments are cancelled through disambiguation: the addition “but not intentionally” makes clear which of various viable logical forms is intended by the speaker. Covert operators of this kind have been popular among linguists in accounting for locally generated scalar implicatures (Chierchia et al., 2012). More recently, Blumberg and Goldstein (ms) explain redundancy effects in modals and attitude verbs by way of an optional, covert operator. Since the linguistic profile of both scalar implicatures and redundancy effects closely resembles that of the proposed intentionality enrichments, and operator approaches have been seriously pursued in these domains, the operator approach to intentionality enrichment is worth taking seriously. As with the contextual proposals, there remain questions for a view of this kind. First, as Chatain and Schlenker (ms) emphasize, postulating a covert operator comes with the burden of establishing that it is, in fact, syntactically real—a task I cannot undertake here.²² Secondly, by itself the proposal would offer no insight into the circumstances under which this operator is inserted and the circumstances under which it is not. As with the contextual proposals, the syntactic strategy is worth taking seriously, but a number of questions would need to be answered in fleshing it out more fully.

In §2 I’ve argued that the hypothesis that ability reports often receive readings enriched with ‘intentionally’ enjoys considerable abductive support. In this section, I have outlined three mechanisms by which such intentionality enrichments

²¹A flatfooted account in terms of what we value or prefer will not work. For instance, most people are able to kill a person non-intentionally (e.g., in a car crash). Nevertheless, an utterance of ‘I’m not able to kill a person’ need not be insincere in their mouths. The **EH** would explain this. After all, not everyone is able to kill a person intentionally. But we don’t have a *preference* for possibilities where killing is done intentionally. Such possibilities just somehow *count for more* in our assessment of an agent.

²²Chatain and Schlenker (ms) devise interesting ellipsis tests to adjudicate between syntactic, semantic, and pragmatic theories of enrichment.

could be generated. Although for each proposal further work would be required to flesh out the proposals more fully, each strikes me as, in principle, viable. Optimism that a linguistically plausible story can be told of how the postulated intentionality enrichments are generated does not seem misplaced.

4 Conservativeness

On an influential view, developed in most detail by Angelika Kratzer (1977); Kratzer, 1981 (2012), ‘can’ invariably denotes possibility, with different species of possibility made salient in context. Consider:

- (40) a. You can go now.
 b. Ann can’t be in Paris, I just saw her at the department meeting.
 c. If you don’t pay attention, you can easily get hurt.

In (40a)-(40c), ‘can’ is naturally read as picking out deontic, epistemic, and circumstantial possibility respectively. A natural null hypothesis is that ‘can’ in (41) denotes possibility, too, agentive possibility:

- (41) Enzo can wiggle his ears.

And while we often use adjectival constructions to pick out agentive possibility (‘is able to’, ‘is capable of’), the same is true for deontic possibility which can be expressed with ‘is permitted to’ or ‘is allowed to’.

Although integrating ability into a unified theory of possibility is attractive, the puzzle of inexact ability has convinced many to abandon the possibilist position. One of the benefits of the proposal presented in this paper is that it can be combined with the view that ability modals denote ordinary species of restricted possibility, governed by a normal modal logic. Let’s call this package of views “possibilism about ability”.

Possibilists about ability are committed to a logic of ability which includes \mathbf{K}_{able} and **Distribution**. That is, where \blacklozenge represents the relevant species of possibility, and \blacksquare its dual, possibilists are committed to all instances of the following two schemas being true:

$$\mathbf{K}_{\blacklozenge}: \blacksquare (S \text{ As} \rightarrow S \text{ Bs}) \rightarrow \blacklozenge S \text{ As} \rightarrow \blacklozenge S \text{ Bs}$$

Distribution $_{\blacklozenge}$: $\blacklozenge (S \text{ As} \vee S \text{ Bs}) \rightarrow \blacklozenge S \text{ As} \vee \blacklozenge S \text{ Bs}$

The key observation is that these principles hold even on their enriched readings:

K $_{\blacklozenge}$ E: $\blacksquare (S \text{ intentionally As} \rightarrow S \text{ intentionally Bs}) \rightarrow \blacklozenge S \text{ intentionally As} \rightarrow \blacklozenge S \text{ intentionally Bs}$

Distribution $_{\blacklozenge}$ E: $\blacklozenge (S \text{ intentionally As} \vee S \text{ intentionally Bs}) \rightarrow \blacklozenge S \text{ intentionally As} \vee \blacklozenge S \text{ intentionally Bs}$

Problem cases like that of the novice darts player do not present counterexamples to these principles, since their antecedents would not be true in those cases. A novice darts player is not such that they are able to intentionally hit the top or intentionally hit the bottom. Nor does it follow from the fact that someone is able to intentionally hit the dartboard that they are able to intentionally hit the top or intentionally hit the bottom, even given **K $_{\blacklozenge}$ E**. After all it is not true that one is unable to intentionally hit the dartboard without intentionally hitting the top or intentionally hitting the bottom; one's intentions need not involve such specifics at all.

Notice that *intentional action* is inexact in that it does not distribute over disjunction. The following principle is clearly bad:

Int Distribution: $S \text{ intentionally Ad or Bd} \rightarrow S \text{ intentionally Ad or } S \text{ intentionally Bd.}$

That someone intentionally hit the top or bottom clearly does not imply that they either intentionally hit the top or intentionally hit the bottom. But this observations would only undermine the plausibility of the enriched distribution principle if 'S is able to A or B' were enriched to 'S is able to intentionally A or B', rather than to 'S is able to intentionally A or intentionally B'. But since on the **EH**, 'intentionally' modifies the verb phrase, it is the latter, not the former enrichment which we'd get. Possibilists can readily admit the falsity of principles like the following, without compromising their commitment to normal modal logic for ability:

- (42) If S is able to intentionally hit the top or hit the bottom, then S is able to intentionally hit the top or S is able to intentionally hit the bottom.

After all, (42) is not even an instance of **Distribution** \blacklozenge **E**, its falsity is of no consequence to the possibilist.²³ Similar remarks apply to **K** \blacklozenge **E**.

There is one more alleged divergence between the logic of possibility and ability which it is worth commenting on. To the extent that ability is possibility in view of certain *true propositions* or *facts*, we'd expect its logic to include an analogue of the modal axiom **T**:

T_{able} If S V d/is V -ing/will V , S is able to V .

But following Kenny (1976), many have argued that this principle has counterexamples. Strikingly, few people produce actual instances of this principle which sound false. Rather, more theoretical arguments are usually given. For instance Kenny suggests that “a hopeless darts player may, once in a lifetime, hit the bull, but be unable to repeat the performance because he does not have the ability to hit the bull” (Kenny, 1976: 214). But more work is needed to show that this is a counterexample to **T**_{able}. Kenny’s claim seems to be best represented as follows:

- (43) Although the novice hit the bull’s eye on this occasion, it’s not the case that generally, they are able to hit the bull’s eye.

But (43) is not a genuine instance of **T**_{able} as it does not interpret the prejacent uniformly throughout. Indeed, I’d submit that genuine instances of the principle such as the following are compelling:

- (44) a. If generally S hits bull’s eyes, then S is able to generally hit bull’s eyes.
 b. If S hit the bull’s eye on this occasion, S was able to hit the bull’s eye on this occasion.
 c. If S intentionally hit the bull’s eye on this occasion, S was able to intentionally hit the bull’s eye on this occasion.

²³In this regard I disagree with Schwarz (2020: p.18) who claims that the stronger “transparent ‘can’ really does not distribute over disjunction.” The point is important, because if, as Schwarz assumes, ability reports pick out this stronger ‘can’ in some contexts, and **Distribution** has counterexamples on this contextual resolution, then **Distribution** is not generally valid and ability does not have a normal modal logic. But then ability is not an ordinary species of restricted possibility.

It is then not clear that there are any genuine counterexamples to \mathbf{T}_{able} .

A common claim in the literature on ability since Kenny (1976) is that ability could not possibly be an ordinary species of restricted possibility because of divergences in the logics of ability and possibility. I hope to have shown that this claim is simply false. Ability has just the logic we'd expect it to have if it were agentive possibility, possibility for action.

5 Objections and Replies

I've made the case for drawing on the inexactness of intentional action to account for the inexactness of ability. Before I conclude, I'd like to consider three natural objections to this approach.

5.1 Non-agentive inexact ability

The first objection starts out from the observation that there can be inexactness in ability reports featuring non-agents or non-actions. Consider:

- (45) a. I'm able to digest a hearty meal quickly, but not in a precise number of minutes.
- b. The elevator is able to take people to the top floor, but not at a precise speed.

(45a) has a clear true reading and (45b) is fine if we imagine the elevator to move at different speeds on different occasions. But since no one is able to intentionally digest their food, and elevators don't do things intentionally, the coherence of these claims cannot be explained by way of intentionality enrichments.

There are two lines of response worth exploring. The first draws on our observation in §1 that the *genericity* of many ability reports affords an additional source of inexactness. Since (45a) and (45b) ascribe generic abilities, it is then not surprising that they should have coherent readings. What we'd want to look at are situation-specific variants of these examples:

- (46) a. ?I'm able to digest the lasagne I've just eaten, but not in a precise number of minutes.

- b. ?This elevator is able to take you to the top floor now, but not at a precise speed.

To my ears, (46a)-(46b) sound worse than (45a)-(45b), which is what we'd expect if the inexactness of the former had its source in their genericity. But the data is a little subtle.

The second line of response draws out parallels between agents and those physical systems which “share an abstract structure with the kind of complex and sophisticated information-carrying devices that rational agents are”, as Stalnaker (2015: p.29) puts it. Digestive systems and elevators don't have intentions proper, but there is a structurally similar contrast between what such systems do and don't do “on purpose”. One might then try to exploit such structural similarities in accounting for inexactness in the abilities of such proto-agents. While more work is needed here, data like the above does not present unsurmountable obstacles to the proposed view.

5.2 Mysterious Opacity

Consider the following case.

Roof Top. Lois is unaware of Superman's secret identity. One evening, on a rooftop, she runs into Clark Kent wearing his Superman cape. Lois shakes his hand and thanks him for his service to the community.

Against the background of this case, the following intentional action report is perfectly felicitous.

- (46) Although Lois intentionally shook Superman's hand, Lois did not intentionally shake Clark's hand.

Given the **EH**, we would then expect there to be a coherent reading of (47):

- (47) ??Although Lois is able to shake Superman's hand, Lois is not able to shake Clark's hand.

But there really does not seem to be such a reading. Doesn't this speak against the **EH**?

The data are indeed puzzling and I won't be able to fully resolve the issue here. However, it is worth noting that, as Mandelkern et al. (2017), Schwarz (2020), and Fusco (2021) have all pointed out, there are at least some ability reports which give rise to opacity. Consider:

- (48) Although most people are able to recite the sequence '3141592653', few people are able to recite the first ten digits of π .
- (49) Not everyone who can point out Hesperus in the night sky can point out Phosphorus in the night sky.

To my ears, (48) and (49) are coherent despite the fact that to recite the sequence '3141592653' just is to recite the first ten digits of π , and to point out Hesperus in the night sky just is to point out Phosphorus in the night sky. Any theory of ability faces the question of why coherent readings of (48) and (49) are accessible but not of (47). It then remains to be seen whether the current proposal fares worse when it comes to these data than alternative theories of ability.

5.3 Inexactness in other modals?

A final objection starts out from the observation that none of the proposed resources for deriving intentionality enrichments are specific to ability. Would we then not expect there to be other inexact modalities, e.g., inexact permissions? Yet claims like the following sound quite bad:

- (50) a. You may raise your voice, but not by a precise decibel level.
- b. You are permitted raise your voice, but not by a precise decibel level.

However, there is noise from two additional sources of oddness here. First, it is often odd to grant someone permission to do what you know they are not able to do. Secondly, it might not be easy to understand why intentionally doing that thing should be forbidden. If we control for these issues, (50a)-(50b) improve. Suppose, for instance, that the above were said to a professional opera singer checking into a clinic to deal with various mental health issues, including burn out. To recover, they must pause their voice training. (50a)-(50b) as uttered by a doctor explaining the ground rules in this setting strike me as felicitous.

6 Conclusion

The puzzle of inexact ability is widely viewed as motivating revisionary logics and semantics of ability. In this paper, I have built on work by Mele (2003) and Schwarz (2020) to explore a logically and semantically conservative solution to the puzzle which explains inexactness in many of our abilities via the inexactness of intentional action.

I'd like to conclude by considering where the discussion leaves us with respect to wider debates about the nature of ability. One of the upshots of our discussion is a new perspective on certain high level questions which are prominent in the literature. Consider the question of what kind of *control*, if any, ability requires.²⁴ The data presented here suggest that there are several questions. Does the ability to do something in some way or another require control? Probably not. Does the ability to do something intentionally require control? That will depend on whether *intentional action* requires control, which is itself a controversial question among philosophers of action.²⁵ Similar points apply to other dogmas of ability such as that ability requires *reliable success* or that abilities are always “*two-way*” in that being able to do something requires being able to refrain from doing it. If I'm right, we might sometimes be better advised looking to action theory, rather than modal semantics, in tackling such questions.

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²⁴See Loets and Zakkou (2022), Mayr and Vetter (2023), and Mandelkern (forthcoming) for recent discussion.

²⁵While authors like Shepherd (2021), Beddor and Pavese (2022), and Pavese and Paul, Henne (2023) argue that intentional action requires control, others like Blumberg and Hawthorne (ms) have presented novel examples and arguments to undermine this conclusion.

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