# The logic of intention reports

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Unlike belief and desire reports, intention reports (like *Kim intended to leave*) are not well studied in formal semantics. This paper aims to begin to fill this gap, focusing on the analysis of intention reports that do not exhibit syntactic control, e.g., *Kim intended for Sandy to leave*. In previous work, such sentences have been argued to involve a coercion mechanism that inserts a causative predicate into the semantic representation to yield an interpretation along the lines of *Kim intended to bring it about that Sandy leave*. I argue that even uncontroversially coercion-free intention reports like *Kim intended to leave* involve a layer of meaning not predicted by standard approaches to attitude predicates, and that once this extra layer of meaning is built into the denotation for *intend* in the appropriate way, the interpretive properties of putatively coercion-based intention reports follow straightforwardly with no appeal to coercion needed. In making this argument, I draw connections to relevant work in experimental philosophy on intentional action. I also suggest that the same analysis applies to an entire class of understudied attitude predicates that include *try*, *decide*, *choose*, and others.

## 1 Introduction

Belief and desire reports like (1a) and (1b) respectively are both well studied in the formal semantics literature and have been useful in elucidating a wide range of phenomena such as presupposition projection (Heim 1992), NPI licensing (Kadmon and Landman 1993; von Fintel 1999; Giannakidou 1999), mood choice (Portner 1997; Villalta 2008; Giannakidou 2009; Portner and Rubinstein 2013), and epistemic modality (Stephenson 2007; Anand and Hacquard 2013). INTENTION REPORTS like (1c), by contrast, have attracted relatively little attention. A broad goal of this paper is to bring intention reports into the purview.

(1) a. Kim believes she'll break the window.
b. Kim wants to break the window.
c. Kim intends to break the window.

The narrow focus of this paper is a puzzle that I believe points to a fundamental way in which intention reports differ from the better studied attitudes. The

puzzle goes as follows. The sentences in (2) (which are just syntactically annotated versions of the sentences in (1) above) all exemplify SAME-SUBJECT ATTITUDE REPORTS: in each case, the subject of the embedded constituent is identified with the subject of the matrix clause, i.e., the attitude holder. This is in principle optional in (2a), and it is obligatory in (2b–c) since both sentences instantiate complement control.

(2) SAME-SUBJECT ATTITUDE REPORTS

a. Kim$_i$ **believes** [*she*$_i$'ll break the window].
b. Kim$_i$ **wants** [*PRO*$_i$ to break the window].
c. Kim$_i$ **intends** [*PRO*$_i$ to break the window].

The sentences in (3), on the other hand, all exemplify DIFFERENT-SUBJECT ATTITUDE REPORTS: the embedded constituent hosts its own referentially independent subject. In the case of belief and desire this is an intuitively straightforward substitution. Whereas (2a–b) report a belief or desire of Kim's with respect to Kim breaking the window, (3a–b) report a similar belief or desire except that they are with respect to Sandy breaking the window.[1] (3c), on the other hand, is not as straightforward.

(3) DIFFERENT-SUBJECT ATTITUDE REPORTS

a. Kim **believes** [*Sandy* will break the window].
b. Kim **wants** [*Sandy* to break the window].
c. Kim **intends** [for *Sandy* to break the window].

Intuitively, (3c) supports a paraphrase like (4); i.e., (3c) is typically understood in such a way that the intention it reports involves the attitude holder Kim playing a causal role in the eventuality described by the embedded constituent. Different-subject belief and desire reports do not support this kind of paraphrase, as illustrated in (5).

(4) Kim **intends** for Sandy to break the window.
≈ Kim intends to *bring it about that* Sandy break the window.

(5) a. Kim **believes** Sandy will break the window.
≠ Kim believes she'll *bring it about that* Sandy break the window.
b. Kim **wants** Sandy to break the window.
≠ Kim wants to *bring it about that* Sandy break the window.

[1] I abstract away here from a difference between (2a) and (2b) that is not relevant to the point at hand: attitude reports expressed by control sentences are well known to give rise to an obligatory *de se* construal. Consequently, (2b) but not (2a) is obligatorily construed *de se*. See Morgan 1970; Chierchia 1990; Stephenson 2010; Pearson 2015, and also section 6.1 below.

I call this special property of different-subject intention reports the CAUSATION EFFECT. Versions of the causation effect have been noticed before, both in the linguistics literature (Perlmutter 1968; Jackendoff 1996; Jackendoff and Culicover 2003; Culicover and Jackendoff 2005; Grano 2015) and in the philosophy literature (Brand 1984; Ludwig 2007). The robustness of the effect has also been called into question, both by linguists (Boeckx, Hornstein, and Nunes 2010) and by at least one philosopher (Vermazen 1993), a point I return to in section 4 below. For now, suffice it to say that I take the paraphrase relation in (4) and the lack thereof in (5) to be facts about linguistic intuition that need to be explained. (4) is not intended to be a claim that either a one-way or a two-way entailment relation holds between the two sentences in question — we will in fact see evidence below that such a claim would be misguided.

Perlmutter (1968); Jackendoff (1996); Jackendoff and Culicover (2003); Culicover and Jackendoff (2005); Grano (2015) all seek to account for the causation effect by arguing for some version of a coercion analysis. Jackendoff and Culicover (2003), for example, say that "although someone else can believe you will do X, no one else can execute your intention to do X" (p. 537), and they propose that the grammar reflects this by requiring that *intend* combine with a controlled complement. To deal with apparent counterexamples like (3c), they appeal to a coercion mechanism that inserts the semantic material *bring it about* in the appropriate place in the semantic representation. The understood subject of this causative predicate is identified with the attitude holder, thereby reinstating the control relation that *intend* needs and simultaneously accounting for the causation effect.[2]

The perspective taken in this paper is that the paraphrase relation that intuitively holds between *Kim intends for Sandy to break the window* and *Kim intends to bring it about that Sandy break the window* is not in itself probative of a coercion analysis for the former sentence. Rather, a coercion analysis should be reserved for those cases where the hypothesized denotations for two constituents in a sisterhood relation are such that the hypothesized denotation for the mother constituent does not follow from ordinary compositional principles but rather must be mediated by a function that adjusts the denotation of one of the sisters in such a way as to achieve the desired result. Consequently, an analysis that derives the denotation of the mother constituent via ordinary compositional principles is to be preferred over one that invokes coercion, provided that the proposed denotations for the daughter constituents are independently motivated. In this light, the narrow analytical goal of this paper is to show how to account for the causation effect without having to

[2]Perlmutter (1968) proposes what is essentially a syntacticized version of this coercion approach, wherein the semantic material *bring it about* is represented as a silent causative predicate in the syntax. The argumentation in this paper targets both the non-syntacticized and the syntacticized variants of the coercion approach without discriminating between them.

appeal to coercion. In particular, what I will argue is that even same-subject intention reports — which are uncontroversially coercion-free — involve a layer of meaning not found in belief or desire reports. Once the denotation for *intend* is enriched to account for this additional layer of meaning, the causation effect observed with different-subject intention reports falls out "for free", thereby obviating any semantic motivation for coercion.

The argument, in a nutshell, goes like this. I assume as background a Hintikkan possible worlds semantics for attitude reports, which gives rise to the expectation that *Kim intends to break the window* should be true if and only if all those worlds that fit with Kim's intentions are worlds in which Kim breaks the window. But, building on insights by Searle (1983), I argue that these truth conditions are actually too weak and should be revised to "true if and only if all those worlds that fit with Kim's intentions are worlds in which Kim *intentionally* breaks the window." Factoring out the contribution of the subject and the complement clause yields a denotation for *intend* whereby *intend* combines with a proposition $p$ and an individual $x$ and returns true if and only if all those worlds that fit with $x$'s intentions are worlds where *it is intentional on x's part that* $p$ *holds*. Taking this denotation and importing it into a different-subject intention report like *Kim intends for Sandy to break the window* gives rise to the truth conditions "true if and only if all those worlds that fit with Kim's intentions are worlds where it is intentional on Kim's part that Sandy breaks the window." These truth conditions, I claim, are sufficient for explaining the causation effect, given that one of the dimensions along which one assesses whether an outcome counts as *intentional* has to do with whether the relevant individual (here, Kim) has a sufficient degree of foresight over the process that leads to it. This conclusion follows Egré's (2014) semantics for *intentional*, which in turn builds on relevant work in experimental philosophy on intentional action (see especially Knobe 2003a,b).

The organization of the rest of the paper is as follows. Section 2 sketches a preliminary Hintikkan possible worlds semantics for intention reports. Section 3 motivates a crucial revision to this semantics based on Searle's (1983) work, and draws relevant conclusions for the denotation for *intend*. Section 4 returns to different-subject intention reports, showing how the revised denotation for *intend* straightforwardly explains the causation effect. Section 5 compares the non-coercion analysis to the coercion analysis, concluding that the non-coercion analysis has the conceptual advantage. Section 6 addresses some remaining issues that need to be addressed in arriving at an accurate denotation for *intend*, discussing the *de se* properties of intention reports and the question of whether *intend* patterns like *want* in having a semantics that involves comparison with contextual alternatives. Section 7 situates *intend* within a class of attitude predicates that all give rise to the causation effect. Finally, section 8 concludes.

## 2 A preliminary denotation for *intend*

According to Hintikka's (1969) influential view, belief reports like (6) involve universal quantification over possible worlds, the restriction in this case being the set of worlds that fit with what Kim believes in the evaluation world and the scope being the set of worlds in which it is raining.

(6) Kim believes it's raining.

Formally, this can be achieved by defining the alternativeness function in (7) that takes us from an individual and a world to the set of worlds that fit with what the relevant individual believes in the relevant world. This function can then be built into the denotation for *believe* as in (8). The predicate *believe* combines with a proposition p and an individual x and returns true if and only if the set of worlds returned by applying the alternativeness function to x and the evaluation world is a subset of those worlds in which p is true. This yields truth conditions like (9).

(7) $\text{ALT}_{bel}(\text{x,w}) = \{\text{w}'\text{: w}' \text{ is compatible with what x believes in w}\}$

(8) $[\![\text{believe}]\!]^w = \lambda\text{p}\lambda\text{x}.\forall\text{w}' \in \text{ALT}_{bel}(\text{x,w})\text{: p(w}')$

(9) $[\![\text{Kim believes it's raining}]\!]^w = \forall\text{w}' \in \text{ALT}_{bel}(\text{k,w})\text{: it's raining in w}'$

It is a straightforward exercise to extend this same technology to other attitude predicates like *want*, simply by defining the appropriate alternativeness function and building it into the denotation for the predicate in the same way. The predicate *want* uses the alternativeness function in (10), giving rise to the denotation in (11) and yielding truth conditions like (12).[3]

(10) $\text{ALT}_{des}(\text{x,w}) = \{\text{w}'\text{: w}' \text{ is compatible with what x wants in w}\}$

(11) $[\![\text{want}]\!]^w = \lambda\text{p}\lambda\text{x}.\forall\text{w}' \in \text{ALT}_{des}(\text{x,w})\text{: p(w}')$

(12) $[\![\text{Kim wants to break the window}]\!]^w = \forall\text{w}' \in \text{ALT}_{des}(\text{k,w})$: Kim breaks the window in w′

Finally, we can extend the same kind of approach to *intend*, defining the alternativeness function in (13), building it into the denotation for *intend* as in (14),

[3] I abstract away here from some well known complications for the Hintikkan approach to *want*: see especially Heim 1992; Giannakidou 1999; von Fintel 1999; Villalta 2008; Anand and Hacquard 2013. I also assume here controversially but innocuously for my purposes that controlled complements denote propositions rather than properties, and for now, I abstract away from the need to account for the obligatory *de se* construal of attitude reports expressed by control sentences: see especially Chierchia 1990; Stephenson 2010; Pearson 2015. All of these matters will be revisited in section 6 below.

and yielding truth conditions like (15). (Cf. Landau (2015), who proposes something like (13) as part of his semantics for *intend*, and Stephenson (2010), who proposes something like (13) as part of her semantics for *persuade*.)

(13) $\text{ALT}_{int}(x,w) = \{w' : w' \text{ is compatible with what x intends in w}\}$

(14) $[\![\text{intend}]\!]^w = \lambda p \lambda x. \forall w' \in \text{ALT}_{int}(x,w): p(w')$

(15) $[\![\text{Kim intends to break the window}]\!]^w = \forall w' \in \text{ALT}_{int}(k,w)$: Kim breaks the window in $w'$

Does each of these three attitude predicates really require its own unique alternativeness function, or would it be possible to get by with fewer? In psychological reality, belief, desire, and intention no doubt interact with each other in complicated ways. But intuitively, intention differs from desire in that only the former involves commitment to action.[4] Consequently, one can want to do something without intending to do it. It is also possible to intend to do something without wanting to do it, as when one feels duty-bound to act in an undesirable way. As for the relationship between intention and belief, the two are related in the sense that it is hard to imagine how someone could intend to do something without believing in the possibility of success. In that connection, Pearson (2015) in fact reduces one to the other, proposing a semantics for *intend* whereby *Kim intends to go to the movies* is true if and only if Kim believes she'll bring it about that she goes to the movies. But such a reduction is too weak: if I believe myself to be clumsy and accident-prone, for example, I can believe that I'll bring it about that I break the window without intending to break the window. Taken together, these considerations lead me to assign each attitude predicate its own alternativeness function, and thereby leave open the possibility that none can be defined in terms of the others (a conclusion familiar from the philosophical literature: see e.g. Bratman 1987). But nothing in this paper crucially hinges on this choice: if it turned out, for example, that intentions were a special kind of belief, and that we wanted to build this into the semantics of intention reports, this would be an elaboration of how the $\text{ALT}_{int}$ function is defined rather than an alternative to the approach sketched here.[5]

[4]Grano 2015 in fact proposes a formal connection between objects of intention and Portner's 2004; 2007 "To-Do list" semantics for imperatives, arguing that imperatives deal in public commitments and intentions deal in private commitments, analogously to how the Stalnakerian Common Ground is the public counterpart of belief.

[5]It is also worth pointing out that in the denotations sketched here, the *only* property that distinguishes each attitude predicate from the others is the alternativeness function. Once the denotation for *intend* is enriched below so that it quantifies over *intentional* outcomes only, this will no longer be the case and so the question of whether we can get by with fewer alternativeness functions becomes relevant again. But as far as I can tell, a reduction would still fail: *Kim intends to break the window* is not equivalent to *Kim believes she'll intentionally break the window*: maybe Kim does

## 3 Revising the preliminary denotation for *intend*

In the previous section, we saw that a standard Hintikkan approach to attitude reports yields semantic representations like the following for belief, desire, and intention reports, respectively.

(16) $[\![$Kim believes she'll break the window$]\!]^w$ =
$\forall$w′ $\in$ ALT$_{bel}$(k,w): Kim breaks the window in w′

(17) $[\![$Kim wants to break the window$]\!]^w$ =
$\forall$w′ $\in$ ALT$_{des}$(k,w): Kim breaks the window in w′

(18) $[\![$Kim intends to break the window$]\!]^w$ =
$\forall$w′ $\in$ ALT$_{int}$(k,w): Kim breaks the window in w′

The idea that I now want to explore is that the truth conditions in (18) suffer an inaccuracy that the truth conditions in (16) and (17) do not. The starting point for this will be Searle's (1983) claim that attitudes have conditions of satisfaction and that the conditions of satisfaction for intention are more complicated than they are for belief or desire (section 3.1). I then turn to the consequences that this has for the semantics of intention reports (section 3.2) and for the semantics of *intend* itself (section 3.3). This approach ends up having implications for the compositional properties of the predicate *intentional*, a matter taken up in section 3.4.

### *3.1 Intention reports and conditions of satisfaction*

By way of background, consider first that the Hintikkan approach to attitude reports relies on the idea that, for any given attitude report, we have intuitions about what the evaluation world would have to look like in order to *fit with* or *be compatible with* or *satisfy* the attitude. This notion of fit (or compatibility or satisfaction) is deeply related to Searle's (1983) notion of CONDITIONS OF SATISFACTION: according to Searle, attitudes have conditions of satisfaction in the sense that beliefs are either true or false, desires are either fulfilled or not fulfilled, and intentions are either carried out or not carried out.[6]

not currently intend to break the window but predicts that she'll change her mind and form such an intention, thereby falsifying the first sentence but verifying the second. And *Kim intends to break the window* is also not equivalent to *Kim wants to intentionally break the window*: Kim can have such a desire without the commitment that comes with intention.

[6]A notable difference between Hintikka's and Searle's respective approaches to representing attitudes is that Hintikka speaks of possible worlds whereas Searle speaks of different ways the actual world could be. A passage from Hintikka (1969) that helps bridge the gap between these two approaches goes as follows: "It would be more natural to speak of different possibilities concerning our 'actual' world than to speak of several possible worlds. For the purpose of logical and semantical

For Searle, determining whether the conditions of satisfaction are met is rather straightforward in the case of belief and desire: a belief that $p$ is satisfied if and only if $p$ is true[7] and a desire that $p$ is satisfied if and if only if $p$ is true. In order for an intention that $p$ to be satisfied, however, it has to be the case not only that $p$ is true but that $p$ is true as a consequence of the attitude-holder's intention. I believe that this asymmetry between belief and desire on the one hand and intention on the other hand is the key to understanding the causation effect.

Before turning to the question of how the grammar cashes out this special property of intention reports, I turn to some evidence that substantiates Searle's claim about the special status of intention. The first piece of evidence is the kind Searle appeals to: intuitions about what it would take for the world to fit with one's intention. Suppose Kim intends to break the window. Before she has a chance to carry out her intention, she is outside playing catch with her son. When it is her turn to throw the ball, her aim is off, and the ball flies through the window, breaking it. So Kim intends to break the window, and she does break the window. But it is not true to say that she breaks the window intentionally. And crucially for the purpose of this discussion, it would be false to say that her intention to break the window is satisfied or carried out. A more vivid example, taken from Harman 1976:444, goes as follows:

> "Mabel intends to drive to Ted's house, to find him, and to kill him. By chance, Ted happens to walk by as Mabel backs out of her driveway and she runs him down without even seeing him. She intends to kill and does kill him, but she does not kill him intentionally."

Again here, what is crucial to the argumentation is the intuition that in this scenario, Mabel's intention to kill Ted is not satisfied, because although Mabel killed Ted, she did not do so intentionally.

The second piece of evidence to substantiate Searle's claim about intention comes from the distribution of the adverb *unintentionally*. This adverb can be embedded into the content of a belief report as in (19) and create no difficulty for interpretation: (19) could be used, for example, in a scenario where Kim is playing catch near a window and is not confident in her aim. (20), in turn, reports a somewhat odd desire, but is still more readily made sense of than (21). If objects

analysis, the second locution is much more appropriate than the first, however, although I admit that it sounds somewhat weird and perhaps also suggests that we are dealing with something much more unfamiliar and unrealistic than we are actually doing" (p. 90).

[7] An anonymous reviewer points out that this may be an oversimplification: Kratzer (1998) considers cases where a belief report is construed *de re* with respect to a specific event. In such cases, a belief that $p$ can fail to be satisfied even if $p$ is true, provided the belief holder is mistaken about the event that verifies $p$.

of intention are necessarily intentional, then the oddness of (21) is expected. (21) creates the same kind of interpretive difficulty as a sentence like *Kim intentionally broke the window unintentionally*, which is either contradictory or at least a strain on what is logically possible.

(19) Kim **believes** [she'll **unintentionally** break the window].

(20) ?Kim **wants** [to **unintentionally** break the window].

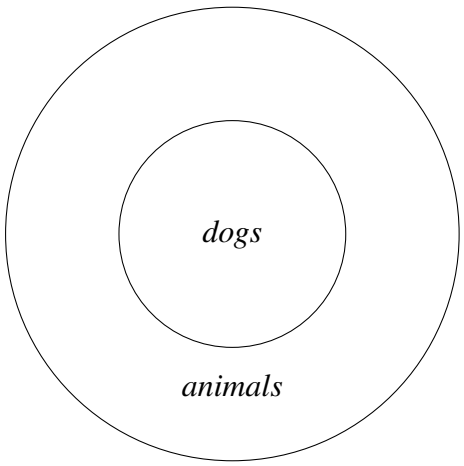
(21) ??Kim **intends** [to **unintentionally** break the window].

Finally, the third and in my view strongest piece of evidence for Searle's claim is the causation effect itself. But this will be the topic of section 4.

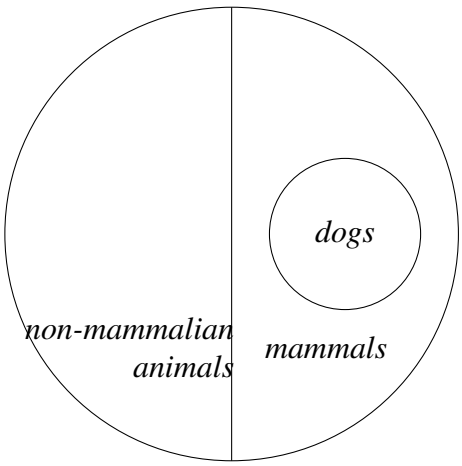
### *3.2 Consequences for the semantics*

Having provided some evidence for Searle's claim about intention, I now turn to the question of what consequences it has for the semantics. Since possible worlds are rather abstract objects and are difficult to have intuitions about, I approach this matter first by analogy from the domain of individuals, where intuitions come more easily. Suppose we wanted to come up with a semantic representation for the universally quantified statement in (22), and we came up with what is visually represented in Figure 1. It is immediately apparent that this representation is too weak. It is also immediately apparent how to fix it: we need to take the set that represents the scope of the quantifier, partition it into the set of mammals and the set of non-mammalian animals, and locate the set of dogs in the set of mammals, as in Figure 2.

(22) All dogs are mammals.



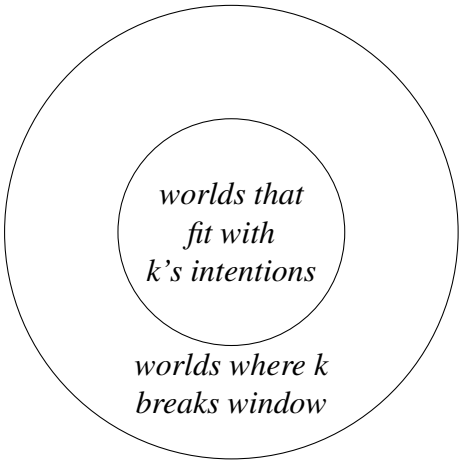

**Too weak for (22)!**
FIGURE 1



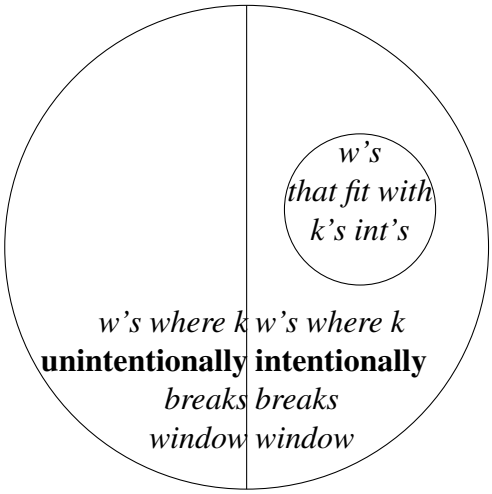

**Correct for (22)!**
FIGURE 2

Turning back to intention reports, my suggestion is that our preliminary semantics — represented visually in Figure 3 — is too weak in precisely the same way that Figure 1 is too weak a representation for (22). And the fix will also be very similar. In particular, we need to take the set that represents the scope of the quantifier, i.e., the set of worlds in which Kim breaks the window, and partition it into two sets, those worlds where Kim *intentionally* breaks the window and those worlds where Kim *unintentionally* breaks the window. And we need to locate those worlds that fit with Kim's intentions in the set of worlds in which Kim *intentionally* breaks the window, as in Figure 4.

(23) Kim intends to break the window.




**Too weak for (23)!**
FIGURE 3




**Correct for (23)!**
FIGURE 4

Expressed formulaically, the suggestion is that we need to move from the representation in (24) to the representation in (25).[8]

(24) TOO WEAK:
$[\![$Kim intends to break the window$]\!]^w$ =

[8]The truth conditions in (25) are in fact still weaker than how Searle would have it. For Searle, intentions have causally self-referential conditions of satisfaction: in order the for the intention to be satisfied, it would have to be the case not just that Kim breaks the window intentionally but that there is a causal chain from the intention to the outcome of Kim intentionally breaking the window. (According to Searle 2009, this idea goes back to Harman 1976.) I suppress this extra condition because I believe that an adequate account of the causation effect requires only the weaker condition that objects of intention are intentional. For reservations about the causally self-referential approach to intentions, see Mele 1987; for attempts at encoding such an idea into the semantics of intention reports, see Ludwig 2007; Grano 2016.

$\forall$w′ $\in$ ALT$_{int}$(k,w): Kim breaks the window in w′

(25) CORRECT:
$[\![$Kim intends to break the window$]\!]^w$ =
$\forall$w′ $\in$ ALT$_{int}$(k,w): Kim **intentionally** breaks the window in w′

For concreteness, suppose a model with just nine worlds in it. In $w_1$, $w_2$, and $w_3$, Kim *intentionally* breaks the window. In $w_4$, $w_5$, and $w_6$, Kim *unintentionally* breaks the window. Finally, in $w_7$, $w_8$, and $w_9$, Kim does not break the window at all. This is summarized in (26).

(26) a. $w_1$, $w_2$, $w_3$: Kim intentionally breaks the window.
b. $w_4$, $w_5$, $w_6$: Kim unintentionally breaks the window.
c. $w_7$, $w_8$, $w_9$: Kim does not break the window.

In order for the belief report expressed in (27) to be true, we know it has to be the case that none of the worlds in ALT$_{bel}$(w,k) include $w_7$, $w_8$, or $w_9$. But ALT$_{bel}$(w,k) can include any of $w_1$ through $w_6$: the belief report says nothing one way or the other about whether Kim believes she will break the window intentionally or unintentionally. The same holds for the desire report expressed in (28): if ALT$_{des}$(w,k) contains any of $w_7$, $w_8$, or $w_9$, the reported desire is false, but ALT$_{des}$(w,k) can contain any of $w_1$ through $w_6$ and still be true, because the desire report says nothing about whether Kim wants to break the window intentionally or unintentionally. But when we turn to the intention report in (29), the truth conditions need to specify that if ALT$_{int}$(w,k) contain any of not just $w_7$, $w_8$, $w_9$ but also any of $w_4$, $w_5$, $w_6$, this is sufficient to render the sentence false: if Kim's intention alternatives include any worlds where Kim *unintentionally* breaks the window, then it is false to say that she intends to break the window.

(27) Kim believes she'll break the window.

(28) Kim wants to break the window.

(29) Kim intends to break the window.

### *3.3 Compositional consequences*

I will now assume that (25), repeated here in (30), is correct and proceed to ask how it arises compositionally. In particular, where does the bolded bit of meaning come from?

(30) $[\![$Kim intends to break the window$]\!]^w$ =
$\forall$w′ $\in$ ALT$_{int}$(k,w): Kim **intentionally** breaks the window in w′

The only two plausible hypotheses are that it comes from the predicate *break the window* (31a) or that it comes from *intend* (31b).

(31) a. Hypothesis A: from *break the window*
b. Hypothesis B: from *intend*

The problem for Hypothesis A is that there is nothing inherently intentional about *break the window*. An event report like (32a) is underspecified for intention in the sense that it could be truthfully uttered in a scenario where Kim unintentionally broke the window. It is also compatible with an explicit denial of intention, as in (32b).[9]

(32) a. Kim broke the window.
b. Kim **unintentionally** broke the window.

But to give Hypothesis A a fighting chance, suppose we were to entertain the view that the predicate *break the window* harbors an ambiguity, and that one of its readings is specified for intentionality. Then it would be conceivable that *intend* comes with a selectional restriction that lets it combine with the intentional reading of *break the window* only. An early discussion of the question of whether event reports like *Kim broke the window* are underspecified or ambiguous with respect to intentionality is taken up by Zwicky and Sadock (1975), who ultimately conclude that the facts do not clearly support either the ambiguity view or the underspecification view. One point Zwicky and Sadock make is that the so-called 'identity tests' for ambiguity are unilluminating in cases where the two readings being tested stand in a privative rather than a polar opposition. For example, (33a) illustrates a standard attachment ambiguity. No 'crossed' reading is available whereby the ambiguity is resolved in one way in the first conjunct but the other way in the elided VP in the second conjunct. (33b), on the other hand, can be used to report a situation

[9]Of course, this is not true for all predicates that can be embedded under *intend*. For example, *murder* is inherently intentional, as suggested by (i). (See Kamp 1999–2007 for an investigation of what he calls 'inherently intentional verbs'.) The approach argued for below has as a consequence that (ii) is true just in case all those worlds that fit with what Kim intends are worlds in which Kim intentionally murders Sandy. The worlds in which Kim intentionally murders Sandy are identical to the worlds in which Kim murders Sandy. But this redundant 'overspecification' of intentionality is innocuous to the interpretation of the sentence in the same way that *Most dogs are nice dogs* is readily interpreted even though conservativity ensures that the repetition of *dogs* in the scope of the quantifier is redundant.

(i) #Kim unintentionally murdered Sandy.

(ii) Kim intended to murder Sandy.

wherein John ate a *ham* sandwich but Bill ate a *turkey* sandwich, thereby supporting the view that *sandwich* is underspecified with respect to these details rather than ambiguous. But even though a crossed reading is available in (33c) wherein John broke a mirror intentionally and Bill broke a mirror unintentionally, this does not rule out a version of the ambiguity view wherein one reading is underspecified with respect to intention and the other reading is intention-specific. Such an approach is compatible with the availability of a crossed reading for (33c) whereby the ambiguity is resolved to the underspecified reading in both conjuncts.

(33) a. John saw the man with the telescope, and so did Bill.
b. John ate a sandwich, and so did Bill.
c. John broke a mirror, and so did Bill.

In the context of the present investigation, though, VP ellipsis actually is illuminating and the evidence points toward underspecification rather than ambiguity. In particular, it is telling that there is nothing contradictory about (34). If *break the window* had an unambiguously intentional reading that *intend* selected for, then the expectation would be that if this VP were embedded under *intend* and then served as an antecedent for VP ellipsis, the elided VP should also be unambiguously intentional. But this is not the case, as (34) attests to: it is possible to explicitly deny intention even when the VP in question is anteceded by a VP embedded under *intend*.

(34) Kim intended to [break the window], and in the end she did ⟨~~break the window~~⟩, albeit not intentionally.

Based on these considerations, I adopt Hypothesis B. It can be implemented as follows. The leading idea is that *intend* does not map its propositional complement wholesale onto the scope of the quantifier, as in the old denotation in (35); rather, it maps a manipulated version of that proposition onto the scope of the quantifier, as in the new denotation in (36). The manipulation is a meta-language equivalent of the natural language predicate *intentional*, which I treat as a function ("INT") that maps a proposition, an individual, and a world onto a proposition. A definition for this function is given in (37). INT is true of a proposition p, an individual x, and a world w just in case two conditions hold. First, it has to be the case that p(w) = 1; i.e., the function is veridical. Second, it has to be the case that, in w, p is intentional on x's part. What it means for a proposition to be intentional on someone's part will be investigated in section 4, where, following Egré's (2014) semantics for *intentional*, I propose that it requires that the individual have a sufficient degree of desire for the outcome and a sufficient degree of foresight over how the outcome will come about.

(35) $[\![\text{intend}]\!]^w = \lambda p \lambda x.\forall w' \in \text{ALT}_{int}(x,w)$: $p(w')$ OLD DENOTATION

(36) $[\![\text{intend}]\!]^w = \lambda p \lambda x.\forall w' \in \text{ALT}_{int}(x,w)$: $\text{INT}(p)(x)(w')$ NEW DENOTATION

(37) $\text{INT} = [\lambda p[\lambda x[\lambda w.p(w) = 1$ and p is intentional on x's part in w$]]]$

This new denotation has as a consequence that an intention report like (38a) has a representation like (38b), rendered in prose in (38c). The bolded material is the substantive contribution of INT and what solves the weakness in the preliminary semantics for intention reports. (See section 6.1 for one final revision to this approach, designed to capture the *de se* properties of intention reports.)

(38) a. $[\![\text{Kim intends to break the window}]\!]^w$
b. $= \forall w' \in \text{ALT}_{int}(k,w)$: $\text{INT}(\lambda w''.\text{k-break-the-window-in-}w'')(k)(w')$
c. $\approx$ 'All those worlds compatible with what Kim intends in the evaluation world are worlds in which Kim breaks the window **and in which it is intentional on Kim's part that she break the window**.'

### *3.4 Events, propositions, and the predicate* intentional

Immediately above, I proposed that *intend* incorporates into its denotation a predicate INT, which is a relation between individuals and propositions. I also proposed that INT is the meta-language equivalent of the natural language predicate *intentional*. This deserves comment, because when the predicate *intentional* is used in its adverbial form,[10] it behaves like an agent-oriented adverb, and according to some approaches including Ernst (2002) (cf. also Kubota 2015), agent-oriented adverbs do not denote relations between individuals and propositions but rather denote relations between individuals and events.

One appeal of an eventive approach is that it straightforwardly accounts for the entailment pattern in (39): it would follow for standard Davidsonian reasons.

(39) Abby intentionally broke the window. $\rightarrow$ Abby broke the window.

But of course the entailment in (39) is not probative of a Davidsonian eventive analysis for *intentional*: it is well established that some propositional functions preserve the truth of their propositional argument; i.e., they are veridical in the sense of Giannakidou 1999. Implicative verbs are a clear example. So, on a propositional analysis, we simply say that it is a lexical property of INT that $\text{INT}(p)(x)(w)$ entails $p(w)$.

Another potential reason for favoring the eventive view is that at first glance,

[10] I assume that the adjective *intentional* and the adverb *intentionally* are semantically identical and differ only in their syntactic distribution.

*intentionally* appears to be aktionsart-sensitive, given contrasts like (40)–(41). In (40), *break the mirror* describes an event, whereas in (41), *know French* describes a state. Consequently, we might account for the contrast via the hypothesis that *intentionally* can select for events but not for states, a restriction that would be conceivable if *intentional* takes an event argument but not if it takes a propositional argument.

(40) Abby intentionally broke the mirror.

(41) ??Abby intentionally knew French.

But this apparent aktionsart-sensitivity is spurious. It is possible to identify felicitous sentences with *intentionally* across all the major aktionsart types, as in (42). And it is also possibly to identify infelicitous sentences across all the major aktionsart types, as in (43). Previewing the discussion of Egré's (2014) work below, I believe that the actual factor at stake in the split between (42) and (43) is whether the entity named by the subject can be construed as having a sufficiently high degree of foresight over the process leading to the described state or event. Although there are well known correlations between aktionsart and the thematic properties of the subject, these correlations are not perfect, as (42)–(43) attest to.

(42) a. John intentionally lived far from where he worked. STATE
b. John intentionally arrived ten minutes late. ACHIEVEMENT
c. John intentionally pushed the cart to the curb. ACCOMPLISHMENT
d. John intentionally pushed the cart around. ACTIVITY

(43) a. ??John intentionally knew French. STATE
b. ??John intentionally noticed the painting. ACHIEVEMENT
c. ??John intentionally went through puberty. ACCOMPLISHMENT
d. ??John intentionally snored for two hours while sleeping. ACTIVITY

I now turn to three considerations that support a propositional approach to *intentional(ly)*. First, as observed by Thomason and Stalnaker (1973) (cf. also Parsons 1990; Morzycki 2015), *intentionally* induces referential opacity. This is illustrated in (44): if Oedipus intentionally married Jocasta, this does not entail that Oedipus intentionally married his mother, even though Jocasta and Oedipus's mother refer to the same individual. This is straightforward on a propositional analysis but unexpected on an eventive analysis.

(44) Oedipus intentionally married **Jocasta**. $\not\twoheadrightarrow$ Oedipus intentionally married **his mother**.

Second, *intentionally* interacts scopally with negation. This is illustrated

in (45). This fact is expected on a propositional analysis, whereas on an eventive analysis, one would have to appeal to negative events to accommodate such facts.

(45) Abby did **not** intentionally break the window $\neq$ Abby intentionally did **not** break the window.

Third and finally, the predicate *intentional* can participate in a syntactic frame whereby it transparently combines with a clausal and therefore presumably proposition-denoting constituent. This is illustrated in (46). Furthermore, the meaning of (46) is roughly the same as that of *Abby intentionally broke the window* (the main difference being that the former presupposes that Abby broke the window whereas the latter entails it).[11]

(46) It was intentional on Abby's part [**that she broke the window**].
($\approx$ Abby intentionally broke the window.)

(46) is also significant because it exemplifies a syntax that allows us to pry apart the 'intender' from the agent of the sentence, as in (47), a fact I will crucially exploit in the semantic representations ahead.

(47) It was intentional on **Abby**'s part that **Bill** broke the window.

When *intentional* is used adverbially, it is not possible to pry apart the 'intender' from the agent of the sentence, and what (47) suggests is that this is due to the grammar of agent-oriented adverbs rather than something inherent to the semantics of *intentional*.

## 4 The causation effect explained

The purpose of this section is to show that the causation effect, repeated in (48), is explained by the revised denotation for *intend* motivated in the previous section and repeated in (49).

(48) Kim intends for Sandy to break the window.
$\approx$ Kim intends to bring it about that Sandy break the window.

[11] To be fair, the predicate *intentional* can also be used as an adnominal modifier in locutions like *the intentional destruction of the city*. If *destruction* is taken to denote a predicate of events, as seems plausible, then this would be conducive to an analysis in which *intentional* operates down at the event level and composes with the nominalized event description via predicate modification. The full range of facts therefore seem to pull us in both directions. One possibility is that *intentional* is type-theoretically flexible in being able to combine with both propositions and events. This seems theoretically unsatisfying, though for now I do not see a better solution.

(49) $[\![\text{intend}]\!]^w = \lambda p \lambda x. \forall w' \in \text{ALT}_{int}(x,w)$: INT(p)(x)(w′)

As a starting point, we observe that the denotation for *intend* in (49) delivers the results in (50b) when applied to a different-subject intention report like (50a). The case that I now want to make is that these truth conditions are sufficient to explain the causation effect, once we unpack the lexical semantics of the predicate *intentional*.

(50) a. $[\![\text{Kim intends for Sandy to break the window}]\!]^w$
b. = $\forall w' \in \text{ALT}_{int}(k,w)$: INT($\lambda w''$.s-break-the-window-in-w″)(k)(w′)
c. ≈ 'All those worlds compatible with what Kim intends in the evaluation world are worlds in which Sandy breaks the window and in which it is intentional on Kim's part that Sandy break the window.'

There is a large body of literature in experimental philosophy concerning what factors are at stake in people's judgments about whether some action counts as intentional. In a recent paper, Egré (2014) offers a linguistic take on the findings, and here I will basically follow Egré's approach. What Egré proposes is that *intentional* is a vague gradable predicate sensitive to (at least) two dimensions: "the *desire* to bring about a particular outcome" and "the knowledge or capacity to *foresee* that a particular plan or action taken will lead to that outcome" (p. 193–194). I will call these the desire dimension and the foresight dimension, respectively. Egré submits that the foresight dimension, which is the dimension that will be crucial to my account of the causation effect, "pertains to how much one can anticipate or control that one's actions will have a particular outcome" (p. 194). In a footnote, Egré furthermore entertains the possibility that foresight and control should be considered two distinct dimensions, since "an agent can desire an outcome, adequately foresee it as a result of some action, but simply lack control over the process linking action and outcome" (p. 194, note 4). Below we will see cases where intention reports can be true even in scenarios that do not involve the attitude holder having control over the relevant outcome. These facts point me toward the conclusion that the foresight dimension really is just about foresight, there is no separate control dimension, and the role that control plays in verifying intention reports has to do with the fact that having control over an outcome is a particularly salient way of being able to anticipate how it will come about.

The foresight dimension is supported by experimental findings like the one reported in Knobe 2003b wherein study participants were given one of two variants of the passage in (51), one instantiating the "skill condition" and one instantiating the "no skill" condition. Participants were then asked the question in (52).

(51) Jake desperately wants to win the rifle contest. He knows that he will only

win the contest if he hits the bull's-eye. He raises the rifle, gets the bull's-eye in the sights, and presses the trigger.
*Second paragraph in skill condition:* Jake is an expert marksman. His hands are steady. The gun is aimed perfectly . . . The bullet lands directly on the bull's-eye. Jake wins the contest.
*Second paragraph in no-skill condition:* But Jake isn't very good at using his rifle. His hand slips on the barrel of the gun, and the shot goes wild . . . Nonetheless, the bullet lands directly on the bull's-eye. Jake wins the contest.

(52) Did Jake intentionally hit the bull's eye?
   a. Skill condition: 79% respond affirmatively.
   b. No-skill condition: 28% respond affirmatively.

One way of interpreting these results is that in the skill condition, Jake had the requisite degree of foresight over how the outcome would come about to support an affirmative response to the question in (52), whereas this does not hold for the no-skill condition.[12]

The desire dimension, in turn, is supported by experimental findings like that reported in Knobe 2003a. Participants were given the passage in (53) and then asked the question in (54).

(53) The vice-president of a company went to the chairman of the board and said, 'We are thinking of starting a new program. It will help us increase profits, but it will also help the environment.' The chairman of the board

[12] As reported in Knobe 2003b, other participants where shown a similar pair of scenarios but involving Jake aiming and firing a rifle at his aunt with the intention of killing her and inheriting her money. Here, the skill condition elicited a 95% affirmative response rate and the no-skill condition elicited a 76% affirmative response rate. Knobe takes this to indicate that there is a moral dimension to how we attribute intention. But as explored in later work (Pettit and Knobe 2009), similar effects hold not just for reasoning about intention but for reasoning about a wide range of psychological attitudes. Taking this line of reasoning even further, Egré (2014) suggests that the effect pervades even judgments that have nothing to do with agency or mental attitudes or even morality in the strict sense but rather simply have to do with how positively or negatively valued an outcome is. For example, Egré suggests that in a context where a boat with 80 passengers sinks and 40 passengers perish and 40 survive, one would be more willing to judge (ia) as true than judge (ib), even though the quantities involved are identical: a negatively valued outcome lowers the threshold for what quantity counts as *many*, just as a negatively valued outcome lowers the threshold for how much foresight an agent must have for her action to count as intentional.

(i) a. Many passengers perished in the sinking.
   b. Many passengers survived the sinking. (Egré 2014:188)

answered, 'I don't care at all about helping the environment. I just want to make as much profit as I can. Let's start the new program.' They started the new program. Sure enough, the environment was helped.

(54) Did the chairman intentionally help the environment? (23% respond affirmatively.)

One way of interpreting this result is that although the chairman could foresee that the environment would be helped, it is clear from the passage that she had no desire for this outcome (rather, it is a foreseen side effect), and this results in the relatively low percentage of affirmative responses.[13]

Turning back to the analysis of different-subject intention reports, repeated in (55), the crucial point here is that if Egré's semantics for *intentional* is on the right track, then those worlds in which it is intentional on Kim's part that Sandy break the window are all worlds in which Kim has a sufficiently high degree of foresight over the process that leads to Sandy breaking the window. This, I suggest, is the source of the causation effect. Nothing further needs to be specified in the semantics. The causation effect, on this view, is an emergent consequence of the fact that objects of intention are necessarily *intentional*, and *intentional* objects necessarily involve foresight on the part of the relevant individual over the process leading to the outcome.

(55) a. $[\![$Kim intends for Sandy to break the window$]\!]^w$
b. = $\forall w' \in \text{ALT}_{int}(k,w)$: INT(^s-break-the-window)(k)(w′)
c. ≈ 'All those worlds compatible with what Kim intends in the evaluation world are worlds in which Sandy breaks the window and in which it is intentional on Kim's part that Sandy break the window.'

On this approach, causation is not explicitly represented anywhere in the semantics of different-subject intention reports; instead, the causation effect has to do with how we reason about whether an outcome counts as *intentional*. The lack of any explicit representation of causation is a virtue of this analysis. To see why, let's consider the criticism that Boeckx et al. (2010) level against Jackendoff & Culicover's (2003) claim about different-subject intention reports. Jackendoff and Culicover (2003), in motivating their coercion approach to different-subject intention reports, say that sentences like (56) "can be paraphrased approximately by" (57) (p. 542).

[13] Here again, responses are modulated based on the moral reprehensibility of the outcome described. When presented with a scenario identical except that it involved *harming* rather than *helping* the environment, the affirmative response rate went up to 82%. See note 12.

(56) Hilary intends for Ben to come along to the party.

(57) Hilary intends *to bring it about that* Ben comes along to the party.

Boeckx et al. (2010) respond by saying that "paraphrases are not meanings . . . it is not clear to us that [(58) ] is a contradiction, which it should be if [(59a)] *meant* [(59b)]" (p. 233).

(58) Hilary intended for Ben to come to the party though, being lazy and complacent, she intended to do nothing whatsoever to bring this about.

(59) a. Hilary intends for Ben to come to the party.
b. Hilary intends to bring it about that Ben come to the party.

I believe that Boeckx et al.'s criticism is a valid one, but also the data in (58) that they employ is not actually successful in making the point. Although (58) is not obviously contradictory, neither is (60), wherein the first clause is replaced by its putatively synonymous and explicitly causative variant. Consequently, the non-contradictory status of (58) is actually consistent with the view that (59a) and (59b) are truth-conditionally equivalent.[14]

(60) Hilary intended to bring it about that Ben come to the party though, being lazy and complacent, she intended to do nothing whatsoever to bring this about.

However, a piece of data that does validate Boeckx et al.'s suggestion that (59a) and (59b) are not truth-conditionally identical is the minimal pair in (61)–(62). (61) is contradictory: it is a straightforward conjunction of a proposition with its own negation. (62), on the other hand, which minimally differs from (61) in substituting in a different-subject intention report in the first clause, is not obviously contradictory.

(61) Hilary intended to bring it about that Ben to come to the party though, being lazy and complacent, Hilary did not intend to bring it about that Ben come to the party. CONTRADICTORY

[14]The non-contradictory status of (60) relates to the fact that the causation associated with the locution *bring it about* does not actually require action in the ordinary sense: one can bring about an outcome by *failing* to act. Imagine a scenario, for example, where Kim and Sandy are on a ship. Sandy accidentally falls overboard and she cannot swim. Kim fails to act because she wants Sandy to drown. I can report this scenario by saying, "Kim intends to bring it about that Sandy drown". In the philosophy literature, these are known as negative intentions, and they are found also in same-subject intention reports like "Kim intends to stay home", in a context where Kim is already at home. (See e.g. Harman 1976.)

(62) Hilary intended for Ben to come to the party though, being lazy and complacent, Hilary did not intend to bring it about that Ben come to the party. NOT CONTRADICTORY

On the approach advocated here, the non-contradictory status of (62) is not a problem. The approach here merely says that if Hilary intended for Ben to come to the party, then all of Hilary's intention alternatives are worlds in which it is intentional on Hilary's part that Ben come to the party. So the prediction is that if (63) is not contradictory, (62) also is not.

(63) It was intentional on Hilary's party that Ben came to the party though, being lazy and complacent, Hilary did not bring it about that Ben come to the party. NOT CONTRADICTORY

This prediction bears out: in both (62) and (63), explicit denial of causation is consistent with the attribution of intentionality, which here can be taken to involve something like pure foresight or anticipation, divorced from any actual causation. This substantiates Egré's proposal that one of the relevant factors in determining whether an action counts as intentional has to do with foresight. Typically, the threshold for having a sufficient degree of foresight is met when one has foresight in virtue of having control over what happens, but data like (63) show that this is not always essential.[15]

## 5 Comparing the non-coercion account to the coercion account

Having presented a non-coercion account of the causation effect, I now compare it to a coercion account. The coercion account of the causation effect amounts to the claim that in a same-subject intention report, *intend* combines with its complement via ordinary compositional procedures, as in (64), whereas in a different-subject intention report, the composition of *intend* with its complement is mediated by some function that manipulates the semantic value of the complement, as in (65).

[15] Pushing this idea to its limits, it is instructive to consider sentences like (i), a naturally occurring example appearing as a quotation in a news article. The context for the utterance is a high school student talking about his experience planting flowers at school for Earth Day, which turned out to be a rainy day. Clearly, this sentence is not the denial of an intention to cause or bring about rain. Rather, it denies that the speaker's intention alternatives include worlds in which the speaker foresaw and desired rain.

(i) I didn't intend for it to rain while we were planting today.
(http://www.mlive.com/news/jackson/index.ssf/2014/04/in_the_classroom_da_vinci_inst_1.html; retrieved 2/17/16)

(64) ⟦intend to leave⟧ = ⟦intend⟧(⟦to leave⟧)

(65) ⟦intend for Bill to leave⟧ = ⟦intend⟧(F(⟦for Bill to leave⟧))

For Jackendoff and Culicover (2003), F is a causative predicate approximated by the locution *bring it about that*. We saw evidence in section 4 above that this does not work; in particular, (66) is not a contradiction, contrary to what such an account would predict.

(66) Hilary intended for Ben to come to the party though, being lazy and complacent, Hilary did not intend to bring about that Ben come to the party.

But this need not be a point against the coercion account. It could simply be indicating that Jackendoff & Culicover were wrong about the value of their coercion operator F. We could alternatively hypothesize that F has the same semantic value as the INT predicate from sections 3–4 above, as in (67), thereby guaranteeing the same truth conditions as in the approach to different-subject intention reports argued for in this paper.

(67) ⟦intend for Bill to leave⟧ = ⟦intend⟧(INT(⟦for Bill to leave⟧))

In short, the non-coercion account, whereby INT is built into the meaning of *intend*, and the coercion account, whereby INT is inserted into the semantic representation to repair an otherwise semantically illicit combination, make identical predictions about the truth conditions of different-subject intention reports. Given this, how can we decide between them? The answer is that we need to look at what predictions they make about same-subject intention reports. As we saw in section 3 above, INT is implicated in the semantics not just of different-subject intention reports but also of same-subject intention reports. If INT is built into the semantics of *intend*, as the non-coercion account holds, then this is fully expected. But if INT is not built into the semantics of *intend*, then it is unexpected. This leaves the coercion approach with two options. The first option is that both same-subject and different-subject intention reports exhibit coercion, as schematized in (68)–(69). But this approach undermines the reason for appealing to coercion in the first place, namely the idea that the selectional properties of *intend* are satisfied by a controlled complement but not by a non-controlled complement. Rather than factoring INT out as a coercion operator, we might as well build it right into the denotation for *intend*, which is exactly the approach taken in this paper.

(68) ⟦intend to leave⟧ = ⟦intend⟧(INT(⟦to leave⟧))

(69) ⟦intend for Bill to leave⟧ = ⟦intend⟧(INT(⟦for Bill to leave⟧))

The other option that the coercion approach has is to entertain the idea that there are two lexical items *intend*$_1$ and *intend*$_2$, one with INT built into its denotation and used for same-subject intention reports as argued above, and one without INT built into it that is used for different-subject intention reports and that triggers coercion. This option is schematized in (70)–(71).

(70) $[\![\text{intend to leave}]\!] = [\![\text{intend}_1]\!]([\![\text{to leave}]\!])$

(71) $[\![\text{intend for Bill to leave}]\!] = [\![\text{intend}_2]\!](\text{INT}([\![\text{for Bill to leave}]\!]))$

This is unattractive territory as well, since much of the appeal of the coercion account is that it avoids positing a lexical ambiguity for what is intuitively the same verb. Based on these considerations, I conclude that the non-coercion analysis of different-subject intention reports is conceptually superior to the coercion approach.

Two anonymous reviewers suggest that there are other, non-semantic considerations that are at stake in deciding whether to adopt a coercion analysis. In particular, one reviewer finds different-subject intention reports to be less acceptable than same-subject intention reports and suggests that a coercion analysis predicts this whereas a non-coercion analysis does not. Suppose for the sake of argument that the reviewer is correct about the acceptability facts. Degraded acceptability is neither a necessary nor a sufficient condition for the presence of coercion. There are many phenomena for which a coercion analysis has been invoked that do not seem to be associated with degraded acceptability. These include the examples in (72), all taken from Lauwers and Willems 2011, where the bolded material in the parentheticals indicates the putatively coerced material. It is not clear to me that any of these have a degraded acceptability. (But see Piñango and Deo 2015 for an alternative analysis of sentences like (72a) that does not involve coercion.)

(72)
a. I began a book. (I began **to read/write** a book.)
b. I heard the river. (I heard **the sound of** the river.)
c. She suddenly knew it. (She suddenly **came to** know it.)
d. Do you want a coffee? (Do you want a **conventional portion of** coffee?)
e. The ham sandwich in the corner wants some more coffee. (**The person who ordered** the ham sandwich in the corner wants some more coffee.)

By the same token, there are many potential sources of degraded acceptability that have nothing to do with coercion. Consequently, it seems to me that this is not a point in favor of the coercion approach. See section 7 for one possible take on why *intend* and other predicates like it may have a marked status when combined with a *for-to* complement.

In a different vein, another reviewer suggests that a coercion analysis should also be evaluated in light of cross-linguistic evidence. In particular, the reviewer suggests that if we can identify languages wherein different-subject intention reports are obligatorily mediated by causative morphology, then it is appealing to hypothesize that the coercion analysis is correct for English and that what is subject to cross-linguistic variation is whether or not the causative material is associated with (overt) structure or not. Indeed, this was Perlmutter's (1968) motivation for positing silent structure in different-subject intention reports in English: as Perlmutter demonstrated, Croatian disallows different-subject intention reports. But as discussed above, adopting the coercion analysis for English involves either positing coercion across the board for both same-subject and different-subject complements, or positing a lexical ambiguity for *intend*, and neither of these options is supported cross-linguistically, to my knowledge. As we will see in section 7 below, there are other verbs in English that pattern like *intend* in giving rise to the causation effect, but that are marginal with different-subject complements for some speakers of English (e.g., *try*, as in *%John tried for Bill to open the door*). It seems plausible that whatever principles are responsible for rendering such sentences marginal in English are also responsible for some languages disallowing different-subject complements to *intend*. For a discussion of what these principles might be, see section 7.

## 6 Remaining issues

### *6.1* de se *semantics*

Controlled complements to attitude predicates are well known to give rise to an obligatorily *de se* interpretation (Morgan 1970), and so the expectation is that this should hold for controlled complements to *intend*. In this section, I document the *de se* properties of intention reports and sketch a way of ensuring that the semantics delivers the right results.[16]

Considerations of theoretical simplicity favor the view that an attitude predicate like *want* has just one denotation regardless of whether it combines with a controlled complement (73) or a non-controlled complement (74).

[16]Another dimension of control semantics — and one that I believe is orthogonal to the goals of this paper — has to do with the phenomenon of partial control in the sense of Landau (2000). Pearson (2015) treats *intend* as a partial control predicate, and I believe that all of the proposals in this paper would be compatible with the technology developed in that paper to derive partial control readings. That being said, in the experimental investigation of the partial control status of thirty control predicates reported by White and Grano (2014), *intend* was among the least acceptable in partial control contexts. Consequently, this is an area where more research is needed.

(73) Abby **wants** [to break the window].

(74) Abby **wants** [Bill to break the window].

But this desideratum stands in tension with another consideration: Chierchia's (1990) influential approach to the obligatorily *de se* status of attitude reports expressed by control sentences involves treating controlled complements as property-denoting and (some) non-controlled complements as proposition-denoting. In what follows, I lay out how Stephenson (2010) resolves this tension.

The claim that controlled complements to attitude predicates have an obligatory *de se* interpretation is based on the observation that a sentence like (75), where Italian *credere* 'believe' takes a controlled complement, can be used to report a first-person belief on the part of Pavarotti ("I am in danger") but cannot be used to report a situation wherein, for example, Pavarotti sees himself in the mirror, fails to realize that he is looking at his own image, and forms the belief "The person I am looking at is in danger".

(75) Pavarotti crede di essere in pericolo.
Pavarotti believes COMP be in danger
'Pavarotti believes that he's in danger.' (Chierchia 1990:20) ITALIAN

Chierchia (1990), drawing on Lewis (1979), proposes an account of this fact that relies on two crucial ingredients. First, attitude predicates quantify over world-individual pairs. The predicate *credere*, for example, has a denotation like (76), where $\text{ALT}_{dox}$ is a function from worlds and individuals to sets of world-individual pairs (doxastic alternatives) as defined in (77). (The precise wording in (77) is mostly borrowed from Percus and Sauerland 2003.) Second, controlled complements denote properties, as in (78).[17]

(76) $[\![\text{credere}]\!]^w = \lambda P_{\langle e,st\rangle} \lambda x. \forall \langle w', y\rangle \in \text{ALT}_{dox}(w,x)\text{: } p(y)(w')$

(77) $\text{ALT}_{bel}(w,x) = \{\langle w', y\rangle : w'$ is compatible with what x believes in w and y is the individual in $w'$ who x (in w) identifies as himself$\}$

(78) $[\![\text{di PRO essere in pericolo}]\!]^w = \lambda x.$x is in danger in w

This setup yields interpretations like that spelled out in (79).

(79) a. $[\![\text{Pavarotti crede di essere in pericolo}]\!]^w$

[17]The idea that controlled complements denote properties has roots in Montague 1974; Chierchia 1984; Dowty 1985. The difference is that in these cited works, controlled complements denote properties in virtue of having a VP syntax. Chierchia (1990), on the other hand, treats controlled complements as clausal, with a PRO subject that obligatorily abstracts to create a property denotation.

b. $= \forall\langle w',y\rangle \in \text{ALT}_{dox}(w,p)$: y is in danger in $w'$

c. $\approx$ 'For all world-individual pairs $\langle w',y\rangle$ such that $w'$ is compatible with what Pavarotti believes in the evaluation world and y is the individual in $w'$ who Pavarotti (in the evaluation world) identifies as himself, y is in danger in $w'$.'

The obligatory *de se* semantics emerges as a consequence of the fact that in all those world-individual pairs quantified over, it is compatible with what Pavarotti believes in the evaluation world that *he himself* is the relevant individual who is in danger in the relevant world.

For Chierchia, a *de se* interpretation arises whenever the complement to the attitude predicate denotes a property, whereas a non-*de se* interpretation arises when the complement denotes a proposition. Stephenson (2010) proposes a way of obviating this property/proposition distinction without losing an account of the distribution of *de se* interpretations. What she proposes is that all clauses (including both controlled and non-controlled complements, as well as matrix sentences) have as their intensions sets of centered worlds, i.e., sets of world-individual pairs. The independent evidence for this move comes from predicates of personal taste: building on Lasersohn (2005), Stephenson proposes that there is a reading of sentences like (80) where the predicate of personal taste (here, *tasty*) comes with an implicit pronoun PRO that refers to the world center, as in (81).

(80) This apple is tasty.

(81) $[\![\text{This apple is tasty PRO}_j]\!]^{w,j} = 1$ iff this apple is tasty to j in w

For Stephenson, an attitude predicate uniformly quantifies over world-individual pairs, as in (82a) (where *want* quantifies over bouletic alternatives (82b)), and controlled and non-controlled complements are type-theoretically identical in having as their intensions sets of centered worlds, as in (83). Crucially, PRO refers to the world center, so a controlled complement like (83a) has a center-dependent interpretation, whereas a complement that has no PRO in it like (83b) has a center-independent interpretation.

(82) a. $[\![\text{want}]\!]^{w,j} = \lambda p_{\langle s,et\rangle}\lambda x.\forall\langle w',y\rangle \in \text{ALT}_{bul}(w,x)$: $p(w')(y)$

b. $\text{ALT}_{des}(w,x) = \{\langle w',y\rangle : w'$ is compatible with what x wants in w and y is the individual in $w'$ who x (in w) identifies as himself$\}$

(83) a. $[\![\text{PRO}_j \text{ to break the window}]\!]^{w,j} = 1$ iff j breaks the window in w

b. $[\![\text{Bill to break the window}]\!]^{w,j} = 1$ iff Bill breaks the window in w

With this setup, we get results like (84) and (85) for controlled and non-

controlled complements to *want*, respectively.[18]

(84) a. $[\![$Abby wants PRO$_j$ to break the window$]\!]^{w,j}$
b. = $\forall\langle$w′,y$\rangle \in$ ALT$_{bul}$(w,a): y breaks the window in w′
c. $\approx$ 'For all world-individual pairs $\langle$w′,y$\rangle$ such that w′ is compatible with what Abby wants in the evaluation world and y is the individual in w′ who Abby (in the evaluation world) identifies as herself, y breaks the window in w′.'

(85) a. $[\![$Abby wants Bill to break the window$]\!]^{w,j}$
b. = $\forall\langle$w′,y$\rangle \in$ ALT$_{bul}$(w,a): b breaks the window in w′
c. $\approx$ 'For all world-individual pairs $\langle$w′,y$\rangle$ such that w′ is compatible with what Abby wants in the evaluation world and y is the individual in w′ who Abby (in the evaluation world) identifies as herself, Bill breaks the window in w′.'

In (84), the *de se* interpretation is guaranteed for the same reason that it was on Chierchia's approach, and in (85), the world center stills figures into the quantification but in an innocuous way since the complement has a center-independent interpretation.[19]

Applying this framework to *intend* gives us the revised alternativeness function in (86) and the revised denotation for *intend* in (87). It yields truth conditions like (88) for same-subject intention reports.

(86) ALT$_{int}$(x,w) = $\{\langle$w′,y$\rangle$: w′ is compatible with what x intends in w and y is the individual in w′ who x (in w) identifies as himself$\}$

(87) $[\![$intend$]\!]^{w,j}$ = $\lambda$p$\lambda$x.$\forall\langle$w′,y$\rangle \in$ ALT$_{int}$(x,w): INT(p)(y)(w′)

(88) a. $[\![$Kim intends to win the election$]\!]^{w}$
b. = $\forall\langle$w′,y$\rangle \in$ ALT$_{int}$(k,w): INT($\lambda$w″.y-win-the-election-in-w″)(y)(w′)
c. $\approx$ 'For all those world-individual pairs $\langle$w′,y$\rangle$ such that w′ is com-

[18]Stephenson (2010) assumes an appropriately modified version of Intensional Functional Application to handle the composition of the predicate (whose extension is type $\langle\langle s, et\rangle, et\rangle\rangle$ with its complement (whose extension is type $t$). (i) is adapted from Stephenson 2010:419.

(i) Intensional Functional Application: If $\alpha$ is a complex expression formed by combining two expressions $\beta$ and $\gamma$, and $\lambda$w′$\lambda$j′.$[\![\gamma]\!]^{w',j'}$ is in the domain of $[\![\beta]\!]^{w,j}$, then $[\![\alpha]\!]^{w,j}$ = $[\![\beta]\!]^{w,j}(\lambda$w′$\lambda$j′.$[\![\gamma]\!]^{w',j'})$.

[19]For an alternative approach, see Pearson 2013. Pearson's approach takes the opposite tack of Stephenson's by proposing that clauses uniformly denote properties. As far as I can tell, the choice between the Stephenson approach and the Pearson approach is orthogonal to the goals of this paper; I adopt Stephenson's approach just for concreteness.

patible with what Kim intends in the evaluation world and y is the individual in w′ who Kim (in the evaluation world) identifies as herself, y wins the election and it is intentional on y's part that y wins the election.'

According to the semantics in (88), Kim's attitude is *de se* both with respect to the individual on whose part the outcome is intentional, and with respect to the individual who wins the election. The first of these two *de se* relations is deeply built into the logic of intention and it is hard to imagine how things could be otherwise (cf. Brand 1984). The second relation is supported by a standard *de se* test context: the sentence in (89b) is false in the scenario described in (89a).

(89) a. CONTEXT: Kim is a politician running for office. One day she gets drunk and sees her own advertisement on television. Without realizing she is watching herself, she decided to throw her support behind the candidate on the television and see to it that that candidate wins the election.
b. #Kim intends to win the election.

When we turn to different-subject intention reports, the updated denotation yields outcomes like (90).

(90) a. $[\![$Kim intends for Sandy to win the election$]\!]^{w}$
b. $= \forall\langle w',y\rangle \in ALT_{int}(k,w)$: INT($\lambda w''$.sandy-win-the-election-in-$w''$)(y)($w'$)
c. $\approx$ 'For all those world-individual pairs $\langle w',y\rangle$ such that w′ is compatible with what Kim intends in the evaluation world and y is the individual in w′ who Kim (in the evaluation world) identifies as herself, Sandy wins the election and it is intentional on y's part that Sandy wins the election.'

The *de se* relation between the attitude holder and the winner of the election is of course no longer present, but unlike what we find with different-subject attitude reports involving the more familiar attitude predicates, different-subject intention reports still end up having a *de se* component on the current approach: there is a *de se* relation between the intention-holder and the individual on whose part it is intentional that the outcome obtain. As stated above in connection with same-subject intention reports, this is deeply built into the logic of intention and it is hard to imagine how things could be otherwise: if the intention-holder does not see herself as the "overseer" of the named outcome, then it is difficult to see how the attitude could be an intention at all.

*6.2 Contextual comparison?*

The standard Hintikkan approach holds that *x believes p* relates $x$'s doxastic alternatives to $p$ in a straightforward way, encoding a subset relation between the former and the latter. But a great deal of evidence suggests that the way *x wants p* relates $x$'s bouletic alternatives to $p$ is more complicated, involving a comparison between $p$-worlds and relevant alternatives (Stalnaker 1984; Heim 1992; Giannakidou 1999; von Fintel 1999; Villalta 2008; Anand and Hacquard 2013). In what follows, I review the relevant evidence and then consider how *intend* fits in.

A standard observation in the literature supporting the comparative treatment of *want* is due to Asher (1987), who showed that there are cases where $p$ entails $q$ but *x wants* $p$ does not entail *x wants* $q$. Heim (1992) and subsequent authors have taken this as supporting a non-monotonic analysis for *want*, which is expected if *want* has a comparative semantics. As Anand and Hacquard (2013) discuss, (91a) can describe a preference for dying quickly as opposed to dying slowly, which does not entail an "absolute" preference for dying (as opposed to not dying). Similarly, (91b) — fashioned after Heim 1992 — can describe a preference for teaching Tuesdays and Thursdays over teaching on other days of the week. It does not entail an "absolute" preference for teaching. The lack of such entailments is supported by the observation that the sentences in (92) are not contradictory.

(91) a. I want to die quickly.
b. John wants to teach Tuesdays and Thursdays.

(92) a. I don't want to die, but given that I have to die, I want to die quickly.
b. John doesn't want to teach, but given that he has to teach, he wants to teach Tuesdays and Thursdays.

When we turn to *believe*, on the other hand, we do not see this behavior; the sentences in (93) are contradictory. Crucially, (94) shows that *intend* patterns like *believe* in this respect.

(93) a. #I don't believe I'll die, but given that I have to die, I believe I'll die quickly.
b. #John doesn't believe he'll teach, but given that he has to teach, he believes he'll teach Tuesdays and Thursdays.

(94) a. #I don't intend to die, but given that I have to die, I intend to die quickly.
b. #John doesn't intend to teach, but given that he has to teach, he intends to teach Tuesdays and Thursdays.

Another consideration supporting the special treatment of *want* is the ob-

servation that *want* supports comparatives and other degree constructions (Villalta 2008; Anand and Hacquard 2013). Building on the data in Anand and Hacquard (2013) and adding *intend* to the mix, I take the following facts as further evidence that *intend* patterns like *believe* and unlike *want* in not involving comparison with contextual alternatives.

*(Non-)gradability:*

(95) a. What I **want** the most is to leave.
b. John **wants** to leave more than Bill does.

(96) a. #What I **believe** the most is that Mary left.
b. #John **believes** that Mary left more than Bill does.

(97) a. #What I **intend** the most is to leave.
b. #John **intends** to leave more than Bill does.

I conclude from these observations that the semantics of *intend* does not involve comparison with contextual alternatives, as already reflected in the denotation for *intend* argued for in this paper.[20]

## 7 Beyond *intend*

The causation effect is not limited to *intend*. It is found with an entire class of control predicates identified by Sag and Pollard (1991) in their study of controller choice. Sag & Pollard call this class of predicates "*promise*-type verbs", and they characterize these verbs as involving a commitment on the part of the controller to perform the action associated with the complement (or to *not* perform the action, in the case of *refuse* and *decline*). The predicates they include in this class are listed in (98). Henceforth I will call these COMMITMENT predicates.

(98) promise, swear, agree, contract, pledge, vow, try, intend, refuse, choose, decline, decide, demand, endeavor, attempt, threaten, undertake, propose, offer, aim (Sag & Pollard 1991:65)

The sentences in (99)–(105) are all naturally occurring examples of various commitment predicates in combination with *for-to* complements, found via Google

[20]Given that *intend* combines with subjunctive complements in at least some languages (e.g., Greek *skopevo* 'intend'/'plan': see Giannakidou 2013), the non-comparative character of *intend* is potentially problematic for theories of mood choice that tie subjunctive mood to comparative semantics in the embedding predicate (e.g., Villalta 2008). But the facts are not obviously problematic for theories of mood choice based on veridicality (see e.g. Giannakidou 2009). I leave it to future work to more fully explore the consequences of *intend* for theories of mood choice.

searches. Caution is in order in interpreting these data since there is no guarantee that the sentences were produced by native speakers of English or that they are free of performance errors. What is crucial, though, is the intuition that these sentences can all be comfortably paraphrased by replacing the underlined portion of the sentences (i.e., *for him*) with *to bring it about that he*. In other words, the causation effect is operative for all of these predicates. I take this to suggest that all of these predicates incorporate the INT function just like *intend* does.[21]

(99) Athena **promised** for him to become a hero of war.
(https://prezi.com/utyj8myih6ax/the-odyssey/; retrieved 2/25/15)

(100) All eyes were on Teague from the outset as the Hawks have **vowed** for him to play a bigger part on the team this season.
(http://www.peachtreehoops.com/2010/10/8/1739426/emptying-the-notebook-from-the-hawks-pre-season-opener; retrieved 2/25/15)

(101) We **tried** for him to get better this morning.
(http://www.smh.com.au/fifa-world-cup-2014/world-cup-news-2014/italys-gianluigi-buffon-uncertain-to-face-costa-rica-20140615-zs8h4.html; retrieved 2/25/15)

(102) I was happy we **chose** for him to stay with her.
(http://brpetsitter.com/testimonials.html; retrieved 2/25/15)

(103) The family **decided** for him to leave school at the end of year eleven.
(http://www.frankrusso.net/intro.html; retrieved 2/25/15)

(104) Tugging on his shoulders I **attempted** for him to get away from the locker.
(http://www.mibba.com/Stories/Read/305188/All-For-You-My-Daisy/4/; retrieved 2/25/15)

(105) The only reason why my 4yr old calmed down tonight . . . was because I **threatened** for him to sleep in the spare room.

[21] An anonymous reviewer suggests that *plan* should also be considered a commitment predicate. This seems right to me, given that the causation effect is operative in sentences like (i). Other predicates not in Sag & Pollard's list that give rise to the causation effect include the implicative predicates *manage* and *remember*, as illustrated in (ii) and ((iii)) respectively.

(i) As a child, his father **planned** for him to be a clergyman, but they were in no financial state for that to happen.
(http://www.revolutionary-war.net/benjamin-franklin.html; retrieved 2/4/16)

(ii) I **managed** for him to notice me.
(https://twitter.com/goldy_ks/status/311362694768914432; retrieved 2/26/15)

(iii) [I] **remembered** for him to take his pills.
(https://www.facebook.com/imfollowinggeoffrey/posts/554586797914173; retrieved 2/26/15)

(http://community.babycentre.co.uk/post/a8556125/ looking_for_advice_re_separate_bedrooms_for_kids; retrieved 2/25/15)

Commitment predicates are to be contrasted with predicates like *hope* and *want*, which do not involve commitment semantics and which straightforwardly combine with both controlled complements and non-controlled *for-to* complements without the causation effect, as illustrated in (106)–(107). There are also some control predicates that are not in the commitment class and that categorically resist *for-to* complements: these include evaluative predicates (Wilkinson 1970, 1976; Rivière 1983; Barker 2002; Kertz 2010), as in (108), and aspectual verbs, as in (109). (I assume following Perlmutter (1970) that aspectual verbs are control/raising ambiguous.)

(106) a. Kim hoped to leave.
b. Kim hoped for Sandy to leave.
($\neq$ Kim hoped to bring it about that Sandy leave.)

(107) a. Kim wanted to leave.
b. Kim wanted for Sandy to leave.
($\neq$ Kim hoped to bring it about that Sandy leave.)

(108) a. Kim was stupid to leave.
b. *Kim was stupid for Sandy to leave.
($\neq$ Kim was stupid to bring it about that Sandy leave.)

(109) a. Kim began to leave.
b. *Kim began for Sandy to leave.
($\neq$ Kim began to bring it about that Sandy leave.)

Of course, something must be said about why some commitment predicates give rise to degraded acceptability when they combine with *for-to* complements.[22] For example, *try* with a *for-to* complement, as illustrated in (110), is unacceptable or at the very least highly marked.

(110) ??/*Kim tried for Sandy to leave.

Some researchers have taken the position that it would be desirable to have a theory of the semantics of *try* that predicts this resistance to non-controlled complements. Suggestions in this vein include Schütze 1997:33 (“trying often but not always implies the involvement of oneself”) and McFadden 2005:180 (“[trying] im-

[22]In this connection, there is a great deal of overlap between the commitment predicates and a class of predicates identified by Huddleston & Pullum (2002:1227) as accepting controlled complements but for which “[i]n some cases it is not quite clear whether a [*for-to* complement] is possible”.

plies agentive involvement of its subject in the embedded eventuality"). Although I agree that there is some merit in thinking in these terms, three qualifications are in order. First, sentences like (110), despite their marked status, are readily interpretable, unlike (for example) (109b). Consequently, we do not want to develop an approach in which the grammar simply fails to assign truth conditions to such sentences. Second, the marked status of sentences like (110) is subject to both dialectal and cross-linguistic variation. According to Henry (1995:101), *I tried for John to go* is acceptable in Ozark English. And in modern Greek, the equivalent of 'try' is reported to be fully acceptable with a non-controlled complement in the form of a subjunctive *na*-clause (see e.g. Terzi 1992). Third, *for-to* complements to some commitment verbs like *intend* do not seem to be degraded, and as I have shown in this paper, it is possible to assign a denotation for *intend* that is flexible enough to account for its use with both controlled and non-controlled complements. So there is a worry of circularity in proposing a semantics for *try* that predicts its marked status with *for-to* complements: the only reason for not assigning it a flexible *intend*-like meaning is the fact that we are trying to explain, i.e., the marked status in acceptability.

In light of these considerations, my suggestion is that we pursue an analysis in which sentences like (110) are not only generated by the narrow syntax but also interpreted by the semantic component, and leave it to partially extra-grammatical factors to account for its perceived markedness. In line with Schütze's and McFadden's suggestions about *try*, I think it is plausible that commitment predicates involve a semantics whereby the attitude holder necessarily figures into the content of the attitude, in the core cases as an agent. Consequently, I suggest, commitment predicates are most comfortable with complements that exploit the grammatical resource of control to leave open an unsaturated argument slot as a grammatically transparent way of signaling the link between the attitude holder and the content of the attitude. This gives rise to a situation wherein *for-to* complements to commitment predicates are highly infrequent, thereby reinforcing their perceived markedness. For reasons that are unclear, this markedness is subject to variation, both cross-dialectally and cross-linguistically, as well as from one commitment predicate to the next. But what is cross-dialectally and cross-linguistically stable is that such sentences are interpretable and that they give rise to the causation effect.[23]

[23] Also relevant to this discussion are object control predicates, which for Sag and Pollard (1991) form their own semantically coherent class, the INFLUENCE CLASS, naming situations wherein "a certain participant (the referent of the object) is influenced by another participant (the referent of the subject) to perform an action" (p. 66). There is a link between influence and intention: successful influence entails getting an agent to form the relevant intention (see Stephenson 2010 for a similar conclusion). For example, if John persuades Bill to open the door, then John succeeds in getting Bill to form the intention to open the door. To my ear, *for-to* complements under object-control

## 8 Conclusion

The narrow conclusion of this paper is that the semantics of intention reports in non-control sentences follows straightforwardly from the basic meaning of *intend*, with no appeal to coercion or any other special mechanism involved, against what previous researches have argued or assumed (Perlmutter 1968; Jackendoff 1996; Jackendoff and Culicover 2003; Grano 2015). But as stated at the outset, a broader goal of this paper has been to bring intention reports into the purview of formal semantics, joining the better studied belief and desire reports. The results point toward a novel parameter of variation in the semantics of attitude predicates: commitment predicates like *intend* bring the attitude-holder into the content of the attitude via the INT function, whereas non-commitment attitude predicates like *believe* and *want* do not.

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predicates sound even more degraded than do *for-to* complements under commitment predicates like *try*, but it is possible to find examples of this on the Internet:

(i) My husband said she called and **begged** him <u>for me</u> to come pick her up ....
(http://www.steptalk.org/node/66529; retrieved 3/24/15)

(ii) I **persuaded** him <u>for us</u> to stay until morning.
(http://www.justmommies.com/forums/f148-uk-and-ireland-mummies/2033415-weekend-trip.html; retrieved 3/24/15)

(iii) I called my dad and **begged** him <u>for me</u> to live there.
(http://www.experienceproject.com/stories/Have-A-Crazy-Mother/1595220; retrieved 3/24/15)

These examples also exhibit the causation effect, all being amenable to *bring it about* paraphrases. For example, (i) can be paraphrased as *My husband said she called and begged him to bring it about that I come pick her up.* My sense from running Google searches on "[object-control predicate] [pronoun] for [pronoun] to" is that most examples of *for-to* complements to object-control predicates involve an embedded subject that is anteceded by the matrix subject, as in (iii), or split-anteceded by matrix subject and object, as in (ii). Examples without such antecedence relations, like (i), seem to be rarer. If this impression is correct, no doubt there is an important connection between the fact that these predicates are ordinarily used as control predicates and the fact that even when they are not, there is possibly a statistical tendency for them to have an (exhaustive) control or split control-like interpretation. But a full exploration of this connection will have to await further research.

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