Perspectival Content and Semantic Composition*

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Abstract

How is perspectival content grammatically encoded? Theories of perspectival meaning can be divided into two classes based on their answer to this question. On one side are "syntactic" analyses in which perspective-sensitive predicates have a distinct semantic type and the perspectival anchor is realized as a syntactic argument, as in standard contextualist approaches. On the other side are "non-syntactic" analyses which afford no special semantic type or syntactic argument structure to perspectival predicates, and instead capture perspective sensitivity at the level of assessment or use, as in relativist or pragmatic approaches. In this chapter, we respond to an empirical challenge for the latter approach from Sæbø (2009), who uses patterns of acceptability in complex complements of subjective attitude verbs to argue that only a syntactic analysis can accurately predict when perspectival content projects and when it does not. We begin by expanding on the data originally considered by Sæbø, and arguing that a syntactic account cannot be extended to cover the full pattern of projection. We then show that it is possible to augment the pragmatic theory of perspectival content articulated in Kennedy and Willer (2016, 2019) with a simple and intuitive compositional semantics, which accurately captures the full pattern of projection and flows naturally from a general view of how perspective-sensitive meaning updates a context.

Keywords: perspectival content, subjective attitude verbs, compositionality, counterstance contingency, dynamic semantics

1 Sæbø's challenge

It is by now well-established that there is a class of SUBJECTIVE ATTITUDE VERBS which require their complements to encode (a certain type of) perspectival meaning. For example, English *find* can embed a small clause complement headed by the predicate *attractive*, but not one headed by *unmarried* (see, e.g., Bouchard 2012; Bylinina 2017: Fleisher 2013; Kennedy 2013; Hirvonen 2014; Reis 2013; Sæbø 2009; Stephenson 2007; Umbach 2016; and Vardomskaya 2018):

(1) a. Kim finds Lee attractive.
b. # Kim finds Lee unmarried.

Sæbø (2009) uses subjective attitude verbs to explore different hypotheses about how the perspectival nature of predicates of personal taste in particular is grammatically encoded. His central comparison is between accounts in which the locus of perspectival meaning is reflected in the syntax (or logical type), such as typical contextualist approaches (e.g. Stojanovic 2007), and those in which it is not, which include standard relativist accounts (e.g. Lasersohn 2005).[1] Both classes of analysis provide a means of capturing the basic contrast between examples like those in (1): on a syntactic account, *find*

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expects the perspectival argument slot of its complement to be unsaturated, and links this position with its subject; in non-syntactic accounts, *find* effectively presupposes that the perspectival aspect of its complement's meaning is "unfixed" in a way that differs according to the nature of the analysis.

In a bit more detail, according to the syntactic or type-theoretic approach, what makes a predicate perspectival is that it selects for an e-type internal argument, e.g. given some index of evaluation s and context c, *attractive* denotes a set of item-judge pairs — the set of $\langle x, y\rangle$ such that x is attractive to y at s — while a non-perspectival predicate such as *unmarried* simply denotes a set of objects — those that are not married at s, period. The role of *find* is to feed its subject to the internal judge argument slot of its complement; this, of course, can only be done if there is an open such slot to begin with.

(2) a. $[\![find\ \phi]\!]^{c,s} = \lambda x.\, [\![\phi]\!]^{c,s}(x)$
b. $[\![attractive]\!]^{c,s} = \lambda x \lambda y.\, x$ is attractive to y at s
c. $[\![unmarried]\!]^{c,w} = \lambda x.x$ is not married at s

On this analysis, (1b) is marked due to a type mismatch: the attitude verb *find* supplies Kim as argument to the complement, yet the denotation of *Lee (is) unmarried* has no argument slot left to be filled. In contrast, due to the semantics of *attractive*, the complement in (1a) happily accepts Kim as the still missing judge argument, and the sentence then evaluates to true just in case Lee is attractive to Kim (at the relevant index of evaluation).

A non-syntactic approach à la Lasersohn (2005) treats (1b) as marked because the attitude verb *find* makes no semantic contribution. Points of evaluation consist of a world, time of evaluation, and judge; all that *find* does is to fix its subject as the judge that matters when evaluating its complement for truth or falsity. That semantic contribution is vacuous if the proposition expressed by the complement is not sensitive to who the judge is.

(3) a. $[\![find\ \phi]\!]^{c,\langle w,t,j\rangle} = \lambda x.\, [\![\phi]\!]^{c,\langle w,t,x\rangle}$
b. A proposition p is JUDGE INVARIANT just in case for all worlds w, times t, and judges j, k: p is true at $\langle w, t, j\rangle$ just in case p is true at $\langle w, t, k\rangle$.

What makes the use of *find* in (1b) odd, then, is that it shifts the judge when the choice of who the judge is does not matter for the truth of the complement in the first place: whether or not Lee is married depends on the world and time of evaluation, but not on the judge. Whether Lee is attractive, in constrast, is a judge-sensitive affair, and so of course the use of *find* in (1a) makes perfect sense.

Following Sæbø (2009), we have illustrated the non-syntactic approach against the background of a relativist setting, but it is important to note that its underlying intuition is not tied to such formal particulars. The basic intuition here is that *find* requires its complement to be perspectival in a distinct way and that this requirement is best understood as a kind of CONTINGENCY REQUIREMENT (Bouchard, 2012). In a relativist setting, this requirement happens to manifest in the form of a sensitivity to how a certain parameter of evaluation — the judge index — is chosen. But this is not the only way to go: Coppock (2018), for instance, replaces possible worlds with "outlooks," which are refinements of worlds that settle not only matters of fact but also matters of opinion, and then lets all predicates — including predicates of personal taste — have ordinary extensions relative to these refined points of evaluation. Since opinions differ, a world will allow for different refinements and thus correspond to multiple outlooks. A proposition is DISCRETIONARY just in case its truth-value varies across the outlooks corresponding to a single world. Coppock's proposal for Swedish *tycka* — which patterns with English *find* in many ways — is that it presupposes that its complement to be discretionary, i.e. vary in truth-value across the outlooks corresponding to a single world. Similarly, Kennedy and Willer (2016, 2019) propose that subjective attitude verbs presuppose the contingency of their complement across a set of contextually salient doxastic alternatives, which agree on matters of fact but differ in resolutions of semantic and pragmatic indeterminacy.

The account that Sæbø (2009) introduces under a "relativist" heading is thus representative of a diverse class of proposals that emphasize perspectival content and thus embeddability under *find* as a matter of contingency rather than as one of semantic type.[2] It is thus very significant when Sæbø maintains that such non-syntactic, contingency-centric approaches flounder when it comes to explaining contrasts like those in (4) and (5), in which the complements of *find* show a greater degree of syntactic complexity than what we saw earlier in (1).

(4) a. Kim finds Lee attractive and pleasant.
b. # Kim finds Lee attractive and unmarried.

(5) a. Kim finds everyone who is unmarried pleasant.
b. # Kim finds everyone who is pleasant unmarried.

In short, the problem for non-syntactic accounts is that if a particular expression has a perspective-sensitive meaning — i.e., is judge-dependent in the way proposed by Lasersohn and other relativists, or more generally contingent in a way that is tied to interpretation rather than semantic composition — then unless that content is fixed by some other expression, any larger constituent containing that expression (if consistent) should be perspective-sensitive in the same way. Thus given that *attractive* is perspective-sensitive, *attractive and unmarried* should be as well, and (4b) should be fine. Similarly, given that *pleasant* is perspective-sensitive (as shown by (5a)), *everyone who is pleasant* should be as well, as should the clausal constituent *everyone who is pleasant (is) unmarried*, and so (5b) should be fine.

In contrast, a syntactic or type-theoretic account provides a simple and straightforward explanation of these contrasts: a perspectival predicate like *attractive* is type-wise distinct from a non-perspectival predicate such as *unmarried*, and so assuming that conjunction requires likeness of semantic type, the perspectival argument of the former must be saturated before it can conjoin with the latter. But this means that unlike *attractive and pleasant* — which can compose before their respective perspectival arguments are saturated — *attractive and unmarried* in (4b) is of the wrong semantic type to compose with *find*. Similarly in (5b), the perspectival argument of *pleasant* must be saturated by the time of relative clause formation, in order to ensure that the entire relative clause is of the right semantic type to compose with the quantifier *everyone*.[3]

At a more general level, Sæbø's claim is that only a fundamentally syntactic account of perspectival meaning can explain how perspectival meaning composes: when a complex constituent containing a perspectival expression itself has a perspectival meaning, and when it does not. If Sæbø is correct, then examples like (4) and (5) present a challenge for a wide variety of analyses which, to our knowledge, has not been adequately addressed by proponents of such accounts.[4] (We will address another class of cases that Sæbø discusses at a later stage). The goal of this paper is to respond to this challenge, which we will do in two steps.

First, after some brief critical reflections on the very idea of tying embeddability under *find* to argument structure, we will expand our attention to a second subjective attitude verb, *consider*. We will demonstrate that *consider* also requires its complement to be perspective-sensitive (though in a way different from *find*) and that it shows a similar pattern of (un)acceptability in examples involving complex complements that are parallel in the relevant respects to (4) and (5). However, we will also argue that *consider* is crucially different from *find* in that there is no plausible "syntactic" account of the basic pattern of complement selection; instead, some version of a non-syntactic account is the only game in town.

Second, we will show that, in fact, it is possible to come up with a simple and intuitive compositional semantics for at least one non-syntactic approach to perspectival meaning — the pragmatic theory articulated in Kennedy and Willer (2016, 2019) — which flows naturally from a general view of how perspective-sensitive meaning updates a context. We will provide a brief overview of the basic theory of perspectival meaning, and will then lay out the compositional details, demonstrating that it accurately predicts when perspectival meaning "projects" and when it does not, and that it captures contrasts like those in (4) and (5).

2 Against a syntactic account

For current purposes, we set aside specific technical concerns one might have about how Sæbø proposes to handle the crucial examples in (4) and (5). Instead, let us begin by highlighting a general worry about the proposal that a predicate is embeddable under *find* in virtue of the presence of an open argument position that *find* is designed to fill with its subject. In the case of predicates of personal taste, it is for sure not unreasonable to hypothesize such an argument, since a judge (or experiencer; see Muñoz (2019)) can be expressed overtly:

(6) a. Lee is attractive to Kim
b. Downhill skiing is fun for Kim.

Bylinina (2017) argues that such overt judge phrases are true arguments of a predicate of personal taste, rather than mere adjuncts, pointing, for example, to the fact that the predicates often select for particular prepositions: switching *to* and *for* in (6a-b) leads to unacceptability. (See also Stephenson 2007, 2008.)

But the class of expressions that embed felicitously under *find* goes beyond those that uncontroversially pertain to matters of personal taste, including character trait predicates, aesthetic predicates, and moral predicates (cf. Vardomskaya 2018), as the following naturally occurring examples demonstrate.

(7) a. Kevin is somebody [with whom] I probably share as much of a world view as any world leader out there. I find him smart, but humble.
b. Yet the [SsangYong] Rodius is so freakishly ugly that someone is bound to find it kitsch.
c. I'd also like to add that while I don't find cheating wrong, I'd rather not cheat in a game unless I've already completed it once without cheating.

There is an evaluative component to the meanings of predicates such as *smart*, *kitsch*, and *wrong*, and it makes sense to say that speakers assign extensions to them in ways that vary according to their own evaluations. It does not follow, however, that these expressions select for a distinct judge argument that could be filled by the subject of a *find*-construction. In particular, unlike *attractive* and *fun*, expressions such as *smart*, *kitsch*, and *wrong* do not seem to take judge PPs, as the following, marginal cases suggest:

(8) a. # Lee is smart to/for Kim.
b. # The car is kitsch to/for Kim.
c. # Cheating is wrong to/for Kim.

If one wants to communicate that the judgments in question are from Kim's perspective in examples like these, one must resort to periphrastic constructions of the sort shown in (9a-c).[5]

(9) a. Lee is smart according to Kim.
b. The car is kitsch in Kim's opinion.
c. Cheating is wrong in Kim's view.

It is of course possible to maintain that the expressions under consideration here have a syntactic argument that, for some reason or another, cannot be overtly expressed. But a more plausible suggestion would be that perspectival content may manifest in a variety of ways. In some cases, the extension of the predicate in question may indeed be sensitive to a lexically designated judge argument. But this is not the *only* way for a predicate to be perspectival. MULTIDIMENSIONALITY, to just give one example, is another potential source (see Bylinina 2017 and Kennedy 2013). Whether someone is smart, for instance, depends on a variety of factors — quick-wittedness, sound judgment,

flexibility of mind, and so on. Even if these dimensions were to allow for objective measurement, how they factor in the application conditions of the predicate may vary from speaker to speaker, and it is in this sense that it can "depend on one's perspective" whether someone is smart, and even if the predicate *smart* lacks an internal judge argument.

Our first concern about a syntactic account, then, is that it rests on type-theoretic assumptions that we have good reason to resist, at least once the full variety of predicates that felicitously embed under *find* has come into view. Our second concern is that a syntactic account does not generalize to account for the full variety of subjective attitude verbs that a natural language such as English provides. The verb *consider* contrasts with *find* in that it can be used with predicates like *vegetarian* (as well as *attractive*):

(10) a. # Kim finds Lee vegetarian.
b. Kim considers Lee vegetarian.

At the same time, *consider* shares with *find* a distinctly subjective flavor in that it rejects fully objective predicates:

(11) a. # Lee finds 37813 prime.
b. # Lee considers 37813 prime.
c. Lee believes 37813 to be prime.

What these facts show is that the attitude verb *consider*, like *find*, requires its complement to be subjective, but in a less demanding way: a predicate such as *vegetarian*, for instance, is "subjective enough" to embed felicitously under *consider*, but not under *find*. And crucially, *consider*-type subjective attitude verbs exhibit a pattern similar to their *find*-type cousins when it comes to more complex complements, as shown by the contrasts in (12) and (13).[6]

(12) a. Kim considers Lee vegetarian and intelligent.
b. # Kim considers Lee vegetarian and in the cast of *Hamilton*.

(13) a. Kim considers someone who is in the cast of *Hamilton* vegetarian.
b. # Kim considers someone who is vegetarian in the cast of *Hamilton*.

These types of contrasts are identical to the ones that motivated Sæbø's argument for a syntactic account of perspectival content in *find* complements, which would in turn suggest a syntactic account of perspectival content in the complement of *consider*. The problem is that it is difficult to see how a syntactic approach could generalize to capture the fine-grained differences in complement selection between *find* and *consider*. Such an analysis would, for example, need to assign to *vegetarian* a type such that this expression — unlike *prime* — embeds felicitously under *consider* but — unlike *attractive* — fails to embed felicitously under *find*. It is unclear what kind of semantic type that would be, but there are also independent reasons not to think that the differences in perspectival content between, say, *vegetarian* and *attractive* must correspond to a difference in semantic type.

Consider, for example, adjectives like *dense, heavy* and *light*. These can have either a purely "quantitative" interpretation that characterizes the physical properties of a substance, as in (14a), or a more "qualitative" interpretation, that can be used to describe objects which have no physical properties, as in (14b); when an object can be assessed from either a quantitative or qualitative perspective, as in (14c), both interpretations are possible (Kennedy 2013).

(14) a. This metal is dense/heavy/light.
b. This story is dense/heavy/light.
c. This cake is dense/heavy/light.

When we turn to subjective attitude verbs, we see that these adjectives embed under *find* only when they are interpreted qualitatively. Thus (15a) is unacceptable under *find*, (15b) is fine under *find*, and (15c) is unambiguously qualitative under *find*; all examples/interpretations are acceptable under *consider*.

(15) a. # Kim finds this metal dense/heavy/light.
b. Kim finds this story dense/heavy/light.
c. Kim finds this cake dense/heavy/light.

(16) a. Kim considers this metal dense/heavy/light.
b. Kim considers this story dense/heavy/light.
c. Kim considers this cake dense/heavy/light.

While there is clearly some kind of meaning distinction between the quantitative and qualitative senses of adjectives like *dense, heavy* and *light* (and indeed this kind of polysemy appears to be quite productive), there is no obvious type-theoretic reflection of this difference: both senses are gradable, for example, and both have the same basic syntactic distribution, with the one exception of embeddability under *find*. So while *find* and *consider* are evidently sensitive to different ways that a predicate can be "perspectival" (or "subjective"), there is no independent evidence that this difference corresponds to a difference in semantic type.

In sum, a syntactic or type-theoretic account of perspectival content and embeddability under *find* fails to generalize twice over. First, it has trouble explaining why expressions that do not transparently select for an *e*-type internal judge argument — character trait predicates, aesthetic predicates, moral predicates, and so on — happily embed under *find*. And second, it fails to account for the more fine-grained differences between the subjective attitudes *find* and *consider*, on pain of overgenerating type-theoretic differences.

We are thus left to conclude that the right account of perspectival content and embeddability under subjective attitude verbs must be a non-syntactic one, which leaves us with two challenges. First, such an account must provide a means of explaining the fine-grained distinctions between *find* and *consider* that we docuemnted in this section. Second, such an account must support a general account of how perspectival content "projects" so that we can explain the contrasts observed in (4) and (5) and (12) and (13) and respond to Sæbø's challenge. Over the next two sections, we will provide such an account, starting with the basics from Kennedy and Willer (2016, 2019) and then presenting a proposal for handling complex complements.

3 Counterstance contingency

The guiding idea behind Kennedy and Willer's (2016; 2019) proposal for *find* and *consider* is that subjective attitude verbs are like regular doxastic verbs such as *believe* in terms of their core at-issue content, but differ in their presuppositions. Specifically, subjective attitude verbs presuppose their complement to be contingent across a set of doxastic alternatives which they label COUNTERSTANCES. These alternatives arise from language users' sophisticated awareness that (what they take to be) matters of fact only partly determine what we say and think. Observe that in the following two examples, replacing *believe* with *consider* signals that the formation of the attitude under consideration must have involved a "leap from the facts:"

(17) a. Kim believes this soup to be vegetarian
b. Kim considers this soup vegetarian.

(18) a. Kim believes herself to be Russian.
b. Kim considers herself Russian.

For example, (17b) signals that Kim's commitment to the soup being vegetarian is based not solely on knowledge of what is in it but also on a pragmatic decision to treat certain ingredients (say, fish stock) as vegetarian. And (18b) would be appropriate in a context in which Kim identifies as Russian not because of her citizenship (she may be of French nationality, or what have you) but because of her ancestry and fancy for all things Russian. Plain belief attributions, to be clear, do not exclude that adopting the commitment involves a distinct leap from the facts; but the use of *consider* explicitly signals the attitude to be perspectival in this specific way.

Whether an attitude is perspectival in the relevant way is not purely a matter of lexical semantics — context plays a crucial role as well. Consider, for instance, the contrast between (19a) and (19b):

(19) a. # Kim considers Burgundy part of France.
b. Kim considers Crimea part of Russia.

The intuitive explanation of the contrast is that, at the time of the writing of this article, the sovereignty over Crimea is disputed, hence the use of consider in (19b) seems appropriate, while Burgundy being part of France would count as uncontroversial, hence the use of *consider* in (19a) appears odd. This is not a purely semantic affair, but crucially depends on specific features of the discourse context.

An ordinary agent's doxastic state thus has a pragmatic dimension to it, in the sense that some beliefs flow from the agent's pragmatic stance on how certain facts are to interpreted. To capture this feature of everyday belief states, Kennedy and Willer suggest that context provides a function κ that tracks the contingency of the pragmatic decisions involved in achieving an information state. κ takes an information carrier i and derives a set $\kappa(i)$ of s's counterstances: alternative information states which agree on a contextually salient basis of matters of fact but take conflicting pragmatic stances on these matters. So for instance, a state s and its counterstances would agree on some food's ingredients but may disagree on what it takes for an ingredient to count as vegetarian. Kennedy and Willer's proposal for *consider* then is that it presupposes the COUNTERSTANCE CONTINGENCY of its complement with respect to the attributee's doxastic state: one of its counterstances is committed to p while another is committed to $\overline{p}$ (i.e. the negation of p).[7]

To capture the more fine-grained difference between *find* and *consider*, Kennedy and Willer suggest that the former presupposes a stronger kind of subjectivity that we label RADICAL counterstance contingency, which flows from a distinguished kind of pragmatic underdetermination. Sometimes it makes sense for speakers to propose to coordinate on a pragmatic stance by STIPULATION. This is what we see, for example, in (20), where "for present purposes" should be heard as referring to some salient task, action or goal whose execution somehow requires categorization of objects according to whether they satisfy the predicate. For example, in (20), the relevant purpose might be mainly administrative; it may be to decide what kinds of meals to serve the guests at a party; or it may be to categorize a region using geographic, political, or ethnocultural criteria.[8]

(20) For present purposes,
a. let's count farms with an annual gross cash farm income (GFCI) of $1,000,000 or more as large, those with a GFCI between $350,000 and $999,999 as midsize, and those with a GFCI below $350,000 as small.
b. let's count pescatarians as vegetarians.
c. let's count Mauretania as sub-Saharan.

Proposing to coordinate a stance by stipulation, however, does not make sense for all kinds of predicates. The following cases, for instance, seem odd.

(21) For present purposes,
a. # let's count anyone with whom Obama shares a world view as smart.

b. # let's count Sean Connery as fascinating.

c. # let's count cheating as morally despicable.

The basic intuition here is that while one may try to make others adopt one's own perspective on a given subject matter, it is infelicitous to just stipulate some criterion as the basis for establishing a conversational convention for *smart*, *fascinating*, or *despicable*. Predicates that resist such stipulation give rise to radical counterstance contingency.

It is natural to ask in virtue of what a particular expression's application criteria in discourse are underdetermined in a way that allows, or does not allow, for coordination by stipulation. We address the question in more detail elsewhere (see Kennedy and Willer 2019). What matters for current purposes is this: the previous observations suggest that each set of counterstances C may be partitioned into a set of sets of counterstances $\Pi(C)$: all elements of C, recall, agree on some salient matters of fact; counterstances within a single cell of $\Pi(C)$, in addition, share a pragmatic stance on those underdetermined issues that may be coordinated by stipulation. A proposition p is radically counterstance contingent with respect to some information state i just in case every cell of $\Pi(\kappa(i))$ contains a counterstance that is committed to p and one that is committed to $\overline{p}$. The suggestion then is that *find* presupposes that its complement is radically counterstance contingent with respect to the attributee's doxastic state.

In a bit more detail, assume that agents are assigned belief states relative to indices of evaluation and that context fixes a counterstance selection function κ in addition to a partitioning of counterstance spaces.[9]

(22) a. A proposition p is *counterstance contingent* with respect to i in c iff $\exists i', i'' \in \kappa(i)\colon i' \subseteq p$ and $i'' \subseteq \overline{p}$.

b. A proposition p is *radically counterstance contingent* with respect to i in c iff $\forall \pi \in \Pi(\kappa(i))$. $\exists i', i'' \in \pi\colon i' \subseteq p$ and $i'' \subseteq \overline{p}$.

The basic proposal for *find* and *consider* — basic in that the complement is assumed to be atomic for now — is then as follows:

(23) a. $[\![consider\ p]\!]^{c,s}(x)$ is defined only if p is counterstance contingent with respect to $\text{Dox}(x, s)$ in c.

b. If defined, then $[\![consider\ p]\!]^{c,s}(x) = 1$ iff $\text{Dox}(x, s) \subseteq p$.

(24) a. $[\![find\ p]\!]^{c,s}(x)$ is defined only if p is radically counterstance contingent with respect to $\text{Dox}(x, s)$ in c.

b. If defined, then $[\![find\ p]\!]^{c,s}(x) = 1$ iff $\text{Dox}(x, s) \subseteq p$.

Two specific predictions are worth highlighting here. First, whenever an expression embeds felicitously under *find*, it also embeds felicitously under *consider*; the reverse does not hold. Second, whenever an expression embeds felicitously under *find*, its criteria of application resist coordination by stipulation, at least in some respects that matter for deciding whether or not the expression truthfully applies to certain objects or not.

Summarizing, following Kennedy and Willer (2016, 2019), we have proposed that *find* and *consider* presuppose that their complements exhibit a distinguished kind of contingency that we have labeled "(radical) counterstance contingency." Insofar as subjective attitude verbs track content that is distinctly perspectival, this is just to say that content is perspectival insofar as it exhibits a distinct kind of contingency. This proposal is representative of a larger tradition in the philosophy of language that includes (but is not exhausted by) standard incarnations of the relativist paradigm.

4 Counterstance and composition

Content is perspectival, we said, insofar as it exhibits a distinct kind of contingency. This is an attractive proposal not least because it readily allows for content to be perspectival to varying "degrees:" contingency, after all, comes in various degrees as well. Sæbø's original challenge to non-syntactic accounts, however, remains real. The problem, recall, is that without additional maneuvers, perspectival content does not seem to "project" in the right way to get the embeddability facts straight. Consider again the cases discussed earlier:

(4) a. Kim finds Lee attractive and pleasant.
b. # Kim finds Lee attractive and unmarried.

(5) a. Kim finds everyone who is unmarried pleasant.
b. # Kim finds everyone who is pleasant unmarried.

(12) a. Kim considers Lee vegetarian and intelligent.
b. # Kim considers Lee vegetarian and in the cast of *Hamilton*.

(13) a. Kim considers someone who is in the cast of *Hamilton* vegetarian.
b. # Kim considers someone who is vegetarian in the cast of *Hamilton*.

The unacceptability of the (b) examples is unexpected given the basic proposal discussed in the previous section. This is straightforward to show when we look at the cases involving *consider*. Suppose that Kim considers Lee vegetarian and also believes him to be in the cast of *Hamilton*. Then the proposition that Lee is vegetarian and in the cast of *Hamilton* is counterstance contingent with respect to Kim's doxastic state — and yet (12b) is no good.[10] Relatedly, the complements of (12b) and (13b) are truth-conditionally equivalent and so whenever the one expresses a counterstance contingent proposition, so does the other — yet only (12b), and not (13b), are felicitous. It is straightforward to verify, on parallel grounds, that the basic proposal from Section 3 does not predict a contrast in acceptability between (4a) and (4b) or between (5a) and (5b) either. In short, if we simply look at the (radical) counterstance contingency of the proposition expressed by the complement, we will not be able to explain the contrasts in acceptability between the (a) and (b) sentences above.

Our response to the problem is that the proposition at play must not only exhibit the right kind of contingency, but also do so for the right reasons. For a conjunction to embed felicitously under a subjective attitude verb, for instance, the (radical) counterstance contingency of the conjunction must flow from the (radical) counterstance contingency of both conjuncts: this is why (4a) and (12a) are fine while (4b) and (12b) are marked. For a quantified construction to embed under *find* and *consider*, in turn, the relevant contingency must flow from the at-issue content rather than the not-at-issue content, and so from the contingency of the scope, not the restrictor. To say that Kim finds everyone who is unmarried pleasant is to say that Kim's attitude speaks to the question of who is pleasant — a question that allows for a radically counterstance contingent resolution. To say that Kim finds everyone who is pleasant unmarried is to say that Kim's attitude speaks to the question of which pleasant people are unmarried — a question that fails to allow for a radically counterstance contingent resolution. Hence the difference in acceptability between (5a) and (5b) and, inter alia, between (13a) and (13b).

The basic observation then is that subjective attitude verbs not only require that their complements exhibit a distinct kind of contingency: complex complements, in addition, impose distinct constraints on the set of doxastic alternatives that may witness the contingency at play. In the following, we will make a concrete proposal for how to spell out this picture in detail. As a preparation, and since our analysis includes quantifiers, let us assume explicitly that our language provides a set of variables x, y, z, ... and that context fixes a variable assignment g_c. We say that $\text{Alt}(c)$ is the set of contexts just like c except for their variable assignments. We assume that every constant

a and predicate expression F have their regular extensions at indices of evaluation $s(a)$ and $s(F)$, respectively. If α is a singular expression, then $d_c(\alpha)$ — the *denotation* of α in c — is $s(\alpha)$ in case α is some constant, and is $g_c(\alpha)$ in case α is a variable. $c[x/a]$ is just like c except that $d_{c[x/a]}(x) = a$. Indices effectively map predicates to extensions: as usual, we say that $[\![F\alpha_1 \dots \alpha_n]\!]^{c,s} = 1$ just in case $\langle d_c(\alpha_1), \dots, d_c(\alpha_n)\rangle \in s(F)$, where $s(F)$ is the extension of F at s.

To get things going, we generalize the notion of a (radically) counterstance contingent proposition to the notion of a (radically) counterstance contingent *issue*. We associate with each sentence an issue by defining a question operator "?" as follows (cf. Groenendijk and Stokhof 1984):

(25) $[\![\phi?]\!]^{c,s} = \{s' \colon [\![\phi]\!]^{c',s} = [\![\phi]\!]^{c',s'} \text{ for all } c' \in \mathrm{Alt}(c)\}$

The semantic value of "$F\alpha_1 \dots \alpha_n$?" at some index s is the set of indices at which the same n-tuples of individuals satisfy F as in s. If $\alpha_1, \dots, \alpha_n$ are all constants, then $[\![F\alpha_1 \dots \alpha_n?]\!]^c$ effectively partitions logical space into two sets of indices: those at which the sentence "$F\alpha_1 \dots \alpha_n$" is true and those at which it is false. The open sentence "Fx?" denotes the set of true and complete answers to the question of who is F, and so on.

It then makes sense to expand the notion of (radical) counterstance contingency to an issue $\mathcal{I}$ as follows (recall that we take context to provide a counterstance selection function κ as well as a partitioning of each counterstance space Π):

(26) Take any issue $\mathcal{I}$ and context c:

a. $\mathcal{I}$ is *counterstance contingent* with respect to i in c iff for some $p \in \mathcal{I}$, p is counterstance contingent with respect to i in context c.

b. $\mathcal{I}$ is *radically counterstance contingent* with respect to i in c iff for some $p \in \mathcal{I}$, p is radically counterstance contingent with respect to i in context c.

The simple intuition here is that an issue is (radically) counterstance contingent just in case one of its resolutions is (radically) counterstance contingent.

To make our refined analysis more precise, we will take some inspiration from the literature on dynamic semantics and state what it takes for an information state to be updated with some bit of information. A standard way of motivating a dynamic semantic perspective starts with Stalnaker's (1978) truism about assertion: assertions express propositions and are made in a context. Since language has context-sensitive expressions, which proposition the assertion expresses may very well depend on the context. On the other hand, context-content interaction is not a one-way street: assertions in turn affect the context, and they do so by adding the proposition expressed by that assertion to the context. This picture has all context change mediated by propositional content, but in principle it does not have to be this way. Instead of being all about truth-conditions, a semantics may be all about how an utterance relates an input context (the context in which it is made) to an output context (the context posterior to the utterance). Semantic content then becomes relational: it is a relation between contexts.[11]

Here we will set aside the controversy between static and dynamic theories of meaning. In fact, we will continue to assign to attitude ascriptions truth-conditions relative to some context and index of evaluation. But we will enrich our framework with a dynamic update function to articulate a more fine-grained account of the constraints that subjective attitudes impose on their complements. Part of the inspiration here is that dynamic semantics has a proven track record of explaining how presuppositions project: we can articulate update rules that not only deliver intuitively adequate truth-conditions for complex sentences but also, if presuppositions are understood as definedness conditions on updating, make empirically adequate predictions about how such presuppositions project.[12] Likewise, then, we propose to think of content as perspectival insofar as it is an update operation satisfying certain definedness constraints that project in intuitive ways.

We start by distinguishing between ordinary, perspectival, and radically perspectival updates, and we do so on the basis of what it takes for a context to admit an update of each respective type.

(27) Consider arbitrary information carrier i, context c, and formula ϕ:

i. the ordinary update of i with ϕ in c, $i[\phi]^c_o$, is always admitted

ii. the perspectival update of i with ϕ in c, $i[\phi]^c_p$, is admitted iff $[\![\phi?]\!]^c$ is counterstance contingent with respect to i in c

iii. the radically perspectival update of i with ϕ in c, $i[\phi]^c_r$, is admitted iff $[\![\phi?]\!]^c$ is radically counterstance contingent with respect to i in c

In brief, to characterize some dynamic content as perspectival is to impose distinct constraints on what it takes for the update to be admissible: the expression in question must give rise to a suitably counterstance contingent issue.

If perspectival content is content that comes with distinct admissibility criteria, then it makes good sense to say that admission failures result in an update being undefined. And if an update is admitted, we proceed in a fashion that is very familiar from the existing dynamic literature. Here is the proposal:

(28) Consider arbitrary information carrier i, context c, formula γ, and update type f. If $i[\gamma]^c_f$ is admitted, then updating with γ proceeds according to the following rules (here Q is any quantifier):

($\mathcal{A}$) $i[F\alpha_1 \dots \alpha_n]^c_f = \{s \in i \colon \langle d_c(\alpha_1), \dots, d_c(\alpha_n)\rangle \in s(F)\}$

($\neg$) $i[\neg\phi]^c_f = i \setminus i[\phi]^c_f$

($\wedge$) $i[\phi \wedge \psi]^c_f = (i[\phi]^c_f)[\psi]^c_f$

(Q) $i[Q_x(\phi)(\psi)]^c_f = \{s \in i \colon \{a \in D \colon s \in i[\phi]^{c[x/a]}_o\} R_Q \{a \in D \colon s \in i[\phi]^{c[x/a]}_o[\psi]^{c[x/a]}_f\}\}$

Else, $i[\gamma]^c_f$ is undefined and we write $i[\gamma]^c_f = \bot$, where $\bot$ is the *undefined state* such that $\bot[\phi]^c_f = \bot$ for all c, ϕ and f.

An update with a closed atomic sentence simply adds the proposition expressed to the input state by eliminating all indices at which the proposition is false — assuming that the issue put into play by the sentence has the right kind of contingency for the update to be admitted in the first place. If not, the update is undefined.

Negation and conjunction work as expected in a dynamic system: an update with a negation just takes the complement of the result of updating with what is negated, and an update with a conjunction proceeds by updating with the first and then with the second conjunct. Note here that we immediately predict that a (radically) perspectival update with a conjunction is defined only if both conjuncts are (radically) perspectival.[13]

The generalized semantics for quantifiers in (Q) builds on the proposal from Chierchia (1992, 1995), where R_Q is the second-order relation appropriate to the determiner Q: the subset relation for *every*, the non-empty intersection for *some*, and so on. What is important here is that the update with the restrictor is ordinary and so effectively free of any perspectival presupposition. As such the perspectival flavor of a quantified construction is fully determined by the perspectival flavor of its scope.

We can then wrap things up by refining our semantics of subjective attitude verbs as follows:

(29) a. $[\![\text{consider } \phi]\!]^{c,s}(x)$ is defined only if $\text{Dox}(x,s)[\phi]^c_p$ is defined.

b. If defined, then $[\![\textit{consider } p]\!]^{c,s}(x) = 1$ iff $\text{Dox}(x,s) \subseteq p$.

(30) a. $[\![\text{find } \phi]\!]^{c,s}(x)$ is defined only if $\text{Dox}(x,s)[\phi]^c_r$ is defined.

b. If defined, then $[\![\textit{find } p]\!]^{c,s}(x) = 1$ iff $\text{Dox}(x,s) \subseteq p$.

The proposal continues to make good sense of subjective attitude verbs whose complements are atomic: $[\![\text{Mary finds Lee fascinating}]\!]^c$, for instance, is defined only if Mary's commitment to Lee's

being fascinating is radically counterstance contingent.[14] In addition, we now also make the right predictions when a subjective attitude verb has a complex complement. To see this, go back to the earlier observed contrasts involving *find*, repeated below:

(4) a. Kim finds Lee attractive and pleasant.
b. # Kim finds Lee attractive and unmarried.

(5) a. Kim finds everyone who is unmarried pleasant.
b. # Kim finds everyone who is pleasant unmarried.

A commitment to Lee being unmarried fails to be radically counterstance contingent, and so a radically perspectival update with "Lee is unmarried" will be undefined with respect to Kim's doxastic state — it follows immediately that a radically perspectival update with "Lee is attractive and unmarried" will be undefined with respect to Kim's doxastic state, and so (4b) is undefined, as required. (4a), in contrast, is fine due to the radical counterstance contingency the issues raised by both conjuncts. This account also extends to data involving quantified constructions. The issue of who is (un)married does not allow for a radically counterstance contingent resolution, explaining why (5b) is unacceptable, while the radical counterstance contingency of the issue of who is pleasant licenses (5a).

The explanatory strategy outlined here extends directly to the corresponding data involving *consider* in (12) and (13), and moreover preserves the original idea that *find* and *consider* require their complement to express a (radically) counterstance contingent proposition to be defined. This leads to a number of additional subtle, but correct, predictions. For instance, given the standard definition of disjunction in terms of negation and conjunction, the sentence "Crimea is part of Russia or Ukraine" should fail to be perspectival in ordinary contexts, since every doxastic alternative agrees on the proposition expressed by that sentence (and even though the disjuncts taken in isolation are counterstance contingent). And indeed (31), only has an interpretation in which disjunction is interpreted with matrix scope, indicating that a parse in which the disjunction is inside the complement is unacceptable.

(31) Kim considers Crimea part of Russia or Ukraine.

Similarly, if some student is clearly tall while others are borderline, then the sentence "Some student is tall" fails to be perspectival (even though the issue of who is tall is counterstance contingent) whereas the sentence "Every student is tall" is perspectival.[15] And in such a context, (32a) is fine, and (32b) is acceptable only when *some student* is understood *de re*, such that Kim's attitude is about one of the borderline cases; crucially, (32b) lacks a *de dicto* reading that is available in (32c) (alongside the *de re* reading), which attributes to Kim the belief that there is a tall student.

(32) a. Kim considers every student tall.
b. Kim considers some student tall.
c. Kim believes some student to be tall.

In addition to accounting for subtle distinctions like these, the basic proposal can be further elaborated to handle a number of trickier examples. For example, Sæbø (2009) observes that in Norwegian, material which fails to be properly perspectival may nonetheless embed felicitously under the subjective attitude verb *synes* as long as it can be interpreted as presupposed (cf. Bouchard 2012 on French *trouver*). For example, in a context in which it is common ground that the addressee is married to a man, (33) can be felicitously used to express a meaning that is equivalent to the English translation.

(33) Jeg synes du er gift med en vakker man
I SAV you are married with a beautiful man
'I find the man you are married to beautiful.' (*lit* 'I find you married to a beautiful man.')

We can accommodate facts like these by adding the following update rule for presupposed material to the system (here we use "∂" to mark that some content is presupposed):

$$(\partial)\ \ s[\partial\phi]^c_f = \begin{cases} i & \text{if } i[\phi]^c_\circ = i \\ \bot & \text{otherwise} \end{cases}$$

In words: presupposed material imposes a definedness condition on updating (see Beaver 2001 and Heim 1982, among others) but the presupposition operator neutralizes all existing perspectival constraints. As a result, only the at-issue content interacts with the definedness conditions imposed by the subjective attitude verb.

Summarizing, we propose to think of perspectival content as dynamic content that satisfies distinct recursively definable admissibility criteria, with counterstance contingency being the key grounding notion. A perspectival update is admitted only if the issue expressed is suitably counterstance contingent. In the atomic case, this is just in case the proposition expressed is counterstance contingent. If the complement is complex, local updates will impose additional admission criteria. In the case of a conjunction, for instance, both conjuncts must be suitably contingent for the update to be defined, and this just follows from our update rules. The fact that we can make also good sense of cases in which *find* and *consider* take quantifiers or presupposed content as their complement indicates that the proposal presented here is worth taking seriously.

5 Concluding Remarks

We have demonstrated that there is at least one instance of a non-syntactic, contingency-centered analysis of perspectival content — the one from Kennedy and Willer (2016, 2019) — that meets Sæbø's challenge from complex complements under the scope of *find*. This is good news, since we have also argued (in Section 2) that a syntactic, type-theoretic approach to perspectival content faces substantial difficulties when it comes to generalizing beyond the basic observations about predicates of personal taste under *find*. We conclude this discussion by asking whether the strategy we have proposed has something to offer for analyses of perspectival content other than Kennedy and Willer's (2016, 2019).

The key point is that the strategy we have pursued here — to offer a fine-grained conception of perspectival content using the tools and techniques provided by dynamic semantics — seems to be available to all non-syntactic accounts that are currently on the market, as nothing should prevent them in principle from appealing to update functions in articulating the subtle perspectival constraints that subjective attitude verbs impose on their complements (as we did in (28)). Indeed, the main challenge here is to articulate the key distinction between the kind of contingency that is required for a proposition to embed felicitously under *consider* and the one that licenses its embeddability under *find*. Once this is in place, any non-syntactic account may proceed as follows: first, lift this distinction so that it applies to issues, as in (26); then, adopt the update-based constraints for *find* and *consider* as spelt out in (27)–(30).

Let us begin with Coppock's (2018) proposal, which includes a set of possible worlds $\mathcal{W}$ and a set Ω of outlooks: $\propto$ is a one-to-one relation between elements of $\mathcal{W}$ and elements of a partition of Ω so that $O \propto w$ just in case each $o \in O$ is a refinement of w. Here the obvious suggestion would be to distinguish between two kinds of refinements: "shallow" outlooks, let us say, are refinements of worlds; and then "deep" outlooks refine shallow ones. We may then say that given some contextually salient set of possible worlds, a proposition is shallowly discretionary just in case for each world in the set, the proposition is contingent across its outlooks; it is deeply discretionary just in case, for each such outlook, it is also contingent across that outlook's refinements.[16] So, it looks as if an outlook-based approach has the resources needed to draw a distinction between "shallow" (*consider*-licensing) and "deep" (*find*-licensing) perspectival content, in a way that is reminiscent of the distinction between plain and radical counterstance contingency.

Something similar is true when we consider the relativist paradigm. Here the perhaps most obvious path is to partition the space of judges. *Consider* requires simple judge sensitivity: keeping the world and time of evaluation constant, we can find some judge that makes the complement true, and one that makes it false. And then we add the following requirement for *find*: in every partition we can, keeping the word and time of evaluation constant, identify some judge that makes the complement true, and one that makes it false.[17]

Distinctions like the one we suggested above for outlook-based semantics and relativism must be grounded in real distinctions that speakers draw in discourse. We have made a concrete proposal for what discursive practices could play this crucial role: belief formation involves acts of pragmatic enrichment beyond what is strictly licensed by the established facts on the ground, and some but not all pragmatic enrichments can be coordinated by stipulative discourse moves. Whether every contingency-centric account can adopt this grounding story is a question we cannot resolve here. For now, we conclude that a contingency-centric analysis (with a dynamic spin) is the way forward for a comprehensive understanding of what makes content perspectival, and that the notion of counterstance contingency provides a fruitful conceptual framing for any such line of inquiry.

Notes

[1]The space of theoretical options in the controversy between relativists and contextualists is quite large (as Sæbø notes). In particular, contextualists need not assume that predicates of personal taste are context-sensitive in virtue of the presence of a syntactic argument whose value is fixed by context; relatedly, the value of such an argument may in principle be fixed along relativist lines, i.e., by the context of assessment rather than the context of production — see, e.g., Stephenson 2007, MacFarlane 2009 and Weatherson 2009 for discussion. The resulting complications need not detain us here: what matters for current purposes is the question of how the perspectival nature of certain natural language expressions is grammatically encoded, not of how perspectives are fixed in discourse.

[2]Other proposals in this spirit include the one from Bouchard (2012), who suggests that *find* carries a "subjective contingency presupposition:" keeping all the non-subjective facts constant, it must be possible to judge the complement clause true, and it must be possible to judge it false (p. 10). Silk (2019), while avoiding reference to subjectivity or special kinds of content, also appeals to a contingency criterion when he suggests that "*find* is felicitous only if the use of the complement distinguishes among live representations of context, local or global" (p. 155).

A different approach is taken by Stephenson (2007) and by Muñoz (2019), who tie acceptability under *find* to a requirement that its complement be sensitive to the subject's experiences in a particular way. But insofar as such requirements project, these approaches are subject to the same criticisms Sæbø levels against relativist/contingency approaches that we outline below.

[3]If we assume that the subject DP undergoes Quantifier Raising in (5a) and (5b), then the judge argument of *pleasant* is still missing when the embedded clause meets the subjective attitude verb, as required, in (5a); but *unmarried* does not have such an argument slot to begin with, and hence (5b) is predicted to be marked.

[4]Kennedy and Willer (2016) sketch a positive proposal that is also mentioned by Coppock (2018); our goal here is to substantially improve on this proposal in scope, empirical adequacy, and motivation.

[5]Bylinina (2017) discusses similar contrasts between thematic and non-thematic "judges" in Russian. Predicates of personal taste like *interesnij* 'interesting' can express the judge as a dative-marked noun phrase, but merely evaluative predicates like *krasivij* 'beautiful' cannot:

(i) Mne interesen etot film.
me.DAT interesting this film.
'This film is interesting to me.'

(ii) *Mne krasiv dom.
*me.DAT beautiful house
'The house is beautiful to me' (*intended but unavailable reading*)

As in English, one must use a more periphrastic structure to convey this kind of meaning:

(iii) Dlja menja/po-moemu krasiv dom.
For me.ACC/in.my.opinion beautiful house
'The house is beautiful according to me/in my opinion.'

[6](12b) and (13b) are fine if we can accommodate some discretion on behalf of the judge, e.g. if we are in a context in which the relevant theatrical practices do not settle whether understudies are cast members or not. For our purposes,

it suffices to observe that as long as the cast of *Hamilton* is an objective affair, there is a clear contrast between (12a) and (12b) and between (13a) and (13b), respectively.

[7]Here we depart (for reasons explained in Kennedy and Willer 2019) from the proposal in Kennedy and Willer 2016, which works with a weaker counterstance contingency criterion: one of its counterstances is committed to p while another is not. Regardless of such matters of detail, we can note that if counterstance contingency is a presupposition, we fully expect there to be instances in which it fails to project due to a conflict with what is asserted or otherwise implied. For instance, a claim such as "Everyone considers the Burj Khalifa tall" may be read as suggesting that the truth of the opinion under consideration is not really up for debate; this reading cancels the presupposition triggered by the use of *consider*. (In contrast, the presupposition seems to project in "Everyone considers the Burj Khalifa tall, but it actually appears small once we reflect on what is technologically possible.") The claim that implicatures may cancel presuppositions is empirically well-attested, though the former are not always given priority over the latter in case of a conflict. See Beaver (2010) and references therein for detailed discussion.

[8]The farm classification (20a), in fact, has been developed by the USDA Economic Research Service for evaluation and reporting purposes. The United Nations, but not the African Union, counts Mauretania as sub-Saharan.

[9]In Kennedy and Willer 2019, the counterstance selection function is sensitive to an agent (specifically to what that an agent believes) and a proposition but such differences of detail need not detain us here. We will omit writing subscripts as in "κ_c" and "Π_c" whenever this is harmless. Relatedly, "p" may stand for a sentence or the proposition it expresses; we let context disambiguate in most cases and explicitly distinguish between the sentence and $[\![p]\!]^c$ whenever it does not.

[10]In a bit more detail, suppose that $i \subseteq p \cap q$ and that $i' \subseteq \overline{p}$ for some $i' \in \kappa(i)$: then $i' \subseteq \overline{p \cap q}$ and so the complement of (12b) is counterstance contingent with respect to Kim's beliefs whenever Lee being vegetarian is thus contingent and Kim believes the conjunction.

[11]Some popular dynamic semantics: Discourse Representation Theory (Kamp 1981; Kamp and Reyle 1993; Kamp et al. 2011), Dynamic Predicate Logic (Groenendijk and Stokhof 1991), File Change Semantics (Heim 1982), Update Semantics (Veltman 1985, 1996). There is a distinct sense in which our proposal will not be essentially dynamic, since updating will always amount to adding a proposition to the input state. What interests us here is how a system of update rules can capture the counterstance contingency of complex formulas. Crespo and Veltman (2019) also propose to use the tools and techniques provided by dynamic semantics to shed light on a number of issues surrounding predicates of personal taste, though their project is different from ours.

[12]Heim's (1983) proposal is seminal (albeit not undisputed); the literature on the projection problem for presuppositions (the label goes back to Langendoen and Savin 1971) is vast and cannot be efficiently reviewed here. Beaver (2001) offers a critical survey of the presupposition theory literature up to the turn of the twenty-first century; he also articulates a response to the projection problem for presuppositions in Update Semantics that will inform our upcoming proposal for counterstance contingency.

[13]To see this, suppose that $[\![\phi?]\!]^c$ fails to be, say, radically counterstance contingent with respect to i in c. Then $i[\phi]^c_r$ is not admitted and so $i[\phi]^c_r$ is undefined. Hence $i[\phi]^c_r = \bot$ and so $(i[\phi]^c_r)[\psi]^c_r = \bot$, and so $i[\phi \wedge \psi]^c_r$ is undefined. For parallel reasons, any radically perspectival update of i with $\ulcorner \psi \wedge \phi \urcorner$ is undefined in c. The fact that these results hold even if the proposition $[\![\phi \wedge \psi]\!]^c$ is radically counterstance contingent is one respect in which the current framework improves upon the more basic proposal.

[14]So here our proposal in fact exactly mirrors the basic proposal in Section 3. Note that a proposition is (radically) counterstance contingent just in case its negation is; hence if p is atomic, then $[\![p?]\!]^c$ is (radically) counterstance contingent just in case $[\![p]\!]^c$ is. Since a perspectival update with p is admitted just in case $[\![p?]\!]^c$ and hence $[\![p]\!]^c$ are radically counterstance contingent, the two proposals make the same predictions when it comes to *find* and *consider* if the complement is atomic.

[15]The crucial technical observation here is that a $i[\phi]^c_f$ is admitted only if $[\![\phi?]\!]^c$ is suitably contingent; otherwise the question of whether ϕ is locally perspectival in the right way — has suitably perspectival disjuncts or suitably perspectival material in the scope of its quantifier, for instance — does not even come up.

[16]One may wish to draw the distinction differently. Here is a proposal that immediately comes to find: if some but not all worlds come with outlooks that render the proposition contingent, it is merely shallowly discretionary; if all worlds do, we have a deeply discretionary proposition. The proposal is technically straightforward, but it is not clear that it makes good sense for *consider*. Take Ludlow's case of the race horse Secretariat: some consider Secretariat an athlete, others do not. Is the question outlook-sensitive given some possible worlds but not others? It does not seem so. As Ludlow (2014, p. 78) puts it: "[i]t is not as though the dispute would be resolved if Secretariat were a little bit faster or could throw a baseball."

[17]While we have focused on outlook-based and relativist proposals, our account is in principle compatible with contextualist (Glanzberg 2007; Zakkou 2019) or even absolutist (see e.g Wyatt 2018) frameworks. The key question is whether these proposals can leave room for perspectival content to be contingent in the way we have argued here, say, by appealing to an appropriate kind of context-sensitivity. We must leave a more detailed discussion of this question to another day.

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