Perspectivism

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Abstract
We defend a Millian treatment of propositional attitude ascriptions, according to which ordinary uses of “Lois knows that Superman flies, but she doesn’t know that Clark flies” are true but involve a mid-sentence shift in context. Our aim is to correct the misimpression that such contextualism threatens the practice of systematic theorizing about the propositional attitudes. We prove a series of results showing how contextualists can secure the good standing of a broad class of principles of propositional attitude psychology, provided corresponding generalizations about people’s mental representations are true. We then show that the assumptions used in these results, although natural, have some surprising implications. We explore different ways in which the contextualist picture might be developed in response, and conclude by arguing that Fregeans and neo-Russellians face a similar set of tradeoffs.

1 Introduction

Lois doesn’t realize that the superhero she knows by the name “Superman” is the same person as the reporter she knows by the name “Clark”. It’s natural to describe her state of mind as follows:

1. Lois knows that Superman flies, but she doesn’t know that Clark flies.

But it is puzzling how this sentence could be true. After all, Superman is Clark. Doesn’t it then follow that, if Lois knows that Superman flies, she thereby knows that Clark flies?

Not according to Fregeans. According to them, the semantic contribution of “Superman” in 1 is not its ordinary referent, Superman, but rather a sense of him. The semantic contribution of “Clark” is a different sense of him, and this difference in semantic contribution allows the sentence to come out true.

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Neo-Russellians, by contrast, think that 1 is false, despite being a natural thing to say. According to them, co-referring names make the same semantic contribution to the sentences in which they occur. So 1 must be false, since its first conjunct affirms precisely what its second conjunct denies.

We will be exploring a third, contextualist option. The proposition that Superman flies is the proposition that Clark flies, Lois knows this proposition in some ways but not in others, and ordinary uses of 1 involve equivocation: in such uses, the kind of knowing ascribed to her by “Lois knows that Superman flies” is different from the one denied of her by “she doesn’t know that Clark flies”. Fregeans are right that ordinary uses of sentences like 1 are true and neo-Russellians are right about the semantics of names. Contextualism promises the best of both worlds.

After presenting a version of this contextualist proposal, we explain what we take to be the central challenge facing it: to make sense of the good standing of the kind of systematic theorizing about the propositional attitudes that is pervasive in epistemology, the philosophy of mind, and the philosophy of action. In response to this challenge, we prove a series of results showing that, given certain simple and natural assumptions, the good standing of a broad class of principles of propositional attitude psychology can be secured by the truth of corresponding generalizations about people’s mental representations. We then draw out some surprising predictions of these assumptions and explore the resulting tradeoffs, showing how they suggest different ways of developing the contextualist framework. We conclude with a comparison to Fregeanism and neo-Russellianism, showing in particular how Fregeans must confront similar tradeoffs.

2 Mental representations

Here is a toy model of our cognitive psychology. We have a language of thought, mentalese. It is an interpreted language (i.e., its expressions have meanings), its sentences are strings of symbols, and its lexicon includes symbols corresponding to truth-functional connectives. So, for example, if s and t are mentalese sentences that respectively mean that p and that q, and \( \& \) is the mentalese symbol corresponding to conjunction, then \[ s \& t \] is a mentalese sentence meaning that p and q. For every propositional attitude verb X, there is a corresponding relation between mentalese sentences s and people a which we will pronounce “s is in a’s X-box”. For example, in the case of Lois, a mentalese correlate \( s_0 \) of “Superman flies” is in her “know”-box, her mentalese correlate \( c_0 \) of “Clark flies” is not in her “know”-box; indeed, its negation \( \neg c_0 \) is in her “believe”-box. In general, the idea is that cases of 1

1Such contextualist views have been defended by Crimmins and Perry (1989) and Crimmins (1992) and explored by Schiffer (1979); Richard (1990) holds a similar contextualist view about cases like the Thelma/Shorty case described in section 3.

2In what follows, all talk of mentalese correlates of public language sentences and expressions is relative to a particular person at a particular time. Everything that follows is therefore compat-
“identity confusion” like Lois’s are ones where a person is insensitive to the co-reference of two expressions in their mental lexicon. This picture can be accepted by Fregeans, neo-Russellians, and contextualists alike. (Note that in adopting the jargon of “mentalese” and “boxes” we are not committing ourselves to any of the further doctrines of Fodor’s (1975) influential ‘language of thought hypothesis’ beyond those appealed to above.)

Let’s now turn to the proposed context-sensitivity of propositional attitude ascriptions. We will assume that, for every propositional attitude verb X, there is a corresponding three-place relation X∗ between people, propositions, and third entities of some sort – which we will call perspectives – such that, on a given occasion of use, the sentence “A Xs” that ϕ1 expresses the proposition that X∗ relates a, p and π, where a is the referent of A, p is the proposition expressed by ϕ, and π is the perspective supplied by the context of use.

Call this abstract proposal perspectivism. We will make it more concrete using our toy model of mental representations as follows. We will assume that perspectives are sets of mentalese sentences, and that X∗ is the relation that holds between a person a, proposition p, and set of mentalese sentences π just in case some s in π both means p and is in a’s X-box.

As should be clear from our talk of “know”-boxes, we are not thinking that which mentalese sentences are in which boxes is something ‘internal’ that could be revealed, say, by ultra-advanced brain-scans. To the extent that “box”-talk carries with it this unintended internalist connotation, the reader is invited to substitute “s is an X-vehicle for a”, or some other idiom that lacks such connotations.

More precisely: a person a is subject to identity confusion when, for some attitude verb X, mentalese sentence s, and co-referring expressions e1 and e2 of a’s mental lexicon, a has s but not s[e2/e1] in their X-box, where s[e2/e1] results from s by replacing some occurrence of e1 in s with an occurrence of e2 (and the occurrence is in a position that licenses the intersubstitution of co-referential terms salva veritate). Lois counts as identity confused because she results from s0 results from c0 by such a replacement of occurrences of co-referential expressions of her mental lexicon – namely, mentalese correlates of “Superman” and “Clark”.

Our assumption that uses of English attitude ascriptions express the holding of a three-place relation between a person, proposition, and perspective will be rejected by those like King (2007) who think that sentences express propositions whose structure reflects those sentences’ syntactic structure so that, assuming English has a binary-branching syntax, no English sentence ever expresses the holding of any polyadic relation of any entities. Such theorists should reformulate perspectivism so that it fits their preferred view about English syntax. We ignore such subtleties in what follows since we will not be considering embeddings of attitude ascriptions in non-extensional contexts that might be sensitive to structural differences among truth-conditionally equivalent propositions. Thanks to an anonymous referee for raising this issue.

The proposal closely corresonds both to the “notion constraint” proposal from Crimmins and Perry (1989) and the appeal to “types of modes of presentation” in Schiffer (1979, p. 32); cf. Schiffer (1992). A simpler proposal would be to identify perspectives with particular mentalese sentences, and let X∗ be the relation that holds between a person a, proposition p, and mentalese sentence s just in case s both means p and is in a’s X-box. But this proposal makes the wrong predictions about quantified attitude ascriptions; for example, it predicts the truth of “There is at most one person who Alice knows runs”, since for any mentalese sentence s, there is at most one person such that s means that they run.

A natural generalization of the present framework would be to identify perspectives with relations between people and mentalese sentences. X∗ would then be the relation that holds between a person a, proposition p, and perspective π just in case a is related by π to some s that both
As advertised, perspectivism allows ordinary uses of 1 to come out true, provided that such uses involve a mid-sentence context-shift. In particular, such uses will be true so long as the perspective supplied by context for its first conjunct contains $s_0$ (or any other mentalese sentence that both means that Superman flies and is in Lois’s “know”-box) and the perspective supplied by context for its second conjunct contains neither $s_0$ nor any other mentalese sentence that both means that Clark flies and is in Lois’s “know”-box.

3 Context sensitivity

In what follows we will be working within the following broadly Kaplanian framework for understanding context-sensitivity. **Semantic values** (what Kaplan (1989) called contents) are assigned, not to expressions, but to particular uses of them. The semantic value of a use of a complex expression is determined compositionally from the semantic values of the corresponding uses of its immediate constituents. So to determine the semantic value of a use of a complex expression, it suffices to determine the semantic values of the corresponding uses of its elementary constituents. These are determined by context as follows. Every elementary expression has a **conventional meaning** (what Kaplan called its **character**), and every use of an elementary expression is in a particular context. The conventional meaning of an elementary expression is identified with a function from contexts to semantic values, and the semantic value of a given use of an elementary expression is the result of applying its conventional meaning to the context that it is in. We will assume that the semantic values of uses of declarative sentences are propositions, which we say those uses **express**. A use of a sentence (including as a subsentence of a larger sentence) is **true** (**false**) just in case it expresses a true (**false**) proposition, and a person who uses a sentence unembedded (i.e., not as a subsentence of a larger sentence) thereby asserts whatever proposition is expressed by that use.

Let **Millianism** be the view that the semantic value of a use of a name is the relevant individual whose name it is. Given uncontroversial background assumptions, Millianism implies that a true use of 1 must involve a mid-sentence context-shift — i.e., that at least two elementary expressions of 1 are used in means $p$ and is in $a$’s $X$-box. In this way, which mental representations are relevant for the truth or falsity of a given attitude ascription could differ from person to person, from time to time, and from world to world. We ignore this proposal in what follows not because we have any aversion to it, but because the sort of generality it affords is orthogonal to our discussion, which concerns attitude ascriptions involving a single person at a given time.

Another natural generalization of the present framework would be to allow perspectives to contain sub-sentential mentalese expressions, so that psychological verbs taking non-clausal complements like “thinks about” or “looks for” could be given a parallel contextualist treatment. For simplicity, in what follows we will treat attitude ascriptions whose complement clauses are polar questions, as in 10, in the same way that we treat propositional attitude ascriptions.

6There are important reasons to question this assumption, but they are orthogonal to the issues we will be concerned with here; see Ninan (2010), Rabern (2012), Yli-Vakkuri (2013), Yalcın (2014).
In addition to perspectivism, we will assume Millianism throughout this paper. Perspectivism and Millianism are a natural pair, since perspectivism accounts for the truth of ordinary uses of sentences like 1 without requiring any difference in the semantic values of uses of different names of the same person, and this undermines the most familiar argument against Millianism. (Conversely, anyone antecedently committed to Millianism could appeal to the truth of ordinary readings of 1 to motivate perspectivism.)

The existence of mid-sentence context-shifts in English is not a distinctive commitment of perspectivism. It should be countenanced by everyone. For example, the sentence

2. Nour is sitting now, and Nour is not sitting now

can be true when used as Nour is standing up. The truth of such a use requires a mid-sentence context-shift for the same reason that a true reading of 1 does if Millianism is true.

In characterizing perspectivism and in explaining our preferred treatment of 1 we appealed to the notion of a perspective being ‘supplied by’ context. We will now consider two strategies for making this notion more precise: verbalism and hidden indexicalism. Verbalists think that the context-sensitivity of propositional attitude ascriptions that perspectivism posits is due to attitude verbs’ conventional meanings delivering different semantic values for different contexts. Hidden-indexicalists, by contrast, think that attitude verbs’ semantic values are context-invariant, but that attitude verbs take an additional phonologically null third argument (in addition to a grammatical subject and a complement clause), and it is these ‘hidden indexical’ arguments whose different semantic values in different contexts are responsible for the relevant context-sensitivity of attitude ascriptions. Verbalists think there is a unique function \( f \) from contexts in which attitude verbs are used to perspectives such that the semantic value of a use of an attitude verb \( X \) in a context \( c \) is the two-place relation that holds between a person and proposition just in case they are related by \( X^* \) to \( f(c) \). Hidden indexicalists, by contrast, think the semantic value of any use of an attitude verb \( X \) is the three-place relation \( X^* , \)

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\(^7\)The first assumption is that the relevant individual named “Superman” is the relevant individual named “Clark”. The second assumption is that a negated sentence expresses the negation of the proposition expressed by the unnegated subsentence, and similarly for other logical connectives. (We will harmlessly pretend that, e.g., “John swims” is a subsentence of “John doesn’t swim”; reframing our discussion in a more syntactically faithful way is orthogonal to the main concerns of this paper.) The third assumption is that the truth value of “she doesn’t know that Clark flies” in ordinary uses of 1 doesn’t depend on any difference there may be between the semantic value of the use of “she” and the semantic value of the earlier use of “Lois”.

\(^8\)Sociologically, however, most Millians reject contextualism in favor of neo-Russellianism; e.g. Salmon (1986), Soames (1987b), Braun (1998), Saul (2010).

\(^9\)The labels are taken respectively from Dorr (2014) and Schiffer (1992). Note that those who accept structured theories of propositions according to which our truth conditions imply that perspectives are constituents of the propositions expressed by attitude ascriptions will count verbalism as committed to perspectives being ‘unarticulated constituents’ of those propositions, in the sense of Perry (1986).
regardless of the context it is in; but they think every such use is accompanied by a hidden indexical, and that there is a unique function $f$ from contexts hidden indexicals are in to perspectives such that the hidden indexical’s semantic value in a context $c$ is $f(c)$. We will remain neutral on the thorny question of whether perspectivists should be verbalists or hidden-indexicalists, since for our purposes all we need is the notion of a perspective supplied by context, and both views allow us to make sense of that notion in terms of the aforementioned functions from contexts to perspectives.

What determines which perspective is supplied by context for a given use of an attitude ascription? This is a hard question. Consider the following case, modified from Schiffer (1979):

Thelma, a German who doesn’t speak English, is traveling in New York when Shorty steals her purse. She doesn’t get a good look at him, but she sees him limping away. The next day the police round up some suspects and call Shorty in for a lineup. Knowing that Thelma saw him get away, Shorty wisely shows up early. Thelma is looking for someone who limps, but doesn’t know how to ask the police to make the suspects walk around. So the lineup fails – she can’t pick anyone out. Later, as Shorty celebrates his ill-gotten gains, Shorty’s friend is telling the story in the bar. “You won’t believe how smart this guy is. Since the lady saw him getting away, she knew Shorty limped, so he got there early. His trick worked: she didn’t see him walk in, so she didn’t know Shorty limped, and he got off scot-free!”

The accomplice’s uses of “she knew Shorty limped” and “she didn’t know Shorty limped” must be in different context (assuming he speaks truly). Perspectivists will think that these contexts supply different perspectives, for the same reason they think that the contexts of the two attitude ascriptions of typical uses of 1 supply different perspectives. What determines which perspectives these are? It cannot be merely the speaker’s choice of words in the complement clause of the relevant attitude ascriptions, since these are the same for both uses. Rather, it seems that it has to do with a difference in which of Thelma’s ways of thinking about Shorty is salient to the conversational participants when those sentences are uttered. This shift in salience is achieved, in turn, by a combination of conversational cues and pragmatic factors. (We will not speculate about the details of how this is achieved, since the phenomenon in question is one that any theory of attitude ascriptions and identity confusion needs to explain, not just perspectivist ones.) In section 9.3 we will outline some ways in which the perspective that parametrizes a given attitude ascription might be partially determined by the salient ways the subject of the ascription has of thinking about the objects of her confusion.

\[10\]By the context in which an entire attitude ascription is used, we mean the context in which the relevant perspective-sensitive elementary constituent of the ascription is used (be that the main verb, if verbalism is true, or the accompanying hidden indexical, if hidden indexicalism is true).
The Thelma/Shorty example helps illustrate two other important facts about attitude ascriptions and identity confusion. The first is that although examples like 1 are convenient in that there is a robust association between our choice of names in the complement clauses, on the one hand, and particular ways the subject has of thinking about the object of her confusion (underpinned by distinct corresponding mental representations), such cases are quite special. Typical descriptions of people’s identity confusion are more like Shorty’s accomplice’s description of Thelma. Typically, when we give such descriptions, we don’t have multiple names for the object of the person’s confusion, let alone multiple names that we robustly associate with the confused person’s different ways of thinking about that object (in contrast to how we robustly associate “Superman” and “Clark” with two ways Lois has of thinking about Superman).

Second, the Shorty/Thelma case shows that Fregeans should agree with perspectivists that identity confusion is associated with a distinctive dimension of context-sensitivity in attitude ascriptions. They should say that the name “Shorty” denotes different senses in its two uses in the accomplice’s discourse. Indeed, Fregeans should agree with perspectivists that we often describe cases of identity confusion using sentences that cannot be true without a mid-sentence shift in context. For example, the sentence

3. Peter knows that Paderewski (the pianist) is musically talented, but doesn’t know that Paderewski (the politician) is musically talented.

is a natural way to describe the famous case from Kripke (1979). Fregeans should say that the name “Paderewski” is context-sensitive: its two uses have different senses of Superman as their semantic values, and so must be in different contexts.11

4 Unequivocal truth

Consider the schema:12

4. If A knows that ϕ, then A believes that ϕ.

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11 One might question whether this sentence really does involve a mid-sentence context-shift by proposing that \( \langle A \text{ knows that } B \text{ (the F) Gs} \rangle \) means the same as \( \langle A \text{ knows that } B \text{ is the F and Gs} \rangle \). But this purported equivalence is mistaken. Suppose there is someone other than Superman who flies, but who isn’t a reporter, and suppose that Luthor doesn’t know anything about this person and indeed doesn’t know that there are any reporters. The situation might be described by saying “Luthor knows that Superman (the reporter) flies”, but there seems to be no corresponding true reading of “Luthor knows that Superman is the reporter and flies”.

Dorr (2014) makes a persuasive and much more detailed case that everyone, whatever their views about the semantics of names, should think that identity-confusion breeds mid-sentence context-sensitivity, and moreover that views like perspectivism don’t violate any well-attested generalizations about such context-sensitivity in English.

12 We use boldface for schematic letters to distinguish them from variables ranging over expressions.
This seems like a good principle of propositional attitude psychology. But what does this ‘goodness’ amount to? Being a schema, any good status it has it inherits from its instances. These instances are context-sensitive English sentences. So we cannot say that the schema is good only insofar as all of its instances are true, since truth is a property not of sentences but of their uses. Nor can we say that the schema is good only insofar as every use of any of its instances must be true, since that condition is far too demanding. For consider:

The Law of Non-Contradiction: It is not that case that \( \phi \) and \( \neg \phi \).

The negation of 2 is an instance of this schema. It has untrue uses, since 2 has true uses. So not every use of any instance of the Law of Non-Contradiction is true. But this fact clearly does not undermine the good standing of that schema.

Let the semantic value of an expression \( e \) relative to a context \( c \) be the result of composing the values for \( c \) of the conventional meanings of \( e \)'s elementary constituents. Let a sentence be true(/false) relative to \( c \) if the proposition it expresses relative to \( c \) is true(/false). Call a sentence unequivocally true if it is true relative to every context; call a schema good if all of its instances are unequivocally true. The Law of Non-Contradiction is in this sense good, despite having instances with uses that are not true.

Now consider the schema:

Substitution: If \( A = B \) and \( \phi \), then \( \phi[B/A] \).  

A use of an identity statement involving a pair of names is true only if both names are used to name the same individual. Given Millianism, this individual is also the semantic value of both name-uses. It follows that an identity statement involving a pair of names is true relative to a context in which both names are used only if both names have the same semantic value relative to that context. And this is true not only of contexts in which each name happens to be used: in general, if Millianism is true, then an identity statement involving a pair of names is true relative to a context only if both names have the same semantic value relative to that context, in which case Substitution is good.  

\[13\] Instances of this schema are obtained by replacing \( \phi \) with a declarative English sentence, \( A \) and \( B \) with proper names, and \( \phi[B/A] \) with some sentence obtained from \( \phi \) by replacing some occurrences of the name substituted for \( A \) with the name substituted for \( B \).

\[14\] Suppose \( \neg A = B \) is true relative to \( c \). Then, assuming Millianism, \( A \) and \( B \) have the same semantic value relative to \( c \); so \( \phi \) and \( \phi[B/A] \) have the same semantic value relative to \( c \) (by compositionality); so if \( A = B \) and \( \phi \), then \( \phi[B/A] \) is true relative to \( c \) (by our second assumption about logical connectives from footnote 7).

This argument does not require the full strength of Millianism; it requires only the weaker assumption that two names have the same semantic value whenever they are used in the same syntactic position to name the same individual. This point is relevant for those who, following Montague (1973), think that when ‘Superman’ occurs as the direct object of ‘seek’ as in ‘Lois seeks Superman’ its semantic value is not Superman but rather the generalized quantifier being a property of Superman: the view is not Millian, but like Millianism it implies that Substitution is
Goodness is not the only interesting status we might wish to claim for these schemas. They are arguably valid too. But ‘validity’ is a contested notion, and in the case of principles of propositional attitude psychology like 4, it is controversial at best whether they are valid, even if they are good. Some will claim, for example, that their validity is precluded by the ‘non-logicality’ of propositional attitude vocabulary. We will focus on goodness in what follows in part to sidestep these issues. The challenges for perspectivism we will be considering concern the mere goodness of the schemas of interest, and so a fortiori are challenges for more demanding statuses one might consider, like being valid, or (if this comes to something different) having only instances that express necessary truths relative to every context (being ‘modally good’ for short). Moreover, the results we will prove below concerning goodness can be mechanically generalized to establish parallel results about modal goodness; see footnote 17.15

Why care about the good standing of systematic theorizing about the propositional attitudes? Such principles figure centrally in epistemology, ac-

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15There are other positive statuses for English sentences that we might have considered instead. Following Kaplan (1989), we assume that propositions can be evaluated as true or false relative to indices and that every context uniquely determines an index. Say that a sentence is true in a context just in case the proposition it expresses relative to that context is true relative to the index of that context; say that a sentence is inevitably true just in case it is true in all contexts. Unequivocal truth is neither sufficient nor necessary for inevitable truth: any non-context-sensitive sentence expressing a contingent truth is unequivocally true but not inevitably true, and (given Kaplan’s treatment of “actually”) any sentence “ϕ if and only if actually ϕ” is inevitably true but not unequivocally true for any ϕ such that, for some c, it is not the case that ϕ is true relative to c if and only if ϕ is true in c. More generally, theorems of Kaplan’s logic of demonstratives will be inevitably true but may not be unequivocally true. We think this makes inevitable truth one interesting notion of validity concerning sentences of English, with the caveat that it is a rather liberal one (since, in the case of non-context-sensitive sentences, inevitable truth coincides with being true relative to the index of every context).

However, the difference between unequivocal and inevitable truth is orthogonal to our main concerns in this paper. This is because potential counterexamples to the goodness of schemas of propositional attitude psychology we discuss below are (or could be replaced with) sentences that express the same proposition relative to any pair of contexts that supply the same perspective.

We will assume that there is an ‘accurate’ index a such that all and only the true propositions are true relative to it, and that, if π is the perspective supplied by c, then it is also the perspective supplied by some context c’ whose index is a. It follows that if any of the sentences of interest are not unequivocally true, they are not inevitably true either: there is a context c relative to which it expresses a proposition that isn’t true, and hence a proposition that isn’t true at a; but the proposition it expresses relative to a context depends only on the perspective of the context; so the sentence is false in any context with index a that supplies the same perspective as c; and there is such a context; so the sentence is not inevitably true. In the other direction, a sentence “□ϕ” is inevitably true if it is unequivocally true, where □ is a modal operator that expresses a notion of necessity equivalent to being true relative to every index: suppose “□ϕ” is true relative to every context; then ϕ expresses relative to any given context c a proposition that is true relative to every index, and hence a proposition that, relative to every index (and hence relative to the index of c), is true relative to every index (and so is necessarily true; we are here assuming that, if a proposition is true relative to every index, then it is true relative to every index that it is true relative to every index); so “□ϕ” is inevitably true. So our results about goodness, when extended to parallel results about modal goodness as advertised above, will thereby imply parallel results about inevitable truth.
tion theory, and the philosophy of mind. Is believing something compatible with believing its negation? Are people always in a position to know that they know what they know? Do people try to do what they believe to be necessary to realize their most desired ends, at least when they believe it to be something they can do? If a person intends to do something do they think that they will do it? Is to believe that something is probable just to have high subjective confidence in it? Even our opening example – does knowing imply believing? – has been a central question of epistemology at least since Plato.16

All of these questions are controversial, and perhaps admit affirmative an-

16An interesting question for perspectivists is the extent to which their contextualism should extend to speech-reporting verbs like ‘says’ in order to maintain the goodness of schematic principles relating speech and thought. Consider the schemas:

(i) If A says that φ and A is not insincere, then A believes that φ.

(ii) If A says that φ in making an utterance u, then the proposition that φ is the unique proposition expressed by u.

There is some temptation to think that (i) and (ii) are both good. But this generates surprising consequences for perspectivists. Suppose Lois not insincerely utters “Superman flies”. Perspectivists think that there are contexts relative to which “Lois doesn’t believe that Clark flies” is true, and hence (by Substitution) relative to which “Lois doesn’t believe that Superman flies” is true. Assuming “Lois’s utterance expresses the proposition that Superman flies” is true relative to such contexts, the goodness of (i) and (ii) leads to the surprising conclusion that “There is nothing that Lois said when she uttered ‘Superman flies’” is also true relative to such contexts.

Maybe perspectivists should accept this conclusion, the idea being (roughly) that saying that p isn’t merely a matter of uttering a sentence meaning that p, but additionally requires knowing that the sentence means that p, so that the context-sensitivity of such knowledge ascriptions (which patterns with the context-sensitivity of more basic knowledge ascriptions like those in i) will lead to corresponding context-sensitivity of speech reports.

Alternatively, perspectivists might deny that (i) is good, and assimilate Lois’s situation to the following case. Suppose a French speaker Grégory memorizes and utters the English sentence “Frenchmen are gullible” without knowing what it means or having any inclination to accept the synonymous French sentence. Arguably, there are contexts relative to which “Grégory said that Frenchmen are gullible and he was not insincere, but he does not believe that Frenchmen are gullible – rather, he doesn’t know what he is saying” truly describes this situation. Perspectivists might say that, similarly, “Lois doesn’t know what she is saying” is true relative to the relevant context (although, unlike “Grégory doesn’t know what he is saying”, a typical utterance of this sentence would be in a context relative to which it was false).

Alternatively still, perspectivists might deny that (ii) is good, and assimilate Lois’s situation to the following case. Suppose Ramy sincerely utters “The Nile floods frequently and flows north”. Arguably, there are contexts relative to which “In making this utterance Ramy said that the Nile floods frequently and also said that it flows North – which are obviously distinct propositions” truly describes this situation. If correct, this seems like a general phenomenon, whereby we can truly report people to have said things that are related to but logically weaker than the propositions expressed by the sentence they utter. Perspectivists might then say that, similarly, “Lois said that someone flies, and hence said something” is true relative to the relevant context. They can thereby accept that (i) is good while denying that “There is nothing that Lois said when she uttered “Superman flies”” is true relative to any context. (The general strategy holds, roughly, that if, owing only to a’s identity confusion about x, ‘A says that φ’ is true relative to some contexts but not to others, then there is a property f such that (a) φ expresses a proposition truth-conditionally-equivalent to x being f, (b) ‘A says that something is F’ is true relative to every context relative to which F expresses f, and (c) ‘A says something’ is true relative to every context.)

A fourth (and perhaps our favored) option holds that “says” is polysemous and different of the above three responses are correct for different of its disambiginations.
swers at best conditional on certain idealizing assumptions. But, as we will see, perspectivists face a challenge to make sense of the good standing of such theorizing even given quite powerful idealizing assumptions. It is to this task that we will now turn.

5 Propositional attitude psychology

Is 4 good? Consider the corresponding generalization about mentalese sentences:

5. For all people \(a\) and mentalese sentences \(s\), if \(s\) is in \(a\)'s “know”-box, then \(s\) is in \(a\)'s “believe”-box.

If perspectivism is correct and 5 is true, then 4 is good. This example is an instance of the following more general result.

Proposition 1. "If \(A\) Xs that \(\varphi\), then \(A\) Ys that \(\varphi\)^\(1\) is good if, for all people \(a\) and mentalese sentences \(s\), if \(s\) is in \(a\)'s X-box, then \(s\) is in \(a\)'s Y-box.

In what follows let \(\Pi(c)\) denote the perspective supplied by \(c\) and \([e]_c\) be the semantic value of \(e\) relative to \(c\).

Proof. Suppose "\(A\) Xs that \(\varphi\)^\(1\) is true relative to \(c\). So some mentalese sentence \(s\) in \(\Pi(c)\) both means \([\varphi]_c\) and is in \([A]_c\)'s X-box. So it is also in their Y-box. So "\(A\) Ys that \(\varphi\)^\(1\) is true relative to \(c\).\(17\)

This result raises the question: under what conditions should perspectivists accept the goodness of a schematic principle of propositional attitude psychology provided they accept the corresponding generalization about people's mental representations? This question will be our focus in what follows.\(18\) We will prove a number of generalizations of Proposition 1, present counterexamples to certain further generalizations of it, and consider how these results bear on the plausibility of perspectivism.

One way in which perspectivists might hope to generalize Proposition 1 is to cover more complex entailment relations between propositional attitudes. Consider the schemas:

6. If \(A\) suspects that \(\varphi\), then \(A\) both thinks that \(\varphi\) and is unsure whether \(\varphi\).

7. If \(A\) perceives that \(\varphi\), then \(A\) either sees that \(\varphi\) or can hear that \(\varphi\) or . . . .

and the corresponding mentalese generalizations

8. For all people \(a\) and mentalese sentences \(s\), if \(s\) is in \(a\)'s “suspect”-box, then \(s\) is both in \(a\)'s “think”-box and in \(a\)'s “be unsure”-box.

\(17\)As advertised, parallel reasoning shows that "Necessarily, if \(A\) Xs that \(\varphi\), then \(A\) Ys that \(\varphi\)^\(1\) is good if necessarily, for all people \(a\) and mentalese sentences \(s\), if \(s\) is in \(a\)'s X-box, then \(s\) is in \(a\)'s Y-box. The same goes for our subsequent results.

\(18\)Braun (2000) poses a related question for neo-Russellianism.
9. For all people $a$ and mentalese sentences $s$, if $s$ is in $a$’s “perceive”-box, then $s$ is either in $a$’s “see”-box or in $a$’s “can hear”-box or . . .

Should perspectivists who think that 8 and 9 are true think that 6 and 7 are good? Proposition 1 is silent on this question, since it does not cover conditionals whose consequents are conjunctions or disjunctions. But the result can be generalized to cover such principles. Call $\sigma$ a positive combination of \{ $\varphi_1$, . . . , $\varphi_n$ \} just in case it is either a member of that set or can be constructed from its members using only conjunction and disjunction.

**Proposition 2.** ˝If $A$ X$s$ that $\varphi$, then $\sigma^{-}$ is good if the corresponding generalization about mentalese sentences is true, where $\sigma$ is positive combination of \{ $\neg A$ Y$s$ that $\varphi^{-}$, . . . , $\neg A$ Y$n$s$ that $\varphi^{-}$ \}.

A precise definition of the notion of correspondence and proof of this result are in a footnote.19

6 Incompatible attitudes

But Proposition 2 does not cover all entailment relations between propositional attitudes that we might be interested in. Consider:

10. If $A$ is unsure whether $\varphi$, then $A$ is not sure that $\varphi$,

and the corresponding generalization

11. For all people $a$ and mentalese sentences $s$, if $s$ is in $a$’s “be unsure”-box, then $s$ is not in $a$’s “be sure”-box.

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19Let $\sigma$ be a positive combination of $Z = \{ \neg A$ Y$s$ that $\varphi^{-}$ : $1 \leq j \leq n \}$. The mentalese generalization corresponding to “If $A$ X$s$ that $\varphi$, then $\sigma^{-}$” is the claim that, for any person $a$ and mentalese sentence $s$, if $s$ is in $a$’s X-box, then $v(\sigma) = 1$ for all classical valuations $v$ such that $v(\neg A$ Y$s$ that $\varphi^{-}) = 1$ if $s$ is in $a$’s Y-box.

To prove Proposition 2: Suppose $\sigma = \neg A$ Y$s$ that $\varphi$. Then the mentalese generalization corresponding to “If $A$ X$s$ that $\varphi$, then $\sigma^{-}$” is the claim that, for any person $a$ and mentalese sentence $s$, if $s$ is in $a$’s X-box, then $v(\neg A$ Y$s$ that $\varphi^{-}) = 1$ for all classical valuations $v$ such that $v(\neg A$ Y$s$ that $\varphi^{-}) = 1$ if $s$ is in $a$’s Y-box. This claim is equivalent to the claim that, for any person $a$ and mentalese sentence $s$, if $s$ is in $a$’s X-box, then $s$ is in $a$’s Y-box. So by Proposition 1, if it is true then the corresponding schema is good.

Next, suppose $\sigma$ is a disjunction of members of $Z$. Then the mentalese generalization corresponding to “If $A$ X$s$ that $\varphi$, then $\sigma^{-}$” is true just in case for every person $a$ and mentalese sentence $s$, if $s$ is in $a$’s X-box, then there is a $Y$ such that “$A$ Y$s$ that $\varphi^{-}$” is a disjunct of $\sigma$ and $s$ is in $a$’s Y-box. Suppose that “$A$ X$s$ that $\varphi^{-}$” is true relative to $c$. So some $s$ in $\Pi(c)$ both means $[\varphi]_{c}$ and is in $[\neg A]^{c}$’s X-box. So, for some $Y$ such that “$A$ Y$s$ that $\varphi^{-}$” is a disjunct of $\sigma$, $s$ is also in their Y-box.

So “$A$ Y$s$ that $\varphi^{-}$” is true relative to $c$. So the relevant instance of $\sigma$ is true relative to $c$, since one of its disjuncts is.

This covers all cases, since any positive combination of sentences is logically equivalent to its conjunctive normal form, and a conditional with a conjunctive consequent is unequivocally true if the conditionals with the same antecedent but with the individual conjuncts as consequents are each unequivocally true.

$\square$

12
Should perspectivists who think that proposition 11 is true think that proposition 10 is good? Proposition 2 is silent on this question, since it does not cover conditionals with negated consequents.

In fact, perspectivism does not imply that proposition 10 is good if proposition 11 is true. Suppose Lois has a mentalese correlate $c_0$ of the English sentence “Clark flies” in her “be unsure”-box. Proposition 11 implies that $c_0$ is not in her “be sure”-box. Suppose further that a mentalese correlate $s_0$ of the English sentence “Superman flies” is in her “be sure”-box. By Substitution, the proposition that Superman flies is the proposition that Clark flies, so $s_0$ and $c_0$ mean the same thing. If Lois is unsure whether Clark flies, then Lois is not sure that Clark flies” is therefore false relative to any context that supplies a perspective that contains both $c_0$ and $s_0$. Perspectivism is compatible with there being such perspectives. So proposition 11 and perspectivism are compatible with this instance of proposition 10 being false relative to some contexts. So they do not imply that proposition 10 is good.

The above argument turned on the possibility of a context supplying a perspective containing distinct mentalese sentences that express identical propositions. Call a perspective injective just in case any distinct mentalese sentences it contains express distinct propositions. Although perspectivism is compatible with the existence of non-injective perspectives, nothing we have said so far implies the existence of any such perspectives. Let injectivity be the hypothesis that all perspectives are injective. Perspectivism and injectivity do imply that proposition 10 is good if proposition 11 is true, and this is again an instance of a more general result:

**Proposition 3.** Given injectivity, “If $A$ Xs that $\phi$, then $A$ does not $Y$ that $\phi$” is good if, for all people $a$ and mentalese sentences $s$, if $s$ is in $a$’s $X$-box, then $s$ is not in $a$’s $Y$-box.

**Proof.** Suppose “$A$ Xs that $\phi$” is true relative to $c$. So some mentalese sentence $s$ in $\Pi(c)$ both means $[\phi]^c$ and is in $[A]^c$’s $X$-box. So it is not in their $Y$-box. By injectivity, $s$ is the only sentence in $\Pi(c)$ that means $[\phi]^c$. So there is no $s'$ in $\Pi(c)$ that both means $[\phi]^c$ and is in $[A]^c$’s $Y$-box. So “$A$ does not $Y$ that $\phi$” is true relative to $c$.

Not all entailment relations between propositional attitudes we might be interested in are covered by Propositions 2 and 3. Consider:

12. If $A$ is unsure whether $\phi$, then (if $A$ desires that $\phi$, $A$ hopes that $\phi$),

and the corresponding mentalese generalization

13. For all people $a$ and mentalese sentences $s$, if $s$ is in $a$’s “be unsure”-box, then if $s$ is in $a$’s “be sure”-box, $s$ is in $a$’s “hope”-box.

Should perspectivists who think that proposition 13 is true think that proposition 12 is good? Both Propositions 2 and 3 are silent on this question, since neither covers conditionals whose consequents are themselves conditionals. But those results can be generalized to cover such principles. Call $\sigma$ a Boolean combination of
\{\varphi_1, \ldots, \varphi_n\} just in case it is either one of \varphi_1, \ldots, \varphi_n or can be constructed from them using only negation, conjunction, disjunction and material implication.

**Proposition 4.** Given injectivity, \(\Gamma A X s\) that \varphi, then \(\sigma^*\) is good if the corresponding generalization about mentalese sentences is true, where \(\sigma\) is a Boolean combination of \(\{\Gamma A Y_1 s\) that \varphi^*, \ldots, \Gamma A Y_n s\) that \varphi^*\}.

The proof of this result is in a footnote.\(^{20}\)

### 7 Complex complements

Our results so far only cover principles about the pattern of attitudes a person has towards a given proposition. They do not cover principles like:

14. If \(A\) doubts that \(\varphi\), then \(A\) thinks that \(\neg \varphi\);

15. If \(A\) believes that \(\varphi\) and \(A\) believes that \(\psi\), then \(A\) believes that \(\varphi \land \psi\);

16. If \(A\) believes that \(\varphi\) and \(A\) believes that \(\psi\), then \(A\) believes that \(\varphi \lor \psi\);

17. If \(A\) believes that \(\varphi\) and \(A\) believes that \(\psi\), then \(A\) believes that \(\varphi \rightarrow \psi\).

And perspectivism does not imply that such schemas are good if the corresponding mentalese generalizations are true. Consider the generalization corresponding to 14:

18. For all people \(a\) and mentalese sentences \(s\), if \(s\) is in \(a\)'s "doubt"-box, then \(\Gamma \neg s^*\) is in \(a\)'s "think"-box.

Suppose Lois has \(c_0\) in her "doubt"-box. Perspectivism is compatible with \(\{c_0\}\) being the perspective supplied by some context. "If Lois doubts that Clark flies, then Lois thinks that Clark does not fly" will be false relative to any such context. The fact that 18 implies that Lois has \(\Gamma \neg c_0^*\) in her "think"-box is irrelevant, since \(\Gamma \neg c_0^*\) is not a member of the perspective supplied by this context. The case is similar for 15-17: If perspectives can fail to contain the conjunctions, disjunctions, or material implications of pairs of sentences they contain, then perspectivism does not imply that these schemas are good even on the assumption that anyone with both \(s\) and \(t\) in their "believe"-box has \(\Gamma s \land t^*, \Gamma s \lor t^*\) and \(\Gamma s \rightarrow t^*\) in their "believe"-box too.

Call a perspective **closed** just in case it contains the negations, conjunctions, disjunctions, and material implications of any mentalese sentences it contains. Although perspectivism is compatible with the existence of non-closed perspectives, nothing we have said so far implies the existence of any

\(^{20}\)Let \(\sigma\) be a Boolean combination of \(Z = \{\Gamma A Y_i s\) that \varphi^* : 1 \leq j \leq n\}\}. The mentalese generalization corresponding to \(\Gamma A X s\) that \varphi, then \(\sigma^*\) is defined as in footnote 19. The proof is then a straightforward combination of the proofs of Proposition 2 and Proposition 3.
such perspectives. Let closure be the hypothesis that all perspectives are closed. Perspectivism and closure do imply that 14-17 are good if the corresponding mentalese generalizations are true, by the following result:

**Proposition 5.** Given closure, if \( A X_1 \)s that \( \varphi_1, \ldots, \varphi_n \) and \( A X_m \)s that \( \varphi_{n+1}, \ldots, \varphi_{m+n} \), then \( A Y_1 \)s that \( \psi \) is good if the corresponding mentalese generalization is true, where \( \varphi_1, \ldots, \varphi_n \) are pairwise-distinct and \( \psi \) is a Boolean combination of \( \{ \varphi_1, \ldots, \varphi_n \} \).

The proof is in a footnote. (Parallel reasoning establishes that, given closure, the result of adding “and \( A \) is ideally rational” to the antecedent of any such schema will be good if the generalization corresponding to the original schema is true of all ideally rational people; the same goes for all of our other results.)

This result contrasts sharply with the pessimistic assessment of Crimmins and Perry (1989), the most prominent defenders of perspectivism. They claim that the rampant context-sensitivity posited by perspectivism means that “there can be no simple logic of belief-sentences” (710):

> Whereas there is little possibility of an interesting logic of belief sentences, the logic of beliefs, notions, and ideas [i.e., mental representations] is available. Such issues as logical and analytic closure of belief, explicit versus implicit belief, and inferential issues in belief change really belong to the logic of beliefs rather than to the logic of belief sentences. We can explore the logic of the relations we have seen as underlying our ordinary talk about beliefs – but this logic will not be a logic of ordinary language. (711)

On the contrary, Proposition 5 shows that the goodness of schemas like 15-17 (and so an “interesting logic of belief sentences”) is not merely compatible with perspectivism, but is in fact implied (given closure) by the kind of generalizations about mental representations (i.e., “logic of beliefs, notions, and ideas”) which Crimmins and Perry claim are “available”.22

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21Let \( \psi \) be a Boolean combination of \( \{ \varphi_1, \ldots, \varphi_n \} \) for pairwise-distinct \( \varphi_1, \ldots, \varphi_n \). Let \( \hat{\psi} \) be the result of replacing \( \neg, \land, \lor, \text{and} \to \) in \( \psi \) with their mentalese counterparts \( \neg, \land, \lor, \text{and} \to \). The mentalese generalization corresponding to \( \hat{\psi} \) is true of all ideally rational people; the same goes for all of our other results.)

22In a separate paper we show how Proposition 5 can be generalized to schemas with iterated attitude ascriptions in their consequents, such as “If \( A \) believes that \( \varphi \), then \( A \) believes that they believe that \( \varphi \). The challenge in accommodating such schemas is that the context-sensitivity of attitude ascriptions makes it non-obvious how to think about the mentalese generalizations corresponding to them.
8 Transparency

But Crimmins and Perry’s pessimism is not unfounded. This is because injectivity and closure together imply that no proposition expressed by any member of any perspective is identical to the result of applying any combination of Boolean operations to it. Suppose the mentalese sentence \( s \) means \( p \) and is a member of perspective \( \pi \). By closure, every Boolean combination of \( \{ s \} \) is also a member of \( \pi \). By injectivity, any pair of distinct such sentences – such as \( s \) and \( \neg \neg s \), or \( s \land (s \lor s) \) and \( \neg (s \land s) \) – express distinct propositions. So \( p \) must be a distinct proposition from its double-negation, its conjunction with its self-conjunction must be distinct from its self-conjunction’s conjunction with it, etc. Many perspectivists may want to deny that propositions are this fine-grained. They must either reject injectivity or closure. One might then think that such perspectivists cannot accept the goodness of all the schemas covered by Propositions 4 and 5 whose corresponding mentalese generalizations they accept.

But this reaction is too quick. Say that \( a \) grasps \( s \) if, for some \( X \), \( s \) is in \( a \)’s \( X \)-box. Now consider the following weakening of injectivity:

\textbf{Transparency:} For all perspectives \( \pi \), propositions \( p \), mentalese sentences \( s \) and \( s' \), people \( a \), and attitude verbs \( X \): if \( s \) and \( s' \) are both in \( \pi \) and both mean \( p \), \( s \) is in \( a \)’s \( X \)-box and \( a \) grasps \( s' \), then \( s' \) is in \( a \)’s \( X \)-box.

We can strengthen Proposition 3 as follows (and likewise for Proposition 4):

\textbf{Proposition 6.} Given transparency, \( \langle A \ X \ s \text{ that } \varphi, \text{ then } A \text{ does not } Y \text{ that } \varphi^\land \rangle \) is good if, for all people \( a \) and mentalese sentences \( s \), if \( s \) is in \( a \)’s \( X \)-box, then \( s \) is not in \( a \)’s \( Y \)-box.

\textbf{Proof.} Suppose \( \langle A \ X \ s \text{ that } \varphi^\land \rangle \) is true relative to \( c \). So some mentalese sentence \( s \) in \( \Pi(c) \) both means \( \ll \varphi \gg \) and is in \( \ll A \gg c \)’s \( X \)-box. So they grasp \( s \), and it is not in their \( Y \)-box. By transparency, no sentence \( s' \) in \( \Pi(c) \) both means \( \ll \varphi \gg \) and is in \( \ll A \gg c \)’s \( X \)-box. So \( \langle A \text{ does not } Y \text{ that } \varphi^\land \rangle \) is true relative to \( c \).

There are principled reasons to accept transparency that do not extend to injectivity. In particular, it can be motivated by combining assumptions about perspectives with assumptions about mentalese as follows. For any relation \( \approx \) between mentalese sentences, transparency is a consequence of:

\textbf{P=}:\ For all perspectives \( \pi \), propositions \( p \), and mentalese sentences \( s \) and \( s' \):
if \( s \) and \( s' \) are both in \( \pi \) and both mean \( p \), then \( s \approx s' \).

\textbf{M=}:\ For all mentalese sentences \( s \) and \( s' \), people \( a \), and attitude verbs \( X \): if \( s \approx s' \) and \( s \) is in \( a \)’s \( X \)-box and \( a \) grasps \( s' \), then \( s' \) is in \( a \)’s \( X \)-box.

If we take \( \approx \) to be the identity relation, then \( M= \) becomes a logical truth and \( P= \) collapses to injectivity. But this is not the only interesting interpretation of these two principles. For example, suppose we instead interpret \( \approx \) as provable equivalence in the propositional calculus. Unlike injectivity, \( P= \) (so
interpreted) does not, given closure, entail the controversial principles about propositional granularity mentioned above. Indeed, it is compatible with the identity of any pair of propositions expressed by sentences that are equivalent in the propositional calculus. As for $M \approx$ (so interpreted), it is a substantive but natural idealizing assumption. And even if it is denied, so long as there is an interesting class of people (say, those who are ideally rational) and propositional attitude verbs (perhaps “believe”, “know”, and the like) for which $M \approx$ is true when $\approx$ is interpreted as logical equivalence, then given $P \approx$ we can establish a qualified version of transparency restricted to such agents and such attitudes, which in turn will allow us to prove a correspondingly qualified version of Proposition 4 concerning such attitudes of such agents. (Other potentially interesting interpretations of $\approx$ include some sort of \textit{a priori} equivalence, sameness of cognitive significance, etc.)

We are now in a position to unify our earlier results, by means of the following principle:

**Grasping:** People grasp all Boolean combinations of mentalese sentences they grasp.

**Proposition 7.** Given closure and either (i) injectivity, or (ii) transparency and grasping, \(\text{⌜If } X s \text{ that } \phi_1, \ldots, \text{ and } X s \text{ that } \phi_m, \text{ then } \sigma \text{ is good if the corresponding mentalese generalization is true, where } \phi_1, \ldots, \phi_m \text{ are pairwise distinct and, for some Boolean combinations } \psi_j \text{ of } \{\phi_1, \ldots, \phi_m\}, \sigma \text{ is a Boolean combination of } \{\text{⌜ } Y s \text{ that } \psi_1 \text{⌝}, \ldots, \text{⌜ } Y s \text{ that } \psi_n \text{⌝}\}\).\]

To illustrate the role of grasping in allowing us to combine the proofs of Propositions 5 and 6, consider the following schema covered by Proposition 7:

19. If $A$ knows that $\phi$, then $A$ does not know that $\neg \neg \phi$.

Suppose propositions are identical to their double negations (which as discussed above is consistent with closure and transparency). Then 19 is clearly not good. We now argue that, given closure, transparency, and grasping, the corresponding mentalese generalization is not true. Consider some $a$, $s$ and $\pi$ such that $s$ is in $a$’s “know”-box and is a member of $\pi$. By closure, $\pi$ contains

\[\text{⌜ } s \text{ } \rightarrow \text{ } s \text{ } \text{⌝} \]

It is illustrative to consider how Proposition 6 might fail if $M \approx$ is denied on an interpretation of $\approx$ as logical equivalence. Let $\pi$ be the set of all Boolean combinations of $\{s\}$ for some mentalese sentence $s$ expressing a contingent proposition. Suppose we accept the coarse-grained view that necessarily equivalent propositions are identical. Then $\pi$ is not injective. But it is no counterexample to $P \approx$. Now suppose $M \approx$ fails for Marwan and “be sure”: his “be sure”-box contains the self-implication “$s \rightarrow s$” but fails to contain some complicated mentalese tautology $s' \in \pi$. Suppose moreover that $s'$ is in Marwan’s “be unsure”-box. Then 10 is not good, since “If Marwan is unsure whether grass is green if grass is green, then Marwan is not sure that grass is green if grass is green” is false relative to any context that supplies $\pi$. Yet for all we have said the corresponding mentalese generalization is true.

Grasping allows us to extend the argument in the proof of Proposition 6 to the case where the complement clause of the negated ascription in the consequent is a Boolean combination of complement clauses of ascriptions in the antecedent. The rest of the proof is a straightforward combination of the proofs of our earlier results.
the kilo-negation of \( s \), which (we are supposing) means the same as \( s \). So by transparency, the kilo-negation must be in \( a \)'s “\( \text{know} \)”-box too if \( a \) grasps it. And by grasping, \( a \) does grasp it, since they grasp \( s \). So it is not true that no one has in their “\( \text{know} \)”-box the kilo-negation of anything they have in their “\( \text{know} \)”-box.

Those who reject grasping as psychologically unrealistic may still accept a weaker generalization in the vicinity. The idea is that some propositional attitude verbs express explicit attitudes, and although grasping isn’t closed under arbitrary Boolean combinations, we at least implicitly grasp all not-too-complicated Boolean combinations of things we explicitly grasp. Say that \( a \) explicitly grasps \( s \) if, for some explicit attitude \( X \), \( s \) is in \( a \)'s \( X \)-box; and let \( \sigma \) be a Boolean \( k \)-combination of \( \{ \varphi_1, \ldots, \varphi_n \} \) just in case it is either one of \( \varphi_1, \ldots, \varphi_n \) or can be constructed from them using negation, conjunction, disjunction and material implication at most \( k \) times. The above idea can be formalized as:

\( k \)-Grasping

People grasp all Boolean \( k \)-combinations of mentalese sentences they explicitly grasp.

This principle allows us to prove the following variant of Proposition 7:

**Proposition 8.** Given closure, transparency and \( k \)-grasping, If \( A \) \( X_1 \)s that \( \varphi_1 \), \( \ldots \), and \( A \) \( X_n \)s that \( \varphi_n \), then \( \sigma \) is good if the corresponding mentalese generalization is true, where \( X_1, \ldots, X_n \) express explicit attitudes, \( \varphi_1, \ldots, \varphi_n \) are pairwise distinct, and, for some Boolean \( k \)-combinations \( \psi_j \) of \( \{ \varphi_1, \ldots, \varphi_n \} \), \( \sigma \) is a Boolean combination of \( \{ \lnot A \ Y_1 \text{s that } \psi_1 \}, \ldots, \lnot A \ Y_n \text{s that } \psi_n \} \).

Consider two perspectivists Ali and Nicol who agree that closure is true, “\( \text{know} \)” expresses an explicit attitude, \( k \)-grasping is true for small \( k \), and no one grasps the kilo-negation of anything they grasp. Ali accepts injectivity, and so thinks that no proposition is identical to its double negation; Nicol thinks that all propositions are identical to their double-negations, and so only accepts transparency. Although they both accept the mentalese generalization corresponding to 19, only Ali will think the schema is good. This is exactly how we would expect competing views of propositional granularity to manifest themselves in propositional attitude psychology.

Propositions 7 and 8 cover a wide range of schemas. But they don’t cover every principle of propositional attitude psychology we might be interested in. Consider:

20. If \( A \) believes that \( \varphi \land \psi \), then \( A \) believes that \( \varphi \).

This schema is not covered by Proposition 7. And even assuming closure and injectivity, the corresponding mentalese generalization does not imply that it is good. For example, suppose \( s \) means that Jahangir drinks milk and Jansher drinks water, Ramy has \( s \) in his “\( \text{believe} \)”-box, and the set of Boolean combinations of \( \{ s \} \) is an injective perspective. “If Ramy believes that Jahangir drinks milk and Jansher drinks water, then Ramy believes that Jahangir drinks milk” is then false relative to any context supplying this perspective, since no
member of the perspective means that Jahangir drinks milk. So 20 is not good (irrespective of whether the corresponding mentalese generalization is true).

Rather than search for some yet further condition on perspectives to secure the inference from the relevant mentalese generalization to the goodness of 20, we think that perspectivists should take such examples to show that 20 is simply not good. In its place, they might point to the weaker schema:

21. If A understands the question whether \( \phi \) and A understands the question whether \( \psi \), then (if A believes that \( \phi \land \psi \), then A believes that \( \phi \)).

This schema is covered by Proposition 7 and (given 1-grasping and that “understand the question” expresses an explicit attitude) Proposition 8.

9 Assessing transparency and closure

Propositions 7 and 8 show that, given transparency and closure, a wide range of schemas of propositional attitude psychology are good if the corresponding mentalese generalizations are true. But are transparency and closure true?

Consider the principles:

Articulation: Every mentalese sentence anyone grasps is in some perspective.

Decomposition: For every perspective \( \pi \) and mentalese sentences \( s \) and \( s' \), if \( s \) is in \( \pi \) and \( s' \) is a subsentence of \( s \), then \( s' \) is in \( \pi \).

Coarseness: For all \( p \), \( p \land \neg p \) is the same proposition as \((p \land \neg p) \land \neg (p \land \neg p)\).

Here are two limitative results:

Proposition 9. Articulation, Decomposition and Transparency are not all true.

Proof. Lois has \( \langle s_0 \hat{\land} \neg c_0 \rangle \) in her “believe”-box. By articulation, it is in some perspective \( \pi \). By decomposition, \( s_0 \) and \( c_0 \) are both in \( \pi \). And \( s_0 \) and \( c_0 \) both mean that Superman flies and Lois has \( s_0 \) in her “know”-box and grasps \( c_0 \). By transparency, she has \( c_0 \) in her “know”-box too. But she doesn’t.

Proposition 10. Articulation, Coarseness, Transparency and Closure are not all true.

Proof. Lois has \( \langle s_0 \hat{\land} \neg c_0 \rangle \) in her “believe”-box. By articulation, it is in some perspective \( \pi \). By closure, \( \langle (s_0 \hat{\land} \neg c_0) \hat{\land} (s_0 \hat{\land} \neg c_0) \rangle \) is in \( \pi \). By coarseness, they mean the same thing. By transparency, if Lois grasps \( \langle (s_0 \hat{\land} \neg c_0) \hat{\land} (s_0 \hat{\land} \neg c_0) \rangle \), then she has it is in her “believe”-box. But (we may suppose) she does grasp this mentalese sentence and does not have it in her “believe”-box.

How should perspectivists respond?\textsuperscript{25}

\textsuperscript{25}We won’t consider views that reject articulation, since we think that, without it, the connection between ordinary language and ‘box-ology’ is too tenuous to justify using the word “believe” to characterize the psychological relation between Lois and \( \langle s_0 \hat{\land} \neg c_0 \rangle \).
9.1 Rejecting decomposition and coarseness

One way that perspectivists might respond to the limitative results 9 and 10 is by rejecting decomposition and coarseness. We ourselves happen to be attracted to views of propositional granularity that imply coarseness, so to that extent we are disinclined towards this response. But also we realize that most philosophers do not share our leanings here. Moreover, avoiding the limitative result posed by Proposition 10 does not require thinking that propositions are structured in the image of the sentences we use to express them. It requires only that no proposition is the result of applying any non-trivial polyadic Boolean operation to itself (the operation in this case being conjunction composed with negation in its second argument). A prohibition on propositions being ‘nontrivial ingredients’ of themselves is consistent, for example, with \( \phi \) and \( \Box \neg \Box \neg \phi \) always expressing the same proposition, and similarly for \( \Box \neg \Box \phi \) and \( \Box \phi \wedge \Box \phi \).\(^{26}\)

Setting aside the issue of propositional granularity, the present response faces other challenges. Suppose we accept transparency, closure, and that ordinary uses of the following sentence are true:

22. Lois believes that Superman flies and Clark doesn’t fly.

What can we say about the perspective supplied by context in the case of such uses? It presumably contains \( \Box s_0 \wedge \neg c_0 \), and so by closure contains every Boolean combination of \( \{ \Box s_0 \wedge \neg c_0 \} \). But it cannot contain \( s_0 \), since (by closure) it would then contain \( \Box s_0 \wedge \neg s_0 \), which means the same as \( \Box s_0 \wedge \neg c_0 \) but (unlike it) is not in Lois’s “believe”-box (violating transparency). For the same reason, it cannot contain any mentalese sentence that means the same as \( s_0 \). So “Lois believes that Superman flies” will be false relative to this perspective. We therefore arrive at the surprising conclusion that the sentence “Lois believes that Superman flies and Clark doesn’t fly: after all, she believes that Superman flies and believes that Clark doesn’t fly” is false relative to this perspective (and indeed, by parallel reasoning, relative to every perspective, since for any mentalese sentence \( \phi \) meaning the same as \( s_0 \) Lois does not have \( \Box \phi \wedge \neg \phi \) in her “believe”-box). This result might seem to undercut the motivation for closure, given (i) the felt connection between such purported explanations and schemas like 15 and (ii) the role of such schemas in motivating closure. More generally, it seems strange that an ordinary true use of 22 would put us in a context relative to which Lois has no attitudes whatsoever towards the proposition that Superman flies. But this worry is admittedly impressionistic, and perhaps the apparent oddity can be explained away by some further story about the nature of the perspectives supplied by such contexts.\(^{27}\)

\(^{26}\) Dorr (2016) defends such a view, and shows that it is not vulnerable to the paradoxes that afflict more naïve structured theories of propositions.

\(^{27}\) Note that the considerations about quantified attitude ascriptions adduced in footnote 5 to argue against the identification of perspectives with particular mentalese sentences support a parallel argument against the mathematically natural proposal that, for every perspective \( \pi \), there is a mentalese sentence \( s \) such that \( \pi \) is the set of all Boolean combinations of \( \{ s \} \).
9.2 Rejecting decomposition and closure

A second option for perspectivists is to reject decomposition and closure. This response naturally goes along with Crimmins and Perry’s pessimism about there being an “interesting logic of belief-sentences”, since not only does it reject the assumption of Proposition 5, but it is hard to see how alternative assumptions could achieve the same effect without falling prey to an analogue of Proposition 10.

But the proposal is compatible with there being an interesting ‘logic’ of the entailment relations between different propositional attitudes, since closure is not an assumption of Proposition 6 (and it is not needed to strengthen that result to cover Boolean combinations of attitudes towards a common content, just as nothing beyond injectivity was needed to generalize Proposition 3 to Proposition 4). Such principles are a central topic in the study of propositional attitudes, especially when we consider how some attitudes might be “analyzed” in terms of others.

Like the proposal considered above that rejects decomposition and coarseness, proponents of the present proposal are also under pressure to say more about which perspectives are supplied by context. (Merely saying that the perspective supplied by context for an ordinary use of 22 contains \( \lnot s_0 \land \lnot c_0 \) but does not contain both \( s_0 \) and \( c_0 \) is not to say very much.)

Note that there are independent reasons for those who accept principles like coarseness to reject closure. Consider an analogue of coarseness for tau-tologies: that, for all \( p \), \( p \rightarrow p \) is the same proposition as \( (p \rightarrow p) \rightarrow (p \rightarrow p) \).

Consider:

23. Lois doesn’t know that, if Superman flies, then Clark flies.

We would expect ordinary uses of such ascriptions to be true and also to be in contexts whose supplied perspective contains \( \lnot s_0 \rightarrow c_0 \). But this is ruled out by transparency for any closed perspective, since Lois grasps \( \lnot s_0 \rightarrow c_0 \), and any closed perspective containing it also contains \( \lnot (s_0 \rightarrow c_0) \rightarrow (s_0 \rightarrow c_0) \), which means the same thing (by our granularity assumption) but unlike \( \lnot s_0 \rightarrow c_0 \) is in Lois’s “know”-box.

A similar point applies to one version of the so-called ‘problem of logical omniscience’ for coarse-grained theories of propositions. The challenge is to provide pretheoretically plausible truth conditions for ordinary uses of negated attitude ascriptions whose complement clauses correspond to mentalese sentences that, though not in the same ‘boxes’ as their self-implications, express the same propositions as their self-implications if propositions are sufficiently coarse-grained. For example, the challenge arises with attitude ascriptions like

24. In 1900, Frege didn’t know that naïve set theory is inconsistent

for those who think that mathematics is non-contingent and that there is only one necessarily true proposition.
9.3 Rejecting transparency

A third option for perspectivists is to reject transparency in order to uphold decomposition. To motivate this response, consider the following strengthening of decomposition:

**Elementary generation:** For every perspective $\pi$ there is a set of elementary expressions of mentalese $E$ such that $\pi$ is the set of all mentalese sentences all of whose elementary constituents are in $E$.

Elementary generation is an extremely natural hypothesis about which sets of mentalese sentences are perspectives. Moreover, it suggests a mechanism by which we convey the relevant difference between the two perspectives supplied by context for ordinary true uses of 1 by our choice of words in that sentence’s two complement clauses: the use of “Superman” in the first complement clause and “Clark” in its place in the second signals that the first attitude ascription is in a context supplying a perspective generated from a set of mentalese expressions that includes Lois’s mentalese analogue of “Superman” but not her mentalese analogue of “Clark”, and vice versa for the second attitude ascription. Of course, perspectivists should ultimately want a more general account of how speakers and hearers successfully communicate using attitude ascriptions given the rampant context-sensitivity of such sentences. As we explained in connection to the Thelma/Shorty example in section 3, giving such an account is not straightforward, since doing so seems to require first understanding why certain ways of thinking about individuals are salient at a given moment in a conversation, which is a challenge facing all theories of attitude ascriptions and identity confusion. But elementary generation is an appealing starting point, since it allows us to think of perspectives as corresponding to collections of representational capacities. On this picture, a person believes a proposition relative to a perspective just in case, through the deployment of basic mental representations that realize such capacities, they thereby deploy a complex representation (i.e., a mentalese sentence) in the right way (i.e., in their “believe”-box) that expresses that proposition.28 However, since it implies decomposition, elementary generation also requires rejecting transparency (by Proposition 9).

Although elementary generation doesn’t imply closure, it is easily combined with it (and implies it given the assumption that every perspective

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28In this way perspectives can correspond to sets of elementary expressions of mentalese without ordinary speakers needing to think about such sets “as such” when making attitude ascriptions. They might, instead, think in a much vaguer way about sets of cognitive capacities or ways of thinking about individuals, which in turn makes the context be one that supplies a perspective generated from the set of elementary expressions that underpin those capacities or are vehicles of such ways of thinking. Alternatively, as explained in the second paragraph of note 5, perspectives might be identified with properties of, or relations to, mental representations, since what matters for our development of perspectivism is merely that perspectives uniquely determine a set of mentalese sentences relative to any given agent, time, and world. Perspectivists can therefore agree with Braun that “ordinary speakers [do not] have […] sophisticated thoughts and intentions about mental representations when they utter belief sentences” (Braun, 1998, pp. 560-1).
is generated from a set of elementary expressions that includes $\neg$, $\land$, $\lor$, and $\rightarrow$. So it is compatible with the assumptions of Proposition 5, which can be strengthened in the manner of Proposition 2 to cover all schemas whose consequents are positive combinations of attitude ascriptions whose complement clauses are Boolean combinations of the (pairwise-distinct) complement clauses of attitude ascriptions in the antecedent. The resulting picture thereby vindicates “positive psychology”: such schemas will be good if the corresponding mentalese generalizations are true.

As for the rest of propositional psychology, the situation is more delicate. Consider the schemas:

25. If $A$ believes that $\varphi$, then $A$ does not believe that $\neg \varphi$.

26. $A$ does not believe that $\varphi \land \neg \varphi$.

On the one hand, elementary generation implies (given articulation) that some perspective contains both $s_0$ and $\neg \varphi$, and so requires denying that 25 is good. On the other hand, all perspectivists must deny that 26 is good (since by articulation some perspective contains $s_0 \land \neg \varphi$, which is in Lois’s “believe”-box). Since the natural motivation for the idea that people don’t have contradictory beliefs is that they don’t believe contradictions, it is not obvious how costly perspectivists initially attracted to that idea should find this implication of elementary generation.

We will now consider two ways in which perspectivists who reject transparency might uphold the goodness of some schemas of propositional attitude psychology not covered by the combination of Propositions 2 and 5.

One option is to hold that the naive box-based semantics applies only to “unanalyzable” attitude verbs. For example, one might think that “be unsure” is analyzable in terms of “understand the question” and “be sure”, so that $[A \text{ is unsure whether } \varphi]_c = [A \text{ understands the question whether } \varphi]$ and $A$ is neither sure that $\varphi$ nor sure that $\neg \varphi$, for the proposition that some $s$ in $\Pi(c)$ that means $[\varphi]$ is in $[A]_c$’s “understands the question”-box and no $s$ in $\Pi(c)$ that either means $[\varphi]$ or means $[\neg \varphi]$ is in $[A]_c$’s “be sure”-box. This analysis guarantees that 10 is good. And the general strategy can be applied quite widely.

A second option is to retreat from schemas like 25 to weaker ones obtained from them by adding a special proviso. Suppose there is a sentence

$\neg X$ that $\varphi$ or $A$ does not X that $\varphi$ will then not be unequivocally true, despite being an instance of the law of excluded middle. (It will be false relative to any $c$ such that no $s \in \Pi(c)$ means $[\varphi]$.)

29. Perspectivists who accept closure and transparency can take some comfort in the fact that “If $A$ understands the question whether $\varphi$, then $A$ does not believe that $\varphi \land \neg \varphi$” is covered by Propositions 7 and 8.

30. Clearly there are some such schemas – e.g., “If $A$ knows that $\varphi$, then $A$ does not know $\varphi \land \neg \varphi$” is not covered by our earlier results, but it is good provided every mentalese sentence in anyone’s “know”-box is true. Williamson (2000, Ch. 1, Ch. 3) discusses different senses in which propositional attitudes might be analyzable in terms of other.

31. As a precedent for this proposal, note that all perspectivists must reject the box-based semantics for negated attitude verbs. That is, they cannot say that $[A \text{ does not } X \text{ that } \varphi]_c$ is true only if some $s \in \Pi(c)$ means $[\varphi]$ and is in $[A]_c$’s $X$-box. This is because “Either $A$’s that $\varphi$ or $A$ does not $X$ that $\varphi$” will then not be unequivocally true, despite being an instance of the law of excluded middle. (It will be false relative to any $c$ such that no $s \in \Pi(c)$ means $[\varphi]_c$.)
Ω that is true relative to all and only contexts that supply perspectives that satisfy transparency. Then for every schema σ covered by Propositions 7 and 8, corresponding results hold for \( \text{⌜If } \Omega, \text{ then } \sigma \text{⌟} \) without the assumption of transparency. This fact suggests one way in which perspectivists can vindicate the legitimacy of remarks like “Setting aside identity confusion, …” that philosophers are wont to make. Note that this way of setting aside the issue of identity confusion for the purposes of doing propositional attitude psychology is very different from restricting the scope of such theorizing to idealized agents who are not subject to any such confusion.\(^{33}\) That restriction is extremely draconian; the resulting theory would not apply to any of us.\(^{34}\) The present proposal involves no such restriction: in contexts supplying transparent perspectives, instances of Ω-qualified schemas can express non-trivial claims about, for example, Lois’s attitudes towards Superman (despite her confusion about his identity).\(^{35}\)

A different challenge for perspectivists who accept elementary generation concerns the truth conditions of negated attitude ascriptions whose complement clauses can be turned into obvious logical truths by intersubstituting co-referential names. (It is similar to the challenge for coarse-grained theories of propositions discussed in the previous subsection.) The main motivation for elementary generation was that it suggested a way that relevant features of contextually supplied perspectives could be indicated in part by speakers’ choices of words in attitude ascriptions’ complement clauses. In particular, we might expect that, ordinarily, if a mentalese sentence grasped by the subject of an attitude ascription is an analogue of that ascription’s complement clause, then it is in the perspective supplied by context. Now consider the perspective supplied by context for an ordinary use of

27. Lois doesn’t know that Superman is Clark.

The present proposal implies that it contains Lois’s mentalese analogue of “Superman is Clark”. Moreover, just as every elementary constituent of “Superman is Superman” is an elementary constituent of “Superman is Superman”, we assume that every elementary constituent of Lois’s mentalese analogue of “Superman is Clark” is an elementary constituent of her mentalese analogue of “Superman is Superman”. So, by elementary generation, the perspective in question also contains her mentalese analogue of “Superman is Superman”. But this mentalese sentence is in her “know”-box. So we have the unwelcome conclusion that ordinary uses of 27 are false.

\(^{33}\)This restriction should also be distinguished from the idea that principles of propositional attitude psychology are good only when restricted to some a special subject-matter about which identity confusion is impossible (e.g., one’s ‘sense data’).

\(^{34}\)Indeed, perhaps being ideally rational requires being identity confused: if the continuum hypothesis is true but any rational person should not be sure of it, rational people will be identity-confused, since they will have “\( \text{ˆ}\aleph_1 \neq \text{ˆ}\aleph_1 \)” but not “\( \text{ˆ}\aleph_1 = \text{ˆ}\beth_1 \)” in their “be sure”-box.

\(^{35}\)An interesting question is whether perspectivists should think that any sentence of pre-theoretical English is true in all and only contexts that supply perspectives satisfying transparency. One potential candidate might be “It is impossible that an ideally rational person believe the conjunction of two things they understand without also believing those conjuncts”.  

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Although certainly a cost of the view, we think that it would be too quick to reject elementary generation merely on the grounds that, given natural assumptions, it predicts that ordinary speakers are mistaken when they judge uses of sentences like 27 to be true. Identity confusion is extremely puzzling, and although in any particular case we would prefer not to attribute error to ordinary speakers, it does not strike us as particularly implausible that ordinary speakers sometimes make mistakes as a result, perhaps quite systematically. We will now consider and respond to two more specific objections to the combination of perspectivism and the error hypothesis under consideration.

Objection 1: Anyone willing to grant that ordinary speakers make mistakes about sentences like 27 should be a neo-Russellian. Reply: We don’t consider postulating context-sensitivity in attitude ascriptions costly in itself. A more concrete worry is needed. Three such worries are that the kind of context-sensitivity we are postulating (i) rests on an unappealing mentalese foundation, (ii) requires too much sophistication on the part of ordinary speakers, or (iii) is too unconstrained to be predictive. Our response to (i) and (ii) is _ad hominem_. Neo-Russellians use a similar framework to give truth conditions for attitude ascriptions, and we suspect that alternative neo-Russellian frameworks would support parallel perspectivist alternatives. And neo-Russellians face if anything a more acute challenge than perspectivists do to explain ordinary conversational patterns involving attitude ascriptions.

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36While the version of perspectivism explored in section 9.1 doesn’t make this unwelcome prediction concerning 27, since it is compatible with the perspective supplied by context being the set of Boolean combinations of Lois’s mentalese analogue of “Superman is Clark”, it may not be compatible with such a treatment of all related examples. This is because the motivations for closure generalize to logical vocabulary other than Boolean connectives. For example, the schemas “If A believes that $\phi$, then A believes that the proposition that $\phi$ is true” and “If there is something that A believes is $F$, then A believes that something is $F$” have a similar flavor to schemas 15-17. So insofar as 15-17 are taken to motivate closure, these two schemas might likewise be taken to motivate the claim that perspectives are closed under truth introduction and existential generalization. If that is right, then any non-empty perspective contains a sentence $s$, and so contains $\langle \hat{T}s \rangle$ (by truth introduction, where $\hat{T}$ and $\hat{#}$ are the mentalese analogues of “is true” and “the proposition that”) and hence contains $\langle \exists x \hat{T}x \rangle$ (by existential generalization). So every non-trivial perspective will contain $\langle \exists x \hat{T}x \rangle$, which we may assume is in any rational person’s “know”-box. But such a person may be subject to identity confusion with regard to the property of being true, just as someone who doesn’t know that “attorney” and “lawyer” are coextensive is identity-confused about being a lawyer. In particular, they may have a mentalese predicate $V$ that expresses the property of truth without having $\langle \exists x \hat{T}x \rangle$ in their “know”-box. In the manner of (28), we might be inclined to convey this person’s state of mind with a sentence like “They don’t know that something is veridical”. But, by parallel reasoning to that concerning (28), it is hard to see how this ascription could express a true non-trivial proposition relative to any perspective. Although one might quibble about the example, the point is general: the sorts of data that motivate closure can be used to motivate other closure conditions on perspectives which may jointly imply that certain mentalese sentences are members of any non-empty perspective and are in any sufficiently cognitively sophisticated person’s “know”-box. We then risk falling into error when we attempt to use negated knowledge ascriptions to characterize such people’s identity confusion concerning the properties and relations expressed by the constituents of such mentalese sentences.

37See Braun (1998) for a defense of a similar outlook.
given the much more widespread error they postulate in speakers’ truth-value judgments about attitude ascriptions.\footnote{See \textcite{Salmon1986} and \textcite{Soames1987b} for the classic neo-Russellian attempts to meet this challenge, and footnote \ref{fn:28} for a non-\textit{ad hominem} reply to a related concern.} Regarding (iii), while such considerations of systematicity may count against versions of perspectivism that reject decomposition or closure, elementary generation is a simple and predictive principle, as witnessed by the fact that it predicts the falsity of ordinary uses of \ref{1}.

Elementary generation not only convicts ordinary speakers of error in far fewer cases than neo-Russellianism does: it also fails to convict them of error in canonical cases like ordinary uses of sentences like \ref{1}. According to perspectivists, it is by exploiting the context-sensitivity of such sentences that ordinary speakers succeed in conveying the contours of people’s identity confusion using ordinary English. If neo-Russellianism is true, it is far less clear how we succeed in doing so without explicitly talking about people’s underlying mental representations.

Objection 2: Although a limited amount of error on the part of ordinary speakers is tolerable, error about sentences like \ref{27} is not tolerable because such ascriptions are central to the phenomenon under discussion. Reply: Sentences like \ref{27} are much less central to the phenomenon under discussion than their prominence in the literature on identity confusion suggests. As discussed at the end of section 3, most real cases of identity confusion do not involve a pair of proper names that are canonically associated with the respect in which the person in question is confused about the thing they are confused about.\footnote{See \textcite{Schiffer1979, Kripke1979}, and \textcite{Dorr2014}.}

Real cases of identity confusion are rarely naturally described using negated knowledge ascriptions with identity statements involving two occurrences of proper names in their complement clauses. Moreover, we agree with \textcite{Saul1997} that, given the pathological pattern of ordinary truth-value judgments for sentences involving pairs of names like “Superman” and “Clark” but not involving any attitude verbs, we should be especially cautious in drawing sweeping conclusions on the basis of examples that seem to essentially rely on such pairs of names.

\section{Conclusion}

Like Fregeanism, perspectivism provides a framework in which the English attitude ascriptions that we ordinarily use to characterize the states of mind of identity-confused people can succeed in conveying true and relevant features of those people’s underlying psychology. Like neo-Russellianism, it is naturally combined with a Millian treatment of proper names and an unqualified endorsement of Substitution.\footnote{\textcite{Goodman2014} argue that Fregeans are committed to the invalidity of Substitution.} But is perspectivism compatible with the good standing of systematic theorizing about the propositional attitudes? Af-

\footnote{\textcite{Soames1987a} for the classic neo-Russellian attempts to meet this challenge, and footnote \ref{fn:28} for a non-\textit{ad hominem} reply to a related concern.}
ter sharpening this question in a way that is sensitive to the context-sensitivity
the theory posits, we established a number of tenability results in this direc-
tion, showing how principles about perspectives like closure and injectivity,
principles about people’s cognitive psychology like grasping and k-grasping,
and principles relating both like transparency, can secure the good standing of
principles of propositional attitude psychology conditional on the truth of cor-
responding generalizations about people’s mental representations. We then
explored tradeoffs between these principles on the one hand, and certain pre-
theoretically attractive claims about readings of ordinary attitude ascriptions
on the other. The issues here are subtle and dependent on one’s background
theory of propositional granularity. But we think that all three versions of per-
spectivism we explored in the last section are worthy of further investigation.

The results of this paper are also relevant to Fregeans and neo-Russellians.
The usual way of developing neo-Russellianism is a limiting case of our way of
developing perspectivism: in effect, it is the view that perspectivism is true but
there is only one perspective – the set of all mentalese sentences.41 This per-
spectivist recasting of neo-Russellianism implies closure, so neo-Russellians
can avail themselves of Propositions 2 and 5 to vindicate the goodness of some
schemas of “positive psychology”, as discussed in section 9.3. But it is also in-
consistent with transparency, and so neo-Russellians cannot appeal to Propo-
sitions 7 and 8 to establish the goodness of other principles of propositional
attitude psychology; nor can they use the strategy mentioned in section 9.3 of
vindicating the non-trivial goodness of such principles when qualified by the
suitably context-sensitive understanding of the proviso “If we set aside identity
confusion, then . . . ”. Neo-Russellianism is also committed to the falsity of
all uses of 27.42

These challenges for neo-Russellians have parallels for Fregeans too. It
is true that Fregeans have no trouble vindicating the goodness of the sort of
schematic principles we have been discussing.43 But it is a vexed question how
they should think about the universal generalizations of those schemas, since
it is a vexed question how they should handle quantification into the scope
of attitude ascriptions. The orthodox treatment is Kaplan (1968).44 And just
as neo-Russellians fail to secure the goodness of schemas like 25 conditional
on the truth of the corresponding mentalese generalization, Kaplanians fail
to vindicate the goodness of universal generalizations of instances of such

42The errors predicted by neo-Russellians in ordinary speakers’ judgments about sentences like
27 are akin to the errors predicted by coarse-grained theories of propositions in ordinary speakers’
judgments about attitude ascriptions like 24 whose complement clauses non-obviously express
logical truths. Given this kinship, it is not clear that neo-Russellians have a principled basis for
objecting to coarse-grained theories on the grounds that they predict such errors, as, e.g. Soames
(1987a) has influentially done.
43Most straightforwardly, they can identify senses with mental representations and have every
attitude verb X express the relation of being in one’s X-box.
44See Aloni (2005), Bacon and Russell (2017) and Caie et al. (forthcoming) for alternative anti-
Millian proposals that avoid this issue about universal generalizations, although only the last
proposal avoids the issue of existential generalizations raised in footnote 46.
schemas, like “For all \(x\), if Lois believes that \(x\) flies, then Lois does not believe that \(x\) does not fly”.\(^{45}\) Similarly, although they have no problem accounting for the truth of ordinary uses of \(^{27}\), they face a challenge concerning related existential generalizations.\(^{46}\)

By contrast, perspectivists can treat quantification into the scope of attitude ascriptions in the same way that they treat quantification into any other context, since they are Millians. And when they take a schema to be good, they can straightforwardly take universal generalizations of it to be good too.\(^{47}\) When it comes to vindicating general principles of propositional attitude psychology, then, it isn’t clear that perspectivism is at any disadvantage in comparison to Fregeanism.

References


\(^{45}\)Given our mentalese framework, a Kaplanian treatment of this sentence would have it express the proposition that, for any \(x\), if for some mentalese name \(n\) of \(x\) Lois has \(\lceil Fa\rceil\) in her “be sure”-box, then for no mentalese name \(n\) of \(x\) does Lois have \(\lceil \neg Fa \rceil\) in her “be sure”-box (where \(F\) is her mentalese analogue of “flies”). And this is false, since there is someone, Superman, such that the antecedent is true (as witnessed by \(s_0\)) and the consequent false (as witnessed by \(c_0\)). See Yalcin (2015) for discussion of how to achieve these truth conditions compositionally.

\(^{46}\)For example, “As in many comic book stories, there is a superhero and an unassuming citizen such that, although the superhero and the citizen are the same person, Lois doesn’t know that they are identical”.

\(^{47}\)More precisely, they can hold that, if \(\sigma\) is good, then \(\forall x_1 \ldots \forall x_n \sigma[(\varphi/\varphi)]\) is good too, provided no variable free in \(\varphi\) becomes bound when it is substituted for an occurrence of \(\varphi\) in \(\sigma\), and each \(x_i\) is free in \(\varphi\) and not in \(\sigma\).


