SYMPOSIUM

Replies to Alex Byrne, Mike Martin, and Nico Orlandi

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I am grateful to Mike Martin, Alex Byrne, and Niko Orlandi for the extraordinary care they have taken with my book and for their incisive and challenging comments and criticisms. I regret that, for lack of space, I can only respond to what I take to be their main points of criticism. The order of my replies is alphabetical.

1 │ REPLY TO ALEX BYRNE: HIGH-LEVEL PROPERTIES AND THE SEMANTICS OF "LOOK"

In my reply to Byrne, I begin by addressing his concern that the raised and non-raised forms of look-statement don't always seem to be equivalent. I then turn to his worry about my characterization of the epistemic use of "look." Finally, I respond to his objection to my main argument in *Seeing and Saying* (2018) for a representational conception of experience.

1.1 │ "Look" as Subject Raising

Byrne raises a worry about a key premise in my argument for a representational conception of experience, viz., that "look" is a subject-raising verb. If "look" is a subject-raising verb, the surface grammatical form in (1a) below is misleading. (1a) appears to be a subject-predicate sentence attributing the property of looking speckled to the hen (as shown in 1b). But this appearance is illusory. At the level of logical form, "looks" is not a constituent of the predicate but rather a sentential operator that takes scope over the subordinate clause "the hen is speckled" (as shown in 1c). The sentence in (1a) is the result of "the hen" being raised out of the subordinate clause "the hen is speckled" in (1c) to become the apparent (or surface-grammatical) subject of "looks speckled."

1a.	The hen looks speckled.	(Subject raised)
1b.	Looking-speckled(the hen).	(Predicative)
1c.	Looks(the hen is speckled).	(Underlying form of 1a)

One problem with the view that "look" is subject-raising is that "look" seems to differ in an important way from the appearance verbs "seem" and "appear," which are uncontroversial examples of subject-raising verbs. For instance, unlike "seem" and "appear," "look" does not take a "that"-clause complement, as illustrated in (2a-b) (the star indicates lack of grammaticality).

| 2a. | The hen seems/appears/looks speckled. |
| 2b. | It seems/appears/*looks that the hen is speckled. |

However, like "seem" and "appear," "look" does take a finite complement headed by "as if" (as shown in 2c).

| 2c. | It seems/appears/looks as if the hen is speckled. |

But, Byrne argues, this presents a problem for my view. (A superficially similar case is put forth by Martin and discussed by Orlandi; I will address the latter in due course.) To see why this irregularity of "look" causes trouble here, Byrne asks us to imagine a scenario where the Greek pantheon is real, and where you utter (3a) on the basis of having seen lightning before, a telltale sign of Zeus's wrath (the pound sign indicates infelicity).

| 3a. | It looked (to me) as if Zeus was angry. |
| 3b. | #Zeus looked angry (to me). |

If "looked" functions as a subject-raising verb, then we should expect the non-subject-raised form in (3a) to be equivalent to the subject-raised form in (3b), which is to say that if (3a) is felicitous, the same should be true of (3b). But given that you didn't see Zeus but only the lightning, (3b) seems infelicitous. If, however, (3a) is felicitous but (3b) is not, then (3a) and (3b) cannot be equivalent, which presents at least a prima facie problem for my view that "look" functions exclusively as a subject-raising verb.[1]

By way of reply, I don't think Byrne's counterexample ultimately presents a threat to my thesis that "look" functions exclusively as a subject-raising verb. Byrne prefaces his counterexample by reminding me and the reader that I say that "look" is unable to take "that"-clause complements due to an irregularity of the verb. However, it merits emphasis that this is an irregularity of "look" only in comparison with "appear" and "seem." Indeed, nearly all textbook examples of subject-raising verbs fail to take finite complements regardless of whether they are headed by "that," "as if," or "like." To see this, consider (4a-c).

| 4a. | Homer seems/appears/happens/looks/tends/needs/ought/ceases/continues to be happy. |

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[1] Note that supposing that "look" in (3a) is used epistemically in the envisaged case, which I would be tempted to argue, does nothing to alleviate Byrne's worry. This is because, if "look" functions exclusively as a subject-raising verb, it function this way irregardless of how it's interpreted in the context.

4b.   It seems/appears/happens/*looks/*tends/*needs/*ought/*ceases/*continues that [Homer is happy].

4c.   It seems/appears/looks/*happens/*tends/*needs/*ought/ceases/*continues as if/ like [Homer is happy].

Subject-raising verbs thus do not typically take finite complements, including "that"-clause complements. It may at first seem surprising that relatively few subject-raising verbs take "that"-clause complements (as shown in 4b), especially as the sentences in (4a) are supposed to be the result of "Homer" moving out of the subordinate clause in (4b) to become the surface-syntactic subject of "to be happy." But here it should be kept in mind that, in Chomskyan generative grammar, the underlying syntactic structures of linguistic expressions are supposed to be universal and therefore are not necessarily expressible in grammatical English (Santorini & Kroch, 2007).

A more reliable (though imperfect) mark of subject raising is the general ability of subject-raising verbs to take a non-finite complement like "to be a traffic jam" or "be a traffic jam" when the verb is headed by the expletive "there," as illustrated in (5a-b).

5a.   There seems/appears/looks/happens/tends/needs/ought/continues/ceases [to be a traffic jam].

5b.   There could/may/should/might [be a traffic jam].

To foreshadow an objection at this juncture, I hasten to say that contrary to some philosophers' intuitions, "looks to be" constructions such as "There looks to be a traffic jam" and "Homer looks to be happy" are perfectly grammatical in English.[2] More on that below.

This regularity of commonplace subject-raising verbs with regard to their ability to take non-finite complements suggests that the sentences in (6) below might serve as English paraphrases of the underlying form of the subject-raised constructions in (4a).[3]

6.   It seems/appears/happens/looks/tends/needs/ought//ceases/continues to be (the case) that Homer is happy.

The underlying syntactic structure of the subject-raised forms in (4a), it seems, can be rendered as English sentences of the form "It [subject-to-subject raising verb] to be (the case) that P."

If the above considerations are on the right track, then we should expect the subject-raised form in (7a) below to be the result of "Zeus" being raised out of the subordinate clause in the English paraphrase in (7b) of the underlying syntactic structure given in (7c)

7a.   Zeus looks to me to be angry.

7b.   It looks to me to be (the case) that Zeus is angry.

7c.   Looks-to-me[Zeus(to be angry)].

(7a) and (7b) are indeed more likely to be equivalent than Byrne's original pair of Zeus cases in (3a) and (3b), at least as far as my cog. psy. students are concerned.

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[2] Here is an example of this construction: "When it looks to be that P, one comes to know that P" (Stalnaker, 1998, p. 348).

[3] It should be kept in mind, however, that subject-raising verbs are not the only verb class that takes non-finite clauses. Control verbs like "expect," "decide," "attempt," "try," "intend," "hope," and "fear" do too (e.g., "Pippi decided to take a leave," "Barney feared going to the dentist," and "We are trying to get pregnant.").

1.2 | Epistemic Uses of "Look"

How exactly to draw the distinction between epistemic and non-epistemic uses of appearance verbs is another tricky issue, as Byrne stresses in his commentary. I follow Roderick Chisholm (1957) in taking evidence-sensitivity (or updating on the evidence) to be central to the epistemic/non-epistemic distinction. On my proposal, if you assert an epistemic look-sentence of the form "it looks like p," "look" assigns a high subjective probability to p. On a Bayesian model, the subjective probability of a hypothesis H, given your new evidence, is the product of the *likelihood* of H, $Pr(E/H)$ and the *prior* probability of H over your old evidence.[4] In the case of assertions of epistemic look-sentences, the content of claim embedded under "look" can be thought of as the hypothesis, to which "look" then assigns a high subjective probability. Say that you are listening to a Entertainment Weekly podcast and the host discusses industry rumors about a potential sequel to the *Tomb Raider* movie. Given what you just heard, you take it to be likely that a *Tomb Raider* sequel will be made. So, you say to your roommate:

8a.   It looks like we'll get to see more of Lara Croft's adventures.

(8a) is true provided the subjective probability that "looks" assigns to the proposition *a Tomb Raider sequel will be made* lies in the [0.5, 1] interval. Assuming you are rational, you will update on new evidence. Suppose at the end of the podcast, the host says "April Fools listeners!! For all the Lara Croft fans out there, I am afraid a sequel is not on the horizon." Disappointed, you retract your prior assertion, saying:

8b.   Never mind! It doesn't look like a *Tomb Raider* sequel is on the horizon after all.

Non-epistemic uses of "look" differ from epistemic uses in that we ordinarily are disinclined to update on the evidence. Suppose you encounter the Müller-Lyer illusion for the first time. Using "look" non-epistemically, you say:

9a.   The two lines look to have different lengths.
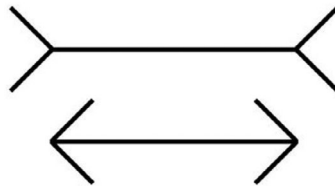
When you subsequently learn that the lines have the same length, you are highly unlikely to update on this evidence. Indeed, you are more likely to reaffirm your prior assertion than retract it, saying, for instance:

9b.   Do the lines really have different lengths? They sure look to have the same length.

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[4] Subjective probability, or credence, refers to the degree of belief, which is specified by a real number in the [0,1] interval, where 0 indicates certainty that a proposition is false and 1 indicates certainty that it is true.

Here is another way to articulate the difference between the epistemic and non-epistemic uses: Unlike non-epistemic uses, epistemic uses "imply that the speaker believes or is inclined to believe that things are as they appear [to them], in the absence of a defeater" (*Seeing and Saying*, 2018, p. 22).

Byrne thinks the latter characterization of the epistemic use of "look" is questionable. He asks us to imagine that he and I have frequently observed tomatoes in green light, and that we know that they have all turned out to be red. On this occasion, however, I happen to know that the tomato that he and I are both viewing in green light is a genetic freak, and is actually black, whereas Byrne doesn't know this. So he says, "The tomato looks red," using "look" epistemically. According to Byrne, I might well agree with him, saying "You're right, it does look red, but by some fluke it's actually black."

By way of reply, as "the tomato looks red" has an implicit "to me" prepositional phrase, I doubt that anyone in my (imaginary) shoes would be inclined to say what Byrne envisages that I say to him. It would be far more natural for someone in my place to reply with: "Well, it might look red to you, Alex. After all, you think it's a regular tomato, but by some fluke it's actually black." The latter sort of reply is exactly as it should be, given a characterization of the epistemic use in terms of an inclination to believe. Given this characterization, I should be inclined to assert the proposition that the tomato (epistemically) looks red to me only if I do not possess a defeater. But in Byrne's scenario, I know that the tomato is black, which is to say that I do possess a defeater. So, the characterization of the epistemic use in terms of an inclination to believe correctly predicts that because I possess evidence that the tomato is not red, I am uninclined to assert the proposition that the tomato looks red. But there is no need to dwell on the characterization of the epistemic use in terms of an inclination to believe, as I put my money on the Baysian account outlined above.

1.3 | High-Level Appearances and the Semantics of "look"

Let's move onto Byrne's objection to my main argument. Consider:

10a.   That watch looks expensive.
10b.   Maria looks Swedish.

Byrne explains the intended readings of (10a-b) as follows:

> There is a visual appearance or look distinctive of many luxury watches—a perceptual gestalt comprising details like subdials, jewels, a bezel, elaborate markings, and so on. There is a visual appearance distinctive of many people from Sweden—a perceptual gestalt comprising pale skin, blonde hair, and so on. Note that a cheap replica Breitling can have that distinctive expensive look without being expensive, and Maria can look Swedish despite being from Brazil, with no ancestral ties to Sweden at all. (Byrne, *This Volume*)

So, according to Byrne, even if Maria is from Brazil, with no ancestral ties to Sweden at all, (10b) may accurately describe how Maria looks. But here is the problem, as Byrne sees it. In previous works, I have argued that high-level properties like *being of Swedish origin*, *having tiger DNA*, and *having atom number 79* are not presented in visual experience (e.g., Brogaard, 2013, 2018). But, now, consider:

10b.   Maria looks Swedish
10c.   The tomato looks red.

According to Byrne, the fact that we can still use (10b) to comment on Maria's distinctive appearance (appearing tall, blonde, pale, etc.), even if it is common knowledge that Maria is from Brazil, rules out that "look" is used epistemically here. So, Byrne argues, "look" is used non-epistemically in both (10b) and (10c).

Now, according to Byrne, (10b) and (10c) clearly are not syntactically comparative. I agree. Indeed, on the account I offer in *Seeing and Saying*, (10b) differs from (10c) in being non-syntactically comparative.

But Byrne argues, a comparative reading of a syntactically noncomparative "look" sentence, like (10b), cannot be read semantically but must be read pragmatically. To back this claim, Byrne asks us to imagine that Maria has a skin condition that makes her face red like a tomato. "Maria looks red and Swedish" sounds perfectly fine in this case, which is to say that "look" passes the coordination test for polysemy (a kind of lexical ambiguity). According to Byrne, as "look" is not polysemous, the difference in the interpretations of (10b) and (10c) cannot be semantic. But the assumption that (10b) is pragmatically comparative but that (10c) is not, Byrne argues, causes trouble for a version of my main argument for the representational view, which he dubs the "operator argument":

P1. "Look" is a hyperintensional mental-state operator.
P2. Hyperintensional mental-state operators operate on representational content.
C1. So, "look" operates on representational content.
P3. If "look" operates on representational content, then looks are representational states

Hence:

C2. Looks are representational states.

As Byrne points out, to reach the desired conclusion that visual perceptual experience is representational, we need an extra premise, viz., P4.

P4. Perceptual phenomenal looks just are visual experiences.

I have some reservations about P4 (as Byrne observes). But I am happy to assume it here. Or at least I am happy to assume the following version of it:

P4-R. For o to phenomenally look F to you is for you to have an experience part of whose content is the proposition that o is F.

But according to Byrne, with the addition of P4, the operator argument "proves too much by Brogaard's own lights" (Byrne, *This Volume*). Here is the problem, as Byrne sees it:

"If the operator argument works, then it shows that the proposition that o is Swedish is the content of someone's experience when *o* looks Swedish to them. (The representational content operated on by 'look' is supposed to be the content of the corresponding perceptual state.) And although Brogaard thinks that 'gestalt

properties that emerge from configurations of low-level and intermediate-level features' (74) can be represented in visual experience, in an instructive discussion she argues that properties like being Swedish are not. If the semantics of 'looks red' and 'looks Swedish' are the same, then the operator argument treats them alike. Granted, if I say that the tomato looks red (to me), then I am saying something about my visual perceptual state; but I am making a parallel claim if I say that Maria looks Swedish. If the proposition that Maria is Swedish is not included in the content of perceptual experience, then the operator argument cannot show that the proposition that the tomato is red is included." (Byrne, *This Volume*)

Byrne's point is this: as "Maria looks Swedish" and "The tomato looks red" are semantically on a par, the operator argument should treat them alike. But this commits me to the view that high-level properties like *being Swedish* can be presented in experience after all, contrary to my claim that such properties cannot be presented in experience.

This is a clever objection. However, it rests on a dubious assumption, viz., the assumption that if "look" is not lexically ambiguous, then the difference in the interpretations of "Maria looks Swedish" and "The tomato looks red" is not semantic but pragmatic. However, this assumption is questionable, as the difference in interpretation between "Maria looks Swedish" and "The tomato looks red" could be due to a structural ambiguity rather than a lexical ambiguity. I will argue that this is indeed what is going on.

Consider:

11a. Maria looks Swedish. (= 10b)
11b. Maria looks the way a Swede may look.

(11a) and (11b) can be used to convey the same proposition. But is this because an assertion of (11a) can conversationally implicate (11b), and vice versa? Or is it because (11a) and (11b) are semantically equivalent?

A classical criterion for distinguishing conversational implicatures from semantic implication is cancellability (Grice, 1978, pp. 115–116; cf. Grice, 1975). To see how cancellability works, consider a classical example from Grice. You are out of gas and ask a passerby where you can get gas. The passerby says:

12a. There's a gas station around the corner.

In asserting (12a), the passerby conversationally implicates (12b):

12b. The gas station is open.

As Grice's explanation goes, it is ordinarily a shared assumption among interlocutors that they all make appropriate contributions to conversations, which requires that they abide by the conversational maxims (be truthful, be adequately informative, be relevant, be orderly). In the example above, if the passerby believes, or knows, that the gas station is not open, she fails to be truthful. So, the shared assumption that she abides by the maxims generates the implicature in (12b).

Conversational implicatures are explicitly cancelable (Grice, 1978, pp. 115–116), which means that we can add a cancellation clause without any ensuing "logical absurdity" or "linguistic offense" (Grice, 1981, p. 186). For instance, the passerby in Grice's classical example could have

canceled the conventional implicature in (12b) by amending the clause "but it's not open" to (12a) without any ensuing "logical absurdity" (as shown in 12c).

12c.   There is a gas station around the corner but it's not open.

Now, consider again the sentences in (11), repeated below:

11a.   Maria looks Swedish to me.
11b.   Maria looks the way a Swede may look to me.

The question before us is whether (11a) and (11b) are semantically or practically equivalent. To adjudicate this, we can use the cancellability test. Adding the negation of (11b) to (11a), and vice versa, yields logical absurdity:

11c.   #Maria looks Swedish to me but she doesn't look the way a Swede may look to me.

11d.   #Maria looks the way a Swede may look to me, but she doesn't look Swedish to me.

As the cancellability test fails in both directions, (11a) and (11b) are not pragmatically but semantically equivalent. As (11b) is semantically comparative, so is (11a). As I argue in *Seeing and Saying* (2018) comparative look-reports involve a noncomparative look-construction at the level of logical form. (11a) can be cashed out as (11e).

11e.   For some way (w) that a Swede may look to me, Maria looks that way (w) to me.

The subject-raised form of (11e) is given in (11f).

11f.   It looks to me to be that (for some way w that a Swede may look to me, Maria is w).

The embedded "that"-clause can be read as "for some envisaged Swede x such that x looks w to me, Maria is w." The "look" that takes scope over the "that"-clause, and the "look" in the "that"-clause is to be read as noncomparative and subject-raising. The "that"-clause attributes the same non-sparse property w to both Maria and some envisaged Swede. (11a) thus involves a noncomparative, subject-raising use of "look."

Given the lack of specificity of "red" in "The tomato is red," the latter may be semantically comparative too. The operator argument, however, is intended to be restricted to noncomparative non-epistemic look-reports. So, for the argument to go through, we need a more convincing example of a noncomparative non-epistemic look-report. Suppose you ask me what my new car looks like. Pointing to a green color patch in a color chart, I say:

> 12.   As far as its color goes, my new car looks that way.

(12) is *semantically* noncomparative, whereas "Maria looks Swedish" is semantically non-comparative. As (12) and "Maria looks Swedish" are not semantically on a par, there is no requirement that the operator argument should treat them alike. We thus have a principled reason for restricting the operator argument to semantically noncomparative non-epistemic look-reports. Assuming that P4 is true, P1 and P2 entail that if "look" in a true phenomenal look-report operates on representational content, then the corresponding perceptual experience is representational. But all perceptual experiences are representational if any perceptual experience is. So, the operator argument yields the desired conclusion that perceptual experience is representational.

2 | MIKE MARTIN: LOOKS AND APPEARANCE TALK

My reply to Mike Martin has three parts. I begin with his critique of my proposed semantics of appearance verbs like "seem" and "look." I then offer an argument against his proposal that "look" has a predicative use. Finally, I briefly address his worry about the tie between appearance talk and experience.

2.1 | What "Look" and "Seem" Seem to Mean

Martin argues that "look" is more polysemous than I make it out to be. We agree that, in one usage, "look" has an agentive (extensional) sense, as illustrated in (1).[5]

> 1.   Junior looks at Zari.

But, on my account, "look" has a completely different sense when used to report on perceptual experience. Suppose you utter (2a) to convey something to a friend about your current perceptual experience.

> 2a.   The cup looks blue.

In the envisaged case, I do not take "the cup" to provide an argument of "looks blue." Rather, I argue, (2a) is to be read as having the underlying logical form captured in (2b).

> 2b.   Looks(the cup is blue).

In my view, the simple verb form of "look" thus functions as a subject-raising verb. While Martin agrees that "look" has a subject-raising use, he argues that it also has a predicative use, where "look" is used non-agentially to characterize objects in an argument-predicate manner, as illustrated in (2c).

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[5] "Look" also has an intensional sense when it occurs in intensional transitives like "look for" and "look ahead to," as in "Lucy is looking for a golden mountain." and "Investors look ahead to 2023." But like the agential sense of "look" in "Junior looks at Zari," the intensional transitive sense of "look" does not play a role in my argument, nor in Martin's criticism. So, I will set them aside here.

2c.   Looks-blue(the cup).

For want of a better term, call the thesis that "look" has both raising and predicative uses the R&P (*Raising and Predicative*) thesis. The latter contrasts with the view I defend, which takes "look," in its simple verb form, to function only as a subject-raising verb. Call this the "R-only thesis."

   To show why he thinks "look" also has a predicative use, Martin invites us to consider two scenarios. In the first scenario, you are trying to identify a pregnant dog at an animal shelter on the basis of how the dogs look. After looking around, you point to a promising candidate and say:

3a.   That dog looks pregnant.

Here, Martin argues, my account makes the correct prediction that (3a) is equivalent to (3b):

3b.   It looks as if that dog is pregnant.

In the second scenario, you are to envisage that you are an advertising executive of sorts, working on a public information campaign concerning contraception in the 1980s. Sorting through the photographs for the campaign, you point to one and say:

4a.   This model looks pregnant.

As Martin points out, the utterance of (4a) is felicitous and may well be true in this scenario (look at the Saatchi poster in his commentary). But, he argues, contrary to what I claim, it is not appropriate to utter:

4b.   It looks as if this model is pregnant.

The reason it is not appropriate to utter (4b), according to Martin, is that a look-statement like (4b) can be felicitous only "where the embedded claim is taken to be an epistemic possibility" (Martin, 2024). So, as Martin sees it, the difference between the two scenarios is that in the first, it is an epistemic possibility (i.e., compatible with what you know) that the dog you are demonstrating is pregnant, but in the second scenario, it is not an epistemic possibility that the cis-gendered male model you are demonstrating is pregnant, as cis men cannot be pregnant.

   But here is the problem Martin envisages for my view: because my view predicts that (4b) has the same underlying logical form as (4a), I am committed to saying that (4a) is felicitous if and only if (4b) is felicitous. So, if Martin is right that (4a) is felicitous but that (4b) is not, that suggests I'm wrong that all constructions like (4a) are to be read as subject raised.

   But is Martin right that (4b) is infelicitous in the envisaged scenario? Well, his intuition that "as if" look-statements are infelicitous when they embed a claim that is known to be false isn't widely shared among English speakers. Here is a representative sample:

5a.   It looks as if the checkered surface bulges out, though this figure actually consists of squares.[6]

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[6] Akiyoshi Kitaoka, "Illusion Design 'Turtles': Lecture After Receiving the First Imai Award (Award of Illusion House), 2004," Sep 22, 2005. http://www.psy.ritsumei.ac.jp/~akitaoka/Imaisho2005.html. Retrieved Dec 1, 2022.

5b.   This stunning optical illusion makes it look as if the tree is floating in mid-air.[7]

5c.   If you focus on the corner edges of the large square it looks as if the lines are curving.[8]

5d.   In the Checker-Shadow illusion, it looks as if A and B have the same color.[9]

5e.   In the Müller-Lyer Illusion, it looks as if the two lines have the same length.[10]

5f.   It looks as if the village is falling off the cliff, but it's only an optical illusion.[11]

5g.   It looks as if wine is flowing out of the bottle, and forming a small puddle on the table.[12]

5h.   This photo makes it look as if this Northern Hawk Owl was right in front of me, but the EXIF data shows Focal Length (35mm format) - 1050 mm.[13]

5i.   In this popcorn optical illusion, it looks as if there are miniature skulls hidden among the popped popcorn.[14]

5j.   If you stare at the center of the Bull's Eye illusion, it looks as if the outer rings are rotating in alternating directions.[15]

5k.   As you scan your eyes over the scintillating grid, it looks as if black dots are disappearing and appearing at the intersections.[16]

The look-statements in (5) all occur in the context of discussing or explaining optical illusions. So, the embedded claims in the look-statements in (5) are known to be false. Even so, the speakers and those among their readers commenting on their discussions clearly think it is perfectly appropriate to utter them. If, however, the "as if" look-statements in (5) are felicitous, despite the embedded claims being epistemically impossible, then that suggests that "as if" look-statements can be used both epistemically and non-epistemically. If this is right, then the fact that it's epistemically impossible for the cis-gendered male model to be pregnant can't ground Martin's verdict that "It looks as if the model is pregnant" is infelicitous. But without evidence to suggest that the latter look-statement is infelicitous, Martin's case does not succeed in showing that "The model looks pregnant" is to be read as predicative rather than as subject-raising.

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[7] Hugo Gye, "Now You Tree It, Now You Don't! Stunning Optical Illusion Makes It Look as if Trunk is Floating in Mid-Air," Daily Mail, Mar 25, 2014. https://www.dailymail.co.uk/news/article-2588975/Optical-illusion-makes-look-tree-floating-mid-air.html. Retrieved Dec 1, 2022.

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[9] Mike Bird & Natasha Bertrand, "18 More Illusions That Will Make Your Head Explode," Business Insider, Feb 27, 2015. https://www.businessinsider.com/18-more-optical-illusions-that-will-make-your-head-explode-2015-2. Retrieved Dec 1, 2022.

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[13] Anne Elliot, "Blowing in the Wind," Flickr, Feb 8, 2016. https://www.flickr.com/photos/annkelliott/25878613556. Retrieved Dec 1, 2022.

[14] James Dean, "Popcorn Optical Illusion," Mighty Optical Illusions, Feb 7, 2014. http://www.moillusions.com/popcorn-optical-illusion/. Retrieved Dec 1, 2022.

[15] "Bull's Eye Illusion," Spectacular Illusions, Oct 29, 2009. http://spectacular-illusions.blogspot.com/2009/10/bulls-eye-illusion.html. Retrieved Dec 1, 2022.

[16] Mike Bird, & Natasha Bertrand, "18 More Illusions That Will Make Your Head Explode," Business Insider, Feb 27, 2015. https://www.businessinsider.com/18-more-optical-illusions-that-will-make-your-head-explode-2015-2. Retrieved Dec 1, 2022.

Although the "as if" look-statements in (5) have a non-epistemic reading, look-statements of this form clearly do sometimes have epistemic readings, even when the subject raised form does not. For this reason, I don't think that "as if" look-statements can be used to paraphrase the underlying logical form of the corresponding subject-raised look-statement. The underlying form of subject-raised look-statements may be paraphrased by means of the construction "It looks to be (the case) that P," as shown in (4):

4a.   The model looks pregnant.   (Raised)
4c.   It looks to be (the case) that the model is pregnant.   (Non-Raised)

2.2 | Nominal Uses of "Look"

Let's move onto Martin's second argument for the R&P Thesis (and thus against the R-Only thesis). "Seem" is a paradigm example of a subject-raising verb. This is why I draw a parallel between "seem" and "look" in arguing that "look" is a raising verb. However, Martin argues, this parallel between "seem" and "look" is not as tight as I make it out to be, the reason being that, with "look," there is a corresponding nominal "look," but this is not so for "seem." As he puts it:

> "Brogaard's case relies on stressing the tight parallel between 'seems' and 'looks', but the point here draws on a sharp contrast between them. With the generic 'appears' there is a corresponding nominal 'appearance'. For the specific modalities, 'looks', 'sounds', 'tastes', 'smells', and 'feels' there is also such a nominal to be had: 'look', 'sound' etc. Moreover, these nominals are used in ways which link them explicitly to objects that feature as the apparent subjects of 'looks'-statements. One can talk about the look of the cup, or the cup's look. It makes no sense whatsoever, on the other hand, to talk about the seem of an object." (Martin, 2024)

This contrast between "seem" and "look" gives us a prima facie reason to think that although "seem" functions exclusively as a subject-raising verb, "look" may sometimes function as a raising verb and sometimes predicatively. To strengthen his case for the R&P thesis, Martin invites us to consider the look-statements in (6a) and (6b):

6a.   The pullover looks moth-eaten.
6b.   The pullover has a moth-eaten look.

In the case at hand, the look-statement in (6a) is used predicatively to ascribe a way of looking to the pullover. As (6a), on this reading, is equivalent to (6b), the look-statement in (6b) must also ascribe a way of looking to the pullover, which would seem to suggest that the simple verb form of "look" in (6b) is used predicatively, which would vindicates the R&P thesis.[17]

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[17] Martin observes that with "look," there is a corresponding nominal "look," and "with the generic 'appears' there is a corresponding nominal 'appearance'." But, he argues, "it makes no sense whatsoever [...] to talk about the seem of an object." He adds that "the availability of these nominals [is specific] to the genuinely appearance vocabulary." My talk of "seemings," he argues, as a "neologism." (I would call it a "term of art"). But Martin is less than fully explicit about whether he thinks "appear" and "seem" exhibit the same kind of polysemy as "look." In other words, is the predicative use only available for "look"? Or is it also available for "appear" or "seem" (or both). One reason to think that a predicative

Despite the intuitive pull of this argument, I think there is reason to resist it. Nominalizations, the process of deriving a nominal by adding a suffix to a base verb, are extremely common in the English language and are a constant source of new lexical items. Although nominals are noun phrases (NPs), they may have a clausal underlying structure (e.g., "Kai's eagerness to please"). In English, there are three kinds of verb-based nominals: gerundive nominals, verbal nominals, and deverbal nominals (e.g., Chomsky, 1970; Quirk et al., 1985; Greenbaum, 1992; Taher, 2015).

Gerundive Nominals: Gerundive nominals, or gerunds, derive from verb phrases (VPs) or clauses by suffixation of "-ing" to the base verb and other morphological changes. For instance, "Fred's being eager to please others" derives from "Fred is eager to please others." Gerunds can be modified by adverbials, as in "Jay's deftly painting his daughter" and "Lucy's suddenly giving Henry a kiss."

Verbal Nominals: Like gerunds, verbal nominals derive from VPs or clauses as a result of suffixation of "-ing" to the base verb and other morphological changes. Because of their similarity to gerunds, verbal nominals are often thought to be gerunds. However, unlike gerunds, verbal nominals are modified by adjectives not adverbials, as in "Jay's deft painting of his daughter," and unlike deverbal nouns, they always function as mass nouns and thus do not pluralize. Verbal nouns favor bounded or habitual readings, which is particularly salient with prepositional VPs like "lasted five hours" and "only occurred on Tuesdays." For example, "John's painting of his daughter lasted five hours" has a bounded reading and "John's painting of his daughter only occurred on Tuesdays" has a habitual reading.

Deverbal Nominal Phrases: Deverbal NPs derive from VPs by suffixation (e.g., "construal") or conversion (e.g., "construct"), which involve no morphological changes. Deverbal nominals may occur with an "-ing" suffix (e.g., "building," "meeting," "happening") or a non-"-ing" suffix (e.g., "walk," "need," "continuation," "tendency"). Like verbal nominals, they can be modified by adjectives, as in "Jill's energetic performance," but not adverbials. Unlike verbal nouns, however, deverbal nominals can function as count nouns, as in "Linda's morning swims."

Nominalizations like "pregnant look," "moth-eaten look," and "greasy appearance" are thus deverbal NPs derived from the VPs "looks pregnant," "looks moth-eaten," and "appears greasy." Given these considerations, let's return to Martin's argument. Consider again (6a) and (6b), repeated from above:

6a. The pullover looks moth-eaten.
6b. The pullover has a moth-eaten look.

Martin's argument for the view that (6a) has a predicative reading runs as follows. As the nominal look-statement in (6b) cannot be read as subject raised, and (6b) is equivalent to (6a), the verbal look-statement in (6a) cannot be read as subject raised either. His argument thus rests on the assumption that the meaning of the simple verb form of "look" in (6a) derives from the meaning

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use is also available for "appear" and "seem" (if available for "look") is this. In Martin's view, a predicate of the form "looks F," such as "looks moth-eaten," designates ways of looking F (e.g., ways of looking moth-eaten). So, it is natural to think that "appears F" designates ways of appearing F and that "seems F" designates ways of seeming F. On this view, for my experience to look (or appear or seem) F is for an F-look (or an F-appearance or an F-seeming) to be manifest in my experience of o, where an F-look (or an F-appearance or an F-seeming) of o is an objective state of looking F (or appearing F or seeming F). But notice that if "seem" has a predicative use, then Martin must avail himself of the neologism "seeming," as he would refer to it. If, however, "seems F" doesn't have a predicative use and therefore cannot be used to refer to ways of seeming, then why think that "o appears F" has a predicative use and therefore can be used to refer to ways of appearing, or that "o looks F" has a predicative use and therefore can be used to refer to ways of looking?

of the nominal form of "look" in (6b). However, the linguistic data suggest that it's the other way around. The nominals "look" and "appearance" are formed by nominalization from the simple verb forms "look" and "appear," suggesting that the meaning of (6b) is parasitic on the meaning of (6a).

Here is another way to put the point: derivations of NPs from VPs don't by themselves make new entities pop into existence. As the meaning of a verb-based NP derives from the base verb, nominal constructions (like 6b) are true under the same conditions as the verb constructions from which they derive. Such derivations by nominalization are also known as "pleonastic transformations" (Schiffer, 1987, 1994, 2003). An example of a pleonastic transformation is the transition from,

> 7a.   Jack grinned ear-to-ear.

in which no reference is made to grins, to

> 7b.   Jack wore an ear-to-ear grin.

in which there appears to be reference to grins. Although (7b) quantifies over grins, it is commonly thought that it only commits us to the existence of grins in the minimal sense that (7b) is true in the same conditions in which (7a) is true (Hofweber, 2005; Thomasson, 2007). Likewise, while "The pullover has a moth-eaten look" quantifies over looks, the conditions that make this construction true are the same as those that make "The pullover looks moth-eaten" true. The upshot is this: although the underlying form of the nominal construction "The pullover has a moth-eaten look" cannot be assigned a subject-raised reading, Martin is wrong to think this precludes a subject-raised reading of "The pullover looks moth-eaten."

2.3 | Comparative Uses of "Look"

One might worry that my argument of the previous section rests on the mistaken assumption that "The pullover looks moth-eaten" is to be assigned a noncomparative reading. However, it may be argued, "The pullover looks moth-eaten" is arguably comparative, in which case moth-eaten-ness is not a quality of the pullover, but rather a qualification of the look of the pullover. But in that case, "The pullover looks moth-eaten" doesn't have a subject-raised reading. Or so it may be argued.

By way of reply, I agree that syntactically noncomparative look-statements can be non-syntactically comparative, and that "The pullover looks moth-eaten" is a good candidate to be non-syntactically comparative. (8a) and (8b) below illustrate the difference between syntactically and non-syntactically comparative look-statements (*Seeing and Saying*, 2018, pp. 26, 56, 121, 138–139).

> 8a.   Anna looks like her sister.   (syntactically comparative)
> 8b.   Vicks looks unwell but ready to go.   (non-syntactically comparative)

However, it's a mistake to think that the adjectival complement of "look" in a comparative look-statement is to be understood as modifying "look" rather than the subject. As I argue in *Seeing and Saying*, syntactically and non-syntactically comparative look-statements involve a

noncomparative reading of "look." Suppose I run into Mike at a café. To my surprise, he is wearing suspenders, loafers, a bow tie, a homburg hat, and thick-framed glasses. So, I say to him:

9a.   You look like a hipster.

(9a) can be analyzed as:

9b.   For some way (w) that a hipster may look to me, Mike looks that way (w) to me.

The subject-raised form of (9b) is:

9c.   It looks to me to be that (for some way w that a hipster may look to me, Mike is w).

The embedded claim can be read as "for some envisaged hipster x such that x looks w to me, Mike is w." The "look" that takes scope over the embedded clause and the "look" in the embedded clause are to be read as noncomparative and subject-raising. The embedded clause attributes the same complex property w to both an envisaged hipster and Mike. (9a) thus involves a subject-raising noncomparative reading of "look."

Although (9a) arguably is syntactically comparative, non-syntactically comparative look-statements also involve a noncomparative reading of "look." Consider again:

10a.   The pullover looks moth-eaten. (= 6a)

(10a) can be analyzed as:

10b.   For some way (w) that a moth-eaten item may look to me, the pullover looks that way (w) to me.

The subject-raised form of the latter is:

10c.   It looks to me to be that (for some way w that an item may look to me, the pullover is w).

The embedded "that"-clause can be read as "for some envisaged item x such that x looks w to me, the pullover is w." The "look" that takes scope over the "that"-clause and the "look" in the "that"-clause are to be read as noncomparative and subject-raising. The "that"-clause attributes the same non-sparse property w to both an envisaged moth-eaten item and the pullover. The upshot is that syntactically and non-syntactically comparative look-statements involve a noncomparative subject-raising use of "look."

2.4 | Why Looks Are Psychological States

What has been said suggests that appearance verbs ascribe psychological states rather than objective states of objects. To bolster my case for this thesis, I will take this opportunity to sketch an objection to Martin's thesis that appearance verbs (on one use) ascribe objective states of objects.

Martin does not give any examples where "look" is modified by the prepositional phrase "to-NP." The prepositional phrase "to-NP" cannot always be omitted from look-statements, however. Consider two people disagreeing about the look of the dress (#thedress).

> Jill: The dress has a blue-and-black look.
> Jack: I disagree. The dress has a white-and-gold look.

The dress looks blue-and-black to Jill but looks white-and-gold to Jack, which is the source of the disagreement. If looks are objective states of objects, the dress cannot have both a blue-and-black look and a white-and-gold look. The dress depicted in the familiar image is in fact blue and black. So, this case does not present a challenge to the thesis that objects have objective looks.

But there isn't always an objective standard for arbitrating disputes about how things look or appear. Consider the graphemes below.
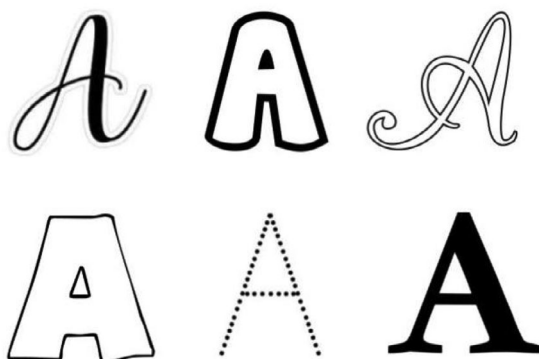
These graphemes all look A-shaped to me, or to (roughly) paraphrase Martin, they look to me like the first letter of the Latin alphabet may look to me. But the graphemes would not look that way to, say, a Chinese speaker unfamiliar with the Latin alphabet. In this case, it doesn't make sense to say that the graphemes either have an objective A-shaped look or not. The A-shaped look of the graphemes is the way the graphemes look in my experience of them, but it is not the way they would look in the experience of a Chinese speaker unfamiliar with the Latin alphabet. Something similar can be said about the pregnant look of the cis-gendered male model. The pregnant look of the model is the way the model looks in my experience of him, but it is not the way he would look in the experience of someone unfamiliar with pregnancy. But if the looks of objects can only be explained in terms of the way the objects do (or would) look to subjects who experience them, then looks are not objective states of objects.

2.5 | Appearance Talk

Martin raises a further concern about the tight connection I claim obtains between perceptual experience and verbal expressions of how things look in experience. The alleged informationally repleteness of perceptual content, he argues, makes it impossible to equate it with any thought content that could realistically be expressed verbally. He writes:

> [Brogaard ties] facts about qualitative similarity and difference for sense experience to facts about the use of English shape and colour adjectives. But I doubt that these words were ever fashioned to report such experiential facts. Pure representational approaches to perceptual experience insist that the most specific or determinate phenomenal character of an experience […] is grounded in the representational content of that experience. No assumption need be made that these representations have a corresponding expression in natural language. And many representationalists assume, following Armstrong and Pitcher, that our experiences are replete in informational details, and are not to be equated with the content of any single belief to which we can give verbal expression. (Martin, 2024)

Martin's point is this: even given a representational conception of experience, it is doubtful that experience attributes the semantic values of English color and shape adjectives to objects. I agree that experience doesn't generally attribute the semantic values of English color and shape adjectives to objects but not that experience never does this. In my view, look-reports and experience are related as follows.

> *Reflection*: for a true, noncomparative non-epistemic look-report of the form "*o* looks F" to specify (or reflect) a content of the corresponding experience is for the experience to have the proposition that *o* is F as part of its content.

Consider:

11a.   The figure looks square.
11b.   The figure looks black.

(11a) and (11b) specify (or reflect) part of the content of my current experience of the black square below.
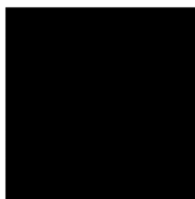
In other words, my current experience attributes the semantic values of the English color and shape adjectives "black" and "square" to the figure above.

If the three dimensions of colors, viz., hue, saturation, and brightness, are presented in experience, then an experience may also attribute the semantic value of the color adjective "red" in (12) to an object.

12.   As far as its hue goes, *that* looks red.

Martin worries that there may not be anything all experiences of red objects have in common. He invites us to consider two scenarios. In one scenario, Sue has an experience of a red tomato against a white background in natural, Northern daylight at midday. In the second scenario, Sue has an

experience of a red tomato against a black background in sodium lighting. In both scenarios, Sue can tell that the tomato is red. By the normal standards of English usage, "The tomato looks red to Sue" is true in both scenarios. But Martin is unsure about whether there is a phenomenal property corresponding to "red," which Sue's experiences share in the two scenarios.

My answer would be that if experience represents the hue of objects and not just the unity of hue, saturation, and brightness, then there is a phenomenal property corresponding to "red," which Sue's experiences share in the two scenarios. Even if it doesn't, there are other color and shape adjectives that may specify representational phenomenal properties of experience (e.g., "square"). But if some look-statements containing color and shape adjectives specify some of the representational phenomenal properties of experience or part of its propositional content, then experience is representational and not (purely) relational.

3 | NICO ORLANDI: LOOK-REPORTS AND MODAL OPERATORS

In my reply to Orlandi, I address the objections they raise to my thesis that "look" functions as a sentential operator. Along the way, I sketch a modal account of gradable look-statements. Finally, I argue that if naïve realists agree with me that "look" is exclusively subject raising, then pace Orlandi, they cannot take look-reports to truly report on any illusory experience.

3.1 | What are Looks?

Nico Orlandi begins their critique by reflecting on what I might mean when I say that looks and seemings are psychological entities. After considering several options, they constructively suggest that I construe looks and seemings, not as *mental states*, but as constituents of *mental content*. As they put it:

> "Perhaps we should formulate Brogaard's thesis as the idea that looks and seemings are psychological states in the sense of being constituents of mental content. If being bent is a property of an intentional object, then it is a constituent of content. This is a view that naïve realists would have trouble accepting. Can the fact that 'look' is a subject-raising verb establish this thesis?" (Orlandi, 2024)

In *Seeing and Saying* (2018), I argue that looks and seemings are mental states, not constituents of mental content. This view is uncontroversial when it comes to epistemic looks and seemings. I take epistemic looks and seemings to be degrees of beliefs, but others might say that they are inclinations to believe. Despite providing different characterizations of epistemic looks and seeming, most will agree that if it epistemically looks or seems to you that P, then it is evident to you that P, or at least you are in the possession of some evidence for P.

However, what is at issue here is what to say about *non-epistemic* looks and seemings, specifically *perceptual* non-epistemic looks and seemings (as opposed to say, introspective, non-epistemic looks and seemings). (Unless otherwise specified, when I speak unqualifiedly of looks and seemings, it's perceptual non-epistemic looks and seemings I have in mind). Orlandi's suggestion is thus that I (and presumably others sympathetic to a representational conception of experience) construe non-epistemic looks and seemings, not as mental states, but as constituents of mental content. The question before us, then, is whether those sympathetic

to a representational conception of experience ought to say that perceptual looks and seemings are constituents of mental content (rather than mental states). I will argue that they needn't say this.

To get the argument off the ground, let's first consider the alternative defended by Martin, focusing on *looks* for the time being. Martin and others favorable to naïve realism argue that perceptual looks are objective states (or complex properties) of objects, specifically objective states of looking a certain way (Travis, 2004; Martin, 2010; Brewer, 2011; Kalderon, 2011). On this account, for an experience to present an object as F is for an F-look of the object to be manifest in the subject's experience of it. For example, for my experience to present a pullover as moth-eaten is for a moth-eaten look of the pullover to be manifest in my experience of the pullover.

Those who reject naïve realism nowadays (like I do) commonly assume that for an object *o* to perceptually look (or seem) F to a subject S is for S to undergo an experience that attributes F to o (or represents o as F) (e.g., Chudnoff & DiDomenico, 2015). On this view, perceptual looks (and seemings) are identical to experiences.[18] As experiences are mental states, so are looks (and seemings). However, advocates of a representational conception of experience sometimes join naïve realists in speaking of the looks of objects and ways of looking. This can be confusing. After all, "o looks F to S" entails "o looks a certain way to S," which entails "o has a certain look to S." So, it might seem that champions of a representational conception of experience are committed to the view that the looks of objects are constituents of mental content (rather than mental states), which is exactly the view Orlandi suggests on my behalf.

That may be a view in conceptual space, but it is not my view. In my view, for an object o to perceptually look F to S—and thus for o to look a certain way to S—is for S to have a mental state that we might refer to as a perceptual look or seeming and that ascribes being F to o (or that represents o as being F).

3.2 | Irregularities of "Look"

Orlandi proceeds to raise concerns about my argument that "look" is a sentential operator by virtue of its raising properties. Their first concern turns on what they take to be peculiarities of "look" compared to "seem." One peculiarity is that "look" doesn't take "that"-clause complements. Orlandi concedes that this "might be just an irregularity of English." But, Orlandi argues, this is not the only way in which "look" is peculiar. Another peculiarity, Orlandi argues, is "[the fact] [t]hat 'look' can be nominalized to talk about the look of things while 'seem' cannot". Orlandi ponders that this might be another irregularity of English but then argues that "look" is still more peculiar insofar as it doesn't combine with infinitival predicates. As they put it:

> "More concerning is the fact that 'look', when compared to 'seem', is 'picky' about the embedded predicates it takes, preferring adjectives ('happy', 'pale') to infinitive clauses. 'Felipe seems to be a hero' and 'Felipe seems to be happy' are ok, but 'Felipe looks to be a hero' and 'Felipe looks to be happy', arguably, are not." (Orlandi, 2024)

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[18] Although I think it is highly plausible that for S to have a look or seeming that attributes F to o just is for S to have an experience that attributes F to o, I have not completely written off the possibility that S can have a look or seeming that attributes F to o only if (i) S has an experience that attributes F to o, and (ii) the content o is F is focally attended by S.

Orlandi takes the multiplicity of peculiarities of "look" to show that "while 'look' might satisfy some common tests for being subject-raising, it is not a sentential operator" (Orlandi, 2024). If Orlandi is right that the alleged peculiarities of "look" show that "look" is not a sentential operator, that is a deathblow to my operator argument (cf. Section 2 above).

However, there is reason to doubt Orlandi's claim that "look" displays irregularities of a sort that cause trouble for my argument. Let's begin with Orlandi's last datapoint, which is supposed to show that "look" is peculiar because unlike "seem," it doesn't combine with infinitive predicates like "to be happy."

However, there is reason to be skeptical about Orlandi's claim that "look" cannot take infinitive predicates. A Google Ngram search using the search term "look_INF to be" shows that the "look to be F" construction is commonplace in English, and that its use dates back at least to 1545.[19] (1a-f) exemplifies more recent uses of the construction in analytic philosophy.

1a. "*When something merely looks to me to be a certain way (…) there is a perceptual state with a certain content.*" (Stalnaker, 1998, p. 341)

1b. "*Not only does it look like a black bead, it also looks to be black.*" (Kalderon, 2011, p. 767)

1c. "*In the mirror each morning there looks to be my facsimile behind the mirror mimicking my every visible move.*" (Maund, 1986)

1d. "*If two things look to be the same colour then there is a colour they both look to have.*" (Fara, 2001, p. 914)

1e. "*I think that 'the stock market looks to be crashing' can be read epistemically.*" (Glüer, 2017, p. 784).

1f. "*This view […] now looks to be in danger of being discarded.*" (Mallon, & Nichols, 2010, p. 297)

It seems, then, that "look to be F" and "seem to be F" are both fine, even if some speakers have a preference for the "look F" form.

Let's move on to the second way in which Orlandi thinks "look" is irregular. The fact "that 'look' can be nominalized to talk about the *look* of things while 'seem' cannot," Orlandi argues, "might be another English peculiarity."

I am not unsure what point Orlandi is trying to make here. First off, it is clearly not true that "look" can be nominalized to talk about the look of things while "seem" cannot. The nominalized form "Jake's seeming pale" is perfectly fine. It is true, of course, that the preferred nominal forms of "seem" in vernacular English are gerundive nominals (e.g., "Lucy's seeming pale was unusual") and verbal nominals (e.g., "His eyes have all the seeming of a demon's that is dreaming"; Poe, 1845). (The deverbal nominal "seemings" is probably a term of art in philosophy). But it's not true that "seem" cannot be nominalized to talk about the look of things. The nominal forms "her seeming pale," "the seeming of a demon's eyes," and "ways of seeming pale," which are nominalizations from simple verb forms like "Lucy seems pale" and "The demon's eyes seem dreary," are perfectly fine. Second, I am unsure why Orlandi thinks that the fact that a deverbal nominal is available for "look" but not for "seem" is a peculiarity of "look." If anything, the lack of a deverbal nominal for "seem" in vernacular English is a peculiarity of "seem." After all, deverbal nominals are available for most subject-raising verbs, as illustrated in (2b).

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[19] A search on Google Ngram Viewer, https://books.google.com/ngrams/, which displays the distribution of occurrences of a search phrase in a particular corpus of books over a given time interval between 1500-2019, found uses of "look_INF to be" in British English as early as 1545.

2a.   Joel seems/looks/appears/fails/happens/begins/continues/needs/ceases to be sorry.

2b.   The *seem/look/appearance/failure/happening/beginning/continuation/need/cessation was unexpected.

So, despite being an exemplary subject-raising verb, the lack of a deverbal nominal for "seem" is a peculiarity, but it's a peculiarity of "seem," not "look." So, this datapoint isn't evidence for the peculiarities of "look" either.

Orlandi's final piece of evidence that is supposed to show that "look" is peculiar and that "look" therefore doesn't function as a sentential operator is that "look" doesn't take "that"-clause complements. While Orlandi is right that "look" doesn't take "that"-clause complements, I am unsure how this is supposed to be evidence against "look" being a sentential operator. After all, most subject-raising verbs fail to take "that"-clause complements, as shown in (3b). So, in this regard, "look" is behaving as expected, if it is a subject-raising verb.

3a.   Bart seems/appears/looks/fails/happens/begins/needs/ceases to be crying.

3b.   It seems/appears/happens/*looks/*fails/*begins/*continues/*needs/*ceases that Bart is crying.

Most paradigmatic subject-raising verbs also fail to take finite complements headed by "as if," and "like," as witnessed by (3c).

3c.   It seems/appears/looks/*happens/*fails/*begins/*continues/*needs/*ceases as if/like Bart is crying.

Interestingly, paradigm cases of subject-raising verbs, including "look," take non-finite clauses (as in 4a) of the form "to be a NP" (as in 4a) and "to be (the case) that P" (as in 4b).

4a.   There seems/appears/looks/happens/fails/begins/continues/needs/ceases to be a traffic jam.

4b.   It seems/appears/looks/happens/fails/begins/continues/needs/ceases to be (the case) that Bart is crying.

The rule-like pattern in (4b) calls for an explanation. One possibility is that the underlying logical form of subject-raised look-constructions is "It looks to be [crying(Bart)]." The raised forms in (4a) would then be the result of the subject "Bart" moving out of the subordinate clause "crying(Bart)" of the un-raised forms in (4b).

The upshot is that "look" behaves as one should expect if it is a subject-raising verb. As subject-raising verbs have scope over the subordinate clause at the level of logical form, they operate on the content of the subordinate clause. As the subordinate clause is sentential, subject-raising verbs are sentential operators. So, pace Orlandi, "look" is not peculiar in any way that should cause us to doubt its status as a sentential operator.

3.3 | "Look" as a Modal Operator

Orlandi offers a further objection to "look"'s being a sentential operator, which is that "look"—along with "seem"—supposedly has little in common with other sentential operators. As Orlandi puts it,

"Brogaard uses the fact that a predicate like 'look' is subject-raising to indicate that it is a sentential operator (46). Other common examples of sentential operators are modals such as 'it is the case that', and logical connectives such as negation. Now, predicates like 'look' and 'seem' have little in common with logical connectives, and since the claim that they are sentential operators plays a significant role in this argument, such a claim should have received more attention." (Orlandi, 2024)

However, Orlandi's claim that "look" and "seem" have little in common with standard sentential operators, which they take to include modals, is dubious. There is an emerging consensus that auxiliary verbs signifying modality like "might," "must," "should," "ought," "could," and "may" are subject-raising verbs just like "seem" and "look" (e.g., Bhatt, 1997; Wurmbrand, 1999, Hacquard, 2006).[20]

Like paradigm subject-raising verbs (e.g., "seem"), relative modals can occur with an infinitival clause headed by the expletive "there" (Bhatt, 1997; Wurmbrand, 1999).

5a.	There seems to be a hurricane headed here.	
5b.	There must be more to this story.	(*epistemic preferred*)
5c.	There should be room for one more.	(*epistemic preferred*)
5d.	There has to be life out there.	(*epistemic preferred*)
5e.	There must be accountability at every level.	(*deontic preferred*)
5f.	There should be more street lights here.	(*deontic preferred*)
5g.	There has to be 50 chairs in this room.	(*deontic preferred*)

Furthermore, like most emblematic examples of subject-raising verbs (e.g., "seem" and "cease"), relative modals can occur with a passive infinitival clause in subject-raised constructions, as shown in (6).

6a.	Dan seems to be held up by a traffic jam.	
6b.	The murder weapon may be hidden around here.	(*epistemic preferred*)
6c.	The treasure must be buried under the rock.	(*epistemic preferred*)
6d.	The biscuits may be finished by Paul.	(*deontic preferred*)
6e.	The homework must be completed by the students.	(*deontic preferred*)

Linguists have traditionally distinguished between epistemic and deontic (or root) modals, as indicated in (5) and (6) (Hacquard, 2006). However, it is now widely agreed that relative modality comes in more than two flavors, for instance, doxastic, bouletic, circumstantial, teleological, and predictive modality (e.g., von Fintel, 2006; Klecha, 2014; Swanson, 2008). A few examples are given in (7) below.

7a.	The butler must have done it.	(*epistemic*)
7b.	All drivers and passengers must use seat belts.	(*deontic*)
7c.	You need to come over. I miss you.	(*bouletic*)
7d.	I have to sneeze.	(*circumstantial*)

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[20] The older assumption that deontic modals can sometimes function as control predicates is controversial (Hacquard, 2006). Furthermore, the assumption that some deontic modal verbs are control verbs does not show that they do not function as sentential operators. Control verbs like "expect," "hope," "attempt," "try," and "decide" differ from raising verbs, for instance, in that they do not license the special subjects "it" and "there," but require their own subject. Even so, they still function as sentential operators (together with their subject), as in "Nick hopes to go to the dinner."

7e.   To get here, you have to take the Turnpike.   (*teleological*)

7f.   Mom will get mad.   (*predictive*)

Relative modals can be modified by adverbs, yielding graded modals, as in "could easily," "almost have to," "really need." In Angelica Kratzer's influential analysis of graded modals, modal constructions are analyzed in terms of quantification over accessible worlds partially ordered in terms of relative closeness to the ideal (cf., Lewis, 1973). Very roughly, a proposition P is necessary if and only if P is true "in all accessible worlds which come closest to the ideal established by the ordering source" (Kratzer, 1991, p. 644). A Kratzer-style modal analysis can be extended to account for constructions with appearance verbs modified by adverbs like "virtually," "nearly," "barely,", as in a phenomenal reading of (8).

8.   The model barely looks pregnant to me.

If the ordering source is a maximal plurality of ideal ways of looking pregnant, then we can take the accessible worlds to be those in which the model looks similar to one of the ideal ways of looking pregnant. (5a), then, is true if and only if for some way (w) a pregnant person looks in one of the accessible worlds that are furthest away from the ideal, the model looks that way (w).

So, Orlandi's claim that "look" and "seem" do not function as sentential operators because they have little in common with other sentential operators is questionable. "Look" and "seem" share a lot in common with modal auxiliary verbs (Wurmbrand, 1999). Indeed, if "look" and "seem" are treated as modal operators, we can straightforwardly account for their occurrence in relative modal constructions like (8).

3.4 | "Look" and Hyperintensional Operators

A further worry Orlandi expresses concerns my discussion of "look" and "seem" as generating hyperintensional contexts. Orlandi voices this concern as follows:

> [I]t is not clear why the focus is on hyperintensionality. A simple failure of substitutivity in intentional contexts would seem to be enough to argue that 'look'-reports introduce reference to a contentful clause. (Orlandi, 2024)

Intensional operations, such as alethic modal operators (e.g., "It is metaphysically possible") and tense operators (e.g., "It will be"), display a failure of substitutivity of co-extensional terms within their scope. For example, "Joe Biden" cannot be substituted *salva veritate* for the co-extensional DP "The President of the United States" in (9a) ("It will be in 2031" is a future tense operator).

9a.   It will be in 2031 that the President of the United States is the President of the United States.

(9a) is true. But the result of substituting "Joe Biden" for the co-extensional DP "The President of the United States" in (9a) is false.

Hyperintensional operators (e.g., epistemic modals) display failure of substitutivity of necessarily co-extensional terms within their scope. For example, because Lois Lane has evidence that Clark Kent cannot fly, "Clark Kent" cannot be substituted *salva veritate* for "Superman" in (9b), when uttered by Lois Lane.

9b.   In view of my evidence, Superman might fly by my house tonight.

Now, suppose Lois Lane is looking at two photographs. One depicts Superman in his Superman costume (photo B), and the other depicts him in his Clark Kent costume (photo A).

(a)   (b)

Pointing to photo B and then photo A, Lois Lane says:

10a.   *He* looks brawny.
10b.   *He* doesn't look brawny.

Intuitively, (10a) and (10b) can both be true, which points to "look" being a hyperintensional operator. But if "looks" picks out ways of looking, and ways of looking are states of objects, as Martin suggests, then Superman either has a brawny look or not. So, if we take "look" to pick out states of objects, then we cannot explain the apparent difference in the truth-values of (10a) and (10b).

Orlandi is right, of course, that both intensional and hyperintensional operators operate on propositional content. But only hyperintensionality (and not "mere intensionality") is a reliable marker that an operator is a (occurrent) *mental state* operator.[21]

3.5 | Why the Predicative Use of "Look" Matters to Naïve Realists

Orlandi then ponders whether it would be a problem for the naïve realist if we were to assume that I'm right that "look" cannot be used predicatively to ascribe a look to an object. Orlandi doesn't think that this would present much of a problem for the naïve realist. As they put it,

> "Now, suppose however that Brogaard is right, and […] that the verb 'look' is not used predicatively to ascribe a property, a look, to o. How big of a problem is this for Martin and for naïve realists? I don't think it is a big one, [as] everyone can agree that look-reports can be used to refer to an experience by citing what the experience is

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[21] To say that hyperintensionality is a marker of mental state operators is not to say that only mental state operators are hyperintensional. Fiction operators and temporal span operators, for example, are also hyperintensional (Lewis, 2004; Brogaard, 2007, 2012).

about while remaining neutral on the nature of the experience and on what kind of properties the experience includes." (Orlandi, 2024)

The reason the supposition that "look" cannot be used predicatively is not a big problem for the naïve realist, according to Orlandi, is that the naïve realist can take look-reports to be true by virtue of citing what the experience is about. This, however, does not seem quite right.

To see this, we might start by asking how we are to understand the aboutness (or intentionality) of experience, given naïve realism. One option, given naïve realism, is to take experience to be minimally intentional in the sense of being about what it presents to the perceiver. Thus, if an experience presents an object o as F to S, and the F-ness of o is manifest in S's experience of o, then the experience is about the fact that o is F. So, Orlandi's proposal explains how, given naïve realism, perceivers can use look-reports of the form "Looks(o is F)" to report on veridical experiences that present o as F. But the proposal inaccurately predicts that perceivers cannot verbally express how things look in the case of illusory experience.

Given a representational conception of experience, an illusion is an experience that represents an object o as being F, even though o is not in fact F. Naïve realists, however, cannot say this. Nor can they say that an illusion is an experience that *presents* an object o as being F, even though o is not F, as that would amount to the contradictory statement that the F-ness of o is manifest in the perceiver's experience of o, even though o is not F. This raises the question of what the naïve realist thinks is made manifest in illusory experience. A promising answer is that it's the objective look of the object of perception that is manifest in illusory experience (Travis, 2004; Martin, 2010; Brewer, 2011; Kalderon, 2011). Suppose again that the director of the advertisement campaign in Martin's envisaged case has an experience presenting a cis male model as being pregnant. While the property of being pregnant is not manifest in experience in this case, the naïve realist can say that the objective pregnant look of the cis male model is manifest in his experience. But here is the problem. "Look" can be used to designate objective ways of looking only if it's used predicatively. So, if we suppose—with Orlandi—that "look" can be used as a raising verb but cannot be used predicatively, that *is* a big problem for Martin and for naïve realists, as this means that if S has an illusory experience of an object o that is not in fact F, then S cannot use the look-statement "o looks F" truthfully to say that the F-look of o is manifest in her experience.

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