

Forthcoming in: Mohan Matthen, ed. *Oxford Handbook of the Philosophy of Perception*, 2012

## Perceptual Reports

Berit Brogaard  
brogaardb@gmail.com  
January 12, 2012

### Contents

1. Perceptual Verbs and Their Etymology
2. Epistemic, Comparative, and Phenomenal Uses of Appearance Verbs
3. Adverbial and Raising Accounts of 'Looks'
4. Consequences for Theories of Perception
5. Intensional Uses and Intentional Content

### 1. Perceptual Verbs and Their Etymology

Perceptual reports are utterances of sentences that contain a perceptual verb. Perceptual verbs include, among others, 'look', 'sound', 'feel', 'taste', 'smell', 'see', 'hear' and 'perceive'. Consider:

- (1)
  - (a) My chair looks red but it's really white
  - (b) His voice sounded deep and earnest
  - (c) Vegemite tastes like spreadable beer
  - (d) Last night my house smelled like a Mexican restaurant
  - (e) The entrance is so white that it feels as if you're walking into a huge iPod
  - (f) This fabric feels like velvet
  - (g) John saw Mary cry
  - (h) The witness heard a noise and found the victim on the ground

Perceptual reports such as these purport to describe how objects in the world are perceived by subjects. It is natural to suppose that at least in many cases, these reports reflect aspects of the phenomenal character and representational content of subject's perceptual experiences. Whether perceptual reports actually reflect these things is a substantial question and one which I will be partially concerned with in this entry.

Perceptual reports containing the verbs 'look', 'seem', 'appear', 'taste', 'smell' and 'sound' are likely to occur either with an implicit or explicit relativization to a perceiver. Syntactically, this can occur with a 'to-X' clause or other local constituents that make the relevant perceiver and perceiving conditions explicit, as in 'Vegemite tastes like spreadable beer to me [in normal taste conditions]' or 'Vegemite tastes like spreadable beer to Americans the first time they taste it'.

Perceptual verbs have an interesting etymology that has some bearing on their semantics in modern English. Starting with visual 'appear' verbs, 'seem' originates from the old English 'beseon', which is a contraction of 'be' and 'seon' (literally: "to see") (*The Oxford Dictionary of English Etymology* and *A guide to Old English*, p. 325). 'Beseon' was used in most of the grammatical constructions which 'look' is used in modern English. Consider the following examples:

'Hwa don Willelm of Normandige beseon gelic?  
*What-does-William-of-Normandy-be-see-like?*  
(What does William the Conqueror look like?)

'Angelcynn beseon micel lytlian nu'  
England-be-see-very-different-now  
(England looks so different now)

'Beseon' functions as a subject raising verb. 'England looks so different now' is a raising construction because 'England' is the surface-grammatical subject of 'look' but the semantic subject of 'to be different now'. Verbs that take this position in a raising construction are called '(subject) raising verbs'.

The semantic subject of 'look' is implicit. In old English, 'beseon' is derived from 'see'. The subject of 'see' could be 'I' or 'people'. If the implicit subject of 'see' is 'I', then 'I see England as very different now' is the raised form of 'England be see so different now [by me]'. Likewise, 'People see William of Normandy in which way?' is a raised form of 'What does William of Normandy be see like [by people]?'.

'Look' comes from the old English verb 'locian', which means 'to see, to gaze'. 'Locian', in turn, comes from from the West Germanic 'lokjan'. 'Locian' in the sense of 'having a certain appearance' entered Old English around 1400, at which point it began to occur in the positions in which 'beseon' had previously occurred. As 'look' originated from 'locian' and 'locian' occurs in the same positions as the older 'beseon', it is very plausible to think that 'look' and 'seem' function in the same way.

'Appear' entered old English from old French 'aparoir' around the same time and acquired a meaning in Old English that is similar to 'locian' in the 'appear' sense. It is around the same time or later that 'sound', 'taste', 'smell' and 'feel' acquire the 'appear' meaning

'Taste' entered old English in 1300. It stems from the old French 'taster' ('to taste'), which originally meant 'to touch, to handle'. Around 1550 it replaced the old English 'smack'.

'Sound' stems from the Latin 'sonare' and entered old English in late 1300. It began to be used in the 'appear' sense some time in 1400. 'Feel' stems from the old English 'felan' and slowly acquired its multiple senses between 1300 to 1829. 'Smell' was not found in old English and is of unknown origin.

The etymology of 'appear' words strongly suggest that 'seem', 'appear' and 'look' function in the same way. As 'taste', 'sound' and 'feel' took on the 'appear' sense by replacing the visual verbs in equivalent sentences, it is plausible that 'appear' words have a unified semantic theory. I return to this theory below.

## **2. Epistemic, Comparative, and Phenomenal Uses of Appearance Verbs**

The first philosopher to offer a systematic account of visual 'appear' words was Roderick Chisholm (1957: chap. 4). Chisholm identified three uses of 'look': The epistemic, the

comparative and the non-comparative (non-epistemic) use. Frank Jackson calls the latter use the phenomenal use of 'look'.

Chisholm's distinction plays a crucial role in Frank Jackson's argument for the sense-datum theory of perception. According to Jackson, the hypothesis that there are accurate phenomenal 'looks' reports partially indicates that we do not perceive the world directly but perceive it via a veil of appearances. I will argue that this conclusion lends support, not to the sense-data theory, but to the hypothesis that visual perception has representational content.

### **Epistemic Uses**

If I hear on the radio that Bank of America has put the financial crisis behind it, I may say 'It looks like I won't need to find a new bank'. This use of 'look' is different from the 'look' that occurs in 'It looks like the road is wet (but it's not)', said on the basis of how the road looks. In the former case, if I am presented with a defeater, it no longer will look to me as if I won't need to find a new bank. For example, if the radio host later announces that Bank of America is going bankrupt, then it will no longer look to me as if I won't need to find a new bank. In the latter case, a defeater is not going to change how things look. If I am told that the city has painted the roads to make them look wet as part of their drive safe complain, it will still look to me as if the roads are wet. Chisholm called the use of 'look' that is subject to defeat 'the epistemic use'.

Epistemic uses are less closely tied to perception than the other uses are. When 'look' is used epistemically, the description sentence containing it purports to describe a cognitive state concerning what is subjectively probable conditional on (total, total inner, total relevant, total relevant presented so far,...) evidence.<sup>1</sup> Furthermore, when 'look' is used epistemically, the cognitive state ceases to exist in the presence of a defeater.

I will say of epistemic reports that they are evidence bearing for the speaker. When epistemic 'looks' reports are not evidence bearing, they are implicitly relativized to a third party. Suppose, for example, after stating the usual antidote and Fink problems, I say 'It looks, prima facie, like one cannot analyze dispositions in terms of conditionals'. I then give a new more elaborate theory in which the proposal is in fact to analyze dispositions in terms of conditionals.<sup>2</sup> Here, the 'looks' report is not evidence bearing for the speaker because it makes implicit reference to the evidence of a person who is not acquired with the new theory.

Like 'look', 'seem', 'appear' and 'sound' all have epistemic uses. Consider:

- (2)
  - (a) It seems that some companies do this on purpose
  - (b) This modelling school appears to be a scam
  - (c) That sounds like a personal problem for me.

When so used 'seem', 'appear' and 'sound' reports also purport to describe a cognitive state concerning what is subjectively probable conditional on (total, total inner, total relevant, total relevant presented so far,...) evidence. For example, in the epistemic sense, 'This modeling

---

<sup>1</sup>I owe this proposal to Hannes Leitgeb.

<sup>2</sup>I owe this example to Hannes Leitgeb.

school appears to be a scam' can be interpreted as meaning 'This modeling school probably is a scam'.

'Taste' and 'smell' do not have any widespread epistemic uses. They are normally used epistemically only in idiomatic phrases and non-literal speech, as in:

- (3)
- (a) [That attitude] smells like teen spirit (Nirvana)
- (b) This tastes like victory

3(b) can but need not have an epistemic reading. In some contexts it signals an emotional response to something that might not actually be victory. For instance, you could say it after you came a close second to Usain Bolt.

### **Comparative Uses**

Comparative perceptual reports tell us that two experiences have certain properties in common but they need not tell us what the properties are. For example, if I notice that Rose is visually similar to her sister, I can say 'Rose looks like her sister'. 'Look', 'seem', 'appear', 'sound', 'taste' and 'smell' all have non-epistemic comparative uses:

- (4)
- (a) The cliff looked like a dried-out body
- (b) The cliff seemed like a dried-out body
- (c) They appeared like the perfect couple in public
- (d) The 95 Tiger 885 I just purchased sounds like a diesel truck
- (e) The cookies smell like marzipan
- (f) Homemade wine tastes like yeast

At least some comparative reports are epistemic reports. For example, suppose I say about war 1: 'this looks like war 2'. That's comparative but plausibly epistemic.<sup>3</sup> As comparative 'perceptual reports have a distinctly comparative structure, it is natural to think that they are structurally related to more familiar comparative sentences. Consider:

- (5)
- (a) John is taller than every girl
- (b) John is taller than every girl is.
- (c) Ellen is as rich as her father
- (d) It is warmer today than it might be tomorrow.
- (e) George is richer than his father was and his son will be.
- (f) John dances like Tom
- (g) Mary eats like a bird

As Richard Larson (1988) argues, 1(a) can be dealt with by positing that (i) the quantified noun phrase (e.g., 'every girl' or 'one of the girls') moves to a wide-scope position and (ii) the comparative expression 'taller than' combines with two type e expressions (i.e., variables or referring terms). On this view, 1(a) is of the form '[Every girl x]taller-than(John, x)'.

---

<sup>3</sup>Thanks to David Chalmers for offering this example.

However, 'than'-clauses are syntactically akin to relative clauses such as 'that every girl likes' as it occurs in 'John is a guy that every girl likes'. Quantified noun phrases cannot scope out of relative clauses. As 'than'-clauses are syntactically akin to relative clauses, it is extremely implausible to think that quantified noun phrases (e.g., 'every girl') can move to a wide-scope position.

Irene Heim argues that even if quantified noun phrases could scope out of 'than'-clauses, modal expressions, adverbs of quantification (e.g., 'Mary *typically* eats breakfast') and floating quantifiers (e.g., 'the girls *all* went outside') cannot possibly do that. So, Larson's suggestion does not carry over to 5(b) to 5(c).

Heim offers a new account of comparatives according to which comparatives ascribe relations between what she calls "degrees" (i.e., abstract entities like heights, weights, etc.). To account for quantifier scopes, Heim suggests that there are semantically vacuous 'wh'-items in the sentence structure. 5(b) can be read as: 'John is taller than every girl is wh'. To a first approximation, 'every girl is wh' is to be read as: 'every girl x: x is this tall'. This item scopes out of the comparative clause, and the 'wh'-item raises to a wide-scope position, yielding:

[wh1[every girl is t1]]2 [John is taller than t2]

Likewise, 5(f), which is superficially similar to 'looks' reports, can be read as: 'John dances like Tom does wh', where 'Tom does wh' is to be read, roughly, as: 'Tom dances this way'. This item scopes out of the comparative clause, yielding: '[wh1[Tom dances t1]]2 [John dances t2]'. We can assign the following truth-condition to 5(f): for some way w such that w is a way that Tom dances, John dances that way too.

As comparative 'looks'-reports are superficially similar to the comparatives in 5(f) and 5(g), it is very plausible that they have the same underlying structure (Brogaard 2009). On this hypothesis, 'X looks like Y' contains the implicit wh-clause 'wh1[Y looks t1]'. This item scopes out of the comparative clause, yielding: '[wh1[Y looks t1]]2 [X looks t2]'. For example, 'Rose looks like her sister' is to be read as containing the implicit wh-clause: 'wh1[Rose's sister looks t1]'. This item scopes out of the comparative clause, yielding '[wh1[Rose's sister looks t1]]2[Rose looks t2]' (Brogaard 2009, see also Martin 2010).

The comparative analysis of comparative 'looks' reports offers the full answer to the question of how to analyze comparative 'looks' reports linguistically but it does not address the question of how to assign truth-conditions. The reason is that the analysis makes unreduced appeal to a notion of 'look x'. This notion needs further analysis in non-comparative terms.

### Perceptual Uses

Non-comparative (non-epistemic) 'looks' reports purport to describe the properties of experience directly (rather than comparatively). For example, if I look at my red chair and say 'the chair looks red', what I said is plausibly a non-comparative report. 'Look', 'seem', 'appear', 'sound', 'taste' and 'smell' all have non-epistemic non-comparative uses. Consider:

- (6)
- (a) Her skin looked as smooth as silk
- (b) Her skin seemed smooth as silk
- (c) Her skin appeared smooth as silk
- (d) The music sounded bracingly fresh and quite moving

- (e) The strawberries taste sour
- (f) The flowers smell sweet

Non-epistemic 'looks' reports fail to be evidence bearing. Even if I am told that the lines in the Müller-Lyer optical illusion have the same length, it will still look to me as if they have different lengths.

Some apparently non-comparative 'looks' reports are implicitly comparative. For example, 'John looks drunk' is plausibly a contraction of 'John looks like someone who is drunk'. Likewise, 'John's voice sounded earnest' plausibly is a contraction of 'John's voice sounded like the voice of someone who is earnest'.

There are, however, three reasons to think not all non-comparative reports are implicitly comparative.

First, comparative 'looks' reports plausibly just are existentially quantified non-comparative 'looks' reports at the level of logical form.

Second, it is evident that we cannot successfully reduce all non-comparative 'looks' reports to comparative reports. 'That chair looks purely qualitatively red' and 'That chair looks the way a purely qualitatively red object would look' plausibly have the same truth-conditions. Hence, the comparative report presupposes a non-comparative use of 'looks'.

Third, as Chisholm (1957: 51) argues, if 'look red' is given a comparative reading, 'red things look red' is an analytic truth. It says 'things that are red look the way things that are red look', which is trivially true. If, on the other hand, 'look red' is given a non-comparative reading, then 'red things look red' is a synthetic truth. Even before she started studying neuroscience and physics Frank Jackson's Mary knew that red things look the way red things look. But she didn't know that red things looked non-comparatively red.

### 3. Adverbial and Raising Accounts of 'Looks'

It remains to give a semantic analysis of the non-comparative 'looks x'. The most important theoretical options for analyzing the semantics of non-comparative 'looks x' are treating 'appear' words as adverbs or treating them as subject-raising verbs. Let us consider the adverbial treatment first.

It is consistent with a comparative linguistic analysis of comparative 'looks' reports that the truth-condition for 'X dances like Y' involves 'X dances P-ly'. For example, 'Amy dances like Eli' is true if Amy and Eli both dance wildly with their eyes closed. When an adverb occurs in a final position it describes the manner of the activity picked out by the verb. Consider:

- (7)
- (a) John spilled the beans clumsily
- (b) John dances clumsily

7(a) means 'John spilled the beans in a clumsy manner', and 7(b) means 'John dances in a clumsy manner'. Adverbs that describe the manner of the activity picked out by the verb are also known as 'manner adverbials'. 7(a) can be assigned the following truth-conditions using Davidsonian event semantics: '∃e[spill(e, John, beans) & clumsily(e)]'. In English: There is an event e such that e is a spilling event that has John as an agent and the beans as a patient, and

e was done clumsily. 7(b) can be assigned the following truth-condition:  $\exists e[\text{dance}(e, \text{John}) \ \& \ \text{clumsily}(e)]$ . In English: There is an event e such that e is a dance event that has John as an agent, and e was done clumsily.

It is theoretically possible that the truth-condition for 'X looks like Y' likewise involves 'X looks x-ly', where 'x-ly' is a manner adverbial. 'The tomato looks red to me' would be assigned the truth-condition:  $\exists e[\text{look}(e, \text{tomato}, \text{me}) \ \& \ \text{redly}(e)]$ . Or: there is a looking event with the tomato and I as participants (agent and patient respectively), and the event takes place in a redly manner. This would be consistent with an adverbial theory of perception, according to which perceiving is an object acting upon a perceiver in a certain manner.<sup>4</sup>

I believe there are several reasons to resist an adverbial interpretation of 'look x'. I outline four such reasons in Brogaard (2009). Here I will just briefly outline what I believe is the correct interpretation of 'look'. A lot of what I am saying here carries over to 'feel', 'taste', 'smell' and 'sound'.

On my preferred account, when 'look' takes an adjective it functions semantically in the same way as the (subject) raising verb (e.g. 'found', 'reported') in the following sentences:

- (8)
- (a) Tom was found missing
  - (b) Susan was proven guilty
  - (c) A laptop was reported stolen
  - (d) Patrick was assumed dead [after disappearing in South America in the 1970s]
  - (e) Some 67% of the students' writing was deemed outstanding or good

The sentences in (8) are pleonastic paraphrases of 'Tom was found to be missing', 'Susan was proven to be guilty', 'A laptop was reported to be stolen', 'Patrick was assumed to be dead' and 'Some 67% of the students' writing was deemed to be outstanding or good'. They are thus structurally similar to sentences with raising verbs and infinitive predicates such as 'John is expected to arrive on time', 'Mary is believed to have stolen two library books', 'The summer promises to be great', 'Tom was seen eating a sandwich'.

One reason for thinking that 'seem' and 'looks' should be given the same semantics is that the etymology of 'appear' words strongly suggests that 'seem' and 'look' function in the same way as 'seem'. 'As 'seem' uncontroversially functions as a raising verb, so does 'look'.

The weakness of this argument, that etymology indicates a unified semantics for 'appear' words, is that even if there is strong evidence that the old English 'locian' and 'besean' function as 'appear' words, 'look' and 'seem' could later have come to function differently. But it is more likely that changes and idiosyncrasies over the years explain why 'look' sometimes behaves differently from 'seem' and 'appear'.

Transformational grammar has taught us that sentences with raising verbs do not have the surface form that they appear to have. On the face of it, 'John looked to be happy' seems to have the same surface grammar as 'John wanted to be happy'. However, this is not so.

---

<sup>4</sup>Roderick Chisholm is a legendary defender of the adverbial theory. Wylie Breckenridge is one of its contemporary defenders.

One of the big advances of transformational grammar was that it offered a way to distinguish between the different underlying forms of sentences like 'John wants to be happy' and 'John looks to be happy' (Partee 1975). The 'want' sentence has the underlying form 'John wants [John to be happy]' and the 'look' sentence has the underlying form '[x looks [John to be happy]]'. 'John looks to be happy (to x)' is generated by applying the transformation rule Subject-to-Subject-Raising. When this rule is applied, 'John' is raised to become the subject of 'looks'.

The subjects of raising verbs like 'seem', 'proven' and 'look' thus have no semantic relation to these verbs. Rather, they are associated with the infinitive predicate or the verb of the embedded clause. For example, in 'The apple looked to be red' the subject 'the apple' is associated with 'to be red' and in 'John seemed to prefer red wine' the subject 'John' is associated with the verb 'prefers'.

In their unraised surface form, raising verbs often take an expletive, or dummy, subject, as in 'It was proven (that) she was guilty', 'It seemed (as if) she was turning red', or 'It looks (like) she is done' (Postal 1974, Chomsky 1981).

Verbs that function as raising verbs can also function as transitive verbs, as in 'John looked (shy, shyly) at Mary', 'Tom (eagerly) expected the car crash' and 'Alice (enthusiastically) tasted the soup'. When they function as transitive verbs, they describe acts or actions of the referent of the semantic subject. When they function as intransitive raising verbs, they describe a passive experiential or epistemic state of an implicitly or explicitly mentioned perceiver. For example, 'Lisa seemed angry to Paul' describes a passive experiential or epistemic state of Paul, and 'The tomato looks red to me' describes a passive experiential or epistemic state of the speaker.

If 'appear' words are raising verbs, then there are at least two reasons to think the adjectival treatment of 'look' is wrong. First, raising verbs are always followed by adjectives or infinitive clauses rather than adverbs. The 'to be' of infinitive clauses always takes an adjectival complement, not an adverbial one, as is apparent in 'John was found to be missing' and 'Susan turned out to be guilty'. Hence, while complements of raising verbs can be modified by adverbs, as in 'extremely beautiful', they cannot themselves be adverbs or 'to be' plus adverb clauses.

Second, unlike adverbial modifiers, the adjectival complements of raising verbs and the corresponding infinitive clauses have the same meaning. The reason that they have the same meaning has to do with the underlying form of the sentences in which they occur. Raising verbs function as sentential operators. 'John seemed worried' has the underlying form 'Seemed (John is worried)'. This underlying form is then transformed into the surface form 'John seemed to be worried'. The latter can then undergo deletion of the predicate infinitive to become 'John seemed worried'. The same goes for 'looks'. 'X looks red' has the underlying form 'Looks (X is red)'. This underlying form is transformed into the surface form 'Looks (X is red)'. This underlying form, in turn, is transformed into the surface form 'X looks to be red', which through infinitive deletion becomes 'X looks red'. The infinitive construction 'X looks to be red' is thus a pleonastic paraphrase of 'X looks red'. In the case of 'John dances clumsily', on the other hand, there is no equivalent infinitive construction. For example, 'John dances clumsily' and 'John dances to be clumsy' have different truth-conditions.

#### **4. Consequences for Theories of Perception**

How we use 'appear' words has some bearing on issues in the theories of perception. As Brogaard (2009) argues, from the hypothesis that 'look' is a raising verb, we can infer that some 'looks' reports reflect phenomenal properties of perception. From that we can infer that they



reflect representational contents of perception and hence that perception has representational content.<sup>5</sup>

'S reflects property P' and 'S reflects content p' can be defined as follows (Brogaard 2009):

Phenomenal Property Reflection

A report that describes experience e reflects a phenomenal property P iff [necessarily, the report is true iff P is a phenomenal property of e]

Content Reflection

A report that describes experience e reflects a content p iff [necessarily, the report is true iff p is a content of e].

Phenomenal Property Reflection and Content Reflection are meant to be restricted to reports that are tokens of sentences that can have true tokens when uttered by us.

As comparative 'looks' reports, if truly comparative, reduce to non-comparative reports, the question to be answered is that of whether some non-comparative 'looks' reports reflect phenomenal properties of perceptual experience. There are two components to this question: One is whether 'looks'- reports mirror properties represented in perception. Another is whether these properties at least sometimes reflect distinctly phenomenal representation.

As for the first question, we have already seen that 'looks', used as an intransitive verb, functions as a sentential operator at the level of logical form. 'X looks red' has the underlying structure 'Looks(X is red)'. In the transformation of the underlying structure, 'X' raises to become a constituent of the higher clause 'X looks to be red'. This then undergoes infinitive deletion to yield 'X looks red'. 'X looks red' thus has the same underlying structure as 'A laptop was reported stolen' and 'Patrick was assumed dead'. In all of these cases the underlying structure contains a subject-predicate subordinate clause with a predicate that expresses a property attributed to the referent of the semantic subject term. For example, 'a laptop was reported stolen' says that it was reported that a laptop was stolen. The subordinate clause thus attributes being stolen to some laptop. Likewise, the subordinate clause in 'X looks red' attributes being red to X. The subordinate clauses of 'looks' reports thus attribute properties expressed by the predicate term to the referent of the subject term of the subordinate clause.

The sentential operator indicates how the properties got attributed. Being stolen was attributed to a laptop in an act of reporting. Being red is attributed to X in a perceptual act. It follows that the subordinate clauses of non-epistemic (or 'perceptual') 'looks' reports mirror properties represented in perception.

The second question to be answered was whether at least some 'looks' reports reflect distinctly phenomenal properties. Here is an argument that they do. Let 'X looks [ADJ] to O at t' be a non-comparative 'looks' reports. Let the domain consist of properties that correspond to '[ADJ]'. Now, for some property P, if 'X looks [ADJ] to O at t' does not reflect P, then either the report is

---

<sup>5</sup>One could also define what it is for a subject to be in a phenomenal relation to a putative fact, and not attempting to define a particular sense of a verb like 'looks'. See Matthen (2010). Though less objectionable, this would not do as a link in an argument from ordinary-language uses of 'look' to metaphysical facts about perception.

necessarily false, or it is not necessary that it is true iff P is a phenomenal property of O's experience.

As for the first horn of the dilemma: 'X looks [ADJ] to O at t' cannot plausibly be necessarily false for all values of 'X', '[ADJ]', 'O' and 't'. If I look at a ripe tomato in good lighting conditions and say 'That looks red to me now', that obviously is true.

As for the second horn of the dilemma: According to Jackson, 'x looks red' is true when x has an experience that is red. However, this is not the best way to interpret 'x looks red'. As we have already established, 'look' expresses a perceiver's experiential attitude relative to a represented property. When used non-epistemically 'look' is a marker of experiential modality as opposed to epistemic modality. A non-epistemic 'looks' report states that the world as experienced is the way indicated by the subordinate clause. By making a 'looks' reports one thus seeks to eliminate the set of possible situations at which the subordinate clause is false.

When used epistemically, 'look' is a marker of epistemic modality. An epistemic 'looks' report states that the world likely is the way indicated by the subordinate clause. Both experiential modality and epistemic modality relativize truth to individuals (perceivers or believers) by relating their current experiential state or their current state of belief to the content of their utterances.

One difference between raising verbs (both epistemic and nonepistemic) and epistemic modals, such as 'may', 'might', 'should' and 'must', is that raising verbs often indicate the source of the perceiver's experiential attitude or the believer's belief. 'The tomato looked red' indicates that the perceiver was looking at the tomato. 'The table felt hard' indicates that the perceiver was feeling the table. 'Tom was seen eating a sandwich' indicates that the perceiver saw Tom. 'John is expected to arrive on time' indicates that the believer was inferring a proposition.

Now, we need to show that:

For some 'looks' reports of the form 'X looks [ADJ] to O', the report is true iff a property corresponding to the adjectival phrase of the subordinate clause is a phenomenal property of O's experience.

The right-to-left direction is obvious. Where P corresponds to '[ADJ]', it is necessarily the case that if P is a phenomenal property of O's experience, then 'X looks [ADJ] to O' is true.

The left-to-right direction is less obvious. To see that it holds, consider a special case of blindsight. Blindsight is a kind of residual vision that some people with lesions to the primary visual cortex have. Blindsighters can make above-chance predictions about the attributes of visual stimuli presented to them in their blind field, without any distinctly visual awareness. In ordinary cases of blindsight, the stimulus does not seem or look any way to the blindsighter. Blindsighters feel that they are simply guessing. But consider the case of Ned Block's super-blindsighter. A super-blindsighter has acquired the ability to guess correctly when to make a guess about a stimulus in her blind field. If someone were to ask a super-blindsighter 'What color does the stimulus in your blind field seem to be?' or 'How does the stimulus look to you?', she may just reply with 'It seems red to me' or 'It looks red to me'.

Consider another case, that of achromatopsia. When a person with achromatopsia looks at a red object, he has a phenomenally black experience of the object. Hence, he cannot tell on the basis of his perceptual experience whether the object is red or black. But suppose he is given a

device that presents a black dot on a screen when it detects that an object is red. By means of this device an achromatopsic can discriminate between red and black objects. If shown a red object and asked 'What color does the stimulus seem to be? Or 'How does the stimulus look to you?', he may just reply with 'It seems to be red to me' or 'It looks red to me'.

These cases seem exceedingly plausible. However, as argued by Brogaard (2009), the occurrence of 'look' in these cases is epistemic.

When a super-blindsighter detects the color of a visual stimulus presented to her in her blind field, she has no distinctly visual awareness of the color of the stimulus. So, when she reports on the color of a stimulus presented to her in her blind field, she cannot make use of any visual phenomenology associated with the color information. Rather, she must infer from her inclination to guess that the stimulus is red that it is red. Were she to be presented with a defeater, she would no longer have the inclination to state that the stimulus looks red. So, when she says that the stimulus looks red, her report is evidence bearing and hence epistemic.

Likewise, when a person with achromatopsia detects the color of a visual stimulus by looking at a computer screen, he has no distinctly visual awareness of the color of the stimulus. So, when he reports on the color of the stimulus, he cannot make use of any visual phenomenology directly associated with the color information. Rather, he must infer from the black dot on the screen that the stimulus must be red. Were he to be presented with a defeater, he would no longer have the inclination to state that the object looks red. So, when he says that the stimulus looks red, his report is evidence-bearing and hence epistemic. Generalizing:

(1) All and only epistemic 'looks' reports reflecting the speaker's internal evidence state are evidence bearing.

(2) When we use a 'looks' report to report on a visual stimulus without basing the report in any way on phenomenal properties of an experience of the stimulus, the report is always evidence bearing.

(3) So, when we use a 'looks' report to report on a visual stimulus without basing the report in any way on phenomenal properties of an experience of the stimulus, the report is epistemic.

A 'looks' report that reports on a visual stimulus can be true only if it is based on the visual phenomenology of an experience of the stimulus or is based on other information available about the stimulus. It follows that when we use a non-epistemic 'looks' report to report on a visual stimulus, the report is true just in case it is based on the phenomenal properties of an experience of the stimulus. So, for non-epistemic reports of the form 'X looks [ADJ] to O', it is necessary that if the report is true, then there is an experience with property P, where P corresponds to '[ADJ]'. Hence, for some 'looks' reports of the form 'X looks [ADJ] to O', the report is true iff a property corresponding to the adjectival phrase of the subordinate clause is a phenomenal property of O's experience. Hence, at least some 'looks' reports reflect distinctly phenomenal properties.

Brogaard (2009) further argues that if 'looks' reports reflect phenomenal properties, they do not reflect non-phenomenal properties. Suppose I have a rough and imprecise experience of John, because I am not wearing my glasses. My experience then has the representational phenomenal property of representing a certain content in a rough and imprecise way. It also has

the non-representational property of being rough and imprecise. But I cannot accurately report the roughness and imprecision of my experience using:

(9) John looks rough and imprecise

'My experience represents John in a rough and imprecise way' and 'My experience is rough and imprecise' do not entail 'my experience represents John as being rough and imprecise'. My rough and imprecise experience does not give rise to an appearance that attributes roughness and imprecision to John. Imprecision is similar to consciousness in this respect. A conscious visual experience of an apple does not represent the apple as conscious. The correct thing to say here is that not all of the phenomenal properties of perceptual experience can be accurately reported using a phenomenal 'looks' report.

The argument from the claim that some 'looks' reports reflect representational phenomenal properties of perception to the claim that perception has content is straightforward (Brogaard 2009). The argument rests on the following principle:

*Looks-Representation Bridge Principle (LRB)*

If X phenomenally looks to be P to O at t, then O's experience at t has the representational phenomenal property of representing something as P.

LRB links phenomenal looks for a person at a time to a phenomenal property of that person's experience at that time. Here is an argument for LRB. Suppose LRB is false. Then X phenomenally looks to be P to O at t but O's experience at t does not have the property of representing something as P. Then either P corresponds to a non-representational phenomenal property of O's experience at t, or it does not correspond to any phenomenal property of O's experience at t. P cannot correspond to a non-representational phenomenal property of O's experience at t, for, as I argued earlier, things cannot phenomenally look to have a property that corresponds to a purely non-representational phenomenal property. So, P does not correspond to any phenomenal property of O's experience at t. So, P does not contribute to what it is like for O to have the experience he has at t. But it is conceptually impossible for X to look to be P to O at t, despite the fact that P does not contribute in any way to what it is like for O to have the experience she has at t. So, LRB is true.

By the LRB principle and the hypothesis that things cannot phenomenally look to have non-representational phenomenal properties, it follows that the properties which things can phenomenally look to have to observer O correspond to representational phenomenal properties of O's experience. So, if a sentence of the form 'X looks like Y to O' is true, then there is a P such that the property of representing something as P is a representational phenomenal property of O's experience, and P is how X and Y look to O. But a report that describes experience e reflects the representational phenomenal property of representing something as P iff [necessarily, the report is true iff representing something as P is a phenomenal property of e]. So, comparative phenomenal 'looks' reports reflect representational phenomenal properties of the perceptual experience they describe.

What about non-comparative phenomenal 'looks' reports? Non-comparative phenomenal 'looks' reports typically have the form 'X looks [ADJ] to O at t'. Sentences which have this surface form and which are not used epistemically are either implicitly comparative or implicitly non-comparative. If they are implicitly comparative, then, as we have just seen, they reflect representational phenomenal properties of the perceptual experience they describe. If they are implicitly non-comparative, and they are true, then it follows that X phenomenally looks [ADJ] to

O at t. But by the LRB principle and the hypothesis that things cannot phenomenally look to have non-representational phenomenal properties, it follows that the property of representing something as [ADJ] is a representational phenomenal property of O's experience at t. So, if 'X looks [ADJ] to O at t' is true, then O has an experience at t with the phenomenal property of representing something as [ADJ]. But a report that describes experience e, and is a token of a sentence S that can have true tokens, reflects the phenomenal property of representing something as P iff [necessarily, the report is true iff the property of representing something as P is a phenomenal property of e]. So, comparative phenomenal 'looks' reports reflect representational phenomenal properties of the perceptual experience they describe.

Both comparative and non-comparative phenomenal reports reflect representational phenomenal properties of the experiences they describe. As Brogaard (2009) argues, there is a simple argument from the premise that phenomenal 'looks' reports reflect phenomenal properties of the experiences they describe to the conclusion that phenomenal 'looks' reports reflect contents of the experiences they describe. The argument runs as follows:

*Look-Content Argument*

- (1) Phenomenal 'looks' reports reflect representational phenomenal properties of the perceptual experience they describe.
- (2) Any representational property of perceptual experience is the property of having a certain perceptual content.
- (3) Hence, phenomenal 'looks' reports reflect a content of the perceptual experience they describe.

We have already established that (1) is true. Here is an argument for premise (2). It is a priori that if an experience has the property of representing p, then the experience represents p. But if an experience has representational content, and it represents p, then p is a content of the experience. So, if an experience has the representational property of representing p, then p is a content of the experience.

The thesis that perception has content rules out a number of theories of perception according to which perception does not have content. These include some versions of naive realism, disjunctivist versions of naive realism, sense-data theories and raw feels theories.

A standard objection to my arguments from perceptual reports to the metaphysics of perception is that even if the arguments are sound, the conclusion only settles that perceptual experience has representational phenomenal properties and representational content in a weak sense of content. In the weak sense of content, disjunctivists, adverbialists, raw-feels theorists, and so on, may agree that perception has content. A stronger claim would be that part of what it is for an act to be a perceptual experience is for it to have phenomenal properties and/or content. Experiences can be said to have strong content in this sense (see Siegel 2011 for this distinction).

This is not the place to address this issue at great length. But a few words about this distinction are in order. An argument can be made from 'looks' reports to the conclusion that some 'looks' reports reflect wide object-involving content. For example, 'He looks like Dave' reflects a wide content that contains Dave as a constituent (see Brogaard 2009). Most thinkers who deny that experience has content in the strong sense would disagree that experiences have this kind of wide object-involving content. It is thus possible to use arguments similar to those presented here to argue for the strong content thesis.

Another standard objection to arguments from language to metaphysics is that we cannot assume that the words of ordinary language are those theories of perception are concerned with. It may be said, for example, that the ordinary language words 'look' and 'see' express concepts that are distinct from the concepts employed by philosophers of perception.

I grant that this is a genuine possibility. Philosophers of perception certainly use the word 'experience' differently from most people. In ordinary language, 'experience' has a variety of meaning none of which is exactly the one philosophers of perception have in mind. As a verb, it means 'undergo' (cf. 'experience a great adventure'). As a noun, it can mean an event participated in (cf. 'the trip was a fantastic experience'), knowledge that derives from participating in a given event or series of events ('a lesson taught by experience') or perceptual exposure to (cf. 'my first experience of NP'). However, there is no similar difference between our ordinary uses of 'see' and 'look'. In fact, all of the examples philosophers normally use when addressing issues concerning events of seeing and looking come from ordinary language. So, I highly doubt that there are concepts of seeing and looking that are distinct from those of ordinary language.

A third objection is this: The look-content argument only works if ordinary perceptual reports are true. If, however, their truth-conditions involve a false theory of perception they may be false.

I grant that there is ordinary language discourse that is treated as true but is in fact false. A good example is 'The sun rises'. This statement is strictly false. But the latter statement is about an object, viz. the sun, whereas perceptual reports involving 'appear' words are about how things appear to a particular perceiver. It is unlikely that all our expressions of how things appear to us are false.

A fourth objection is this: The correct semantics for looks-sentences needs to be sensitive not just to armchair linguistic evidence, but also to philosophical reasoning about perception. For example, when science tells us that water is H<sub>2</sub>O, that tells us something about the semantics of 'water'; if philosophy or science were to tell us, for example, that sense-datum theory or naive realism is true, that would tell us something about the semantics of 'looks'. So, we can't conclusively argue from semantics to metaphysics unless we have already done the metaphysics.

By way of reply, it is doubtful that science can determine how things look to us. How things look to me seems to be something only I can determine. So, while science can help us discover the content of 'water', it cannot help us discover the content of perceptual reports. I think the same sort of point applies to the thought that science might discover that sense-datum theory or naïve realism is true. Because theories of content are intimately tied to how things look to us, as we have seen, science cannot confirm or falsify them. Of course, to the extent that linguistics is a science, science can indeed help us settle which theory of content is correct, but this is just the approach taken here.

## **5. Intensional Uses and Intentional Content**

David Bourget (2010) further argues that the intensional nature of perceptual verbs causes trouble for Hinton's argument (1967) for a disjunctive account of perception. Hinton argues that (10) should be analyzed in terms of (11):

(10) I am experiencing a flash of light.

(11) Either (A) I see a flash of light, or (B) I have an illusion of a flash of light.

On Hinton's disjunctive account of perception, when I experience something I either stand in direct perceptual relation to an entity (in this case, a flash of light) or I have an illusion (or hallucination) of that entity. So, if (11) is the correct analysis of (10), then that seems to provide evidence for a disjunctive analysis of perception. However, as Bourget points out, 'see' appears to have uses that introduce intensional contexts.

Suppose the heartbroken Lois Lane takes a strong hallucinatory drug and then utters the following (these are modifications of Bourget's examples):

(12)

(a) Wow, I see Superman on my left. That's a really strong drug.

(b) I see Superman spinning in front of me, even though I know he isn't even here.

(c) I see Superman all over the place. Maybe I should stop taking the drug.

The sentences in (12) seem intuitively true. But if they are true, then the result of substituting 'Clark Kent' for 'Superman' is false. So, 'see' introduces an intensional context, at least sometimes.

If 'see' is used in this way in (10), then the hypothesis that (10) is to be analyzed as (11) does not lend evidence to a disjunctive analysis of perception. The occurrence of 'see' could be interpreted in the same way as the occurrence of 'see' in 'Someone is poking my brain. I see stars everywhere'.

Here is a further reason to think 'see' can have intensional uses (see Brogaard 2011). When we see an event, we needn't see all of it. For example, 'John saw the car accident' does not imply 'John saw every part of the car accident'. We see (or witness) complex events, and other high-level properties, in part by visually detecting other properties that typically are associated with the event in question. For example, 'John witnessed the murder' may be true if John heard a gunshot and saw a man fall to the ground and then ran away. Likewise, John can see a crying event in virtue of seeing various properties that typically are associated with crying, for instance, a shivering body, a handkerchief, runny mascara, and so on. Hence, even if all crying events essentially involve shedding tears, it can be true that John saw someone cry even if he didn't see them shed any tears. So, 'John saw Mary cry' and 'John saw Mary shed tears' need not be equivalent, even if we assume that crying events essentially involve shedding tears. The opacity of seeing reports of this type adds further support to the argument that 'see' has intensional uses.<sup>6</sup>

---

<sup>6</sup>The paper has benefited from comments provided by David Chalmers, Hannes Leitgeb, Mohan Matthen, Martine Nida-Ruemelin, Susanna Schellenberg, Wolfgang Schwartz, Susanna Siegel, Daniel Stoljar and audiences at the Center for Mathematical Philosophy, Ludwig-Maximilians-Universität München and the Language of Consciousness Conference at the Australian National University.

## References

- Armstrong, D. M. (1961). *Perception and the Physical World*, London: Routledge.
- Bayne, T. (Forthcoming). "Perceptual Experience and the Reach of Phenomenal Content", *Philosophical Quarterly*.
- Bourget, D. (2010). "Intensional and Phenomenal Uses of Perceptual Verbs", Chapter in ANU Dissertation.
- Breckenridge, W. (In Progress). 'Look' Sentences and Visual Experience.
- Brogaard, B. (2009). "Do 'looks' Reports Reflect the Contents of Perception", in B. Brogaard and D. Chalmers, ed., *The Language of Consciousness*, Oxford: Oxford University Press.
- Brogaard, B. (2011). "What do We Say When We Say How or What We Feel?", *Philosophers' Imprint*.
- Brogaard, B. (2012). *Transient Truths: An Essay in the Metaphysics of Propositions*, New York: Oxford.
- Byrne, A. (2009). "Experience and Content". *Philosophical Quarterly* 59: 429-451.
- Campbell, J. (1993). "A Simple View of Colour", *Reality Representation, Projection*, J. Haldane and C. Wright, ed. Oxford: Oxford University Press, 257-68.
- Campbell, J. (2005). "Transparency vs. Revelation in Color Perception", *Philosophical Topics* 33: 105-115.
- Chalmers, D. (2004). "The Representational Character of Experience", In B. Leiter (ed.), *The Future for Philosophy* (153-81). Oxford: Oxford University Press.
- Chalmers, D. (2006). "Perception and the Fall from Eden", in *Perceptual Experience*, ed. T. Gendler and J. Hawthorne, Oxford: Clarendon Press: 49-125.
- Chisholm, R. M. (1957). *Perceiving: A Philosophical Study*, Ithaca: Cornell University Press.
- Chomsky, N. (1981). *Lectures on Government and Binding*, Dordrecht: Foris
- Chomsky, N. (1986). *Knowledge of language*. New York: Praeger.
- Dreyfus, H. and Kelly, S. D. (2007). "Heterophenomenology: Heavy-handed Sleight-of-Hand", *Phenomenology and the Cognitive Sciences* 6: 45-55.
- Glüer, K. (2009). "In Defence of a Doxastic Account of Experience", *Mind and Language* 24: 297-327.
- Heim, I. (2006). "Remarks on comparative clauses as generalized quantifiers", Ms, MIT.
- Hinton, J. M. (1967). "Visual Experiences", *Mind* 76: 217-227.
- Jackson, F. (1977). *Perception: A Representative Theory*, Cambridge: Cambridge University Press.
- Larson, R. (1988). "Scope and comparatives", *Linguistics & Philosophy* 11:1-26
- Martin, M. 2010. "What's in a Look?" in B. Nanay, ed., *Perceiving the World?* Oxford: Oxford University Press, 160-226.
- Matthen, M. 2010. "Color Experience: A Semantic Theory", In Jonathan Cohen & Mohan Matthen (eds.), *Color Ontology and Color Science*. MIT Press.
- Maund, B. J. (1986). "The Phenomenal and Other Uses of 'Looks' ", *Australasian Journal of Philosophy* 64: 170-180.
- Mitchell, B. and Robinson, F.C. (2001). *A guide to Old English*, sixth edition, Oxford: Blackwell.
- Partee, B. (1975). "Deletion and Variable Binding", in E. Klima, ed., *Formal Semantics of Natural Language*, Cambridge University Press, Cambridge.
- Pautz, A. (2008). "What are the Contents of Experiences", *The Philosophical Quarterly*, doi: 10.1111/j.1467-9213.2008.584.x.
- Postal, P. (1974). *On Raising*, Cambridge, Mass. MIT Press.
- Siegel, S. (2005). "Which Properties Are Represented in Perception?". In *Perceptual Experience*, eds. T. Szabo Gendler and J. Hawthorne, Oxford: Oxford University Press.
- Siegel, S. (2006). "Subject and Object in the Contents of Visual Experience". *Philosophical*



Review 115.

Siegel, S. (2009). "Do Visual Experiences Have Contents?", In *Perceiving the World*, ed. Bence

Siegel, S. (2011). "The Contents of Visual Experience", New York: Oxford University Press.

Nanay, Oxford University Press, 2010.

Thompson, B. J. (2009). "Senses for Senses", *Australasian Journal of Philosophy* 87: 99-117.