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DO WE SEE APPLES AS EDIBLE?

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Abstract: Do we (sometimes) perceive apples as edible? One could argue that it is just a manner of speaking to say so: we do not really *see* an object as edible, we see it as having certain shape, size and color and we only infer on the basis of these properties that it is. I argue that we do indeed *see* objects as edible, and do not just believe that they are. My argument proceeds in two steps. First, I point out that Susanna Siegel's influential argument in favor of the claim that we represent sortal properties perceptually does not work. Second, I argue that we can fix this argument if we replace the sortal property in question with the property of being edible, climbable or Q-able in general.

I. Introduction

We perceive objects as having various properties. We perceive them as having a certain color, a certain shape and a certain spatial location, for example. The question I would like to examine here is whether we perceive them as having a kind of property that is less obviously perceptual: the property of being edible, climbable or Q-able in general.

The first thing to note is that there are two ways of asking this question that correspond to two different ways of thinking about perceptual experiences. According to some, perceptual experiences represent objects as having various properties.[1] If we go along with this assumption, the question will be: what properties are represented by perceptual experiences. But according to others, perceptual experiences do not represent anything: they are not representations at all.[2] They may be thought of as 'presenting' or 'being sensitive' to some properties, but they do not represent these properties. If we accept this framework, the question is what properties perceptual experiences are sensitive to. The important point is that regardless of whether we accept a 'representational' or a 'relational' view of perceptual experience,[3] the question about which properties are perceptually experienced and which ones aren't can (and should) be raised. In what

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follows, I will use the 'representational' terminology and assume that perceptual states *represent* objects as having various properties, but the argument can be rephrased to fit the relationalist framework.

Most of the discussion about what properties are represented by perceptual experiences concerns sortal properties. When I am looking at the object in front of me do I perceive it as a table or do I perceive it as having a certain shape, size and color and I only *infer* that it is a table? In other words, besides the properties of having certain shape, size and color, is the property of being a table also represented in perception?

I will not take sides in this debate, as my aim is to show that properties that could be thought of as even less obviously perceptual are represented in perception: the property of being edible, climbable or Q-able in general.

But I will use some important considerations and arguments from the debate about the perceptual representation of the property of being a table. The structure of my argument is as follows. First, I try to show that Susanna Siegel's influential argument in favor of the claim that we represent the property of being a table perceptually does not work. Second, I argue that we can fix this argument if we replace the sortal property in question with the property of being Q-able.

The claim that we perceive objects as Q-able is not new. I myself argued recently that our perceptual system represents objects as edible, climbable or Q-able in general.[4] My main concern there, however, is to establish that our *perceptual system* represents properties of this kind – consciously or unconsciously. For the purposes of that argument, explicitly remained neutral about whether these representations, which I label 'action-oriented perceptual states' are conscious.[5] The present paper, in contrast, is about *perceptual experiences*. The question is whether we are *perceptually aware* of properties like edible, climbable or Q-able in general. Everything I say in this paper is about perceptual experiences: when I talk about 'seeing' in what follows, that is to be understood as 'consciously seeing' (much like the concept is used by Fred Dretske).[6] The argument in the present paper supports my earlier, more general claim, but it goes further: it aims to make a stronger claim: at least sometimes, we consciously perceive objects as edible.[7]

II. Are sortal properties represented in perception?

Susanna Siegel argues that some sortal properties (she calls them K-properties), like being a pine tree or being a table, are represented in perception. In this section, I will try to show that her argument is vulnerable to an important objection. Then I will try to fix Siegel's argument in such a way that it does show that some not obviously perceptual properties, like that of being Q-able, are represented in perception.

Siegel's argument is the following. Take two experiences, E1 and E2: the experience of a tree before and after taking a course on the typology of trees, respectively. Here is what we can say about these two experiences:

(0) The overall experience of which E1 is a part differs from the overall phenomenology of which E2 is a part.
(1) If the overall experience of which E1 is a part differs from the overall phenomenology of which E2 is a part, then there is a phenomenal difference between the sensory experiences E1 and E2.
(2) If there is a phenomenal difference between the sensory experiences E1 and E2, then E1 and E2 differ in content.
(3) If there is a difference in content between E1 and E2, it is a difference with respect to sortal properties represented in E1 and E2.

(Conclusion) Sortal properties are represented in perception.

So the overall experience of seeing a pine tree before learning about pine trees is different from the overall experience after having learned this (0). This difference is perceptual difference (1) and it is due to the difference of the properties represented in perception in the two cases (2). Finally, this difference with regards to the represented properties is a difference with regards to the represented sortal properties.

I accept premise (0), (1) and (2), for the sake of argument – I will have more to say about them in Section VI. I will argue against (3).

Denying (3) (while accepting (2)) would amount to saying that E2 represents some (non-sortal) property, whereas E1 does not and this explains the difference in phenomenology without any need to talk about sortal properties.

Siegel considers a version of this way of arguing against (3). The suggestion is that E1 and E2 differ with respect to the Gestalt-properties (i.e. complex shape, size and color-properties) they represent. E1 represents some Gestalt-property and E2 represents some other Gestalt-property. Neither of them represents any sortal properties. Siegel admits that this explanatory scheme may work in some cases, but she argues that it does not work in all cases.

She gives the following example for a case where the appeal to Gestalt-properties breaks down. X has an unusual facial expression when he is expressing doubt. When I first saw him making this face, I had no idea that he was expressing doubt. But as I got to know him, I learned to recognize his doubtful expression. E1 is my experience of X's face before I knew it was expressing doubt and E2 is my experience after I came to know his expression. Siegel assumes, rightly, that there may be a phenomenal difference between E1 and E2. Importantly, she claims that:

> . . . it seems implausible to suppose that there must be a change in which color and shape properties are represented before and after one learns that it is doubt that the fact so contorted expresses.[8]

The structure of Siegel's argument is then the following. There are cases where all the following are true:

(a) E1 and E2 represent the same Gestalt-properties.
(b) Still, there is a phenomenal difference between E1 and E2.
(c) The phenomenal difference between E1 and E2 must be a representational difference (this follows from step (2) above).

(Conclusion) Hence, E1 and E2 must represent different sortal properties

I will not question (b): it does seem that there is a phenomenal difference between seeing X's doubtful expression before and after learning that it expresses doubt. I have already accepted (c). But I will try to point out that (a) is ambiguous and that it does not seem to be a plausible assumption if we do some disambiguating.

III. The importance of attention

We attend to some, but not all, the properties we represent objects as having. Some properties we represent without attending to them, but some others we represent and attend to.[9] As William James famously wrote, 'attention [. . .] out of all the sensations yielded, picks out certain ones as worthy of notice and suppresses all the rest. We notice only those sensations which are signs to us of *things* which happen practically [. . .] to interest us'.[10] To put it very simply, some properties are represented pre-attentively and a subset of these properties is also represented post-attentively.[11]

In the light of this distinction, premise (a) of Siegel's argument can mean one of the following two claims:

(a1) E1 and E2 pre-attentively represent the same Gestalt-properties.
(a2) E1 and E2 post-attentively represent the same Gestalt-properties.

My worry is that while we have good reason to believe that (a1) is true, what would be needed for Siegel's argument to work is (a2). But it is far from clear that we have any reason to hold (a2).

I will not question claim (a1), which seems convincing enough. In the case of E1 and E2, we have the same object in front of us, and this object has the very same properties. Our perceptual apparatus is also sensitive to the same properties in the two cases. Hence, it seems reasonable to say that

E1 and E2 represent the same Gestalt-properties pre-attentively. But it would be a much stronger claim to say that they represent the same Gestalt-properties post-attentively.

At this point some could interject and question the assumptions I have been making about the relation between attention and perceptual representation. More precisely, it could be, and has been, suggested that in order for a property to be represented in my perceptual experience, I must be attending to this property. In other words, there is no such thing as pre-attentive representation: attention is necessary for being represented in a perceptual experience.[12] Note, however, that if we think about the relation between attention and perceptual representation this way, this does not influence my argument: if attention is necessary for being represented in a perceptual experience, then we have no reason to believe that (a1) is true. But this leaves my argument, which questions (a2), intact. Again, the structure of my argument is that *even if* we have reason to buy (a1), we have no reason to believe that (a2) is true. If (a1) is untenable, all the better for my argument.

Let is go back to the example of the pine tree again. After I have familiarized myself with the various features of pine trees, when I see the pine tree I am likely to attend to different features than the ones I attended to before. I will attend to, say, the shape of the pine cones, the color of the foliage, the diversity of the ways the needles are bundled in fascicles, etc. I have not attended to any of these features before, as, according to the example, I didn't know much about any of them: I was just looking at a tree without knowing much about the specifics of pine trees. In short, we do have reason to accept (a1), but we also have reason to have doubts about (a2). Note that the same argument can be given in the case of each of Siegel's examples: we have no reason to suppose, for example, that we attend to the same features of a face before and after learning that the face expresses doubt. After I have learned this, I will attend to features I have not attended to before: the way the wrinkles run on the forehead, the slightly raised eyebrows, etc.

Importantly, in order for Siegel's argument to work, she needs (a2). E1 and E2 may represent the same Gestalt-properties pre-attentively, but the argument is blocked if the difference between the phenomenal character of E1 and E2 is explained by the different Gestalt-properties E1 and E2 represents post-attentively. The difference between the phenomenal character of E1 and E2 can be explained without appealing to sortal properties: it can be explained by which Gestalt-properties of the object we are attending to.

Thus, a plausible suggestion is that the difference between E1 and E2 is a matter of a difference in attention. And this suggestion should not sound too surprising. Attention, as the famous 'inattentional blindness' phenomenon shows, can dramatically change what we experience.[13]

This phenomenon has been known for a long time. Rezsö Bálint, a Hungarian physician after whom Balint-syndrome was named, wrote in 1907:

> It is a well-known phenomenon that we do not notice anything happening in our surroundings while being absorbed in the inspection of something; focusing our attention on a certain object may happen to such an extent that we cannot perceive other objects placed in the peripheral parts of our visual field, although the light rays they emit arrive completely at the visual sphere of the cerebral cortex.[14]

More recently, various experiments about inattentional blindness have demonstrated that we fail to experience those features of our surroundings that we are not paying attention to.[15] Probably the most famous inattentional blindness experiment is the following.[16] We are shown a short video-clip of two teams of three, dressed in white and black, passing a ball around. We are asked to count how many times the white team passes the ball around. On first viewing, most of the observers come up with an answer to this not very interesting question. On second viewing, however, when there is no counting task to be completed, they notice that a man dressed in gorilla costume walks right in the middle of the passing game, makes funny gestures and then leaves. The gorilla spends nine seconds in the frame and most viewers do not notice it when attending to the passing of the ball.[17]

What these empirical and everyday phenomena show is that attention can make a huge difference in what we experience.[18] My suggestion is that attention also plays a key role in explaining the difference between the phenomenal character of E1 and E2. We have the following explanatory scheme: E1 and E2 pre-attentively represent the same Gestalt-properties. But as we attend to different Gestalt properties in E1 and E2 (say, we attend to different ways of grouping the same pre-attentively represented properties), the difference between the phenomenal character of E1 and E2 can be explained by the different Gestalt-properties E1 and E2 represent post-attentively. As Siegel's argument fails to rule out this explanatory scheme, we have no reason to suppose that E1 and E2 represent different sortal properties.

Does this explanatory scheme go against premise (2), a claim we have already accepted? (2), again, was the following:

(2) If there is a phenomenal difference between the sensory experiences E1 and E2, then E1 and E2 differ in content.

If what we mean by 'content' is 'post-attentive content',[19] then (2) remains correct: the phenomenal difference between E1 and E2 is explained in

terms of representational content: E1 and E2 represent different Gestalt-properties post-attentively.[20]

Thus, it seems that we have no justification for inferring (3) from (2), which means that we have no reason to suppose that perceptual experiences represent objects as having sortal properties.

The negative claim I made in this section is that Siegel's argument cannot be used to conclude that perceptual experiences represent sortal properties. But I want to go further and use these considerations to say something positive about what properties are represented in perception. I will argue in the next section that although Siegel's argument is not conclusive about whether sortal properties are represented in perception, if we modify the argument slightly, it can yield a probably even more surprising result: that the property of being edible and climbable is represented in perception.

IV. Action-properties

We experience objects we are looking at as having a number of properties. Some properties one experiences objects as having can't be fully characterized without reference to one's action. I call these properties *action-properties*. Being edible or climbable for me is an action-property, for example. An object's action-properties are relational properties: they depend both on the properties of the object and of the agent: whether a tree is climbable for me depends both on the tree and on my climbing skills. (Quick warning about my terminology: I have been, and will be, using the term 'being edible' as a synonym for 'being edible for me'. There may be a sense of the term 'being edible' that would be different from this, but this would not express an action-property. My focus here is the experience of action properties and not the ordinary language analysis of the concept of 'edible'.)

Properties can be characterized by actions in many ways. Experiencing an object as having an action-property can mean that I experience it as something that affords[21] or invites an action, as something not to perform an action with, as something that can be used as a means of performing the action I want to perform or as a potential obstacle that should be overcome if I want to perform a certain action. I use the term 'experiencing an object as having an action-property' to cover all these diverse cases.

The awareness of action-properties is in some circumstances a very salient feature of our experience of the world. Suppose that I am running on the street to catch my bus and a lamppost is in my way. I am likely to experience the lamppost as an obstacle to the performance of my action of

catching the bus: this property (the property of being an obstacle to the performance of my action) is likely to be more salient than the color or shape of the lamppost.

What this example is supposed to show is that we sometimes experience objects as having action-properties. But I may do so perceptually or non-perceptually and the example does not tell us which one is the case. The big question is whether we experience objects as having action-properties *perceptually*. Even though our awareness of action-properties of objects seems more salient than their shape-, size- and color-properties, this does not show that action-properties are represented in perception. In the next section, I will use what remained of Siegel's argument to show that at least some of them are.[22]

My claim is not that all action-properties are perceptually represented but that *some* are. Just which action-properties are represented in perception is a delicate and complex question but for the purposes of this paper it is enough to note that some of the action-properties that are perceptually represented are properties like being edible, climbable or Q-able in general.[23] A further qualification: my claim is not even that for every action Q, being Q-able is perceptually represented. It is not true of many mental actions and it is not true of highly complex actions like winning a war.[24] Attributing the property of being winnable to an election is unlikely to be an instance of perceptual attribution. But it is important to note here that the claim I defend in this paper is that there are *some* actions, Q, such that we (sometimes) perceive objects as Q-able. I do not claim that this is true of all actions.

Before arguing for the claim that some action-properties are represented in our perceptual experience, a couple of clarifications are in place. First, we may experience an object as having a certain action-property, say, as edible, but the object may fail to have this property. Our experience may misrepresent action-properties. Conversely, often an object has a number of action-properties, say, a tree is climbable for me, but I may not necessarily experience it as having an action-property.

Second, we may experience the same object as having different action-properties: I can experience a newspaper as having various action-properties in different contexts: I can experience it as having an action-property that cannot be fully characterized without reference to the action of killing a fly, an action-property that cannot be fully characterized without reference to my action of reading about the election results, etc.

Finally, experiencing action-properties is neither necessary, nor sufficient for the performance of actions. Often, the agent experiences an object as having an action-property, but the action itself is not performed. Conversely, we can perform actions without experiencing anything as having any action-properties; if, for example, we act without attending to what we are doing.

V. *Are action-properties represented in perception?*

Let us now go back to Siegel's argument for the claim that sortal properties are represented in perception. Here is the equivalent argument concerning action-properties. Take two experiences, E1* and E2*: the experience of representing a tree as climbable for me and the experience of representing the same tree as climbable for my twin sister (assuming that my twin sister is as tall as I am and has similar climbing skills).

These mental states are defined in terms of what property they represent: the property of being climbable for me and the property of being climbable for my twin sister, respectively. The definition of E1* and E2* leaves it open whether they represent these properties *perceptually*. And I argue that they do.

Here is what we can say about these two experiences:

(0*) The overall experience of which E1* is a part differs from the overall phenomenology of which E2* is a part.

(1*) If the overall experience of which E1* is a part differs from the overall phenomenology of which E2* is a part, then there is a phenomenal difference between the sensory experiences E1* and E2*.

(2*) If there is a phenomenal difference between the sensory experiences E1* and E2*, then E1* and E2* differ in content.

(3*) If there is a difference in content between E1* and E2*, it is a difference with respect to the action-property represented in E1* and E2*.

(Conclusion) Action-properties are represented in perception.

I aimed to show that Siegel's argument about sortal properties does not work, because we can block the move from (2) to (3). Now I need to show that when it comes to action-properties, (3*) does follow from (2*). The main consideration against (3) was that it is possible that the difference between the phenomenal character of E1 and E2 is due to the fact that while they represent the same Gestalt-properties pre-attentively, they represent different Gestalt-properties post-attentively. Thus, the difference is due to the difference in which non-sortal properties we are attending to and not to the difference in what sortal properties are represented.

I need to show that the same way of blocking the move from (2) to (3) does not work in the case of the transition between (2*) and (3*). In the case of Siegel's example, it seems unreasonable to suppose that we need to attend to the same feature of the object we are looking at in E1 and E2. After I have learned about pine trees, I will be

attending to different features of pine trees from the ones I attended to before.

But, and this is where the difference lies between Siegel's argument and mine, in the case of E1* and E2* above, we are attending to the very same features. Experiencing a tree as climbable for me and experiencing it as climbable for you involve attending to the very same features of the tree: the height of its lowest branches, the texture of its bark, etc.

It is important to be clear about the structure of this argument. In the case of Siegel's example, I argued that in order to have experience E2, we need to attend to features of the tree we could not attend to when having E1, simply because we didn't know about these features. In the present case, in contrast, it is difficult to see what features one would need to attend to in order to experience the tree as climbable for oneself that one could (and would) not attend to when experiencing it as climbable for someone else (with similar climbing skills). The plausible explanation of the difference between E1 and E2 in terms of the difference in what we are attending to, which blocked Siegel's move from (2) to (3), does not seem very plausible in the present case, as in the present case, we have reason to believe that the two experiences represent the same Gestalt-properties not only pre-attentively, but also post-attentively.

We can now put together the argument for (3*) adjusting Siegel's argument:

(a*) E1* and E2* represent the same Gestalt-properties both pre-attentively and post-attentively.
(b*) Still, there is a phenomenal difference between E1* and E2*.
(c*) The phenomenal difference between E1* and E2* must be a representational difference (this follows from step (2*) above).

(Conclusion) Hence, E1* and E2* must represent different action-properties

As E1* and E2* represent the same Gestalt-properties not only pre-attentively, but also post-attentively, the objection I raised against Siegel's original argument does not work here: the phenomenal difference between E1* and E2* cannot be explained in terms of what we are attending to, because we are attending to the same properties. And this argument can be generalized to any pairs of experiences where the first experience is that of seeing x as Q-able for me and the second experience is seeing x as Q-able for you (as long as my and your Q-ing capacities are sufficiently similar). Perceptual experiences may or may not represent sortal properties, but we have an argument in favor of an even surprising claim, namely, that they do represent (some) action-properties.

VI. Sortal properties versus action-properties

I need to make an important clarification about the structure of the argument I presented in this paper so far. I argued that Siegel's move from (2) to (3) is not justified, whereas my move from (2*) to (3*) is. But Siegel's argument for the claim that sortal properties are represented in perception is a three-step argument and I have not analyzed Siegel's arguments for (1) and for (2) at all. And, as I accepted these steps of Siegel's argument in the case of action-properties, I also simply accepted (0*), (1*) and (2*) without any argument. So strictly speaking, I have not argued for the claim that action-properties are represented in perception. I only argued for a conditional claim: if (0*), (1*) and (2*) are correct, action-properties are represented in perception.

There is a further complication: Siegel talks about pine trees, whereas I talk about climbability. We have seen how this difference makes the transition from (2*) to (3*) different from the transition from (2) to (3). But doesn't this difference matter when it comes to the transition from (0*) to (1*) and from (1*) to (2*)? The worry is that even if (1) and (2) were correct, it may still be possible that (1*) or (2*) are false, if there is a significant asymmetry between (1) and (1*) or between (2) and (2*) that would make the application of Siegel's arguments in the case of action-properties problematic. Note, however, that Siegel's arguments for (1) and (2) make no reference to the details of E1 and E2, they should apply to any pair of experiences that satisfy (0). Thus, if her arguments for (1) and for (2) stand, I could import them without any further complications into my argument for (1*) and (2*).

But not everyone will accept Siegel's argument for (1) and (2) (see Brogaard ms, for example).[25] As a result, I will sketch my own argument for (1*) and (2*). Like Siegel, I assume that (0*) is true: I will assume that the overall experience of which E1* is a part differs from the overall phenomenology of which E2* is a part. To take a different, but structurally similar example, suppose that I am playing basketball against you (who has similar skills/height/weight as I do). The basketball bounces towards us. Now, few would deny that experiencing it as being catchable for myself has very different phenomenal character from experiencing it as being catchable for you – it just feels different. These two experiences follow the exact pattern I used to describe the difference between E1* and E2*. Again, (0*) does not claim that this phenomenal difference is perceptual in nature – all it says is that experiencing the tree as climbable for me feels different from experiencing it as climbable for you.[26]

It is an entirely different question whether this phenomenal difference is a perceptual, or, as Siegel would say, a sensory one, and I don't really

know how intuitions or introspection could help us to decide what phenomenal difference is sensory and what is non-sensory.[27]

In some cases, (1) may sound convincing. Consider the following example. At a dinner partly, I'm eating a piece of meat that I take to be chicken, when my host tells me that it is in fact a piece of rat meat (or pigeon, etc.; use your favorite disgusting animal). My (gustatory) experience before she told me this is E1; my experience after that is E2. If I am really disgusted by rats, then E1 and E2 are clearly different and the difference seems to be a sensory/perceptual one: the meat will *taste* different.

But I am not sure that we can find an example where everyone's intuitions would converge to conclude that (1*) is correct. And even in the case of the gustatory example above, the opponent of (1) can insist that the difference in phenomenal character is not a sensory one. The same move would be open to the opponent of (1*) as long as the argument I give in favor of (1*) relies on intuitions and/or introspection.[28]

Remember, (1) and (1*) are claim about our perceptual phenomenology: they are not about what properties are represented in perception, but about what properties are part of our phenomenology. (1) and (1*) are not about content: they are about perceptual, or as Siegel says, sensory, phenomenology. The challenge is to find a non-intuitive, non-introspective way of resolving this debate about phenomenology.

I argue at length for (1*), and for a general methodology for keeping perceptual and non-perceptual phenomenology apart elsewhere.[29] Here, let me just sketch the gist of the argument. This argument does not rely on either intuitions or introspection. It relies on a set of visual search experiments. Patients with symptoms of unilateral neglect[30] are slow and sometimes even unable to find objects defined by a salient visual property (such as their color). Yet, they are capable of, and relatively efficient in, finding objects defined by the action they can be used for.[31] Two aspects of these experimental findings need to be highlighted: first, these patients do experience the property of what an object can be used for. And, second, they were, like most unilateral neglect patients, unaware of the shape, size and color properties of the objects presented to them.

It is important to be careful about what these experiments demonstrate. They do not directly show that the property of 'being used for a certain action' (or 'to be used for a certain action') is perceptually represented in healthy humans or even in patients with symptoms of unilateral neglect. These findings only tell us what properties are part of the overall phenomenology of these patients (and what properties they are not). I aim to show that these experiments nonetheless help us to show that normal humans experience action-properties perceptually.

Remember Siegel's argument in favor of (1): if the phenomenal difference between E1 and E2 is not sensory, then it must be due to an event that

occurs somewhere later in the processing that has its own non-perceptual phenomenology.[32] Siegel goes on to argue that no candidate for such non-sensory event counts as a plausible candidate, but this argument may be questioned by some as it does not rule out that some non-sensory event type that Siegel failed to consider could account for the phenomenal difference.

But what the unilateral neglect patients' visual search experiments show is that in the case of these patients the phenomenology of what an object can be used for is preserved while the phenomenology of seeing undoubtedly sensory properties, like color and shape was missing or delayed. Thus, the phenomenology of what an object can be used for is temporarily prior to the phenomenology of seeing color and shape.

This does *not* prove that the property of what an object can be used for is processed earlier in the perceptual system than the property of color and shape in healthy humans. What it does prove is that in healthy humans the phenomenology of what an object can be used for is not an event that comes after, and that is based on, the perceptual phenomenology of seeing the object's shape and size. If it were, then in those humans who have missing or delayed phenomenology of seeing the object's shape and size would also have missing or delayed phenomenology of what the object can be used for. But, as the experiments show, they don't.

To sum up, the denier of (1*) would need to say that the event that makes the overall phenomenology of E1* and E2* different occurs some time after the perceptual processing. In other words, they would need to say that the experience of whether the tree is climbable for me or for my twin sister comes after the perceptual processing. But as we have seen, patients with unilateral neglect experience properties of this kind without experiencing undoubtedly sensory properties like shape and color. The event that makes the overall phenomenology of E1* and E2* different comes before (and in some cases completely without) sensory phenomenology of shape and color. But this means that the event that makes the overall phenomenology of E1* and E2* different is a perceptual event: the phenomenal difference between E1* and E2* is a sensory difference: (1*) is true.

But there are some more general and more serious problems that the denier of (1*) faces. More precisely, denying (1*) yields some very implausible consequences for the way we should describe the phenomenal character of the experience of unilateral neglect patients when they are performing the visual search task.

Again, the suggestion was that shapes and colors are unconsciously processed and action-properties are part of the patients' non-perceptual phenomenology. What about their perceptual phenomenology then? The objector is forced to conclude that these patients lack any perceptual phenomenology while they are performing this visual search task. The

only properties they are aware of are action-properties, but these properties are, by supposition, not part of their perceptual phenomenology. This is an extremely problematic conclusion as these people are staring at objects, perform visual tasks with what they see, talk about what they see, manipulate what they see, and, importantly, consciously experience what they see, nonetheless, the objector needs to say that they lack perceptual phenomenology: there is nothing it is like for them to see these objects.

In other words, the objector is forced to say that it is possible to have a conscious perceptual experience of an object and nonetheless lack visual phenomenology altogether. If we allow for unconscious perception, it is possible to perceive an object without any accompanying phenomenology, but the consequence of denying that action-properties are part of perceptual phenomenology is something much more radical: it amounts to saying that it is possible to have a *conscious* perceptual experience of an object without any accompanying perceptual phenomenology – a claim that comes dangerously close to a straight logical contradiction. If denying that action-properties are part of perceptual phenomenology forces us to postulate such empty perceptual phenomenology during conscious perception, then we have strong reasons to accept (1*).

Two quick worries about this conclusion before I turn to (2*). First, this argument was about unilateral neglect patients. Why is any of it relevant when we try to understand what properties are part of the perceptual phenomenology of healthy humans? The answer is that the argument from unilateral neglect is a *reductio* argument: if we assume that in healthy humans action-properties are not part of perceptual phenomenology, then we get implausible results for unilateral neglect patients.

The second worry is the following. Even if the argument from unilateral neglect is conclusive, how can we address the following intuitively plausible idea: the difference between experiencing the tree as climbable for me or for my twin sister is the matter of having some kind of (maybe imagined?) experience of the action I would have to undertake.[33] In the former case, I do have an experience of this action (of climbing the tree) I would have to undertake, whereas in the latter case, I don't. I see the pull of this intuition but I don't see a conflict between this intuition and (1*). It may very well be the case that I do (also) experience the action I would have to undertake when I experience the tree as climbable for me. But (1*) is about *perceptual* phenomenology: if I do in fact experience the action I would have to undertake, do I experience it perceptually or non-perceptually? Does it show up in my perceptual or in my non-perceptual phenomenology? And my argument, if correct, shows that it must show up in my perceptual phenomenology.

How about (2*)? (2*), like (2), is a special case of the general view called intentionalism. Intentionalism is the view according to which the phenomenal character of an experience supervenes on the content of this

experience. There are many versions of intentionalism, but the one that (2*), and (2), is a special case of is intentionalism about specific sense modalities: the claim that the phenomenal character of our perceptual experiences supervene on the content of these perceptual experiences.

Not everyone is an intentionalist in this sense. Hence, not everyone will accept (2*) automatically. But it is important to emphasize that the most convincing counterexamples against intentionalism fail to apply in the case of (2*) because they all, in one way or another, have to do with attention. They all have the same structure: two perceptual experiences have the same content, but they have different phenomenal character because our attention is different in the two cases. As David Chalmers says, 'the most plausible potential cases of phenomenally distinct visual experiences with the same representational content involve differences in attention'.[34] If someone is moved by these counterexamples,[35] they should conclude that intentionalism is false: the phenomenal character of perceptual experiences does not supervene on the content of this experience, as in these examples two perceptual experiences have the same content and yet they have different phenomenal character.

I am not sure that these counterexamples to intentionalism are convincing.[36] But what is important from our point of view is that they do not count against (2*) as in the case of (2*) the difference between E1* and E2* does not entail any difference in attention. In fact, as we have seen, this is the most important difference between Siegel's argument and mine that allows me to argue for (3*) and blocks her argument for (3).

In order to argue for (2*) we do not have to accept intentionalism *tout court*. We only need a much weaker claim: that the phenomenal character of an experience supervenes on the content of this experience *as long as the attention does not change*. We could call this claim intentionalism*. We have seen that the reason why intentionalism has been considered to be problematic is that there are scenarios where attention does change and this may or may not bring about a change in phenomenology without a change in content. But these counterexamples by definition do not count against intentionalism*. And (2*) is a special case of intentionalism* given that, as we have seen in the last section, there is no difference between E1* and E2* in terms of the allocation of attention.

Thus, we have good reason to hold (0*), (1*) and (2*). And as I argued that we can infer (3*) from (2*), we can conclude that at least some action-properties are perceptually represented.

Finally, one may question the sharp distinction between sortal properties and action-properties. After all, action-properties like being Q-able could be taken to be sortal properties. Hence, if the argument I presented in this paper is correct, it provides indirect support for Siegel's original claim that sortal properties are perceptually represented. If we think of sortal properties this way, I have no problem with this conclusion. I did

not argue that sortal properties are not represented in perception. They may very well be. I argued that some properties that are even less obviously perceptual, that is, action-properties, are represented in perception. Those who take action-properties to be sortal properties can take my argument to show *which* sortal properties are perceptually represented.

VII. Conclusion

Although saying that we literally see objects as edible or climbable may sound quite provocative, it is not such a radical claim. The proposal I defended here is that we *sometimes* see objects as edible or climbable. I do not claim that we always do so. It happens quite often that we do not perceive anything in our visual field as having action-properties.

More importantly, if our perceptual system was evolutionarily useful, it must have been because it came in handy when our ancestors were performing actions (on which their survival depended). Thus, our perceptual system was selected for helping us to perform actions. It is hardly a very surprising claim, then, to say that it was selected for representing objects as having properties that cannot be fully characterized without reference to the agent's action.[37]

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NOTES

[1] Peacocke, C. (1992). *A Study of Concepts*. Cambridge, MA: MIT Press; Siegel, S. (2010). *The Contents of Visual Experience*. New York: Oxford University Press; Pautz, A. (2010). 'An Argument for the Intentional View of Visual Experience', in B. Nanay (ed.) *Perceiving the World. New Essays on Perception.* Oxford: Oxford University Press; Nanay, B. (2010). 'Attention and Perceptual Content', *Analysis* 70, pp. 263–270; Crane, T. (2006). 'Is There a Perceptual Relation?' in T. Gendler and J. Hawthorne (eds) *Perceptual Experience*. Oxford: Oxford University Press, pp. 126–146.

[2] Travis, C. (2004). 'The Silence of the Senses', *Mind* 113, pp. 57–94; Martin, M. G. F. (2004). 'The Limits of Self-Awareness', *Philosophical Studies* 120, pp. 37–89; Martin, M. G. F. (forthcoming). *Uncovering Appearances*. Oxford: Oxford University Press; Campbell, J, (2002). *Reference and Consciousness*. Oxford: Oxford University Press; Brewer, W. (2006). 'Perception and Content', *European Journal of Philosophy* 14, pp. 165–181.

[3] Campbell, 2002.

[4] Nanay, B. (forthcoming). 'Action-oriented Perception', *European Journal of Philosophy*; Nanay, B. (forthcoming). *Perception, Action, and What's in between*. Oxford: Oxford University Press.

[5] Nanay, B. 'Action-oriented Perception', Section V.

[6] See Dretske, F. (2010). 'What We See: The Texture of Conscious Experience, in B, Nanay (ed.) *Perceiving the World. New Essays on Perception.* New York: Oxford University Press.

[7] This claim is consistent with the claim that we sometimes also represent objects as edible, climbable, etc. unconsciously, for example, when we are performing actions we are very much used to, as I suggest in 'Action-oriented Perception', Section V.

[8] Siegel, S. (2006a). 'Which Properties are Represented in Perception?' in T. Gendler and J. Hawthorne (eds) *Perceptual Experience*. Oxford: Oxford University Press, pp. 481–503, at p. 499.

[9] See, for example, Dretske, 2010 and Prinz, J. (2010). 'How Do Perceptual States Become Conscious?' in B. Nanay (ed.) *Perceiving the World. New Essays on Perception*. New York: Oxford University Press.

[10] James, W. (1892/1961). *Psychology: The Briefer Course*, G. Allport, ed. New York: Harper & Row, p. 39.

[11] See Nanay, 'Attention and Perceptual Content'.

[12] See Prinz, 2010; cf. Dretske, F. (2006) 'Perception without Awareness', in T. Gendler and J. Hawthorne (eds) *Perceptual Experience*. Oxford: Oxford University Press, pp. 147–180; Dretske, 2010.

[13] Simmons, D. J. and Chabris, C. F. (1999). 'Gorillas in our Midst: Sustained Inattentional Blindness for Dynamic Events', *Perception* 28, pp. 1059–1074; Mack A. and Rock, I. (1998). *Inattentional Blindness*. Cambridge, MA: MIT Press.

[14] Bálint, R. (1909). 'Seelenlahmung des "Schauens", optische Ataxie, raumliche Storung der Aufmerksamkeit', *Monatsschrift fur Psychiatrie und Neurologie* 25, pp. 51–81. (English translation: *Cognitive Neuropsychology* 12, pp. 265–281.)

[15] Mack and Rock, 1998.

[16] Simmons and Chabris, 1999.

[17] The philosophical implications of inattentional blindness are far from clear. See Wolfe, J. M. (1999). 'Inattentional Amnesia, ' in: V. Coltheart (ed.) *Fleeting Memories. Cognition of Brief Visual Stimuli*. Cambridge, MA: MIT Press, 71–94; Prinz, 2010.

[18] See Hill, C. (1991). *Sensations*. Cambridge: Cambridge University Press, pp. 123–126; Block, N. (1995). 'A Confusion about Consciousness', *Behavioral and Brain Sciences* 18, pp. 227–247, esp. p. 231.

[19] If we are persuaded by the line of argument about the relation between attention and perceptual representation I mentioned above, then this is the only way of interpreting 'content', see also Nanay, 2010.

[20] This conclusion seems to come close to the way William James was thinking about perceptual experience. He wrote: 'In a world of objects thus individualized by our mind's selective industry, what is called our "experience," is almost entirely determined by our habits of attention' (James, 1892/1961, p. 39).

[21] The property of affording an action and especially the suggestion that this property is perceptually represented will remind some of J. J. Gibson's theory of affordances (Gibson, J. J. (1966). *The Senses Considered as Perceptual Systems*. Boston, MA: Houghton Mifflin; Gibson, James J. (1979). *An Ecological Approach to Visual Perception*. Boston: Houghton Mifflin). It is important to emphasize that the claims I make in this paper do not rely on, or need to endorse, any element of Gibson's theory of perception. Importantly, I am not suggesting that what we perceive are affordances. What we perceive are objects and we may (sometimes, not always) perceive them as having action-properties.

[22] It is worth noting that Siegel elsewhere does talk about the perceptual representation of some properties that could be considered to be action-properties. She argues that efficacy is represented in perceptual experiences and efficacy could be considered to be an action-property (Siegel, S. (2005). 'The Phenomenology of Efficacy', *Philosophical Topics* 33, pp. 65–84). She also argues that the 'perceptual relation of perspectival connectedness' is represented perceptually (Siegel, S. (2006b). 'Subject and Object in the Contents of Visual

Experience', *Philosophical Review* 115, pp. 355–388), but it is much less clear that that the 'perceptual relation of perspectival connectedness' would count as an action-property.

[23] See Nanay 'Action-oriented Perception'; Nanay, *Perception, Action and What's In Between*; and Nanay, B. (forthcoming). 'Do We Sense Modalities With Our Sense Modalities?' *Ratio*, for a characterization of properties of this kind.

[24] A particularly intriguing question is whether the action of seeing would qualify. If it does, we would need to conclude that we perceptually attribute the property of being visible to every object we see. Some seem to endorse such conclusion: Susanna Siegel argues that the 'perceptual relation of perspectival connectedness' is represented perceptually (Siegel, 2006b) and this concept of 'perceptual relation of perspectival connectedness' may be closely related to the concept of visibility (thanks for Susanna Siegel for pointing this out to me – personal communication Summer 2008). I will not talk about the action of seeing and the property of being visible in what follows.

[25] Brogaard, B. (2010) 'Do We Perceive Natural Kind Properties?', *Manuscript*. Available at: http://philpapers.org/rec/BRODWP

[26] Those who deny that the overall experience of which E1* is a part differs from the overall phenomenology of which E2* is a part should read the claim I am making in this paper as a conditional one: if the two experiences differ in their overall phenomenology, then edibility is perceptually represented.

[27] See Masrour, F. (forthcoming). 'Is Perceptual Phenomenology Thin?' *Philosophy and Phenomenological Research*, for an analysis of how to draw the line between sensory and non-sensory experience and Bayne, T. (2009). 'Perception and the Reach of Phenomenal Content', *Philosophical Quarterly* 59, pp. 385–404, for expressing doubts about whether we can use introspection to find out what is sensory and what is non-sensory experience.

[28] See Siegel, S. (2007). 'How Can We Discover the Contents of Experience?' *Southern Journal of Philosophy* (Supp) 45, pp. 127–142; Kriegel, U. (2007). 'The Phenomenologically Manifest', *Phenomenology and the Cognitive Sciences* 6, pp. 115–136; and Bayne, 2009 on the methodology of settling disagreements about whether an experience is sensory or not.

[29] Nanay, B. (manuscript) 'Perceptual Phenomenology'.

[30] Unilateral neglect is caused by brain lesions, primarily in the right parietal areas. Patients showing these symptoms are unaware of the left hand side of their body and environment.

[31] Humphreys, G. W-M. and Riddoch, M. J. (2001). 'Detection by Action: Neuropsychological Evidence for Action-defined Templates in Search', *Nature Neuroscience* 4, pp. 84–88; Riddoch, M. J., Edwards, M. G., Humphreys, G. W-M., West, R. and Heafield, T. (1998). 'Visual Affordances Direct Action: Neuropsychological Evidence from Manual Interference', *Cognitive Neuropsychology* 15, pp. 645–693, esp. p. 678, see also Humphreys, G. W- M. and Riddoch, J. (2007). 'How to Define an Object: Evidence from the Effects of Action on Perception and Attention', *Mind & Language* 22, pp. 534–547.

[32] Siegel, 2006a, pp. 492–496.

[33] I am grateful to an anonymous referee for raising this worry.

[34] Chalmers, D. (2004). 'The Representational Character of Experience', in B. Leiter (ed.) *The Future for Philosophy*. Oxford: Oxford University Press, pp. 153–181.

[35] See Speaks, J. (forthcoming). 'Attention and Intentionalism', *Philosophical Quarterly*; Nickel, B. (2007). 'Against Intentionalism', *Philosophical Studies* 136, pp. 279–304, esp. p. 284; Peacocke, 1992; see also Macpherson, F. (2006). 'Ambiguous Figures and the Content of Experience', *Noûs* 40, pp. 82–117, Section 7.

[36] See my argument against in Nanay, 2010.

[37] I presented an earlier version of this paper at the APA Pacific Division Meeting in 2008. I am grateful for all the feedback I received on these occasions. Special thanks to my

commentator, Claire Batty, to an anonymous referee and to Susanna Siegel for detailed comments. Somewhat confusingly, I gave a different paper (the one to be published as 'Action-oriented Perception') under the title of this paper a number of times (roughly, between 2005 and 2007). The present paper is very different from that one (see Section I above).

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