How picture perception defies cognitive impenetrability

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Abstract

According to the thesis of the cognitive impenetrability of perception to thought – from now onwards, (TCI) – both the phenomenal character and the intentional content of perceptual states are impermeable to states of their subjects' cognitive systems. This means that no change in the content of the latter states alters either feature of the former states. Now, perception of ambiguous figures is held to be a *prima facie* counterexample to (TCI), for what one takes to be the picture a picture *of* influences what experience she has when facing the picture, hence it induces two different (picture) perceptions. A defender of (TCI) may well reply that in the Gestalt switch involving ambiguous figures there is indeed a phenomenological change, yet this change is only indirectly driven by the states of the cognitive system involved. For, first, those states rather induce a shift in attention, and second, this shift of attention is responsible for the phenomenological switch. Yet let us consider first the fact that in perception of ambiguous figures attention works differently than in the ordinary perceptual cases in which there is no real cognitive penetration; namely, as an active focusing on the very same elements of the figure to be alternatively grasped rather than as a focusing on a different part of the scene one was previously facing. Moreover, let us take into account the fact that picture perception of ambiguous figures is just a borderline case of ordinary picture perception, for picture perceptions both of ambiguous figures and of 'normal' figures are characterized by the lighting up of aspects (different aspects in the former case, just one aspect in the latter case). Then, the above reply may be appropriately circumvented: insofar as in picture perception attention performs a grouping job of the very same elements of the figure one is facing and such an attentive job may suit a conceptual research, concepts mobilized by the states of the cognitive system involved may well help attention to perform such a job by conceptually informing the picture perception a subject entertains.

How picture perception defies cognitive impenetrability

According to the thesis of cognitive impenetrability of perception[1] to thought – from now onwards, (TCI) – both the phenomenal character and the intentional content of perceptual states are impermeable to states of their subjects' cognitive systems.[2] This means that no change in the content of the latter states alters either feature of the former states. Perceptual illusions are paradigmatic examples of one such impenetrability. In the case of the Müller-Lyer illusion, although we believe (for independent reasons) that the two lines ending in oppositely oriented wedges have the same length, we cannot but see them as being different in length. As Fodor (1983) holds, perception is *modular*.

Now, perception of ambiguous figures is held to be a *prima facie* counterexample to (TCI). For what one takes to be the picture a picture *of* influences what experience one has when facing the picture, hence it induces two different (picture) perceptions. For instance, in the well-known example of the duck-rabbit figure, once one manages to see the figure as (a picture of) a *rabbit*, one no longer sees it as (a picture of) a *duck* and *vice versa*.[3] Undoubtedly, the two 'seeing-as'- experiences

[1] In point of fact, I will focus here merely on *visual* perception, although the phenomena I will deal with may be found also in other sensory modalities, at least as far as picture perception also occurs in such modalities (cf. e.g. auditory picture perception or tactile picture perception). This is clearly enough for my purposes, for visual cases of cognitive penetrability are sufficient to undermine (TCI) in its generality.

[2] As intentionalists or representationalists claim, the phenomenal character of a perceptual state amounts to, or at least supervenes on, the intentional content of that state. I think this claim is wrong, yet for the purposes of this paper I will remain neutral on it.

[3] Wollheim (1980[2]:220) holds that a way of describing things that appeals to pictures as seen-as items is better than merely saying that the relevant subject sees the figure either as a duck or as a rabbit. Yet the best description of the situation at stake would be to say that that subject sees the figure either as a duck or a rabbit in virtue of literally seeing the figure itself, for this is what seeing a duck or a rabbit *in* that figure really amounts to (for this account of the whole twofold experience of seeing-in (on which, see soon later in the text), cf. Levinson (1998) and my Voltolini (2011), where I also apply it to the case of ambiguous figures). Once the subject further interprets the figure either as a picture *of* a duck or as a

are phenomenologically different; the Gestalt switch is also a change in experience.[4] Thus, the perceptual situation at stake is utterly unlike an apparently analogous situation in which by mobilizing different concepts we limit ourselves to describe differently what remains one and the same 'seeing-as' experience with no undergoing switches, as in this case presented by Wittgenstein:

> Take as an example the aspects of a triangle [… .] This triangle can be seen as a triangular hole, as a solid, as a geometrical drawing; as standing on its base, as hanging from its apex; as a mountain, as a wedge, as an arrow or pointer, as an overturned object which is meant, for example, to stand on the shorter side of the right angle, as a half parallelogram, and as various other things (2009[4]:II xi, § 162).

Let me describe the situation at stake in greater detail. To begin with, the phenomenological difference of the two 'seeing-as' experiences one has when facing the duck-rabbit figure is well matched by a difference in content between those experiences. Now, if by following Wollheim (1980[2]) we accept that picture perception amounts to the twofold 'seeing-in' experience of non-literally seeing the depicted object in virtue of literally seeing a material object (a canvas, etc.),[5] we can describe the above Gestalt switch as the transition from a certain twofold 'seeing-in' experience of 'seeing' a duck in a figure in virtue of seeing that figure to another twofold 'seeing in' experience of 'seeing' a rabbit in that figure in virtue of again seeing that figure. Yet what prompts that phenomenological difference is precisely a change in the concepts that the two experiences mobilize – *being (a picture of) a duck*, *being (a picture of) a rabbit*. To put it differently, a relevant difference in how those concepts are to be instantiated manages to do what the analogous difference between the concepts recalled

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picture *of* a rabbit, then the description in question, namely that such a subject sees the figure either as a picture of a duck or as a picture of a rabbit, becomes quite legitimate. On this cf. again Voltolini (2011).

[4] As Macpherson (2006) forcefully claims.

[5] That the non-literal seeing of the depicted object takes place *in virtue of* the literal seeing of the figure accounts for the fact that, as Podro (1998) has claimed, seeing-in is *inflected*, that is, one 'sees' an object in a figure insofar as one sees certain of the figure's properties.

by Wittgenstein in the above example of the aspects of a triangle fails to perform; namely, a phenomenological change in the experience. In other terms, taking the duck-rabbit figure as (a picture of) a rabbit rather than as (a picture of) a duck involves a phenomenological difference in one's perception, while taking the triangular figure e.g. as a (picture of) a mountain rather than as (a picture of) an arrow does not involve such a change. Now, the concepts mobilized in the above Gestalt switch also constitute the different content of different states of the cognitive system of the subject involved; that subject wants to see the figure either as (a picture of a) duck or as (a picture of) a rabbit. Since her later (picture) perceptions precisely make those intentions fulfilled, one may thus well say that her perceptions have been penetrated by those states. Or so I claim.

To be sure, a defender of (TCI) may immediately reply that in the above Gestalt switch there is indeed a phenomenological change, yet this change is only indirectly driven by the states of the cognitive system involved. For, first, those states rather induce a shift in attention, and second, this shift of attention is responsible for the phenomenological switch by letting the perceptual module do its - admittedly different - perceptual job.[6] According to one of the main defender of (TCI), namely Pylyshyn (2003), this is precisely how things work. For Pylyshyn, what happens when concepts mobilized by cognitive states seem to be involved in perception, or better in *early vision*, that part of perception which according to him is cognitively impenetrable, is the following. In a pre-perceptual stage concepts trigger attention. Once attention focalizes a certain portion of a perceived scene, early vision picks up the objects which are visually given in that portion in a completely non-conceptual way.[7]

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[6] For this way of putting the reply, cf. Macpherson (2011).

[7] Cf. Pylyshyn (2003:62-3, 80-2, 86). Theoretically speaking, another explanation is open to Pylyshyn, namely to claim, as he also says (cf. 2003:64), that cognitively induced attention here operates at a *post*-perceptual stage, namely *after* the perceptual module does its job of picking up perceptually available objects non-conceptually. At first blush, this is what Pylyshyn should maintain, since he holds that a conceptually penetrable perception amounts precisely to seeing-as perception (cf. 2003:51-2). Yet this explanation cannot be legitimately invoked here. For, as we will immediately see, in Gestalt groupings attention clearly plays a genuinely *perceptual* role in arranging in a certain way the elements of a scene.

Now definitely, attention is involved in having the two experiences, the 'duck'-experience and the 'rabbit'- experience. As Chisholm (1993) originally noted, once one focuses on a certain spot on the left-hand side of the figure and then lets her gaze go rightwards, she becomes able to see the duck in the figure, yet once one focuses on certain lines on the right-hand side of the figure and then lets her gaze go leftwards, she becomes able to see the rabbit in the figure.

Yet first of all notice that the way focusing of attention works here is not the way it normally works in cases in which attention is conceptually driven yet no cognitive penetration occurs, as when one turns her eyes on different *parts* of the perceived scene in order to note something of a kind *K* – say, a tree – one did not note before. One may well say that in these cases, although they trigger attention, concepts constituting cognitive states do not play any perceptual role. For once conceptually-driven attention lets the eyes focalize the right part of the scene, then the perceptual module does all there is perceptually to do, namely, it enables the relevant subject to see the objects located in that part of the scene by non-conceptually individuating them. Yet in the case of a Gestalt switch, one still keeps her eyes on the very same part of the figure, by simply selecting a different orientation – in our case, left to right vs. right to left – according to which the very same elements of the figure are to be grasped. So, one may well guess that the work concepts perform here does not limit itself in activating attention, but it goes through such an activation in order to reach perception and thereby influence it.

As a matter of fact, Pylyshyn sees no difference between the two cases. He limits himself to saying that attention may perform different jobs; sometimes it enables the perceptual module to pick up an object in the perceived scene by letting the subject's eyes move to it, some other times it enables the perceptual module to pick up an object in the perceived scene by giving a direction, an orientation, to certain elements in that scene without the subject's eyes moving in any relevant sense.[8]

[8] Cf. Pylyshyn (2003:160,168).

Yet Pylyshyn does not seem to notice that in the latter case attention plays a perceptually active role. For by enabling a different grouping of the scene's elements, it makes one's perception of that scene different. Thus, insofar as that perceptually active attention is conceptually driven, concepts inform (picture) perception.

I say "Pylyshyn does not seem to notice" for in point of fact he endorses Peterson *et al.* (1992) distinction between *reference-frame realignments*, what happens in the duck-rabbit case, and *(part-based) reconstruals*, where simply the parts of an experienced scene take different meanings, as in the case of the aspects of the triangular figure.[9] Now, the difference between the two cases is precisely the one I have already pointed out. In the first case, concept play a perceptual role by inducing a Gestalt switch. Yet in the latter case they do not play that role, for no such switch occurs.[10]

Moreover, the guess that concepts influence (picture) perception via the way in which they make attention rearrange a perceived scene in the case of Gestalt switches is further corroborated once one notices that all pictures are potentially ambiguous, that is, are such that different objects can be seen in them. For example, what appear to be mere shadows on the depicted face of G.W. Bush in a portrait of the former US president turn out to be (pictures of) dark naked bodies scattered all around a lighter multicoloured surface (cf. http://hypehaus.com/artists/blogartists/jonathan-yeo1.jpg). On the basis of that reflection, it will turn out that what in the case of a 'normal' figure happens only once happens at least twice in the case of a Gestalt switch, unless further potentialities in the representational power of such a figure are discovered. More precisely, what happens twice in the case of a Gestalt switch is simply what actually happens once in the case of a 'normal' figure, namely, the *lighting up* of an aspect.[11] But if this is the case, then in both cases the attentional focusing should be better described as a way of

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[9] For other examples of this situation, see the cases of visual puns labelled by R. Price "droodles" that Pylyshyn himself quotes (cf. 2003:43-4).

[10] Not accidentally, Pylyshyn also espouses Peterson's *et al.* conclusion that, unlike realignments, reconstruals normally occur in mental imagery rather than in perception. For according to him in the imagery case there is no real image whose elements one can visually realign. Cf. (2003:347-9).

[11] Cf. Wittgenstein (2009[4]:II xi, §§ 118, 140).

keeping oneself concentrated on one and the same scene unless something perceptually appears *in* that scene. Yet this shows that the job concepts do here again mobilizes attention in order to influence perception. For concepts orient a subject's (picture) perception in grasping what is there to be grasped over and above the material object that subject directly faces.

Consider for instance the well-known case of R.C. James' photograph of a dalmatian. Here no Gestalt switch is actually involved. Yet for a subject seeing that picture may well amount for a long while to simply seeing black and white patches chaotically scattered all around within a certain surface, until at a certain moment a certain aspect lights up and that subject sees a dalmatian in the photo. In such a case, again, attention is surely involved by mobilizing the concept of *being a dalmatian*: if one is said to see a dalmatian in the figure, this will surely prompt an attentional research concerning the figure itself. Yet attention is here involved not in order to let the subject's eyes move her eyes towards somewhere else in the whole perceived scene. Rather, attention prompts the subject's eyes to go on seeing the very same (part of the) scene she is facing, until she gathers differently the very same elements of the scene she was looking at before. By grasping such elements in a new order, she comes to see what she previously failed to see; namely, the figure as (a picture of) a dalmatian, or, which is the same, a dalmatian in the figure.

That in such a case a phenomenological change occurs between the 'before' and the 'after' experience can hardly be denied. In this situation, a new complex twofold experience takes place that alters the original experience of what now is only a 'fold' of that complex experience, i.e., the literal seeing of the material object one is facing. In Lopes' own words:

> The features we see a picture surface as having may depend in part on what we see in the picture. Thus seeing a dog in [the photo of a dalmatian] causes one to see part of the picture surface as having a bounded subjective contour, which is invisible when no dog is seen in the picture. This phenomenon is widespread in pictures and affects the perceived relative size, shape, color, and contrast of part of picture surfaces. (1996:167-8)

Moreover, if that change occurs, a change in the content of the experiences involved occurs as well, namely, a change from a literal seeing of a piece of paper to a non-literal seeing of a dalmatian in virtue of literally seeing that piece of paper.[12] But as I have shown above, at least in ordinary cases what makes the phenomenological, as well as the intentionality, change in the subject's perceptual state is the mobilization of the concept of *being a dalmatian*, which also occurs in the content of states of the cognitive system of the subject involved. Thus, what we have here is precisely what in the case of an actually ambiguous figure happens twice; namely, the (picture) perception's being cognitively penetrated by the relevant concept of the relevant cognitive state.

At this point, a defender of (TCI) might retort that, although the phenomenological change in question can hardly be denied, it does not yet depend on the mobilization of a concept figuring in the content of some cognitive state. Rather, the change happens independently of the possession of such a concept.[13]

Yet first of all, in order to see that concepts play a role in picture perception, let me evaluate once again the fact, already recalled, that not all concepts can induce a Gestalt switch, but only those concepts whose instantiations mobilize features that are sufficiently different. Now, let me ask the following question: in what sense exactly have those instantiations to mobilize features that are sufficiently different? Well, in the sense that the relevant perceptions involve different kinds of grouping operations that are performed at least with respect to the depicted instances of such concepts.[14] Let us

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[12] Cf. Hopkins (1998:15-6).

[13] According to Tye (1995:140), the fact that a phenomenological change driven by certain concepts occurs in the relevant picture perception does not entail that such concepts enter into the content of that perception. This is questionable, for a subject is confronting herself with a *generic* picture, insofar as she sees *some F or other* in the figure. Yet independently of this the fact that one such change is conceptually driven is enough for ruling out (TCI). For, as I said at the very beginning, (TCI) maintains that neither the intentional content *nor* the phenomenological character of a perceptual state is cognitively penetrable.

[14] But, as we will see later, this may well happen also with respect to perceptions of genuine three-dimensional samples of the relevant concepts.

go back to the triangle case pointed out before. Why does seeing that triangle as (a picture of) a mountain rather than as (a picture of) an arrow involve no phenomenological change in its perception? For the way in which the triangle's elements are grouped remains exactly the same in both cases. Whereas in the case of the duck-rabbit figure, the switch is phenomenologically relevant precisely because the two concepts induce different grouping operations on the same perceived elements of the figure – as I said, a certain left-to-right grouping rather than a certain right-to-left grouping: the very same elements in the figure are ordered differently so that they form different perceptual unities. Suppose instead that a subject started to see the figure as a (picture of a) rabbit and then she took it as a (picture of a) hare. In that case, no phenomenological change would take place. For the concept of *being a hare* precisely induces the very same grouping of the elements of the duck-rabbit figure that the concept of *being a rabbit* induces.

Now, one way of reading the morale of this reflection is that one and the same Gestalt switch, or even one and the same Gestalt grouping, may be induced not only by a certain concept – say, the concept of *being a rabbit* – but also by any other concept whose mobilization prompts the very same perceptual (re)arrangement of the perceived scene – say, the concept of *being a hare*. If this is the case, then the fact that a subject has no mastery of a particular concept does not yet mean that there is no cognitive penetrability of picture perception. For the relevant Gestalt grouping may be induced by another concept that subject possesses.

Moreover, I can well acknowledge that there are cases of Gestalt switches which take place spontaneously, that is, without the previous mobilization of any concept; although the description of the switch certainly mobilizes different concepts, the switch may occur even in subjects which have no mastery of such concepts. These cases involve what Wittgenstein once labeled "purely optical" aspects (1980:I, § 1017). Purely optical aspects may be qualified as cases in which a perceptual shift may well happen independently of the fact that the figure involved has a certain representational power, is a picture *of* something; that is, the switch may well be either an alternation in seeing the figure either as (a *picture of*) a *F* or as (a *picture of*) a *G*, or an alternation in

seeing the figure either as a two-dimensional *F* or as a two-dimensional *G*. Consider the 'double cross'- case. One may well pass from seeing a certain figure as (a picture of) a white cross on a black background to seeing that figure as (a picture of) a black cross on a white background. But one may well merely pass from seeing a two-dimensional black figure (call it a two-dimensional black cross if you like) flanked by a white two-dimensional array of triangles to seeing a two-dimensional white figure (call it a two-dimensional white cross if you like) flanked by a black two-dimensional array of triangles. One may thus guess that in order to notice one such Gestalt switch, a subject does not need to mobilize the concepts of *being a black cross* or of *being a white cross*, as figuring in particular in the content of a cognitive state such as that one wants to see the figure as (a picture of) a white cross on a black background or in the content of a cognitive state such as that as (a picture of) a black cross on a white background. As Wittgenstein says,

> Those two aspects of the double cross (I shall call them A aspects) might be reported simply by pointing alternately to a free-standing white and a free-standing black cross.
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> Indeed, one could imagine this as a primitive reaction in a child, even before he could talk. […]
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> The A aspects are not essentially three-dimensional; a black cross on a white ground is not essentially a cross with a white surface in the background. One could teach someone the idea of the black cross on a ground of different colour without showing him anything other than crosses painted on sheets of paper. Here the 'background' is simply the surrounding of the cross. (2009[4]:II xi, § 215, 218).[15]

To be sure, in order to see that concepts may not be involved in a Gestalt grouping of a certain figure, one does not even have to rely on cases involving merely two-dimensional switches. Going further in this direction, provided that there are no substantial differences between the case of an actually ambiguous and a merely potentially ambiguous figure, it may indeed be the case that even in the case of the

[15] For other examples of merely two-dimensional switches, such as seeing a figure either as a square or a as a regular diamond, cf. e.g. Macpherson (2006:87-90).

photo of a dalmatian, the only aspect that there is lights up onto a subject without that such a subject recognizes the photo as (a picture of) a *dalmatian*. Consider puzzle pictures, in which one is invited to connect points on a surface until a certain pattern lights up. Definitely, in order for that pattern to light up, no concept has to be mobilized in advance. Granted, if one is asked to say *what* she sees, she will provide an answer only if she has mastery of the relevant concept. Yet one may reasonably say that such a subject may grasp the new perceptual pattern even if she lacks such a mastery.[16]

Thus, both in the case of a figure involving a Gestalt switch and in the case of the actually non-ambiguous figure, the aspects involved may precisely merely light up onto someone rather than dawning up to her in virtue of a certain cognitive process. Yet this does not really undermine the challenge against (TCI). For remember that in order to defy (TCI) it is enough to show that perception *can* be cognitively penetrated, not that it *must* be. This is to say, what the counterexamples to (TCI) I have here presented really show is that concepts *help* one to perform in her perception a grouping operation, an assemblage of the elements perceived under a certain orientation, that might be performed even non-conceptually. The perceptual way of grouping elements attention performs may be done non-conceptually, as it paradigmatically happens with puzzle pictures. Yet mastery of concepts facilitates attention to do the same perceptual job. If there were no cognitive penetration, attention should operate only on a non-conceptual basis. But in the examples I pointed out it precisely happens the opposite.[17]

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[16] To be sure, a defender of the cognitive penetrability of picture perception may still retort that even in such cases concepts are hardly avoidable in order for the perceiver to perform a phenomenological switch. As Wittgenstein puts it: "I suddenly see the solution of a puzzle-picture. Where there were previously branches, now there is *a human figure*. [my italics]. My visual impression has changed, and now I recognize that it has not only shape and colour, but also a quite particular 'organization'. (Wittgenstein 2009[4]:II xi, § 131).

[17] Incidentally, note that I am focusing here on the issue of cognitive penetrability of picture perception. For, as I already remarked (cf. fn. 13), if I focused directly on the issue of whether picture perception has a conceptual content, it would be hard to escape a positive conclusion on that matter. In all the above cases, the twofold 'seeing-in' experience that features a picture perception is a *generic* one: in virtue of

To be sure, since there is no substantial difference between the case of an actually ambiguous figure and the case of a merely potentially ambiguous figure, we can well expect that even in the latter case normally concepts help one to perform the relevant grouping operation precisely in the same way as in the former case. So, even if we acknowledge that in the latter case there are situations in which the grouping operation may occur without any concept being mobilized, there are other situations in which such a mobilization is relevant: one manages to see a figure as (a picture of) an *F* insofar as she tries successfully to see that figure as (a picture of) an *F*.

Consider the well-known case of the Holy Shroud of Turin. For my present purposes, let me put aside the problem of whether that shroud is a *transparent* image of Christ – in Walton's (1984) sense of a natural sign of its meaning, Christ in this case – that really wrapped Christ's body; let me rather take it just as an image of a human body. Now, if *ex hypothesi* one were faced with that tissue without knowing anything about its interpretation, she would probably just see a bundle of dark patches scattered around it. But suppose one knew that what she has to see in that tissue is a human body. Then she would focus her attention on the very same bundle in order to let the grouping of that bundle emerge that would allow her to see it as (a picture of) such a body.

Finally in this concern, let me remark that a certain feature of the 'seeing-as' experience involved in picture perception does not have to lead one astray. It is often stressed, primarily by Wittgenstein himself, that this experience is subject to the will.[18] In point of fact, I recalled before that this is normally taken to mean that a subject wants to see a certain figure as a picture of an *F*. This might well lead a defender of (TCI) to think that concepts are mobilized in a sort of arbitrary operation that does not actually involve any perceptual element; perception comes before such an operation occurs.[19]

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literally seeing certain patches of colour, one non-literally sees not a particular object (say, my favourite dalmatian Pongo), but an object of *some kind or other*, an object falling under such kind. How can we thus avoid the conclusion that the content of a picture perception is concept-involving?

[18] Cf. Wittgenstein (2009[4]:II xi, § 256).

[19] This is precisely what Pylyshyn would consider a post-perceptual operation of attention. Cf fn. 6.

Yet this is precisely what is not the case. For one cannot see *at will* a figure as a picture of a *F*. Put alternatively, one may try to see something as a picture of an *F* and fail to see it as such; for instance, one cannot see a hole as (a picture of a solid with) a rectangular face.[20] For the figure involved does not allow that seeing-as to obtain insofar as its elements cannot be appropriately grouped. Rather, in such cases will operates on attention as the means that allows a certain picture perception – rather than another one – to emerge, possibly because of the mobilization of the relevant concept. Put alternatively, seeing a figure as something may well be an order[21] to be fulfilled by means of the relevant attentional act. To repeat, such an act operates at a perceptual, not a post-perceptual stage. For that operation involves a grouping arrangement of the elements of the perceived scene that has perceptual import, as the change in phenomenal character in a Gestalt switch or in a Gestalt mere 'lighting up' testifies.

Two final remarks before concluding. First, as Wittgenstein himself originally remarked, there are different notions of seeing-as.[22] This is relevant for my present purposes. For what makes (TCI) credible is precisely one kind of seeing-as whereas what makes (TCI) challengeable is another kind of seeing-as. Let me call the first notion *illusory seeing-as*[23] and the second *organizational seeing-as*. As I said at the very beginning, perceptual illusions paradigmatically support (TCI). Such illusions are instances of illusory seeing-as, which is a non-factive sense of seeing: illusorily seeing something as *F* does not entail seeing that that very something is *F*, hence that that something is *F*.[24] For example, illusorily seeing two segments as different in length does not entail seeing that such segments differ in length, hence that they are such. On the contrary, organizational seeing-as defies (TCI): the experiences of duck-rabbit figures, or of the famous photo of a dalmatian for that matter**,** are, as Wittgenstein again says,

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[20] Cf. Wittgenstein (1980:II § 545).

[21] Cf. again Wittgenstein (2009[4]:II xi, § 256).

[22] Cf. Wittgenstein (2009[4]:II xi, § 155). See also Walton: "the problem of the nature of depiction is, at bottom, the problem of the nature of the relevant variety of seeing-as" (1990:300).

[23] This is what Hermerén (1969:4-8) labels *as-if seeing-as*.

[24] Cf. Mulligan (1988:142).

"half visual experience, half thought" (2009[4]: II, xi § 140), insofar as they involve the lighting up of aspects which may well involve concepts.

Second, I have limited myself to considering cases of picture perceptions, in which a two-dimensional entity is seen as pictorially representing a three-dimensional entity. Yet Gestalt switches of this kind also occur when a subject faces a three-dimensional entity. Consider a three-dimensional instance of the Necker cube. Unlike a case involving a two-dimensional figure, which may be seen either as a picture of a cube with a certain face in the foreground and another face in the background or as a picture of a cube with those faces in the reverse position, the three-dimensional entity can be directly seen either as a cube with a certain face in the foreground and another face in the background or as a cube with those faces in the reverse position. Now, insofar as concepts may be mobilized in inducing this shift, ordinary perception of three-dimensional entity may also constitute a challenge to (TCI). What if while wandering around I came across something that now looks to me as a rabbit? Could not it also look to me as a duck?[25]

To sum up. Picture perception is cognitively penetr*able*. Concepts *may* induce grouping that produces a phenomenal change in the experience – from the experience of a mere figure to the experience of a *picture*, the depictive representation of something, or from the experience of a figure to the alternate experience of one picture and of another one – as well as in its content, as the content of a certain 'seeing-in' experience or as the content of two different 'seeing-in' experiences respectively. As Wittgenstein once said, "that's why the lighting up of an aspect seems half visual experience, half thought" (2009[4]: II, xi § 140).[26]

Bibliography

[25] Cf. once more Wittgenstein (2009[4]:II xi, § 138).

[26] A preliminary version of this paper has been presented to the 2010 Conference of the European Society for Philosophy and Psychology, Universities of Bochum and Essen, August 25-28, 2010. I thank all the participants for their very stimulating questions. Let me also thank Diego Marconi and Alfredo Paternoster for their important comments.

Chisholm, R. (1993), "Act, Content and the Duck-Rabbit", in J.W. Canfield, S.G. Shanker (eds.), *Wittgenstein's Intentions*, Garland, New York, 94-95.

Fodor, J. (1983), *The Modularity of the Mind*, The MIT Press, Cambridge MA.

Hermerèn, G. (1969), *Representation and Meaning in the Visual Arts*, Scandinavian University Books, Lund.

Hopkins, R. (1998), *Picture, Image and Experience*, Cambridge U.P., Cambridge.

Levinson, J. (1998), "Wollheim on Pictorial Representation", *The Journal of Aesthetics and Art Criticism* 56, 227-233.

McIver Lopes, D. (2006), "The Domain of Depiction", in M. Kieran (ed.), *Aesthetics and the Philosophy of Art*, Blackwell, Oxford, 160-175.

Macpherson, F. (2006), "Ambiguous Figures and the Content of Experience", *Nous* 40, 82-117.

Macpherson, F. (2011), "Cognitive Penetration of Colour Experience: Rethinking the Issue in Light of an Indirect Mechanism", *Philosophy and Phenomenological Research* (forthcoming).

Mulligan, K. (1988), "Seeing As and Assimilative Perception", *Brentano Studies* 1, 129-152.

Peterson, M.A., Kihlstrom, J.F., Rose, P.M., Glisky, M.A. (1992), "Mental Images Can Be Ambiguous: Reconstruals and Reference-frame Reversals", *Memory and Cognition* 20, 107-123.

Podro, M. (1998), *Depiction*, Yale U.P., New Haven and London.

Pylyshyn, Z. (2003), *Seeing and Visualizing*, The MIT Press, Cambridge MA.

Tye, M. (1995), *Ten Problems of Consciousness*, The MIT Press, Cambridge MA.

Voltolini, A. (2011), "Towards a Syncretistic Theory of Depiction", in C. Calabi (ed.), *Perceptual Illusions. Philosophical and Psychological Essays*, Palgrave, Basingstoke (forthcoming).

Walton, K.L. (1984), "Transparent Pictures", *Critical Inquiry* 11, 246-276.

Walton, K.L. (1990), *Mimesis as Make-Believe*, Harvard U.P., Cambridge MA.

Wittgenstein, L. (1980), *Remarks on the Philosophy of Psychology*, I-II, Blackwell, Oxford.

Wittgenstein, L. (2009^4), *Philosophical Investigations*, Blackwell, Oxford.

Wollheim, R. (1980^2), "Seeing-as, Seeing-in, and Pictorial Representation", in *Art and its Objects*, Cambridge U.P., Cambridge, 205-226.