Object Perception, Perceptual Recognition, and That-Perception Introduction

VINCENT HOPE

Abstract
The philosophy of perception currently considers how perception relates to action. Some distinctions may help, distinguishing object perception from perceptual recognition, and both from that-perception. Examples are seeing a man, recognising a man, and seeing that there is a man. Perceiving an object controls self-location by its recognising an object, which depends on memory of how it looks, controls looking for it and interacting with it, or not, and that-perceiving controls saying that an object exists. Perception controls action. Milner and Goodale, Jacob and Jeannerod, and Noë are considered.

The last decades have seen a new direction in the philosophy of perception. Its traditional preoccupation with epistemology and the sensory path to knowledge has been displaced by questions about the non-conceptual content of experience,[1] whether it is unconscious and action-guiding,[2] and whether perception is not so much concerned with action as with conceptualisation of conscious experience.[3]

Some distinctions may help in pursuing these questions, distinguishing *object perception* from *perceptual recognition of objects*, and distinguishing both from *perceiving facts about objects*. The words 'perception', 'perceptual' and 'perceive' share etymology and link the senses of vision, hearing, smelling, tasting, and feeling by touch under the same distinctions.

[1] See, for example, Christopher Peacocke, 'Scenarios, concepts and perception', Essay 5, *The contents of experience, Essays in perception* ed. Tim Crane, (Cambridge: Cambridge University Press, 1992). See also M.R. Bennett and P.M.S. Hacker, *Philosophical Foundations of Neuroscience*, especially chs 4 and 10 (Blackwell, 2003). Also Alva Noe, *Action in Perception* (Cambridge Mass, MIT, 2004).

[2] See Andy Clark, 'Visual Experience and Motor Action: Are the bonds too tight?' *The Philosophical Review*, **110**, No 4, Oct 2001.

[3] A. David Milner and Melvyn A. Goodale, *The visual brain in action*, (Oxford, Oxford University Press, 1995). See also Pierre Jacob and Marc Jeannerod *Ways of Seeing* (Oxford, Oxford University Press, 2003).

doi:10.1017/S003181910999009X
© The Royal Institute of Philosophy, 2009

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

Object perception is exemplified by seeing a man, perceptual recognition by recognising a man, and perceiving a fact about an object by seeing that there is a man. Parallel phrases can be found for the other senses, like 'hearing a man', 'recognising (the sound of) a man', and 'hearing that a man is there', 'feeling a woollen blanket', 'recognising the feel of a woollen blanket', and 'feeling that something is a woollen blanket', 'smelling cheese', 'recognising the smell of cheese', 'smelling that there is cheese'.

The first, object perception, does not entail the third. Seeing a man does not entail seeing that there is a man; one might mistake a man for a dog. Correlatively, seeing that there is a man does not entail seeing a man, though it does entail object perception of some kind because it requires seeing evidence of a man, recognising it, and drawing the right conclusion.

Seeing a man does not entail recognising a man because seeing a man does not depend on having seen a man, whereas recognising a man depends on having seen a man. Recognising a man does not entail seeing that something is a man. A baby can recognise its father without seeing that he is a man.

These distinctions are essential for any comprehensive theory of perception, whether philosophical, psychological, or physiological. It will be argued, however, that animals do not that-perceive. And it could (but will not) be argued that the primitive perception of algae is non-recognitional. Animals do not speak and cannot perceive that something is or is not the case. It will also be argued that perceiving a fact, e.g. that there is a man, is being able to assert a proposition, because one perceives and recognises evidence of the truth of a sentence. Yet we say that animals that-perceive, e.g. that a man is coming, that there is food in a bowl, and so on. An alternative description will be offered which avoids that-constructions (e.g. a cat can see and recognise an approaching car; pets can see and recognise food in a bowl).

Of these three states one is basic to the others. There can be no perceptual recognition or factual perception unless something is perceived. Without seeing *something* one cannot recognise it or see that that there is such a thing, although one may not see the thing itself. (Again, without hearing *something* one cannot recognise what one hears, or hear (for example) that a bus is coming.)

Furthermore each of these, it will be argued, is (to use a current phrase) 'perception for action', though none of them is itself any kind of action. Object perception controls stance and position relative to the environment. Perceptual recognition controls movement in the environment and engagement with or avoidance of objects and situations. That-perception controls speech.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

These distinctions will now be considered in turn to see their differences. Afterwards we can look at some authors in their light.

A three-fold perceptual distinction

1: Object perception

Seeing an object is, no doubt, having visual sensations caused by it. But the word 'seeing' does not mean having visual sensations. Its meaning is understood by young children who know nothing of the language of visual sensation but can say whether they see something. By being taught how to look for things whose discovery is seeing them, by learning the language of looking and seeing, they know how to say what they see. They learn that what they can see they can look at and what they can look at they can see.

Looking *for* something depends on being able to recognise it when one sees it. But looking *at* something does not; one can look at what one has never seen before. Then one keeps one's gaze on it. One keeps it in view. To do that needs control of gaze, to maintain its direction by that of the object, and that requires being able to direct one's eyes at will. Looking in the direction of an object is not quite the same as looking at it because one can look in a direction to see what is there and fail to see what there is because it is too far or too small or too indistinct. Looking at something is looking in its direction because it is in that direction. One sees its direction by seeing it. One controls the direction of one's eyes by the direction of the object.

A child who knows that it is looking at something does not know *that* it is controlling its eye position by what it is looking at. It could not say that. Nevertheless, because it has been taught how to look in response to hearing the verb 'Look', it does know *that it is looking*. It could say that. It has also been taught that the verb 'to see' applies to itself when it is looking at something, and that it can stop itself seeing by shutting its eyes and make itself see again by opening them. So it knows *that it sees* something and can say so.

We can now explain seeing an object. It is *being able*, as one is, with one's eyes in their current position, to look at it. To see something is to *be able* to control the direction of one's gaze by an object because it is in that direction. It is not necessary to control eye-direction by what one sees. What matters is being able to do so with current eye-position.

To see something is not the same as seeing its direction: it is being able to see its direction. This means that we see much more than we

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

look at. Indeed one cannot look at everything one sees and has no reason to do so. We see many things which we do not notice. We could look at them if we noticed them.

Other kinds of object perception are not open to the same explanation. While hearing a sound implies being able to listen to it, listening to a sound is not like looking at an object because it is not controlling the ears by the direction of the sound. There is a tighter connection between the direction of gaze and what one is looking at than between head position and what one is listening to. Yet, if one hears a sound clearly, one can hear its direction. So hearing can be compared with seeing in providing information about direction. Hearing is being able to control head position by the direction of what one hears. Like what we see what we hear is much more than what we listen to, although it would normally be easier to listen to everything one hears than to look at all that one can see.

Both seeing and hearing can discover distance as well as direction. But neither seeing an object nor hearing one requires seeing or hearing direction or distance. These spatial relations *can* be seen and heard but may not be, even if one sees or hears an object or its sound.

As hearing or seeing direction allows control of head position, so seeing distance allows control of movement by distance, whether in approaching an object or distancing oneself from it. Seeing distance is not the same as seeing how large or small is the space between us and it. We learn to recognise the size of visible distance. To begin with we reach for things until we touch them. With practice we can see immediately how to move automatically to come into contact. In covering ground it takes a lot of experience to see how far it is to the top of a mountain, though one sees the intervening ground. Seeing distance comes before recognising its size.

2: Perceptual recognition

Perceptual recognition controls engagement with or disengagement from a perceived object. It depends on remembering what has been seen or otherwise perceived. It is an effect of seeing something which can control pursuit of it in its absence and engagement with it or avoidance of it in its presence. What is recognised is how something looks (or sounds or feels, etc). Qualities and shape are recognised by their appearance, without being recognised *to be* the qualities or shape of the object. So something of a certain shape

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

and colour can be recognised without being seen *to be* of that shape and colour. Seeing shape is not seeing that something has it. (Seeing-that is seeing a fact, a kind of that-perception, which will be discussed next.) Recognising shape is not recognising that it is a certain shape, say round, or oval. It is remembering what the shape looks or feels like so that one can look for it. Memory of what has been experienced can prompt looking for it but can have the opposite effect of encouraging its avoidance because of a painful or unpleasant experience.

Although some searching is looking for what has been perceived, there seems also to be instinctive searching, as an animal first looks for a mate. This kind of instinctive searching does not use the animal's private memory but uses a kind of genetic memory carrying its own kind of instinctive recognition.

The basic form of perceptual recognition is non-linguistic. A baby can recognise its mother by her appearance and behaviour without recognising that she is its mother. Because it knows what she looks like the baby can look for her and, on seeing her can expect to engage with her. To recognise *that* this person is her mother a child must learn to call her 'Mother' and learn that other children have mothers like hers.

3: That-perception

Factual perception is that-perception. Hearing *that* a bus is coming, seeing *that* it is *not* snowing, feeling by touch *that* a surface is smooth, are examples of that-perception. It is veridical, because it is perceiving what is or is not the case. It is impossible to hear that a bus is coming without a bus coming, or to see that it is not snowing without it not snowing, or to feel that there is a smooth surface without there being one.

Perceiving that something *is* the case requires being able to have perceived that it *was not* the case, had it not been so. That-perception embraces that-not-perception, spanning the alternatives and the difference between them.

What is the difference between hearing a bus coming and hearing that a bus is coming? Hearing that a bus is coming uses just the same hearing as hearing a bus coming. So that-hearing is not a particular kind of hearing. It is, rather, learning some fact from hearing. Similarly seeing a bus coming and seeing that a bus is coming use the same kind of vision, a kind of object perception, whether the bus or evidence of its approach is seen. Even if

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

that-seeing processes object vision differently from the vision needed for visual recognition or visually guided manipulation, it must start with object vision.

Animals can see and hear what is happening and can act accordingly. A cat, for instance, can look up and down a street before running across it. It can see a car coming and pause, waiting for the car to pass. Not seeing a car it runs safely across. Not seeing a car coming is not the same as seeing that a car is not coming. If they were the same, not seeing a thousand things where one is looking would be seeing that a thousand things are not there. Looking up the empty street after seeing a car coming the cat does not see a car, nor does it see a bus, nor does it see a man. That does not mean that it sees that a car is not there, that a bus is not there, and that a man is not there. Not seeing something somewhere is not the same as seeing that something is not there. Yet not seeing a car coming has the effect of preventing or removing the cat's inhibition caused by seeing it. The cat recognises the approach of the car and its danger. This recognition stops it in its tracks. Not recognising the approach of the car prevents the fear. Not recognising the approach of anything allows it to prepare to cross. But not recognising is not recognising that not.

If not seeing a car is not seeing that there is not a car, what is seeing that there is not a car? It requires knowing what a car is and looks like, so that one can *look to see if there is a car*. Looking to see if there is a car requires knowing that *if one does not see a car where one is looking, there is not one*. This is an inference from the negative proposition *that one does not see a car somewhere* to another negative proposition *that there is not one there*. But one can also see that a car is not somewhere without looking to see if there is one. Knowing what it is to see a car one may simply have the thought, when seeing where a car might be, that one does not see a car and can infer that there is not one to be seen.

Although that-perception depends on sensory perception it is not itself another kind of perception. It does not have its own sense with its own objects. It is, rather, an effect of ordinary sensory perception on the power of speech. Seeing that it is raining is knowing *to say* that it is raining by seeing and recognising rain. It is a kind of practical knowledge, *of what to say*, of what can be asserted and what can be denied (in the case of seeing what is not the case) on the basis of object perception.

It is convenient to describe it metaphorically as 'perceiving the truth of propositions', as if this were another kind of perception with propositions as its objects. It is not. Propositions are ways of

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

speaking truly or falsely. Seeing their truth is knowing which way to speak for assertion and which for denial.

Jonathan Harrison is quite clear that there are propositions and that they are not sentences nor are they thoughts.[4] He does not say what they are other than that they might not have existed without language. He rightly takes issue with Davidson's provocative suggestion that the word 'that' in such sentences as 'Galileo said that the earth moves' can be turned into a demonstrative by bisecting the sentence into 'The earth moves. Galileo said that.' Davidson's suggestion is that in such contexts the demonstrative 'that' refers, not to words, but to *asserted content* shared by the utterance quoted and the quoter's own utterance. Harrison rightly objects that as Davidson states it the analysis requires anyone saying that Galileo said that the earth moves to say that the earth moves. He proposes that the word 'that' means that the speaker is about to 'put forward a proposition in order that various things can be said about it without the person ... having to commit himself to its truth.'[5] Using the prefix 'that' prevents asserting the sentence. In that light let us us agree that a proposition is the assertible content of asserting a sentence which can be said without being asserted.

Consider saying 'I am a liar, am I?' in challenging someone who accuses you of being a liar. One says the sentence 'I am a liar' without saying that one is a liar. One speaks a sentence whose truth one rejects. Consider repeating what someone has asserted as an account of what he did in order to see whether one has noted the story correctly. 'You left the house at ten to nine. You took a bus to the West End. You met John and had a drink with him. That's your story.' In repeating the story one is not asserting what the author was saying. One is not oneself saying that the person left the house etc. So it is in that-saying.

These examples are of saying an assertible sentence without asserting it, in order to specify a proposition. In doing so the speaker must use its referring terms to refer to objects, times, and places, just as if one were asserting it. Such speech only differs from assertion in the sentence not being asserted. This explains the slight paradox in saying, as Harrison does, that a proposition is 'being put forward'. The word 'proposition' means 'what is proposed', but in using a 'that' construction one is not proposing a proposition. On the other hand where a speaker asserts what someone perceives or knows the

[4] Jonathan Harrison, 'The logical function of 'that', or truth, propositions and sentences', *Philosophy* **79**, 67–96.

[5] Op.cit., 68.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

speaker follows in Davidson's footsteps. Indeed, because verbs of perception are veridical all that-perception can be put into Davidson's format. 'She saw that it was raining.' translates into 'It was raining. She saw that'. Here the word 'that' refers to the asserted content of the antecedent sentence which the speaker actually asserts.

Comparison with contemporary texts

1: Milner and Goodale

Some reject the suggestion that perceiving an object is a kind of perception. Seeing an object is not perception, they say. Milner and Goodale hold that vision for action is not vision for perception. By 'vision for action' they mean vision used for manipulating objects or even controlling the eyes. In *The Visual Brain in Action* they argue that part of the brain makes visual control of action possible while another part makes perception possible. To clarify what they are saying they explain what they mean by the word 'perception'. They do not mean what is conventionally meant. As they use it the word refers to a process 'which allows one to assign meaning and significance to external objects and events'.[6] It is a process 'subserving the recognition and identification of objects and events and their spatial and temporal relations.'[7] It does not refer to visual control of action by seeing objects and their location, as the frog sees its prey. Indeed, they believe that there are two independent visual systems.[8] One, the non-perceptual, is concerned with acting in and on the world and the other, the perceptual, with 'representing' it. These are two distinct functions they say. They admit that their exclusive definition is at variance with common usage in visual science and everyday language but justify their decision on the ground that it is central to their arguments that the visual mechanisms underlying 'perception' on the one hand and action on the other are different.

Their theses about the distribution of visual brain function are based on a large body of clinical and experimental evidence which shows that a person can control their body environmentally and

[6] *The Visual Brain in Action*, 2.
[7] Ibid.
[8] A view repeated by Goodale in 'Action Insight: The Role of the Dorsal Stream in the Perception of Grasping', *Neuron* **47** 4 August 2005, 328–329.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

relative to an object without being conscious of doing so and without being able to be conscious of doing so because of brain damage. This depleted ability is called 'blindsight'. One case was of a patient who could 'post' a card through a slot, orienting her wrist to do so, while not being able to describe what she was doing. Other evidence of different brain damage shows that a person can describe what they see while having great difficulty in controlling action towards or with it.

There is no doubt that processing of vision depends on different parts of the brain whether for manipulation or conscious description. Other evidence shows that visual illusions which produce false judgments about size do not impair manual operations requiring accurate matching of grasp to size. So a person can have a false belief while acting appropriately to the circumstances falsifying the belief. This implies the independence of the mechanism for belief and the mechanism for manipulative action.

Accepting their thesis that the part of the brain controlling action through vision is not the same as the part of the brain controlling judgment and belief does not require accepting their definition of 'perception'. Their decision to redefine 'perception' is arbitrary and confusing to a reader who thinks that objects can be perceived without being recognised. Also confusing is their claim that a person who can 'post' a card through a slot does not 'recognise' what she sees. Lack of speech does not prevent animal or human recognition. Indeed without pre-verbal recognition verbal recognition would be impossible. The condition would better be described as 'dumbsight'.

A difficulty arises with their claim that the part of the brain which serves visual control does not serve the recognition of objects. To recognise what something is depends on seeing where it is. Even if a different part of the brain is needed to recognise what is seen, it cannot be recognised without being located visually. That requires active control of eyes-in-head-on-body-on-ground. Of course this is not manipulative control. It is not manipulative action. But looking at something which one has noticed is a physical action. It requires self-control of bodily location and of eye-location relative to the body. So the claim that these parts of the brain are functionally separate is doubtful, if this means that they function independently of each other. The representation that something seen has a certain character or identity cannot occur without engaging bodily control of seeing to identify what is being seen by its exclusive location. The function of identifying requires the function of locating visually. Visual action is basic to visual belief, and can occur without it.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

Whereas visual belief cannot occur without active control of the eyes, and, indeed, the whole perceptual system needed for looking.

2: Jacob and Jeannerod

Other writers share this over-sophisticated view of perception and deny that seeing an object is perceiving it. Jacob and Jeannerod say 'Not all human vision has been designed to allow visual perception'.[9] Echoing Milner and Goodale they say '...visual perception *properly so-called* (author's italics)...' is different from vision-for-action.[10] In their book they devote a chapter to vision and describe perceptual ability as 'at the service of thought and conceptualisation'.[11] They examine many current theories about what can be perceived and how it is perceived. It becomes apparent that they regard perception as perceptual knowledge of the world. The fundamental role of visual perception is to enable the identification and recognition of objects.[12] This depends on subsuming objects under concepts. That-perception is linguistic: 'one cannot know a fact unless one believes that the corresponding proposition is true'.[13] We do not know objects, only facts, though one can be acquainted with objects[14] and misidentify them.[15] They fully recognise that vision provides phenomenal experience which is non-conceptual but do not wish to admit that seeing an object is perceiving it, because perception, for them, is recognising something as belonging to some named class. They accept the distinction between seeing objects and seeing facts[16] but deny that seeing objects is perception. At the same time they admit that 'the visual system cannot represent an object at all unless the representation contains visual information about one of the object's visual attributes, namely its spatial location'.[17] So, although they skew the meaning of the word 'perception' towards that-perception, they recognise that conscious recognition of objects depends on seeing their location which can only

[9] *Ways of seeing*, 135.
[10] Op.cit., 157.
[11] Op.cit., 145.
[12] Op.cit., 139.
[13] Op.cit., 144.
[14] Op.cit., 145.
[15] Op.cit., 161.
[16] Op.cit., 159.
[17] Op.cit., 191.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

be done by what is here called 'object perception'. They do not think that vision for perception is distinct and separate from vision for action. They prefer to distinguish processing of vision for interaction with the world and processing of vision into conceptualisation of what is seen. In one place they deviate slightly from saying that perception is conceptualisation of what is seen when they describe the non-conceptual 'perception of spatial relations between objects' which is found not only in adults but in babies which use locational information to distinguish objects.[18] So they accept that vision of location is a kind of perception.

Their book consists in large part of a detailed survey of psychological, philosophical, and physiological theories of vision with special reference to visual control of action. It concludes with an argument that seeing can be processed non-conceptually into representations of 'targets' for reaching and grasping.[19] They recall Gibson's language of 'affordances' and describe the motor-processing of visual targets as that.[20] Such processing is surely a kind of recognition of the direction, distance, and shape of objects. It is practical knowledge developed from experiment with one's own body. Seeing how far away something is is knowing the size of movement needed to reach it. Seeing how to hold something is knowing from its visible shape the grasp one will need to do that. They describe this well as 'visuomotor representation'.

But why not distinguish different perceptual conditions, perceiving an object and its location, non-verbal perceptual recognition of objects and their spatiality, and that-perception? Why restrict perception to its most sophisticated form, perceiving the truth of a proposition?

3: Alva Noë

Another writer is Alva Noë. In *Action in Perception*[21] he says that perceiving is a way of acting. It is something we do for which a paradigm is a blind person tap-tapping their way around a cluttered space. What we perceive depends on what we do and are ready to do.[22] This is the 'enactive' theory of perception.

[18] Ways of seeing. 192.
[19] Op.cit., 178.
[20] Op.cit., 182.
[21] Alva Noë, *Action in Perception* (Cambridge Massachusetts and London: MIT Press, 2004).
[22] Op.cit., 1.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

At the same time as being a skilful activity requiring bodily coordination perception is intrinsically thoughtful.[23] Perceiving is having sensory stimulation which one 'understands'. This pragmatic idea forms one of the main themes of the book.[24] But he does not want to 'overintellectualize' perceptual experience. He is not talking about intellectual or verbal understanding but 'sensorimotor' understanding which comprehends things in sensorimotor terms.[25]

For example, the experience of shape depends on our implicit understanding of how perspectival shape varies as we move.[26] Our grasp of colour depends on our implicit mastery of the way appearances change as conditions change.[27] When you experience a tomato as voluminous and three-dimensionally extended you implicitly take it that were you to move your eyes a bit to the left or right you would bring previously hidden or obscured parts of the tomato into view. You understand how its appearance changes with your movement. You visually experience parts of the tomato which you do not actually see because you understand implicitly that your sensory relation with those parts is mediated by familiar patterns of sensorimotor dependence.[28] We learn what the environment looks like, what objects and surfaces look like, and expect to see the back of a tomato by moving round it. We learn how things look and feel as we move, on a micro-scale with manipulation, or a macro-scale with landscape. This is a good account of learning by looking. One learns to expect how *the look* of things will change or not as one moves, or as they move. One might compare hearing with seeing: by listening one learns how the sound of a sound changes as it approaches and recedes or as one approaches it or moves away from it.

He quotes an example of active perception from Poincaré: following a moving object with the eye. He says that this experience presents an object '*as* moving'.[29] He often uses the 'as' construction: the experience of the shape of something presented *as* cubical;[30] the seeing of a tomato *as* voluminous. Seeing-as, in this sense, is being able to anticipate how something will look if it moves or you do. It

[23] Action in Perception, 3.
[24] Op.cit., 182.
[25] Op.cit., 184.
[26] Op.cit., 198.
[27] Op.cit., 199.
[28] Op.cit., 77.
[29] Op.cit., 200.
[30] Op.cit., 198, 206.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

implies sensorimotor knowledge. One anticipates the cubical look of something but without recognising that it is a cube, or the three-dimensional look of a tomato without recognising that it is a globe.

Noe wants to draw our attention to perceptual learning, which provides a means of 'understanding' what one perceives, yet he does not want to appeal to Kantian or Fregean concepts. He ought, therefore, to avoid describing perception as 'thoughtful'[31] and even as 'understanding'. Expecting to see how a tomato looks from behind is not any kind of understanding, though it is a kind of knowledge.

He says several times that perception is an activity, something we do,[32] but qualifies this to reduce the behavioural commitment to perception's dependence on a perceiver being able to act and think.[33] He might have followed Gibson's lead in distinguishing two modes of perception, a passive mode of sensing and an active mode of looking, listening, tasting, and so on. Some perception requires tracking activity, like seeing the flight of a bird or a ball, but complete passivity does not preclude all perception. One can feel oneself falling or being pushed. This is not something one does, like looking or listening. 'Vision is a process of gleaning how things are . . .', he says.[34] Must it be? Gleaning is gathering and one *may* gather by seeing, or one may not. We can see things without noticing them. Noë is mistaking seeing for looking, hearing for listening, feeling by being touched for feeling by touching, and so on. He mistakes the active control of perception for the thing itself.

Normal perception does, as he says, depend on action because normally we use our time usefully with the things we need. We are continuously looking, listening, touching and feeling things, and deliberately tasting and smelling them. We control a great deal of what we perceive. In reading we make ourselves look at the page and move the eyes across it, then down and across again, in order to see the words. We make ourselves see what is there. But seeing what is there happens; *it* is not our action. We sniff at flowers to 'see' how they smell. The smell hits us. The enactive theory is over-active.

Like Milner and Goodale, and Jacob and Jeannerod, Noë overlooks the importance of the most basic kind of perception – object perception – in favour of learning how to recognise what one sees

[31] Action in Perception, 3.
[32] Op.cit., 1.
[33] Op.cit., vii.
[34] Op.cit., 107.

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press

and anticipate how it will look and feel. In his favour is his clear understanding that sensory perception is not that-perception. But he does not seem to realise that the most basic perception occurs before learning to anticipate or recognise.

Conclusion

Milner and Goodale deny that object perception is perception and also deny that unconscious recognition, like that of apperceptive agnosics, is perceptual. What they call 'perception' is only one kind of perception – that-perception.

Jacob and Jeannerod usually describe perception as conceptualised knowledge of what is seen. However, they do recognise the vision which locates objects and even describe it as 'perception'. It is basic, they point out, to any kind of perceptual recognition or knowledge.

Noë does not distinguish between object perception and perceptual recognition. He does, however, emphasise that perceptual knowledge of how things look depends on knowing how they are being looked at, and he distinguishes this kind of pragmatic knowledge from that-perception.

Object perception is basic, as Jacob and Jeannerod agree. An essential but unnoticed aspect of object perception is *self-perception* of how the sense organs are oriented. Perception of objects is not only of objects. It is at once perception of an object and of the perceiver's sense organs. To see where something is relative to oneself one has to perceive how the eyes are placed in the head, how the head is placed on the shoulders and how the shoulders are placed above to the hips. Limb and organ proprioception contribute orientation of the sensor to perception of the location of what is being sensed. This kind of proprioception is fundamental to the perception of objects. Its importance is not recognised by the writers discussed above, nor even by Gibson.

Royaume-Uni

https://doi.org/10.1017/S003181910999009X Published online by Cambridge University Press