

What Does the Mind's Eye Look At?

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A conception of mental imagery recently advanced by Kosslyn is discussed and criticized. An alternative account of imagery is recommended, one that assimilates the having of images to the exercise of one's capacity to recognize the thing or event imagined.

"Do you remember him?" Natasha suddenly asked, after a moment's silence. Sonya smiled.

"Do I remember *Nicholas*?"

"No, Sonya, but do you remember so that you remember him perfectly, remember everything?" said Natasha with an expressive gesture, evidently wishing to give her words a very definite meaning. "I remember *Nikolenka* too, I remember him well," she said. "But I don't remember *Boris*. I don't remember him a bit."

"What! You don't remember *Boris*?" asked Sonya in surprise.

"It's not that I don't remember — I know what he is like, but not as I remember *Nikolenka*. Him — I just shut my eyes and remember, but *Borris* . . . No!" (She shut her eyes.) "No! There's nothing at all." (Tolstoy, 1928. Book III, chap. 6).

It is undoubtedly true that people — most of us, anyway — from time to time have what we call mental images. We see childhood playmates in our minds' eyes, hear tunes in our heads. Sometimes we describe our images as vivid and compelling; at other times they seem thin or illusive.¹

The issue I wish to address here is not whether mental imagery occurs — plainly it does — but, given that people *do* have mental images, of what does this activity consist. I shall begin by discussing very briefly a view advanced by Stephen Kosslyn and his associates which seems to me mistaken. Kosslyn's account is particularly interesting because it has much in common with traditional views of imagery in which the having of images is modeled on the construction and observation of an interior picture or copy of

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¹It is claimed by some people that their mental imagery is inevitably pale, never vivid; others claim that they have no mental imagery at all. Introspective claims of this sort seem, on the one hand, unchallengeable, and on the other hand, somewhat puzzling. Before they can be sensibly evaluated, however, one must have a clear notion of what the having of mental images comes to. This, of course, is not something discoverable *just* by introspecting.

whatever it is that is imagined.

Consider, for example, visual imagining:

... visual images might be like displays produced on a cathode ray tube (CRT) by a computer program operating on stored data. That is, we hypothesized that images are temporary spatial displays in active memory that are generated from more abstract representations in long-term memory. Interpretive mechanisms (a "mind's eye") work over ("look at") these internal displays and classify them in terms of semantic categories (as would be involved in realizing that a particular spatial configuration corresponds to a dog's ear, for example). (Kosslyn, Pinker, Smith, & Schwartz, 1979)

Such an account is apt to appear astonishing until one realizes that it is barely more than a gussied-up version of a view of mental imagery which has been with us at least since the time of Plato. The hardware has changed — signet rings and wax tablets have been replaced by computing machines and CRTs — but the fundamental idea has remained intact.

That a particular way of viewing a phenomenon has a long tradition is hardly a reason to reject it, of course. In fact, one might suppose the opposite. If the "classical" account of mental imagery has survived as long as it has, perhaps this is a sign that it harbors truths deep enough to withstand the vicissitudes of intellectual fashion.

I want to suggest, however, that the "classical" conception of mental imagery is mistaken. It has survived as long as it has, not because it is hearty but because it has typically been taken for granted, rarely scrutinized. The point I want to make is conceptual rather than empirical. Such points are relevant to empirical inquiry, I think, just because it is ordinarily advisable to begin an investigation with a reasonably clear idea of what it is one is investigating. If my arguments here seem frivolous or slight, it should be borne in mind that the conception of imagery I wish to replace is rarely *argued* for at all.

Is the having of mental images a form of interior looking, a perusal of an entity (the mental image) by the mind's eye? Consider the expressions:

- i. *A* is looking at an *X*
- ii. *A* is imagining an *X*

Are these activities similar? I think not. The appearance of similarity may be imparted by the fact that they are syntactically parallel. At a deeper level they differ significantly. I shall express this difference by saying that *looking* is a relational expression and *imagining* is not.

To say that *A* is looking at *X* is to say that *A* stands in some relation to something, *X*. If it is true that *A* is looking at *X*, then it is true as well that there is an *X* at which *A* is looking. The case of imagining is different. If *A* is imagining *X*, then *A* need not be in any relation at all to an entity or event, *X*. Nor need it be true that there is an *X* which *A* is imagining. *Imagining* is, as

one might say, logically intransitive. In this respect it differs from *looking*, *seeing*, *hearing*, and *kicking*, and resembles *sleeping* and *smiling*. To say that *A* imagines *X* is to say that *A* is doing something, that *A* is imagining *X*-ly (or *X*-imagining), just as to say that *A* is smiling broadly or sleeping soundly is to say that *A* is smiling or sleeping in a certain way. The difference, then, between *A*'s imagining *X* and *A*'s imagining *Y* is not that there are two things, *X* and *Y*, to which *A* may be in some relation, but that in the one case *A* is doing something *X*-ly while in the other case *A* is doing something *Y*-ly.²

Admittedly, this way of talking is a trifle awkward. It seems, however, to parallel one way in which we speak about images devised by painters, poets, and sculptors — not an unpromising parallel at that (see Goodman, 1968, chap. 1). For example, one looks at a painting and says that it represents a bowl of fruit. In saying this, one may mean either of two things: (1) the painting represents a particular bowl of fruit on a particular occasion; or (2) the thing depicted in the painting is a bowl of fruit (and not, say, a landscape or a dish of pasta). A painting of Napoleon represents Napoleon in the first sense. We call such paintings portraits. A painting of a horse may represent some particular horse or it may simply represent a horse as distinct from a pig or a rabbit.

There are, then, at least two senses in which paintings can represent things. The first sense is roughly equivalent to *denote*. In this sense there are no paintings of unicorns, or centaurs or hippogryphs. Saying (in this sense) that a painting represents *X* entails that *X* exists. In its other sense, representation does not entail the existence of anything at all. Thus, to say (in this second sense) that a painting represents a unicorn is just to say that it is a certain *sort* of painting. Roughly, it is a member of a set of things collected together because they resemble one another in various ways. In the same way, something is called a table or a chair in virtue of the fact that it is similar to other things called tables or chairs. Sets of this sort are characterized by similarities or family resemblances. Compare these to sets of objects defined by reference to their *denotata*, the set, for example, of drawings of Abraham Lincoln.

Having a mental image is, in some respects, akin to *drawing* a picture as distinguished from looking at a picture. There is a particular sense in which I cannot be wrong about a picture I have drawn or painted or about my own mental images. If asked to draw a picture of Elizabeth II, I may or may not produce a passable likeness. Still, the picture is *of* Elizabeth II. It would not make sense to press me on this, to ask me, for example, how I can be sure that

²Ulric Neisser's account of mental imagery (see Neisser, 1976, chap. 7) constitutes an example of an empirical theory consistent with these logical features of *imagining*.

it is a picture of Elizabeth II and not, say, Princess Margaret. I have drawn it *as* Elizabeth II; that it is Elizabeth II is not something I discover by examining the picture once I have fashioned it. The same is true of one's mental images. If I ask you to imagine the Washington monument, it will not then make sense for me to ask you how you know that it is the Washington Monument you are imagining and not, perhaps, some other obelisk or a papier-mâché mock-up. Were mental images analogues of CRT displays, were imagining relational in the sense required by Kosslyn's theory, such questions would be perfectly in order.³

There are, to be sure, ways in which one can be wrong about one's images, just as one can be wrong about what one has drawn. These ways are not, however, very like the ways in which one can be wrong about items one looks at. If, for example, you confuse Elizabeth II with Elizabeth I, you may go wrong when asked to imagine Elizabeth II. The error here is not one of misinterpreting, however, but one of mis-labeling; your confusion is over a name, not over your image. This is similar to, though not quite the same as, a case in which a mugging victim can vividly recall the features of the assailant, but cannot, for that, say who the assailant was.

In the ordinary case, one does not discover what one has drawn by examining it (in the way someone else might discover what one has drawn in that way). Similarly, the mind's eye does not find out about the images that come before it by examining them. Representational images of any sort must be interpreted. One and the same picture, for example, may be used on different occasions to represent utterly different things. Consider the stick-figure below:



³ A difficulty in criticizing views of this sort stems from the fact that their adherents cheerfully admit to what one might otherwise regard as crippling absurdities. When this occurs, one normal route of criticism is blocked. In the present case, one thinks of experiments performed by Kosslyn and his associates designed to determine the acuity and the visual angle of the mind's eye. Admittedly, one is not warranted in rejecting a theory solely because it is in some ways odd or striking. Nevertheless, it is useful to distinguish broadly *conceptual* from *empirical* oddities. It is not just that Kosslyn's view leads to surprising empirical discoveries, but that the "conceptual framework" applied to those discoveries seems in so many ways objectionable.

Such a figure might be used to represent a man walking with difficulty up a hill, or a man sliding backwards down a hill. It might depict how some particular person walked on some particular occasion, or how one might walk, or how one ought to walk up hills. Just in itself, the picture is indefinitely ambiguous. Mental images are not like this. One's image of the Matterhorn may be confused or vague, but it is not ambiguous.

It may be mentioned in passing that ordinary images cannot be disambiguated by supplementing them with additional features. One might, for example, add an arrow to the picture above to indicate direction of travel. Now, however, the arrow must be interpreted. Adding further features points us in the direction of a bottomless regress.

The moral, I think, is that it is wrong to model the having of mental images on the viewing of pictures, whether these pictures are taken to be wax impressions (popular among Greek theorists) or jazzier CRT displays. The notion that in imagining something there must be a something which is imagined (that is, acted on in a certain way, inwardly observed) comes neither from introspection nor from reason but from the feeling that there must *be* something corresponding to the grammatical object in the expression "*A* imagines *X*." I have argued that the grammatical form of such expressions is misleading, in that it parallels the form of the sentence "Harry is drawing (painting, representing) a unicorn."

Still, there is surely a sense in which the having of mental images is *like* perceiving. I think this is right. My contention is only that having an image of *X* before one's mind's eye is not like observing (or "scanning") an *X*. We do, of course, talk about our images in the way we talk about things we observe, we describe them as we would describe things we look at or hear. This suggests that when we report that our image is reddish or round we are doing something analogous to what we do when we report that we are looking at something reddish or round. This, I think, is *not* right. I shall say more about introspective reports in a moment. For now, however, I wish only to observe that it is more plausible to regard imagining an *X*, seeing an *X* before one's mind's eye, as involving our knowing how *X*'s look (would look, might look). Imagining Elizabeth II is to imagine how Elizabeth II looks.

It is of course possible to imagine things one has never seen and which, in consequence, one could not envision. Even in such cases, however, imagining such things seems to involve a belief, or at least a guess, about how they would look (sound, feel, taste, smell). Nor is it that we use our belief to supervise the construction of an interior replica of the thing imagined. Knowing how to tie one's shoelaces need not involve interior analogues of shoelace tyings. Knowing how Elizabeth II looks (or might look), or knowing how the *Marseillaise*

sounds, need not involve the possession and consultation of interior copies of these things.

The suggestion I want to advance here, though hardly original (see, e.g., Neisser, 1976), is that imagination is at one with our capacity to recognize things. In ordinary perception we make use of this capacity in the act of recognizing what we perceptually confront. In order to see X 's, for example, I must in some sense know what X 's are, so that, on those occasions when I am visually confronted by an X , I can recognize that this is what I am looking at. The ability to do this, I want to suggest, involves the exercise of the very same capacity we put to use in imagining X 's.

Have I, despite my initial disclaimer, ended by denying that there are mental images? Not at all. Is the view I have sketched here consistent with what we seem to find when we introspect? I think it is. What I have suggested is that (1) to have a mental image is not to be in some special relation to an item or episode having the properties attributed to the image; and (2) the having of mental images, in consequence, is not like "scanning" CRT's. I have argued that one conception of mental imagery is wrong: the conception, namely, that a mental image is an internal picture (copy, replica). I have sought to replace that conception with one that I think makes sense and fits most of our pretheoretical intuitions about mental imagery. My claims, however, have been logical, not psychological. The connection between imagination and recognition (i.e., perception) may be logical, but the character of our capacity to do these things is, in the end, an empirical matter.

Finally, what about the evidence of introspection? Doesn't this evidence provide grounds for taking mental images to be distinguishable entities which we may, if we like, look at or "scan"? I have, of course, tried to argue that the having of mental images is logically very different from looking at pictures, but one may feel that there *must* be something wrong with my argument on the grounds that introspection reveals a world populated by entities which might as well as not be called mental images. To deny that there are such entities is to fly in the face of what most of us observe every day (though, of course, inwardly).

This is not the place to embark on a detailed discussion of introspection. There are, however, a couple of final points worth making. First, one who argues that the possibility of introspection requires the existence of a class of introspectable objects is simply begging the question against the view I have advanced. I have provided an account of one sort of introspective activity, the having of mental images, which makes no appeal at all to such entities. Similarly, it is clear that a theorist who bases his belief in a realm of special interior objects on the fact that subjects, in the main, respond sensibly and without hesitation to such questions as "Is your image green or blue?" or "Is it

round or square?" is again begging the question against the view I have tried to defend. On that view, the sentence "My image is green and rectangular" has the force roughly of the sentence "I am imagining how something green and rectangular looks." To imagine the latter, one need not be engaged in the inspection of a green and rectangular entity.

A mental image, then, is not a kind of image (an interior one, as opposed to a painted, drawn, or sculpted one) any more than a polecat is a kind of cat or a false pregnancy is a kind of pregnancy. This, I would insist, is a far cry from denying that there are mental images — just as it is a far cry from denying that there are polecats or false pregnancies. Having a mental image of X is to reflect on how X looks (sounds, feels, smells, tastes); it is not to look at something that looks (sounds, feels, smells, tastes) like an X . Mental images are not entities that are looked at or "scanned" because having a mental image is not to look at or "scan" anything.

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