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Two uses of the word "see".

The one: "What do you see there?"—"I see *this*" (and then a description, a drawing, a copy). The other: "I see a likeness between these two faces"—let the man I tell this to be seeing the faces as clearly as I do myself.

The importance of this is the difference of category between the two 'objects' of sight.

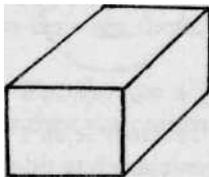
The one man might make an accurate drawing of the two faces, and the other notice in the drawing the likeness which the former did not see.

I contemplate a face, and then suddenly notice its likeness to another. I *see* that it has not changed; and yet I see it differently. I call this experience "noticing an aspect".

Its *causes* are of interest to psychologists.

We are interested in the concept and its place among the concepts of experience.

You could imagine the illustration



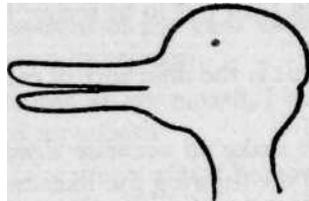
appearing in several places in a book, a text-book for instance. In the relevant text something different is in question every time: here a glass cube, there an inverted open box, there a wire frame of that shape, there three boards forming a solid angle. Each time the text supplies the interpretation of the illustration.

But we can also *see* the illustration now as one thing now as another.—So we interpret it, and *see* it as we *interpret* it.

Here perhaps we should like to reply: The description of what is got immediately, i.e. of the visual experience, by means of an interpretation—is an indirect description. "I see the figure as a box" means: I have a particular visual experience which I have found that I always have when I interpret the figure as a box or when I look at

a box. But if it meant this I ought to know it. I ought to be able to refer to the experience directly, and not only indirectly. (As I can speak of red without calling it the colour of blood.)

I shall call the following figure, derived from Jastrow¹, the duck-rabbit. It can be seen as a rabbit's head or as a duck's.



And I must distinguish between the 'continuous seeing' of an aspect and the 'dawning' of an aspect.

The picture might have been shewn me, and I never have seen anything but a rabbit in it.

Here it is useful to introduce the idea of a picture-object. For instance



would be a 'picture-face'.

In some respects I stand towards it as I do towards a human face. I can study its expression, can react to it as to the expression of the human face. A child can talk to picture-men or picture-animals, can treat them as it treats dolls.

I may, then, have seen the duck-rabbit simply as a picture-rabbit from the first. That is to say, if asked "What's that?" or "What do you see here?" I should have replied: "A picture-rabbit". If I had further been asked what that was, I should have explained by pointing to all sorts of pictures of rabbits, should perhaps have pointed to real rabbits, talked about their habits, or given an imitation of them.

I should not have answered the question "What do you see here?" by saying: "Now I am seeing it as a picture-rabbit". I should simply

¹ *Fact and Fable in Psychology.*

have described my perception: just as if I had said "I see a red circle over there."—

Nevertheless someone else could have said of me: "He is seeing the figure as a picture-rabbit."

It would have made as little sense for me to say "Now I am seeing it as ..." as to say at the sight of a knife and fork "Now I am seeing this as a knife and fork". This expression would not be understood.—Any more than: "Now it's a fork" or "It can be a fork too".

One doesn't 'take' what one knows as the cutlery at a meal for cutlery; any more than one ordinarily tries to move one's mouth as one eats, or aims at moving it.

If you say "Now it's a face for me", we can ask: "What change are you alluding to?"

I see two pictures, with the duck-rabbit surrounded by rabbits in one, by ducks in the other. I do not notice that they are the same. Does it follow from this that I see something different in the two cases?—It gives us a reason for using this expression here.

"I saw it quite differently, I should never have recognized it!" Now, that is an exclamation. And there is also a justification for it.

I should never have thought of superimposing the heads like that, of making *this* comparison between them. For they suggest a different mode of comparison.

Nor has the head seen like *this* the slightest similarity to the head seen like *this*—although they are congruent.

I am shewn a picture-rabbit and asked what it is; I say "It's a rabbit". Not "Now it's a rabbit". I am reporting my perception.—I am shewn the duck-rabbit and asked what it is; I may say "It's a duck-rabbit". But I may also react to the question quite differently.—The answer that it is a duck-rabbit is again the report of a perception; the answer "Now it's a rabbit" is not. Had I replied "It's a rabbit", the ambiguity would have escaped me, and I should have been reporting my perception.

The change of aspect. "But surely you would say that the picture is altogether different now!"

But what is different: my impression? my point of view?—Can I say? I describe the alteration like a perception; quite as if the object had altered before my eyes.

"Now I am seeing *this*", I might say (pointing to another picture, for example). This has the form of a report of a new perception.

The expression of a change of aspect is the expression of a *new* perception and at the same time of the perception's being unchanged.

I suddenly see the solution of a puzzle-picture. Before, there were branches there; now there is a human shape. My visual impression has changed and now I recognize that it has not only shape and colour but also a quite particular 'organization'.—My visual impression has changed;—what was it like before and what is it like now?—If I represent it by means of an exact copy—and isn't that a good representation of it?—no change is shewn.

And above all do *not* say "After all my visual impression isn't the *drawing*; it is *this*—which I can't shew to anyone."—Of course it is not the drawing, but neither is it anything of the same category, which I carry within myself.

The concept of the 'inner picture' is misleading, for this concept uses the '*outer* picture' as a model; and yet the uses of the words for these concepts are no more like one another than the uses of 'numeral' and 'number'. (And if one chose to call numbers 'ideal numerals', one might produce a similar confusion.)

If you put the 'organization' of a visual impression on a level with colours and shapes, you are proceeding from the idea of the visual impression as an inner object. Of course this makes this object into a chimera; a queerly shifting construction. For the similarity to a picture is now impaired.

If I know that the schematic cube has various aspects and I want to find out what someone else sees, I can get him to make a model of what he sees, in addition to a copy, or to point to such a model; even though *he* has no idea of my purpose in demanding two accounts.

But when we have a changing aspect the case is altered. Now the only possible expression of our experience is what before perhaps seemed, or even was, a useless specification when once we had the copy.

And this by itself wrecks the comparison of 'organization' with colour and shape in visual impressions.

If I saw the duck-rabbit as a rabbit, then I saw: these shapes and colours (I give them in detail)—and I saw besides something like this:

and here I point to a number of different pictures of rabbits.—This shews the difference between the concepts.

'Seeing as' is not part of perception. And for that reason it is like seeing and again not like.

I look at an animal and am asked: "What do you see?" I answer: "A rabbit".—I see a landscape; suddenly a rabbit runs past. I exclaim "A rabbit!"

Both things, both the report and the exclamation, are expressions of perception and of visual experience. But the exclamation is so in a different sense from the report: it is forced from us.—It is related to the experience as a cry is to pain.

But since it is the description of a perception, it can also be called the expression of thought.—If you are looking at the object, you need not think of it; but if you are having the visual experience expressed by the exclamation, you are also *thinking* of what you see.

Hence the flashing of an aspect on us seems half visual experience, half thought.

Someone suddenly sees an appearance which he does not recognize (it may be a familiar object, but in an unusual position or lighting); the lack of recognition perhaps lasts only a few seconds. Is it correct to say he has a different visual experience from someone who knew the object at once?

For might not someone be able to describe an unfamiliar shape that appeared before him just as *accurately* as I, to whom it is familiar? And isn't that the answer?—Of course it will not generally be so. And his description will run quite differently. (I say, for example, "The animal had long ears"—he: "There were two long appendages", and then he draws them.)

I meet someone whom I have not seen for years; I see him clearly, but fail to know him. Suddenly I know him, I see the old face in the altered one. I believe that I should do a different portrait of him now if I could paint.

Now, when I know my acquaintance in a crowd, perhaps after looking in his direction for quite a while,—is this a special sort of seeing? Is it a case of both seeing and thinking? or an amalgam of the two, as I should almost like to say?

The question is: *why* does one want to say this?

The very expression which is also a report of what is seen, is here a cry of recognition.

What is the criterion of the visual experience?—The criterion? What do you suppose?

The representation of 'what is seen'.

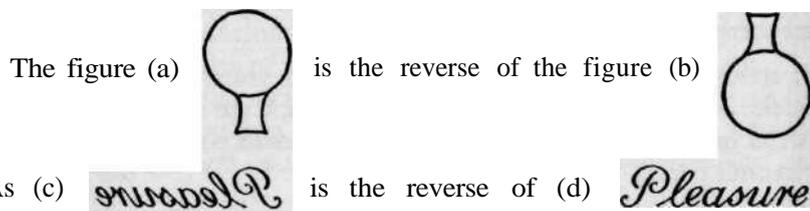
The concept of a representation of what is seen, like that of a copy, is very elastic, and so *together with it* is the concept of what is seen. The two are intimately connected. (Which is *not* to say that they are alike.)

How does one tell that human beings *see* three-dimensionally?—I ask someone about the lie of the land (over there) of which he has a view. "Is it like A&J?" (I shew him with my hand)—"Yes."—"How do you know?"—"It's not misty, I see it quite clear."—He does not give reasons for the surmise. The only thing that is natural to us is to represent what we see three-dimensionally; special practice and training are needed for two-dimensional representation whether in drawing or in words. (The queerness of children's drawings.)

If someone sees a smile and does not know it for a smile, does not understand it as such, does he see it differently from someone who understands it?—He mimics it differently, for instance.

Hold the drawing of a face upside down and you can't recognize the expression of the face. Perhaps you can see that it is smiling, but not exactly what *kind* of smile it is. You cannot imitate the smile or describe it more exactly.

And yet the picture which you have turned round may be a most exact representation of a person's face.



But — I should like to say — there is a different difference between my impressions of (c) and (d) and between those of (a) and (b). (d), for example, looks neater than (c). (Compare a remark of Lewis Carroirs.) (d) is easy, (c) hard to copy.

Imagine the duck-rabbit hidden in a tangle of lines. Now I suddenly notice it in the picture, and notice it simply as the head of a rabbit. At some later time I look at the same picture and notice the same figure, but see it as the duck, without necessarily realizing that it was the same figure both times.—If I later see the aspect change—can I say that the duck and rabbit aspects are now seen quite differently from when I recognized them separately in the tangle of lines? No.

But the change produces a surprise not produced by the recognition.

If you search in a figure (i) for another figure (2), and then find it, you see (i) in a new way. Not only can you give a new kind of description of it, but noticing the second figure was a new visual experience.

But you would not necessarily want to say "Figure (i) looks quite different now; it isn't even in the least like the figure I saw before, though they are congruent!"

There are here hugely many interrelated phenomena and possible concepts.

Then is the copy of the figure an *incomplete* description of my visual experience? No.—But the circumstances decide whether, and what, more detailed specifications are necessary.—It *may* be an incomplete description; if there is still something to ask.

Of course we can say: There are certain things which fall equally under the concept 'picture-rabbit' and under the concept 'picture-duck'. And a picture, a drawing, is such a thing.—But the *impression* is not simultaneously of a picture-duck and a picture-rabbit.

"What I really *see* must surely be what is produced in me by the influence of the object"—Then what is produced in me is a sort of copy, something that in its turn can be looked at, can be before one; almost something like a *materialisation*.

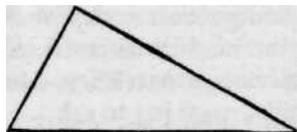
And this materialization is something spatial and it must be possible to describe it in purely spatial terms. For instance (if it is a face) it can smile; the concept of friendliness, however, has no place in an account of it, but is *foreign* to such an account (even though it may subserve it).

If you ask me what I saw, perhaps I shall be able to make a sketch which shews you; but I shall mostly have no recollection of the way my glance shifted in looking at it.

The concept of 'seeing' makes a tangled impression. Well, it is tangled.—I look at the landscape, my gaze ranges over it, I see all sorts of distinct and indistinct movement; *this* impresses itself sharply on me, *that* is quite hazy. After all, how completely ragged what we see can appear! And now look at all that can be meant by "description of what is seen".—But this just is what is called description of what is seen. There is not *one genuine* proper case of such description—the rest being just vague, something which awaits clarification, or which must just be swept aside as rubbish.

Here we are in enormous danger of wanting to make fine distinctions.—It is the same when one tries to define the concept of a material object in terms of 'what is really seen'.—What we have rather to do is to *accept* the everyday language-game, and to note *false* accounts of the matter *as* false. The primitive language-game which children are taught needs no justification; attempts at justification need to be rejected.

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 to stand on the shorter side of the right angle, as a half parallelogram, and as various other things.

"You can think now of *this* now of *this* as you look at it, can regard it now as *this* now as *this*, and then you will see it now *this* way, now /j-." — *What way?* There *is* no further qualification.

But how is it possible to *see* an object according to an *interpretation*?—The question represents it as a queer fact; as if something were being forced into a form it did not really fit. But no squeezing, no forcing took place here.

When it looks as if there were no room for such a form between other ones you have to look for it in another dimension. If there is no room here, there *is* room in another dimension.

(It is in this sense too that there is no room for imaginary numbers in the continuum of real numbers. But what this means is: the application of the concept of imaginary numbers is less like that of real numbers than appears from the look of the *calculations*. It is necessary to get down to the application, and then the concept finds a different place, one which, so to speak, one never dreamed of.)

How would the following account do: "What I can see something *as*, is what it can be a picture of"?

What this means is: the aspects in a change of aspects are those ones which the figure might sometimes have *permanently* in a picture.

A triangle can really be *standing up* in one picture, be hanging in another, and can in a third be something that has fallen over.—That is, I who am looking at it say, not "It may also be something that has fallen over", but "That glass has fallen over and is lying there in fragments". This is how we react to the picture.

Could I say what a picture must be like to produce this effect? No. There are, for example, styles of painting which do not convey anything to me in this immediate way, but do to other people. I think custom and upbringing have a hand in this.

What does it mean to say that I '*see the sphere floating in the air*' in a picture?

Is it enough that this description is the first to hand, is the matter-of-course one? No, for it might be so for various reasons. This might, for instance, simply be the conventional description.

What is the expression of my not merely understanding the picture in this way, for instance, (knowing what it is *supposed* to be), but *seeing* it in this way?—It is expressed by: "The sphere seems to float", "You see it floating", or again, in a special tone of voice, "It floats!"

This, then, is the expression of taking something for something. But not being used as such.

Here we are not asking ourselves what are the causes and what produces this impression in a particular case.

And *is* it a special impression?—"Surely I see something *different* when I see the sphere floating from when I merely see it lying there."—This really means: This expression is justified!—(For taken literally it is no more than a repetition.)

(And yet my impression is not that of a real floating sphere either. There are various forms of 'three-dimensional seeing'. The three-dimensional character of a photograph and the three-dimensional character of what we see through a stereoscope.)

"And is it really a different impression?"—In order to answer this I should like to ask myself whether there is really something different there in me. But how can I find out?—I *describe* what I am seeing differently.

Certain drawings are always seen as flat figures, and others sometimes, or always, three-dimensionally.

Here one would now like to say: the visual impression of what is seen three-dimensionally is three-dimensional; with the schematic cube, for instance, it is a cube. (For the description of the impression is the description of a cube.)

And then it seems queer that with some drawings our impression should be a flat thing, and with some a three-dimensional thing. One asks oneself "Where is this going to end?"

When I see the picture of a galloping horse—do I merely *know* that this is the kind of movement meant? Is it superstition to think I *see* the horse galloping in the picture?—And does my visual impression gallop too?

What does anyone tell me by saying "Now I see it as" ? What consequences has this information? What can I do with it?

People often associate colours with vowels. Someone might find that a vowel changed its colour when it was repeated over and over again. He finds *a* 'now blue—now red', for instance.

The expression "Now I am seeing it as . . ." might have no more significance for us than: "Now I find *a* red".

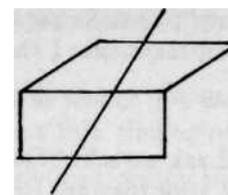
(Linked with physiological observations, even this change might acquire importance for us.)

Here it occurs to me that in conversation on aesthetic matters we use the words: "You have to see it like *this*, this is how it is meant"; "When you see it like *this*, you see where it goes wrong"; "You have to hear this bar as an introduction"; "You must hear it in this key"; "You must phrase it like *this*" (which can refer to hearing as well as to playing).

This

figure

a



is supposed to represent a convex step and to be used in some kind of topological demonstration. For this purpose we draw the straight line *a* through the geometric centres of the two surfaces.—Now if anyone's three-dimensional impression of the figure were never more than momentary, and even so were now concave, now convex, that might make it difficult for him to follow our demonstration. And if he finds that the flat aspect alternates with a three-dimensional one, that is just as if I were to shew him completely different objects in the course of the demonstration.

What does it mean for me to look at a drawing in descriptive geometry and say: "I know that this line appears again here, but I can't *see* it like that"? Does it simply mean a lack of familiarity in operating with the drawing; that I don't 'know my way about' too well?—This familiarity is certainly one of our criteria. What tells us that someone is seeing the drawing three-dimensionally is a certain kind of 'knowing one's way about'. Certain gestures, for instance, which indicate the three-dimensional relations: fine shades of behaviour.

I see that an animal in a picture is transfixed by an arrow. It has struck it in the throat and sticks out at the back of the neck. Let the picture be a silhouette.—Do you *see* the arrow—or do you merely *know* that these two bits are supposed to represent part of an arrow?

(Compare Kohler's figure of the interpenetrating hexagons.)

"But this isn't *seeing*!"—"But this is seeing I"—It must be possible to give both remarks a conceptual justification.

But this is seeing! *In what sense* is it seeing?

"The phenomenon is at first surprising, but a physiological explanation of it will certainly be found."—

Our problem is not a causal but a conceptual one.

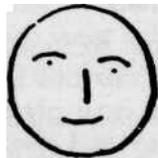
If the picture of the transfixed beast or of the interpenetrating hexagons were shewn to me just for a moment and then I had to describe it, *that* would be my description; if I had to draw it I should

certainly produce a very faulty copy, but it would shew some sort of animal transfixed by an arrow, or two hexagons interpenetrating. That is to say: there are certain mistakes that I should *not* make.

The first thing to jump to my eye in this picture is: there are two hexagons.

Now I look at them and ask myself: "Do I really see them *as* hexagons?"—and for the whole time they are before my eyes? (Assuming that they have not changed their aspect in that time.)—And I should like to reply: "I am not thinking of them as hexagons the whole time."

Someone tells me: "I saw it at once as two hexagons. And that's the *whole* of *what* I saw." But how do I understand this? I think he would have given this description at once in answer to the question "What are you seeing?", nor would he have treated it as one among several possibilities. In this his description is like the answer "A face" on being shewn the figure



The best description I can give of what was shewn me for a moment is *this*:

"The impression was that of a rearing animal." So a perfectly definite description came out.—Was it *seeing*, or was it a thought?

Do not try to analyse your own inner experience.

Of course I might also have seen the picture first as something different, and then have said to myself "Oh, it's two hexagons!" So the aspect would have altered. And does this prove that I in fact *saw* it as something definite?

"Is it a *genuine* visual experience?" The question is: in what sense is it one?

Here it is *difficult* to see that what is at issue is the fixing of concepts. A *concept* forces itself on one. (This is what you must not forget.)

For when should I call it a mere case of knowing, not seeing?—Perhaps when someone treats the picture as a working drawing, *reads* it like a blueprint. (Fine shades of behaviour.—Why are they *important** They have important consequences.)

"To me it is an animal pierced by an arrow." That is what I treat it as; this is my *attitude* to the figure. This is one meaning in calling it a case of 'seeing'.

But can I say in the same sense: "To me these are two hexagons"? Not in the same sense, but in a similar one.

You need to think of the role which pictures such as paintings (as opposed to working drawings) have in our lives. This role is by no means a uniform one.

A comparison: texts are sometimes hung on the wall. But not theorems of mechanics. (Our relation to these two things.)

If you see the drawing as such-and-such an animal, what I expect from you will be pretty different from what I expect when you merely know what it is meant to be.

Perhaps the following expression would have been better: we *regard* the photograph, the picture on our wall, as the object itself (the man, landscape, and so on) depicted there.

This need not have been so. We could easily imagine people who did not have this relation to such pictures. Who, for example, would be repelled by photographs, because a face without colour and even perhaps a face reduced in scale struck them as inhuman.

I say: "We regard a portrait as a human being,"—but when do we do so, and for how long? *Always*, if we see it at all (and do not, say, see it as something else)?

I might say yes to this, and that would determine the concept of regarding-as.—The question is whether yet another concept, related to this one, is also of importance to us: that, namely, of a seeing-as which only takes place while I am actually concerning myself with the picture as the object depicted.

I might say: a picture does not always *live* for me while I am seeing it. "Her picture smiles down on me from the wall." It need not always do so, whenever my glance lights on it.

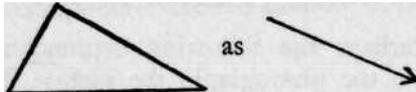
The duck-rabbit. One asks oneself: how can the eye—this *dot*—be looking in a direction?—"See, *if is looking*^ (And one 'looks' oneself as one says this.) But one does not say and do this the whole time one is looking at the picture. And now, what is this "See, it's looking!"—does it express a sensation?

(In giving all these examples I am not aiming at some kind of completeness, some classification of psychological concepts. They are only meant to enable the reader to shift for himself when he encounters conceptual difficulties.)

"Now I see it as a" goes with "I am trying to see it as a" or "I can't see it as a yet". But I cannot try to see a conventional picture of a lion *as* a lion, any more than an F as that letter. (Though I may well try to see it as a gallows, for example.)

Do not ask yourself "How does it work with *met*"—Ask "What do I know about someone else?"

How does one play the game: "It could be *this* too"? (What a figure could also be—which is what it can be seen as—is not simply another

figure. If someone said "I see 

he might still be meaning very different things.)

Here is a game played by children: they say that a chest, for example, is a house; and thereupon it is interpreted as a house in every detail. A piece of fancy is worked into it.

And does the child now *see* the chest as a house?

"He quite forgets that it is a chest; for him it actually is a house." (There are definite tokens of this.) Then would it not also be correct to say he *sees* it as a house?

And if you knew how to play this game, and, given a particular situation, you exclaimed with special expression "Now it's a house!"—you would be giving expression to the dawning of an aspect.

If I heard someone talking about the duck-rabbit, and *now* he spoke in a certain way about the special expression of the rabbit's face I should say, now he's seeing the picture as a rabbit.

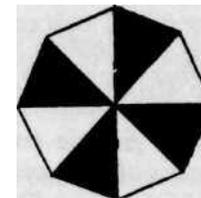
But the expression in one's voice and gestures is the same as if the object had altered and had ended by *becoming* this or that.

I have a theme played to me several times and each time in a slower tempo. In the end I say "Now it's right", or "Now at last it's a march", "Now at last it's a dance".—The same tone of voice expresses the dawning of an aspect.

Tine shades of behaviour.'—When my understanding of a theme is expressed by my whistling it with the correct expression, this is an example of such fine shades.

The aspects of the triangle: it is as if an *image* came into contact, and for a time remained in contact, with the visual impression.

In this, however, these aspects differ from the concave and convex aspects of the step (for example). And also from the aspects of the figure



(which I shall call a "double cross") as a white **cross on a black** ground and as a black cross on a white ground.

You must remember that the descriptions of the alternating aspects are of a different kind in each case.

(The temptation to say "I see it like *fbis*", pointing to the same thing for "it" and "this".) Always get rid of the idea of the private object in this way: assume that it constantly changes, but that you do not notice the change because your memory constantly deceives you.

Those two aspects of the double cross (I shall call them the aspects A) might be reported simply by pointing alternately to an isolated white and an isolated black cross.

One could quite well imagine this as a primitive reaction in a child even before it could talk.

(Thus in reporting the aspects A we point to a part of the double cross.—The duck and rabbit aspects could not be described in an analogous way.)

You only 'see the duck and rabbit aspects' if you are already conversant with the shapes of those two animals. There is no analogous condition for seeing the aspects A.

It is possible to take the duck-rabbit simply for the picture of a rabbit, the double cross simply for the picture of a black cross, but not to take the bare triangular figure for the picture of an object that has fallen over. To see this aspect of the triangle demands *imagination*.

The aspects A are not essentially three-dimensional; a black cross on a white ground is not essentially a cross with a white surface in the background. You could teach someone the idea of the black cross on a ground of different colour without shewing him anything but crosses painted on sheets of paper. Here the 'background' is simply the surrounding of the cross.

The aspects A are not connected with the possibility of illusion in the same way as are the three-dimensional aspects of the drawing of a cube or step.

I can see the schematic cube as a box;—but can I also see it now as a paper, now as a tin, box?—What ought I to say, if someone assured me *he* could?—I can set a limit to the concept here.

Yet think of the expression "*felt*" in connexion with looking at a picture. ("One feels the softness of that material") (*Knowing* in dreams. "And I *knew* that . . . was in the room.")

How does one teach a child (say in arithmetic) "Now take *these* things together!" or "Now *these* go together"? Clearly "taking together" and "going together" must originally have had another meaning for him than that of *seeing* in this way or that.—And this is a remark about concepts, not about teaching methods.

One *kind* of aspect might be called 'aspects of organization'. When the aspect changes parts of the picture go together which before did not.

In the triangle I can see now *this* as apex, *that* as base—now *this* as apex, *that* as base.—Clearly the words "Now I am seeing *this* as the apex" cannot so far mean anything to a learner who has only just met the concepts of apex, base, and so on.—But I do not mean this as an empirical proposition.

"Now he's seeing it like *this*", "now like *that*" would only be said of someone *capable* of making certain applications of the figure quite freely.

The substratum of this experience is the mastery of a technique.

But how queer for this to be the logical condition of someone's having such-and-such an *experience*[^]. After all, you don't say that one only 'has toothache' if one is capable of doing such-and-such.—From this it follows that we cannot be dealing with the same concept of experience here. It is a different though related concept.

It is only if someone *can do*, has learnt, is master of, such-and-such, that it makes sense to say he has had *this* experience.

And if this sounds crazy, you need to reflect that the *concept* of seeing is modified here. (A similar consideration is often necessary to get rid of a feeling of dizziness in mathematics.)

We talk, we utter words, and only *later* get a picture of their life.

For how could I see that this posture was hesitant before I knew that it was a posture and not the anatomy of the animal?

But surely that only means that I cannot use *this* concept to describe the object of sight, just because it has *more* than purely visual reference?—Might I not for all that have a purely visual concept of a hesitant posture, or of a timid face?

Such a concept would be comparable with 'major' and 'minor' which certainly have emotional value, but can also be used purely to describe a perceived structure.

The epithet "sad", as applied for example to the outline face, characterizes the grouping of lines in a circle. Applied to a human being it has a different (though related) meaning. (But this does *not* mean that a sad expression is *like* the feeling of sadness!)

Think of this too: I can only see, not hear, red and green,—but sadness I can hear as much as I can see it.

Think of the expression "I heard a plaintive melody". And now the question is: "Does he *hear* the plaint?"

And if I reply: "No, he doesn't hear it, he merely has a sense of it"—where does that get us? One cannot mention a sense-organ for this 'sense'.

Some would like to reply here: "Of course I hear it!"—Others: "I don't really *bear* it."

We can, however, establish differences of concept here.

We react to the visual impression differently from someone who does not recognize it as timid (in *the full* sense of the word).—But I do *not* want to say here that we feel this reaction in our muscles and joints and that this is the 'sensing'.—No, what we have here is a modified concept of *sensation*.

One might say of someone that he was blind to the *expression* of a face. Would his eyesight on that account be defective?

This is, of course, not simply a question for physiology. Here the physiological is a symbol of the logical.

If you feel the seriousness of a tune, what are you perceiving?—Nothing that could be conveyed by reproducing what you heard.

I can imagine some arbitrary cipher—this, for instance:



to be a strictly correct letter of some foreign alphabet. Or again, to be a faultily written one, and faulty in this way or that: for example, it might be slap-dash, or typical childish awkwardness, or like the flourishes in a legal document. It could deviate, from the correctly written letter in a variety of ways.—And I can see it in various aspects according to the fiction I surround it with. And here there is a close kinship with 'experiencing the meaning of a word'.

I should like to say that what dawns here lasts only as long as I am occupied with the object in a particular way. ("See, it's looking 1")—"I should like to say"—and *is* it so?—Ask yourself "For how long am I struck by a thing?"—For how long do I find it *new*?

The aspect presents a physiognomy which then passes away. It is almost as if there were a face there which at first I *imitate*, and then accept without imitating it.—And isn't this really explanation enough?—But isn't it too much?

"I observed the likeness between him and his father for a few minutes, and then no longer."—One might say this if his face were changing and only looked like his father's for a short time. But it can also mean that after a few minutes I stopped being struck by the likeness.

"After the likeness had struck you, how long were you aware of it?" What kind of answer might one give to this question?—"I soon stopped thinking about it", or "It struck me again from time to time", or "I several times had the thought, how like they are!", or "I marvelled at the likeness for at least a minute"—That is the sort of answer you would get.

I should like to put the question "Am I *aware* of the spatial character, the depth of an object (of this cupboard for instance), the *whole* time

I am seeing it?" Do I, so to speak, */*??*/* it the whole time?—But put the question in the third person.—When would you say of someone that he was aware of it the whole time, and when the opposite?—Of course, one could ask him,—but how did he learn how to answer such a question?—He knows what it means "to feel pain continuously". But that will only confuse him here (as it confuses me).

If he now says he is continuously aware of the depth—do I believe him? And if he says he is aware of it only occasionally (when talking about it, perhaps)—do I believe *that*? These answers will strike me as resting on a false foundation.—It will be different if he says that the object sometimes strikes him as flat, sometimes as three-dimensional.

Someone tells me: "I looked at the flower, but was thinking of something else and was not conscious of its colour." Do I understand this?—I can imagine a significant context, say his going on: "Then I suddenly *saw* it, and realized it was the one which".

Or again: "If I had turned away then, I could not have said what colour it was."

"He looked at it without seeing it."—There is such a thing. But what is the criterion for it?—Well, there is a variety of cases here.

"Just now I looked at the shape rather than at the colour." Do not let such phrases confuse you. Above all, don't wonder "What can be going on in the eyes or brain?"

The likeness makes a striking impression on me; then the impression fades.

It only struck me for a few minutes, and then no longer did.

What happened here?—What can I recall? My own facial expression comes to mind; I could reproduce it. If someone who knew me had seen my face he would have said "Something about his face struck you just now".—There further occurs to me what I say on such an occasion, out loud or to myself. And that is all.—And is this what being struck is? No. These are the phenomena of being struck; but they *are* 'what happens'.

Is being struck looking plus thinking? No. Many of our concepts *cross* here.

('Thinking' and 'inward speech'—I do not say '*to oneself*'—are different concepts.)

The colour of the visual impression corresponds to the colour of the object (this blotting paper looks pink to me, and is pink)—the shape of the visual impression to the shape of the object (it looks rectangular to me, and is rectangular)—but what I perceive in the dawning of an aspect is not a property of the object, but an internal relation between it and other objects.

It is almost as if 'seeing the sign in this context' were an echo of a thought.

"The echo of a thought in sight"—one would like to say.

Imagine a physiological explanation of the experience. Let it be this: When we look at the figure, our eyes scan it repeatedly, always following a particular path. The path corresponds to a particular pattern of oscillation of the eyeballs in the act of looking. It is possible to jump from one such pattern to another and for the two to alternate. (Aspects A.) Certain patterns of movement are physiologically impossible; hence, for example, I cannot see the schematic cube as two interpenetrating prisms. And so on. Let this be the explanation.—"Yes, that shews it is a kind of *seeing*"—You have now introduced a new, a physiological, criterion for seeing. And this can screen the old problem from view, but not solve it.—The purpose of this paragraph however, was to bring before our view what happens when a physiological explanation is offered. The psychological concept hangs out of reach of this explanation. And this makes the nature of the problem clearer.

Do I really see something different each time, or do I only interpret what I see in a different way? I am inclined to say the former. But why?—To interpret is to think, to do something; seeing is a state.

Now it is easy to recognize cases in which we are *interpreting*. When we interpret we form hypotheses, which may prove false.—"I am seeing this figure as a" can be verified as little as (or in the same sense as) "I am seeing bright red". So there is a similarity in the use of "seeing" in the two contexts. Only do not think you knew in advance what the "*state* of seeing" means here! Let the use *teach* you the meaning.

We find certain things about seeing puzzling, because we do not find the whole business of seeing puzzling enough.

If you look at a photograph of people, houses and trees, you do not feel the lack of the third dimension in it. We should not find it easy to describe a photograph as a collection of colour-patches on a flat surface; but what we see in a stereoscope looks three-dimensional in a different way again.

(It is anything but a matter of course that we see 'three-dimensionally' with two eyes. If the two visual images are amalgamated, we might expect a blurred one as a result.)

The concept of an aspect is akin to the concept of an image. In other words: the concept 'I am now seeing it as' is akin to 'I am now having *this* image'.

Doesn't it take imagination to hear something as a variation on a particular theme? And yet one is perceiving something in so hearing it.

"Imagine this changed like this, and you have this other thing." One can use imagining in the course of proving something.

Seeing an aspect and imagining are subject to the will. There is such an order as "Imagine *this*", and also: "Now see the figure like *this*"; but not: "Now see this leaf green".

The question now arises: Could there be human beings lacking in the capacity to see something *as something*—and what would that be like? What sort of consequences would it have?—Would this defect be comparable to colour-blindness or to not having absolute pitch?—We will call it "aspect-blindness"—and will next consider what might be meant by this. (A conceptual investigation.) The aspect-blind man is supposed not to see the aspects A change. But is he also supposed not to recognize that the double cross contains both a black and a white cross? So if told "Shew me figures containing a black cross among these examples" will he be unable to manage it? No, he should be able to do that; but he will not be supposed to say: "Now it's a black cross on a white ground!"

Is he supposed to be blind to the similarity between two faces?—And so also to their identity or approximate identity? I do not want to settle this. (He ought to be able to execute such orders as "Bring me something that looks like *this*")

Ought he to be unable to see the schematic cube as a cube?—It would not follow from that that he could not recognize it as a representation (a working drawing for instance) of a cube. But for him it

would not jump from one aspect to the other.—Question: Ought he to be able to *take* it as a cube in certain circumstances, as we do?—If not, this could not very well be called a sort of blindness.

The 'aspect-blind' will have an altogether different relationship to pictures from ours.

(Anomalies of *this* kind are easy for us to imagine.)

Aspect-blindness will be *akin* to the lack of a 'musical ear'.

The importance of this concept lies in the connexion between the concepts of 'seeing an aspect' and 'experiencing the meaning of a word'. For we want to ask "What would you be missing if you did not *experience* the meaning of a word?"

What would you be missing, for instance, if you did not understand the request to pronounce the word "till" and to mean it as a verb,—or if you did not feel that a word lost its meaning and became a mere sound if it was repeated ten times over?

In a law-court, for instance, the question might be raised how someone meant a word. And this can be inferred from certain facts.—It is a question of *intention*. But could how he experienced a word—the word "bank" for instance—have been significant in the same way?

Suppose I had agreed on a code with someone; "tower" means bank. I tell him "Now go to the tower"—he understands me and acts accordingly, but he feels the word "tower" to be strange in this use, it has not yet 'taken on' the meaning.

"When I read a poem or narrative with feeling, surely something goes on in me which does not go on when I merely skim the lines for information."—What processes am I alluding to?—The sentences have a different *ring*. I pay careful attention to my intonation. Sometimes a word has the wrong intonation, I emphasize it too much or too little. I notice this and shew it in my face. I might later talk about my reading in detail, for example about the mistakes in my tone of voice. Sometimes a picture, as it were an illustration, comes to me. And this seems to help me to read with the correct expression. And I could mention a good deal more of the same kind.—I can also give a word a tone of voice which brings out the meaning of the rest, almost as if this word were a picture of the whole thing. (And this may, of course, depend on sentence-formation.)

When I pronounce this word while reading with expression it is completely filled with its meaning.—"How can this be, if meaning is the use of the word?" Well, what I said was intended figuratively. Not that I chose the figure: it forced itself on me.—But the figurative employment of the word can't get into conflict with the original one.

Perhaps it could be explained why precisely *this* picture suggests itself to me. (Just think of the expression, and the meaning of the expression: "the word that hits it off".)

But if a sentence can strike me as like a painting in words, and the very individual word in the sentence as like a picture, then it is no such marvel that a word uttered in isolation and without purpose can seem to carry a particular meaning in itself.

Think here of a special kind of illusion which throws light on these matters.—I go for a walk in the environs of a city with a friend. As we talk it comes out that I am imagining the city to lie on our right. Not only have I *no* conscious reason for this assumption, but some quite simple consideration was enough to make me realize that the city lay rather to the left ahead of us. I can at first give no answer to the question *why* I imagine the city in *this* direction. I had *no reason* to think it. But though I see no reason still I seem to see certain psychological causes for it. In particular, certain associations and memories. For example, we walked along a canal, and once before in similar circumstances I had followed a canal and that time the city lay on our right.—I might try as it were psychoanalytically to discover the causes of my unfounded conviction.

"But what is this queer experience?"—Of course it is not queerer than any other; it simply differs in kind from those experiences which we regard as the most fundamental ones, our sense impressions for instance.

"I feel as if I knew the city lay over there."—"I feel as if the name 'Schubert' fitted Schubert's works and Schubert's face."

You can say the word "March" to yourself and mean it at one time as an imperative at another as the name of a month. And now say "March!"—and then "March *no further*!"—Does the *same* experience accompany the word both times—are you sure?

If a sensitive ear shews me, when I am playing this game, that I have now *this* now *that* experience of the word—doesn't it also shew

me that I often do not have *any* experience of it in the course of talking?—For the fact that I then also mean it, intend it, now like *this* now like *thaty* and maybe also say so later is, of course, not in question.

But the question now remains why, in connexion with this *game* of experiencing a word, we also speak of 'the meaning' and of 'meaning it'.—This is a different kind of question.—It is the phenomenon which is characteristic of this language-game that in *this* situation we use this expression: we say we pronounced the word with *this* meaning and take this expression over from that other language-game.

Call it a dream. It does not change anything.

Given the two ideas 'fat' and 'lean', would you be rather inclined to say that Wednesday was fat and Tuesday lean, or *vice versa*? (I incline decisively towards the former.) Now have "fat" and "lean" some different meaning here from their usual one?—They have a different use.—So ought I really to have used different words? Certainly not that.—I want to use *these* words (with their familiar meanings) *here*.—Now, I say nothing about the causes of this phenomenon. They *might* be associations from my childhood. But that is a hypothesis. Whatever the explanation,—the inclination is there.

Asked "What do you really mean here by 'fat' and 'lean'?"—I could only explain the meanings in the usual way. I could *not* point to the examples of Tuesday and Wednesday.

Here one might speak of a 'primary' and 'secondary' sense of a word. It is only if the word has the primary sense for you that you use it in the secondary one.

Only if you have learnt to calculate—on paper or out loud—can you be made to grasp, by means of this concept, what calculating in the head is.

The secondary sense is not a 'metaphorical' sense. If I say "For me the vowel *e* is yellow" I do not mean: 'yellow' in a metaphorical sense,—for I could not express what I want to say in any other way than by means of the idea 'yellow'.

Someone tells me: "Wait for me by the bank". Question: Did you, *as you were saying the word*, mean this bank?—This question is of the same kind as "Did you intend to say such-and-such to him on your way to meet him?" It refers to a definite time (the time of walking, as the former question refers to the time of speaking)—but not to an

experience during that time. Meaning is as little an experience as intending.

But what distinguishes them from experience?—They have no experience-content. For the contents (images for instance) which accompany and illustrate them are not the meaning or intending.

The intention *with which* one acts does not 'accompany' the action any more than the thought 'accompanies' speech. Thought and intention are neither 'articulated' nor 'non-articulated'; to be compared neither with a single note which sounds during the acting or speaking, nor with a tune.

'Talking' (whether out loud or silently) and 'thinking' are not concepts of the same kind; even though they are in closest connexion.

The *interest* of the experiences one has while speaking and of the intention is not the same. (The experiences might perhaps inform a psychologist about the '*unconscious*' intention.)

"At that word we both thought of him." Let us assume that each of us said the same words to himself—and how can it mean MORE than that?—But wouldn't even those words be only a *germ*? They must surely belong to a language and to a context, in order really to be the expression of the thought *of* that man.

If God had looked into our minds he would not have been able to see there whom we were speaking of.

"Why did you look at me at that word, were you thinking of. . . .?" —So there is a reaction at a certain moment and it is explained by saying "I thought of. . . ." or "I suddenly remembered"

In saying this you refer to that moment in the time you were speaking. It makes a difference whether you refer to this or to that moment.

Mere explanation of a word does not refer to an occurrence at the moment of speaking.

The language-game "I mean (or meant) *this*" (subsequent explanation of a word) is quite different from this one: "I thought of . . . as I said it." The latter is akin to "It reminded me of"

"I have already remembered three times today that I must write to him." Of what importance is it what went on in me then?—On the

other hand what is the importance, what the interest, of the statement itself?—It permits certain conclusions.

"At these words *he* occurred to me."—What is the primitive reaction with which the language-game begins—which can then be translated into these words? How do people get to use these words?

The primitive reaction may have been a glance or a gesture, but it may also have been a word.

"Why did you look at me and shake your head?"—"I wanted to give you to understand that you" This is supposed to express not a symbolic convention but the purpose of my action.

Meaning it is not a process which accompanies a word. For no *process* could have the consequences of meaning.

(Similarly, I think, it could be said: a calculation is not an experiment, for no experiment could have the peculiar consequences of a multiplication.)

There are important accompanying phenomena of talking which are often missing when one talks without thinking, and this is characteristic of talking without thinking. But *they* are not the thinking.

"Now I know!" What went on here?—So did I *not* know, when I declared that now I knew?

You are looking at it wrong.

(What is the signal for?)

And could the 'knowing' be called an accompaniment of the exclamation?

The familiar physiognomy of a word, the feeling that it has taken up its meaning into itself, that it is an actual likeness of its meaning—there could be human beings to whom all this was alien. (They would not have an attachment to their words.)—And how are these feelings manifested among us?—By the way we choose and value words.

How do I find the 'right' word? How do I choose among words? Without doubt it is sometimes as if I were comparing them by fine differences of smell: *That* is too *that* is too —*this* is the right one.—But I do not always have to make judgments, give explanations; often I might only say: "It simply isn't right yet". I am dissatisfied, I go on looking. At last a word comes: "*That's* it!" *Sometimes* I can say why. This is simply what searching, this is what finding, is like here.

But doesn't the word that occurs to you somehow 'come' in a special way? Just attend and you'll see I—Careful attention is no use to me. All it could discover would be what is *now* going on in *me*.

And how can I, precisely now, listen for it at all? I ought to have to wait until a word occurs to me anew. This, however, is the queer thing: it seems as though I did not have to wait on the occasion, but could give myself an exhibition of it, even when it is not actually taking place. How?—I *act* it.—But *what* can I learn in this way? What do I reproduce?—Characteristic accompaniments. Primarily: gestures, faces, tones of voice.

It is possible—and this is important—to say a *great deal* about a fine aesthetic difference.—The first thing you say may, of course, be just: "*This* word fits, *that* doesn't"—or something of the kind. But then you can discuss all the extensive ramifications of the tie-up effected by each of the words. That first judgment is *not* the end of the matter, for it is the field of force of a word that is decisive.

"The word is on the tip of my tongue." What is going on in my consciousness? That is not the point at all. Whatever did go on was not what was meant by that expression. It is of more interest what went on in my behaviour.—"The word is on the tip of my tongue" tells you: the word which belongs here has escaped me, but I hope to find it soon. For the rest the verbal expression does no more than certain wordless behaviour.

James, in writing of this subject, is really trying to say: "What a remarkable experience! The word is not there yet, and yet in a certain sense is there,—or something is there, which *cannot* grow into anything but this word."—But this is not experience at all. *Interpreted* as experience it does indeed look odd. As does intention, when it is interpreted as the accompaniment of action; or again, like minus one interpreted as a cardinal number.

The words "It's on the tip of my tongue" are no more the expression of an experience than "Now I know how to go on!"—We use them in *certain situations*, and they are surrounded by behaviour of a special kind, and also by some characteristic experiences. In particular they are frequently followed by *finding* the word. (Ask yourself: "What would it be like if human beings *never* found the word that was on the tip of their tongue?")

Silent 'internal' speech is not a half hidden phenomenon which is as it were seen through a veil. It is not hidden *at all*, but the concept may easily confuse us, for it runs over a long stretch cheek by jowl with the concept of an 'outward' process, and yet does not coincide with it.

(The question whether the muscles of the larynx are innervated in connexion with internal speech, and similar things, may be of great interest, but not in our investigation.)

The close relationship between 'saying inwardly' and 'saying' is manifested in the possibility of telling out loud what one said inwardly, and of an outward action's *accompanying* inward speech. (I can sing inwardly, or read silently, or calculate in my head, and beat time with my hand as I do so.)

"But saying things inwardly is surely a certain activity which I have to learn!" Very well; but what is 'doing' and what is 'learning' here?

Let the use of words teach you their meaning. (Similarly one can often say in mathematics: let the *proof* teach you *what* was being proved.)

"So I don't *really* calculate, when I calculate in my head?"—After all, you yourself distinguish between calculation in the head and perceptible calculation! But you can only learn what 'calculating in the head' is by learning what 'calculating' is; you can only learn to calculate in your head by learning to calculate.

One can say things in one's head very 'distinctly', when one reproduces the tone of voice of one's sentences by humming (with closed lips). Movements of the larynx help too. But the remarkable thing is precisely that one then *hears* the talk in one's imagination and does not merely/*?*/ the skeleton of it, so to speak, in one's larynx. (For human beings could also well be imagined calculating silently with movements of the larynx, as one can calculate on one's fingers.)

A hypothesis, such as that such-and-such went on in our bodies when we made internal calculations, is only of interest to us in that it points to a possible use of the expression "I said to myself"; namely that of inferring the physiological process from the expression.

That what someone else says to himself is hidden from me is part of the *concept* 'saying inwardly'. Only "hidden" is the wrong word

here; for if it is hidden from me, it ought to be apparent to him, *he* would have to *know* it. But he does not 'know' it; only, the doubt which exists for me does not exist for him.

"What anyone says to himself within himself is hidden from me" might of course also mean that I can for the most part not *guess* it, nor can I read it off from, for example, the movements of his throat (which would be a possibility.)

"I know what I want, wish, believe, feel," (and so on through all the psychological verbs) is either philosophers' nonsense, or at any rate *not* a judgment *a priori*.

"I know . . ." may mean "I do not doubt. . ." but does not mean that the words "I doubt. . ." are *senseless*, that doubt is logically excluded.

One says "I know" where one can also say "I believe" or "I suspect"; where one can find out. (If you bring up against me the case of people's saying "But I must know if I am in pain!", "Only you can know what you feel", and similar things, you should consider the occasion and purpose of these phrases. "War is war" is not an example of the law of identity, either.)

It is possible to imagine a case in which I *could* find out that I had two hands. Normally, however, I *cannot* do so. "But all you need is to hold them up before your eyes!"—If I am *now* in doubt whether I have two hands, I need not believe my eyes either. (I might just as well ask a friend.)

With this is connected the fact that, for instance, the proposition "The Earth has existed for millions of years" makes clearer sense than "The Earth has existed in the last five minutes". For I should ask anyone who asserted the latter: "What observations does this proposition refer to; and what observations would count against it?"—whereas I know what ideas and observations the former proposition goes with.

"A new-born child has no teeth."—"A goose has no teeth."—"A rose has no teeth."—This last at any rate—one would like to say—is obviously true! It is even surer than that a goose has none.—And yet it is none so clear. For where should a rose's teeth have been? The goose has none in its jaw. And neither, of course, has it any in its

wings; but no one means that when he says it has no teeth.—Why, suppose one were to say: the cow chews its food and then dungs the rose with it, so the rose has teeth in the mouth of a beast. This would not be absurd, because one has no notion in advance where to look for teeth in a rose. ((Connexion with 'pain in someone else's body'.))

I can know what someone else is thinking, not what I am thinking.

It is correct to say "I know what you are thinking", and wrong to say "I know what I am thinking."

(A whole cloud of philosophy condensed into a drop of grammar.)

"A man's thinking goes on within his consciousness in a seclusion in comparison with which any physical seclusion is an exhibition to public view."

If there were people who always read the silent internal discourse of others—say by observing the larynx—would they too be inclined to use the picture of complete seclusion?

If I were to talk to myself out loud in a language not understood by those present my thoughts would be hidden from them.

Let us assume there was a man who always guessed right what I was saying to myself in my thoughts. (It does not matter how he manages it.) But what is the criterion for his guessing *right*? Well, I am a truthful person and I confess that he has guessed right.—But might I not be mistaken, can my memory not deceive me? And might it not always do so when—without lying—I express what I have thought within myself?—But now it does appear that 'what went on within me' is not the point at all. (Here I am drawing a construction-line.)

The criteria for the truth of the *confession* that I thought such-and-such are not the criteria for a true *description* of a process. And the importance of the true confession does not reside in its being a correct and certain report of a process. It resides rather in the special consequences which can be drawn from a confession whose truth is guaranteed by the special criteria of *truthfulness*.

(Assuming that dreams can yield important information about the dreamer, what yielded the information would be truthful accounts of dreams. The question whether the dreamer's memory deceives him when he reports the dream after waking cannot arise, unless indeed we introduce a completely new criterion for the report's 'agreeing'

with the dream, a criterion which gives us a concept of 'truth' as distinct from 'truthfulness' here.)

There is a game of 'guessing thoughts'. A variant of it would be this: I tell A something in a language that B does not understand. B is supposed to guess the meaning of what I say.—Another variant: I write down a sentence which the other person cannot see. He has to guess the words or their sense.—Yet another: I am putting a jig-saw puzzle together; the other person cannot see me but from time to time guesses my thoughts and utters them. He says, for instance, "Now where is this bit?"—"Now I know how it fits!"—"I have no idea what goes in here,"—"The sky is always the hardest part" and so on—but / need not be talking to myself either out loud or silently at the time.

All this would be guessing at thoughts; and the fact that it does not actually happen does not make thought any more hidden than the unperceived physical proceedings.

"What is *internal* is hidden from us."—The future is hidden from us. But does the astronomer think like this when he calculates an eclipse of the sun?

If I see someone writhing in pain with evident cause I do not think: all the same, his feelings are hidden from me.

We also say of some people that they are transparent to us. It is, however, important as regards this observation that one human being can be a complete enigma to another. We learn this when we come into a strange country with entirely strange traditions; and, what is more, even given a mastery of the country's language. We do not *understand* the people. (And not because of not knowing what they are saying to themselves.) We cannot find our feet with them.

"I cannot know what is going on in him" is above all a *picture*. It is the convincing expression of a conviction. It does not give the reasons for the conviction. *They* are riot readily accessible.

If a lion could talk, we could not understand him.

It is possible to imagine a guessing of intentions like the guessing of thoughts, but also a guessing of what someone is actually *going to do*.

To say "He alone can know what he intends" is nonsense: to say "He alone can know what he will do", wrong. For the prediction contained in my expression of intention (for example "When it strikes

five I am going home") need not come true, and someone **else may** know what will really happen.

Two points, however, are important: one, that in many cases someone else cannot predict my actions, whereas I foresee them in my intentions; the other, that my prediction (in my expression of intention) has not the same foundation as his prediction of what I shall do, and the conclusions to be drawn from these predictions are quite different.

I can be as *certain* of someone else's sensations as of any fact. But this does not make the propositions "He is much depressed", " $25 \times 25 = 625$ " and "I am sixty years old" into similar instruments. The explanation suggests itself that the certainty is of a different *kind*.—This seems to point to a psychological difference. But the difference is logical.

"But, if you are *certain*, isn't it that you are shutting your eyes in face of doubt?"—They are shut.

Am I less certain that this man is in pain than that twice two is f_{our} ?—Does this shew the former to be mathematical certainty?—'Mathematical certainty' is not a psychological concept.

The kind of certainty is the kind of language-game.

"He alone knows his motives"—that is an expression of the fact that we ask *him* what his motives are.—If he is sincere he will tell us them; but I need more than sincerity to guess his motives. This is where there is a kinship with the case of *knowing*.

Let yourself be *struck* by the existence of such a thing as our language-game of: confessing the motive of my action.

We remain unconscious of the prodigious diversity of all the everyday language-games because the clothing of our language makes everything alike.

Something new (spontaneous, 'specific') is always a language-game.

What is the difference between cause and motive?—How is the motive *discovered*, and how the cause?

There is such a question as: "Is this a reliable way of judging people's motives?" But in order to be able to ask this we must know what "judging a motive" means; and we do not learn this by being told what '*motive*' is and what '*judging*' is.

One judges the length of a rod and can look for and find some method of judging it more exactly or more reliably. So—you say—*what* is judged here is independent of the method of judging it. What length *is* cannot be defined by the method of determining length.—To think like this is to make a mistake. What mistake?—To say "The height of Mont Blanc depends on how one climbs it" would be queer. And one wants to compare 'ever more accurate measurement of length' with the nearer and nearer approach to an object. But in certain cases it is, and in certain cases it is *not*, clear what "approaching nearer to the length of an object" means. What "determining the length" means is not learned by learning what *length* and *determining* are; the meaning of the word "length" is learnt by learning, among other things, what it is to determine length.

(For this reason the word "methodology" has a double meaning. Not only a physical investigation, but also a conceptual one, can be called "methodological investigation".)

We should sometimes like to call certainty and belief tones, colourings, of thought; and it is true that they receive expression in the *tone* of voice. But do not think of them as 'feelings' which we have in speaking or thinking.

Ask, not: "What goes on in us when we are certain that . . . ?"—but: How is 'the certainty that this is the case' manifested in human action?

"While you can have complete certainty about someone else's state of mind, still it is always merely subjective, not objective, certainty."—These two words betoken a difference between language-games.

There can be a dispute over the correct result of a calculation (say of a rather long addition). But such disputes are rare and of short duration. They can be decided, as we say, 'with certainty',

Mathematicians do not in general quarrel over the result of a calculation. (This is an important fact.)—If it were otherwise, if for instance one mathematician was convinced that a figure had altered unperceived, or that his or someone else's memory had been deceived, and so on—then our concept of 'mathematical certainty' would not exist.

Even then it might always be said: "True we can never *know* what the result of a calculation is, but for all that it always has a quite

definite result. (God knows it.) Mathematics is indeed of the highest certainty—though we only have a crude reflection of it."

But am I trying to say some such thing as that the certainty of mathematics is based on the reliability of ink and paper? *No.* (That would be a vicious circle.)—I have not said *why* mathematicians do not quarrel, but only *that* they do not.

It is no doubt true that you could not calculate with certain sorts of paper and ink, if, that is, they were subject to certain queer changes—but still the fact that they changed could in turn only be got from memory and comparison with other means of calculation. And how are these tested in their turn?

What has to be accepted, the given, is—so one could *say*—*forms of life.*

Does it make sense to say that people generally agree in their judgments of colour? What would it be like for them not to?—One man would say a flower was red which another called blue, and so on.—But what right should we have to call these people's words "red" and "blue" *our* 'colour-words'?"—

How would they learn to use these words? Arid is the language-game which they learn still such as we call the use of 'names of colour'? There are evidently differences of degree here.

This consideration must, however, apply to mathematics too. If there were not complete agreement, then neither would human beings be learning the technique which we learn. It would be more or less different from ours up to the point of unrecognizability.

"But mathematical truth is independent of whether human beings know it or not!"—Certainly, the propositions "Human beings believe that twice two is four" and "Twice two is four" do not mean the same. The latter is a mathematical proposition; the other, if it makes sense at all, may perhaps mean: human beings have *arrived* at the mathematical proposition. The two propositions have entirely different *uses*.—But what would *this* mean: "Even though everybody believed that twice two was five it would still be four"?—For what would it be like for everybody to believe that?—Well, I could imagine, for instance, that people had a different calculus, or a technique which we should

not call "calculating". But would it be *wrong*? (Is a coronation *wrong*? To beings different from ourselves it might look extremely odd.)

Of course, in one sense mathematics is a branch of knowledge,—but still it is also an *activity*. And 'false moves' can only exist as the exception. For if what we now call by that name became the rule, the game in which they were false moves would have been abrogated.

"We all learn the same multiplication table." This might, no doubt, be a remark about the teaching of arithmetic in our schools,—but also an observation about the concept of the multiplication table. ("In a horse-race the horses generally run as fast as they can.")

There is such a thing as colour-blindness and there are ways of establishing it. There is in general complete agreement in the judgments of colours made by those who have been diagnosed normal. This characterizes the concept of a judgment of colour.

There is in general no such agreement over the question whether an expression of feeling is genuine or not.

I am sure, *sure*, that he is not pretending; but some third person is not. Can I always convince him? And if not is there some mistake in his reasoning or observations?

"You're all at sea!"—we say this when someone doubts what we recognize as clearly genuine—but we cannot prove anything.

Is there such a thing as 'expert judgment' about the genuineness of expressions of feeling?—Even here, there are those whose judgment is 'better' and those whose judgment is 'worse'.

Correcter prognoses wiD generally issue from the judgments of those with better knowledge of mankind.

Can one learn this knowledge? Yes; some can. Not, however, by taking a course in it, but through *"experience"*.—Can someone else be a man's teacher in this? Certainly. From time to time he gives him the right *tip*.—This is what 'learning' and 'teaching' are like here.—What one acquires here is not a technique; one learns correct judgments. There are also rules, but they do not form a system, and only experienced people can apply them right. Unlike calculating-rules.

What is most difficult here is to put this indefiniteness, correctly and unfalsified, into words.

"The genuineness of an expression cannot be proved; one has to feel it."—Very well,—but what does one go on to do with this recognition of genuineness? If someone says "Voilà ce que peut dire un coeur vraiment e"pris"—and if he also brings someone else to the same mind,—what are the further consequences? Or are there none, and does the game *end* with one person's relishing what another does not?

There are certainly *consequences*, but of a diffuse kind. Experience, that is varied observation, can inform us of them, and they too are incapable of general formulation; only in scattered cases can one arrive at a correct and fruitful judgment, establish a fruitful connexion. And the most general remarks yield at best what looks like the fragments of a system.

It is certainly possible to be convinced by evidence that someone is in such-and-such a state of mind, that, for instance, he is not pretending. But 'evidence' here includes 'imponderable' evidence.

The question is: what does imponderable evidence *accomplish*'?

Suppose there were imponderable evidence for the chemical (internal) structure of a substance, still it would have to prove itself to be evidence by certain consequences which *can* be weighed.

(Imponderable evidence might convince someone that a picture was a genuine But it is *possible* for this to be proved right by documentary evidence as well.)

Imponderable evidence includes subtleties of glance, of gesture, of tone.

I may recognize a genuine loving look, distinguish it from a pretended one (and here there can, of course, be a 'ponderable' confirmation of my judgment). But I may be quite incapable of describing the difference. And this not because the languages I know have no words for it. For why not introduce new words?—If I were a very talented painter I might conceivably represent the genuine and the simulated glance in pictures.

Ask yourself: How does a man learn to get a 'nose' for something? And how can this nose be used?

Pretending is, of course, only a special case of someone's producing (say) expressions of pain when he is not in pain. For if this is possible

at all, why should it always be pretending that is taking pkce—this very special pattern in the weave of our lives?

A child has much to learn before it can pretend. (A dog cannot be a hypocrite, but neither can he be sincere.)

There might actually occur a case where we should say "This man *believes* he is pretending."