Chapter 2
Experience and the Object of Knowledge

The Cartesian conception of mind is based on the dichotomy of external and internal, which, in its turn, is closely related to the classical conception of experience. Therefore, a consistent redefinition of mind in pragmatism requires a revision of the notion of experience formulated by early modern philosophers. In this view, experience is sense experience. Sense organs function like channels connecting internal consciousness to the so-called external world. Perceptions are caused by external things but these external causes itself cannot be perceived. Perceptions are effects of these hidden causes. The object of knowledge is the external world as it is independently of what we say or think about it and independently of our epistemic access to (perceptions of) the world. Sense perceptions are internally conditioned which is why they do not directly inform us about the real character of the world. This is because, among other things, effects don't resemble their causes. For example George Berkeley wondered how colours could resemble something than cannot even be seen.

The classical view of experience can be questioned. The same holds for the dichotomy of internal and external as well as that of apparent and real. The founders of pragmatism challenged classical philosophy by broadening the concept of experience. The role of action in experience must be taken into account. This, in its turn, leads to a radical redefinition not only of the concept of experience, but also of the notion of the object of knowledge. The hidden causes of perceptions are replaced by the (at present) hidden consequences of action as the ultimate goal of what has to be known. To know is to know what to do in order to achieve one's goals. Further, the difference between mere belief and true knowledge (absolutely a priori truths) is not tenable. In Dewey's operational conception of knowledge the earlier distinction between mere belief and true knowledge is replaced by the distinction between what is had and what is known.

P. Määttänen, *Mind in Action*, Studies in Applied Philosophy,
Epistemology and Rational Ethics 18, DOI 10.1007/978-3-319-17623-9_2

2.1 Classical Conception of the Object of Knowledge

Richard Rorty has a point in his claim that the idea of a theory of knowledge grew around the problem of the "external world", that is, "the problem of knowing whether our inner representations were accurate" (Rorty 1980, pp. 139–140). The first and most radical problem concerns serious ontological scepticism: how do we know that the external world even exists. In its original Cartesian form the external world is material and the internal world is immaterial. In formulating his new conception of mind Descartes changed the meaning of the notion of idea. Platonic ideas are forms, but for Descartes the knowing subject is a thinking and unextended thing. Ideas in such a mind cannot be forms because form requires extension, spatiality. The epistemological problems become acute.

The Cartesian conception of mind is based on a container metaphor (Lakoff and Johnson 1999). Ideas are in the mind like cookies in a jar. People have a privileged access to their own consciousness by introspection. It became a specific epistemological problem to explain how the internal universal ideas can be knowledge of external particular objects. Ideas are universal and intentional internal units that refer to (are about of) external material objects. How are ideas and objects related to each other while they are so different things, and how can one universal idea be about all its objects that are also different in many ways? Locke based his answer on similarity, or conformity, to be more accurate. Idea and its object have similar form (a primary quality in contrast to secondary qualities like colours, for which no account of the connection can be given). The idea of circle is round and the epistemological relation between the idea and circles in the world is based on the same form, there is conformity between them. However, Locke could not solve the problem of a general triangle that should be "neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon; but all and none of these at once" (Locke 1959, p. 274; see Määttänen 1993, pp. 21–30). This general triangle is required because of the demand of conformity between the idea and all these different triangles in the world.

This sharp separation of the mental (or intellectual) and the material (or sensibility) was a problem also for Immanuel Kant who developed his doctrine of schematism for explaining the connection (Määttänen 1993, pp. 21–29). Kant's Copernican revolution changed conceptions about perception but the general framework of experience remained the same. The hidden causes of perception, about which experience is silent as David Hume said, are changed to the thing it itself. The character of perception is, however, changed. The main idea of the Copernican revolution is that all right, we cannot get from effects to their causes, but there is no need to. Instead we can get from causes to their effects. This is related to the method of analysis and synthesis that has ancient roots. In the Middle Ages phenomena were investigated by searching their causes by analysis, and synthesis was the opposite procedure. Phenomena were produced by manipulating their causes or constructed (synthesized). This lead to the principle

that one can get certain knowledge of things if one have access to their causes. For example Thomas Hobbes and Benedict Spinoza appealed to this principle (Hobbes 1962, pp. 3, 10–11; Spinoza 1955, p. 34). Kant applied the notion of synthesis to experience. Pure synthesis gives the manifold (das Mannigfaltige) a priori (Kant KdrV, A 77/b 103). Certain knowledge about nature can be achieved because nature as an object of experience is a product of the synthetic activity of pure understanding.

The outcome of all this is that to perceive is not to receive passively impressions from the world. Perception is an active and constructive process. This entails the character of the perceiving mind has an effect on what is perceived. Thus in order to find out what the experienced world is like one has to find out first what the mind is like and what is the mind's affect on perceptions. This is one important task of aprioristic epistemology. The need for such an epistemology is motivated by the view of perception as an outcome of the effect of the thing in itself and internal conditions.

The classical tradition tempts one to say that dependence on internal conditions can be termed mind-dependence. For early modern philosophers mind was immaterial consciousness. After Kant these internal conditions are often called concepts. Neo-Kantians tends to say that the experienced world is carved up by concepts (see for example Putnam 1981). The question that remains unanswered is what is the concept of concept applied in this context.

The Cartesian view of mind and its contents was mediated to contemporary psychology by Franz Brentano who made the unfortunate analogy between language and mind (Brentano 1924, pp. 124–125). Medieval philosophy of language had come to the conclusion that the words "horse" and "centaur" function in language in the same way quite independently of the fact that there are no centaurs. The words are intentional units that purport to refer to their intentional objects. The words are about something. Intentionality is *aboutness*. In a similar manner, mind consists of intentional units that are about something. Contemporary talk about mental or internal representations continues this tradition with respect to the dichotomy of internal and external. Dependence on internal conditions is dependence on internal mental states (internal representations, meanings or concepts). And intentionality became a criterion of mentality. It is a good criterion, but there is a better way to explain what it amounts to.

The classical view of experience and of the object of knowledge has many flaws. Once the role of bodily organs in perception is accepted the dependence on internal conditions becomes more complicated. Some internal conditions are material conditions, for example biological properties of the sense organs and the brain. Consider colours. In order to see the table as brown we need light, the table that reflects light and the eyes belonging to a living organism. Perceived colours are the joint outcome of these factors. Therefore it is justified to say that colours are properties of the concrete interaction of the live organisms and its environment although colours are experienced to be attributes of the perceived object. There is no reason

to refer to hidden and thus unknown causes of perceptions. All factors involved are known well enough. We perceive the table as a material object in spite of the fact that we perceive it as coloured by virtue of having eyes. The table is the cause of its being perceived. The hidden causes can be removed from the discussion, and this removes also the need of any specific a priori epistemology to explain how we can gain knowledge about something that is in principle hidden from us. It may be argued that the table as a swarm of elementary particles is a hidden cause of perceptions, but this really does not change anything. Elementary particles are observed with external instruments, and observation with external instruments can be analysed in the same way.

In addition to material conditions there are, of course, conceptual conditions. Perceptions are interpreted with linguistic meanings, concepts and theories. Accordingly we can distinguish between two kinds of viewpoints, physical and conceptual. Concepts and theories change and conceptual viewpoint changes, we get new interpretations of issues. But physical viewpoint is different. Mind is inseparable from the body, and the body determines one's viewpoint to the world. Material conditions that determine the physical viewpoint are difficult to change. Biological evolution changes bodily organs, and external instruments that mediate and modify perceptions can be developed. Physical viewpoint is also objective in the sense that bodily organs are exactly as objective elements in the physical world as the physical objects perceived.

The possibility of radical ontological scepticism is one consequence of the classical doctrine of the object of knowledge combined with the notion of immaterial mind. How can one know that these hidden causes of perceptions even exist? The traditional sceptical problem is sometimes reformulated in contemporary terms in papers like Are We Brains in a Vat? (Putnam 1981). In this setting a naughty scientist has put the brain in a vat and manipulates its nerve endings. The brain is supposed to ponder whether it can know for sure that it is not just a brain in a vat. This question does not presume any immaterial mind, but it presumes that the brain is able to do the same things as the Cartesian soul. However, strictly speaking nobody has ever managed to show how knowledge (meanings, concepts, ideas, you name it) can literally be located in the brain, how the brain can just by itself take care of cognition. The so-called neural correlates of consciousness found by brain imaging are not enough to show this. This discussion takes for granted the classical distinction between external and internal, and this starting point seems to be a mere presumption inherited from the philosophical tradition rather than an established fact.

The brain-in-a-vat discussion is also a striking example of how the role of the rest of the body and the bodily action is simply ignored as if it had nothing to do with experience, cognition and knowledge. There are more and more evidence for the significance of the body and motor activity. Naturalism does not imply that mind must be reduced to the brain. Philosophical pragmatism with its emphasis on the significance of action changes the notion of experience and offers an alternative line of inquiry.

2.2 The Role of Action in Experience

According to Peirce the concept of experience is broader than that of perception. Experience includes much that is not perceived. “It is the compulsion, the absolute constraint upon us to think otherwise than we have been thinking that constitutes experience. Now constraint and compulsion cannot exist without resistance, and resistance is effort opposing change. Therefore there must be an element of effort in experience; and it is this which gives it its peculiar character” (CP 1.336). Effort and resistance are experienced in action. To experience is to be an active agent in the world. In a similar manner John Dewey criticized what he called a spectator theory of knowledge. As living creatures we perceive and act.

Now we face the question of the relation between perception and action. They cannot be simply separated as different elements in experience. They function together at the same time. Peirce characterized the difference as follows. In action “our modification of other things is more prominent than their reaction on us” while in perception “their effect on us is overwhelmingly greater than our effect on them” (CP 1.324). Precisely because of this difference action not only broadens the concept of experience but also changes its character.

Effort meets resistance that is compulsive. Hard facts resist our will. Peirce describes the character of hard facts with a sceptic walking down Wall Street “debating himself the existence of an external world; but if in his brown study he jostles up against somebody who angrily draws off and knocks him down, the sceptic is unlikely to carry his scepticism so far as to doubt whether anything beside the ego was concerned in that phenomenon” (CP 1.431). Hard facts make them to be recognized in experience, and in order to experience this one must act and meet the resistance of hard facts.

The resistance of the world forces one to accommodate one’s activity to the hard facts, which function as objective conditions of action. The body is the first and necessary instrument for experiencing the world. Muscular effort meets the resistance of the physical world. Bodily behaviour accommodates to these objective conditions. To some extent the physical world can be changed by one’s own effort, but this has obvious limits. We can change these conditions by using external instruments like tools, machines and other devices, but the same relation between effort and resistance remains. This is why action as an element of experience is more forceful than perception alone. “The authority of experience consists in the fact that its power cannot be resisted” (CP 7.437). This authority is experienced when we act in the world.

There is a difference between action and perception, but they function together. This entails that action plays a role also in perception. Classical empiricism maintained that perception is passive. Sense organs only receive impression from the world. This view has changed. Internal conditions have an effect on how the world is perceived. It is a commonplace that perceptions are interpreted with meanings, concepts, beliefs, theories and so on. The lesson to learn from pragmatism is

that action is involved in the ways we perceive the world. This is observed also in contemporary cognitive science. According to Alva Noë what we perceive is determined by what we do or what we know how to do (Noë 2004, p. 1).

Peirce coined the term *percept* for expressing this idea. Percept is not the same as perception, which in the classical tradition is considered to be in the mind. There is a double awareness involved in percepts (CP 7.625). A table, say, is perceived to be brown and round. Perception is interpreted with meanings; it is internally conditioned. Objects as perceived, as cognised in the sign, are immediate objects (CP 8.183). This is one aspect of percepts. On the other hand, there is an element of hardness in percepts. The hardness of fact "lies in the insistency of the percept" (CP 7.659). Percepts resist our will. Percepts are perceived objective conditions of action.

In other words, the table is experienced as an object of perception, as immediate object. But at the same time it is experienced as an object of (potential) action where muscular effort meets resistance. The awareness of this on the ground of mere perceptions is based on earlier practical experience of dealing with rigid objects like tables. This earlier experience gives grounds to anticipate what will happen if some muscular effort takes place. As we shall see later, habits of action are formed when action is accommodated to objective conditions of action. These habits are meanings (Chap. 4). The hardness of percepts is based on the fact that they are interpreted with these non-linguistic (or tacit) meanings. It is the same table that is, at the same time, an object of perception and an object of motor action. The table is made of the same stuff as my body; both are equally objective and real parts of the material world. The immediate object, the table as perceived, is the very same object that resists muscular effort as a material object. Peirce goes as far as to say that, rightly understood, it is correct to say that we "directly perceive matter" (CP 1.419). Once the principle of ontological symmetry is accepted it is not problematic to say that we perceive matter.

So it makes sense to say that we perceive more than what classical empiricism would allow, but on the other hand Peirce claims that we experience something that cannot, properly speaking, be perceived. "We perceive objects brought before us; but that which we especially experience—the kind of thing to which the word 'experience' is more particularly applied—is an event" (CP 1.336).

Now what is an event? Event is a temporal process that involves some kind of change. A situation, say $\mathbf{S_1}$, is changed to another, say $\mathbf{S_2}$. There are events that take place in our environment without our participation, but and active agent is interested to know what to do, what events can be brought about. Action can be described as an operation or a set of operations (**O**) that connects these situations. The second situation is an outcome of some operations performed in the first one. Thus we get the scheme: $\mathbf{S_1} \rightarrow \mathrm{O} \rightarrow \mathbf{S_2}$. Both situations can be perceived but not at the same time (the same holds for events that occur by themselves). This is why events are not properly speaking perceived. An agent in the first situation perceives the situation but that what is of interest are the possibilities to bring about changes. The world may be *perceived* as phenomenal qualities attributed to perceived objects, but properly speaking it is *experienced*

as possibilities to bring about changes, or better, as possibilities of action. In pragmatism to know is to know what to do. Spectator theory is replaced by operational conception of knowledge. Experience is, generally speaking, orientating to possible future experiences on the ground of past practical experience.

2.3 The Object of Knowledge in Pragmatism

Pragmatism entails a radical change in the notion of the object of knowledge. The goal of knowledge is not to reach the "real" but hidden and mind-independent world causing our perceptions. Hidden causes of perceptions are replaced by the hidden (that is, in the situation $\mathbf{S_1}$ hidden) consequences of action. As Dewey put it, the objects of knowledge are controlled processes of change where acting agents transform a situation into another (Dewey LW 1 1981, p. 128). Acting agents bring about controlled processes of change. The knowing subject and the performed operations belong to the object of knowledge. Thus we have two different senses of the notion of object. One notion is the world (or some part of it) as an object of perception and action and the other is the object of knowledge that is a relation between two situations. This relation is mediated by controlled operations performed by the knowing subject: $\mathbf{S_1} \rightarrow \mathrm{O} \rightarrow \mathbf{S_2}$.

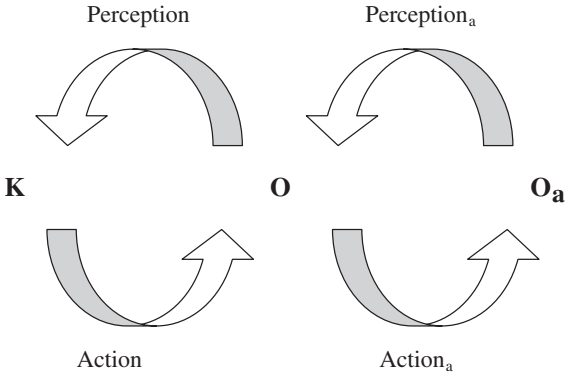
What will be known is the joint outcome of some processes in the world observed in the first situation and some operations that a started in this situation. The outcome is the second situation. What will *not* be known is how the world is as alleged hidden causes of perceptions before the operations. Experience consists of perception and action, and the limits of experience are relative to the methods and instruments of investigating the world (Chap. 7). The difference between the classical view and the pragmatic view as to the perceived situation $\mathbf{S_1}$ can be described as follows.

The classical view of perception as the (only) epistemic access to the world requires that there are internal items (in some forms of naturalism neural events in the brain) that function as internal representations and that there is an epistemic relation between an internal representation and the perceived object. The problem is to explicate by virtue of what is a neural event in the brain a representation. By virtue of what is it (maybe in combination with other neural events) knowledge? What makes a neural process a mental process, an intentional entity? These problems are addressed later. They are far from solved.

Pragmatism emphasizes that knowledge is prospective, not retrospective. An active agent seeks ways to act further and wants to know what to do in order to reach the situation $\mathbf{S_2}$ as an outcome of this action. The second situation is hidden in the first but it will be revealed if knowledge is adequate. Thus knowledge is always relative to the (actual or potential) activity of the knowing subject. This is the way in which things are even in situations where there are no conscious objectives of action. Beliefs (habits of action) need not be conscious, as Peirce already noted (CP 2.148, 2.711 and 5.417). Mere observation may seem to be static and

instantaneous, but this is illusory. Simple perceptions are complex and fast operations. Action is in a way involved also in perception (Noë 2004). To know that snow is white is to know how to look at snow and recognize its whiteness as a result of a complex and active process. The problem that remains to be solved is the question of what is the role of internal neural events in experience.

The structure of experience and the object of knowledge can be described with the following figure.



The knowing subject **K** faces the world as an object of perception and action. The world is experienced as possibilities of action. Each situation offers a large number of possibilities of action. These possibilities are anticipated with earlier acquired habits of action. Anticipatory mechanisms (Sect. 3.4) bring to mind what are the expected consequences of anticipated action (Action$_a$), what would be perceived (Perception$_a$), namely the anticipated object of experience (**O$_a$**).

The world is an object of perception and action, but the object of knowledge in pragmatism is a different notion. It is a relation between two situations, subject encountering **O** (situation **S$_1$**) and subject encountering **O$_a$** (situation **S$_2$**). In Dewey's words: "The objects of science, like the direct objects of the arts, are an order of relations which serve as tools to effect immediate havings and beings" (Dewey LW 1 1981, p. 110). The relation between situations is mediated by action, and this brings the activity into the object of knowledge. This view differs radically from the classical view. One important difference is that there is no need for epistemology the task of which would be telling a priori (in the absolute sense of the word) how the character of mind (as an internal knowing subject) affects the perceptions about the so-called external world. All prerequisites of having and acquiring knowledge are formed on the basis of past practical experience. Past experience consists of evolutionary experience, cultural heritage and individual experience (those elements of evolutionary and cultural experience that an individual succeeds to acquire during growth, socialization, education and so on). Another difference is that the acting agent (knowing subject) belongs to the object of knowledge. This follows from the fact that action is needed in order to change the situation. The knowing subject is involved or embedded in the situation she is transforming by acting in it.

2.4 The World as Had and the World as Known

According to Dewey "we do not have to go to knowledge to obtain an exclusive hold on reality. The world as we experience it is a real world" (Dewey LW 4 1984, p. 235). Peirce emphasized the role of the resistance of the hard facts as objective conditions of action. This world is real and it is an object of perception and action, and the object of knowledge is a relation $\mathbf{S_1} \rightarrow \mathrm{O} \rightarrow \mathbf{S_2}$.

Dewey makes use of the distinction between had and known. When the problematic situation $\mathbf{S_1}$ is encountered, it is simply had as an object of perception and action. It is a situation that one begins to inquire. During the inquiry it begins to change into one element of the object of knowledge. $\mathbf{S_1}$ is experienced as possibilities of action that have anticipated consequences. The problem determines what kind of consequences are the desired ones. This, in its turn, determines what kinds of operations are required. These operations will be found on the ground of the relevant features of $\mathbf{S_1}$, general knowledge about the world as it is experienced in $\mathbf{S_1}$ and previous experience of similar situations. Now we have: $\mathbf{S_1} \rightarrow \mathrm{O}$. If the selected operations turn out to be successful, then we have the object of knowledge $\mathbf{S_1} \rightarrow \mathrm{O} \rightarrow \mathbf{S_2}$. We have been justified in claiming in $\mathbf{S_1}$ that we know how to solve the problem, how to proceed to $\mathbf{S_2}$.

Dewey illustrates his conception with an example of a patient coming to see a physician (LW 4 1984, pp. 139–140). The patient sets the problem of inquiry. Some features of the patient are searched out as symptoms. These symptoms are the relevant data for making a diagnosis with the help of theoretical knowledge about medicine and previous practical experience of treating patients with similar symptoms. Some operations are performed to make the person healthy again. If this really happens, then the physician has had knowledge adequate enough about the problems in the health of the patient. Knowledge is prospective in the sense that the adequacy of knowledge depends on the course of events during the treatment. The knowledge is, of course, based on earlier experience and theories involved, but if the treatment is not successful, then the knowledge turns out to be inadequate and, thus, after all not true knowledge about this problematic situation and its transformation into the desired situation. An acting agent wants to know what to do and orientates to the future on the ground of past experience, but the proper justification of knowledge takes place in the future. Knowledge is adequate enough if the action performed turns out to be successful.

The transition from what is had to what is known makes Dewey's use of the word "object" quite flexible. Some objects of experience are simply had, and then there are objects known. Hasty interpretation might consider these objects as distinct objects. However, this interpretation is not quite correct. The patient coming to the physician is first simply had. She has various features. Then the problem, the fact that the patient has some symptoms, starts the inquiry (examination, laboratory test and so on). When a treatment has been decided, the patient has been transformed into an object known. The person has become an object of medical knowledge. But it is the same person observed and interpreted in the framework

of medical science. The person as had and the person as known (as an element in the object of knowledge) are not two distinct objects. The same object is interpreted with different sets of meanings. So far as these meanings are considered to constitute the object we have two objects, but only one person.

In pragmatism knowledge is not necessarily unequivocal. There are often many ways to reach the goal, and the criteria of evaluating these different ways may depend on the context. Further, the goal may be reached accidentally, or inadequate action may lead astray. If the first situation remains problematic without any clue of how to act adequately, then the situation remains as an observed situation that is simply had and does not belong to the object of knowledge. This distinction between the world as had and the world as known is a distinction between true knowledge and mere opinion. It is a parallel to the classical distinction between knowledge as justified and eternally true knowledge about the real being as distinguished from mere opinions about the moving and changing empirical world. In naturalism there are no good reasons for making such distinction. There is only one world and we live in it. What is left is a distinction between had and known.

The view, according to which the object of knowledge consists of the hidden causes of perception, is still with us. The apparent plausibility of this view is based not only on the inertia of the classical tradition in philosophy, but also on contemporary philosophy of science. The table as a perceived object and the table as a swarm of elementary particles are sometimes considered as two different things. Elementary particles cannot be seen, so the idea is that these theoretical objects of science are the hidden causes of sense perception. In a way this is correct. However, elementary particles are observed with scientific instruments, and the definition of the object of knowledge concerns also science. The table as an everyday object and the table as a swarm of theoretical objects are the same thing. There is only one table observed from two different physical perspectives determined by sense organs, on the one hand, and scientific instruments, on the other. The pragmatist definition of the object of knowledge holds for both of them. The situation is the same as in the case of a patient seeing a doctor. The same table is interpreted with two different sets of meanings, namely the meanings of everyday discourse and the meanings applied in science.

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http://www.springer.com/978-3-319-17622-2

Mind in Action
Experience and Embodied Cognition in Pragmatism
Määttänen, P.
2015, XII, 94 p. 1 illus., Hardcover
ISBN: 978-3-319-17622-2