

Philosophy of Mind

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Philosophical Concept

‘Philosophy of mind’, and ‘philosophy of psychology’ are two terms for the same general area of philosophical inquiry: the nature of mental phenomena and their connection with behaviour and, in more recent discussions, the brain.

Much work in this area reflects a revolution in psychology that began mid-century. Before then, largely in reaction to traditional claims about the mind being non-physical (see Dualism; Descartes), many thought that a scientific psychology should avoid talk of ‘private’ mental states. Investigation of such states had seemed to be based on unreliable introspection (see Introspection, psychology of), not subject to independent checking (see Private language argument), and to invite dubious ideas of telepathy (see Parapsychology). Consequently, psychologists like B.F. Skinner and J.B. Watson, and philosophers like W.V. Quine and Gilbert Ryle argued that scientific psychology should confine itself to studying publicly observable relations between stimuli and responses (see Behaviourism, methodological and scientific; Behaviourism, analytic).

However, in the late 1950s, several developments began to change all this: (i) The experiments behaviourists themselves ran on animals tended to refute behaviouristic hypotheses, suggesting that the behaviour of even rats had to be understood in terms of mental states (see Learning; Animal language and thought). (ii) The linguist Noam Chomsky drew attention to the surprising complexity of the natural languages that children effortlessly learn, and proposed ways of explaining this complexity in terms of largely unconscious mental phenomena. (iii) The revolutionary work of Alan Turing (see Turing machines) led to the development of the modern digital computer. This seemed to offer the prospect of creating Artificial intelligence, and also of providing empirically testable models of intelligent processes in both humans and animals. (iv) Philosophers came to appreciate the virtues of realism, as opposed to instrumentalism, about theoretical entities in general.

1. Functionalism and the computational theory of mind

These developments led to the emergence in the 1970s of the loose federation of disciplines called ‘cognitive science’, which brought together research from, for example, psychology, linguistics, computer science, neuroscience and a number of sub-areas of philosophy, such as logic, the philosophy of language, and action theory. In philosophy of mind, these developments

led to Functionalism, according to which mental states are to be characterized in terms of relations they bear among themselves and to inputs and outputs, for example, mediating perception and action in the way that belief and desire characteristically seem to do. The traditional problem of Other minds then became an exercise in inferring from behaviour to the nature of internal causal intermediaries.

This focus on functional organization brought with it the possibility of multiple realizations: if all that is essential to mental states are the roles they play in a system, then, in principle, mental states, and so minds, could be composed of (or 'realized' by) different substances: some minds might be carbon-based like ours, some might be computer 'brains' in robots of the future, and some might be silicon-based, as in some science fiction stories about 'Martians'. These differences might also cause the minds to be organized in different ways at different levels, an idea that has encouraged the co-existence of the many different disciplines of cognitive science, each studying the mind at often different levels of explanation.

Functionalism has played an important role in debates over the metaphysics of mind. Some see it as a way of avoiding Dualism and arguing for a version of materialism known as the identity theory of mind (see Mind, identity theory of). They argue that if mental states play distinctive functional roles, to identify mental states we simply need to find the states that play those roles, which are, almost certainly, various states of the brain. Here we must distinguish identifying mental state tokens with brain state tokens, from identifying mental types with brain types (see Type/token distinction). Many argue that multiple realizability shows it would be a mistake to identify any particular kind or type of mental phenomenon with a specific type of physical phenomenon (for example, depression with the depletion of norepinephrine in a certain area of the brain). For if depression is a multiply realized functional state, then it will not be identical with any particular type of physical phenomenon: different instances, or tokens, of depression might be identical with tokens of ever different types of physical phenomena (norepinephrine depletion in humans, too little silicon activation in a Martian). Indeed, a functionalist could allow (although few take this seriously) that there might be ghosts who realize the right functional organization in some special dualistic substance. However, some identity theorists insist that at least some mental state types – they often focus on states like pain and the taste of pineapple, states with Qualia (see also the discussion below) – ought to be identified with particular brain state types, in somewhat the way that lightning is identified with electrical discharge, or water with H₂O. They typically think of these identifications as necessary a posteriori.

An important example of a functionalist theory, one that has come to dominate much research in cognitive science, is the computational theory of mind (see Mind, computational theories of), according to which mental states are either identified with, or closely linked to, the computational states of a computer. There have been three main versions of this theory, corresponding to three main proposals about the mind's Cognitive architecture. According to the

‘classical’ theory, particularly associated with Jerry Fodor, the computations take place over representations that possess the kind of logical, syntactic structure captured in standard logical form: representations in a so-called Language of thought, encoded in our brains. A second proposal, sometimes inspired by F.P. Ramsey’s view that beliefs are maps by which we steer (see Belief), emphasizes the possible role in reasoning of maps and mental Imagery. A third, recently much-discussed proposal is Connectionism, which denies that there are any structured representations at all: the mind/brain consists rather of a vast network of nodes whose different and variable excitation levels explain intelligent Learning. This approach has aroused interest especially among those wary of positing much ‘hidden’ mental structure not evident in ordinary behaviour (see Ludwig Wittgenstein §3 and Daniel Dennett).

The areas that lend themselves most naturally to a computational theory are those associated with logic, common sense and practical reasoning, and natural language syntax (see Common-sense reasoning, theories of; Rationality, practical; Syntax); and research on these topics in psychology and Artificial intelligence has become deeply intertwined with philosophy (see Rationality of belief; Semantics; Language, philosophy of).

A particularly fruitful application of computational theories has been to Vision. Early work in Gestalt psychology uncovered a number of striking perceptual illusions that demonstrated ways in which the mind structures perceptual experience, and the pioneering work of the psychologist, David Marr, suggested that we might capture these structuring effects computationally. The idea that perception was highly cognitive, along with the functionalist picture that specifies a mental state by its place in a network, led many to holistic conceptions of mind and meaning, according to which parts of a person’s thought and experience cannot be understood apart from the person’s entire cognitive system (see Holism: mental and semantic; Semantics, conceptual role).

However, this view has been challenged recently by work of Jerry Fodor. He has argued that perceptual systems are ‘modules’, whose processing is ‘informationally encapsulated’ and hence isolatable from the effects of the states of the central cognitive system (see Modularity of mind). He has also proposed accounts of meaning that treat it as a local (or ‘atomistic’) property to be understood in terms of certain kinds of causal dependence between states of the brain and the world (see Semantics, informational). Others have argued further that Perception, although contentful, is also importantly non-conceptual, as when one sees a square shape as a diamond but is unable to say wherein the essential difference between a square and a diamond shape consists (see Content, non-conceptual).

2. Mind and meaning

As these last issues indicate, any theory of the mind must face the hard topic of meaning (see Semantics). In the philosophies of mind and psychology, the issue is not primarily the

meanings of expressions in natural language, but of how a state of the mind or brain can have meaning or content: what is it to believe, for example, that snow is white or hope that you will win. These latter states are examples of Propositional attitudes: attitudes towards propositions such as that snow is white, or that you will win, that form the 'content' of the state of belief or hope. They raise the general issue of Intentionality, or how a mental state can be about things (for example, snow) and properties (for example, white), and, particularly, 'about' things that do not exist or will not happen, as when someone believes in Santa Claus or hopes in vain for victory.

There have been three main proposals about mental content. A state might possess a specific content: (i) by virtue of the role it plays in reasoning (see Semantics: conceptual role); (ii) by virtue of certain causal and lawful relations the state bears to phenomena in the world (see Semantics: informational; Functionalism); or (iii) by virtue of the function it plays in the evolution and biology of the organism (see Semantics: teleological; Functional explanation). Related to these proposals are traditional philosophical interests in Concepts, although this latter topic raises complicating metaphysical concerns with Universals, and epistemological concerns with A priori knowledge.

Special problems are raised by indexical content, or the content of thoughts involving concepts expressed by, for example, 'I myself', 'here', 'now', 'this', and 'that' (see Content, indexical; Demonstratives and indexicals; Propositional attitudes §3). Does the thought that it is hot here, had in Maryland, have the same content as the thought that it is hot here, had in Canberra? The conditions under which such thoughts are true obviously depends upon the external context – for example, the time and place – of the thinking.

This dependence on external context is thought by many to be a pervasive feature of content. Drawing on recent work on reference (see Reference; Proper names), Hilary Putnam and Tyler Burge have argued that what people think, believe and so on depends not only on how they are, but also upon features of their physical and social environment. This raises the important question of whether an organism's psychology can be understood in isolation from the external world it inhabits. Defenders of methodological individualism insist that it can be (see Methodological individualism); Putnam, Burge and their supporters that it can't. Some theorists respond to the debate by distinguishing between wide and narrow content: narrow content is what 'from the skin in' identical individuals would share across different environments, whereas wide content might vary from one environment to the next (see Content: wide and narrow). These theorists then give distinctive roles to the two notions in theoretical psychology, although this is a matter of great controversy.

3. Alternatives to functionalism

Not everyone endorses functional and computational theories of mind. Some, influenced by Ryle and the later Wittgenstein, think that such concern with literally inner processes of the brain betrays a fundamental misunderstanding of mental talk, which, they argue, rests largely on outward Criteria. Others think that computational processes lack the means of capturing the basic properties of Consciousness and Intentionality that are essential to most mental phenomena. John Searle, in particular, regards his Chinese room argument as a devastating objection to computational approaches. He thinks that mental phenomena should be understood not functionally, but directly in biological or physical terms.

The hardest challenge for functionalism is posed by Qualia – the properties that distinguish pain, the look of red, the taste of pineapple, and so on, on the one hand, from mental states like belief and understanding on the other. (See also Bodily sensations; Sense-data; Perception). Some argue that unnecessary problems are produced in this area by an excessive reification of inner experience, and recommend instead an adverbial theory of mental states (see Mental states, adverbial theory of). However, some problems persist, and can be made vivid by considering the possibility of ‘inverted qualia’. It seems that two people might have colour experiences that are the complements of one another (red for green, yellow for blue, etc.), even though their behaviour and functional organization are identical. This issue is explored in Colour and qualia and leads inevitably to the hard problems of Consciousness: What is it? What things have it? How do we tell? What causal role, if any, does it play the world?

There is also an issue for functionalists over Mental causation. A principal reason why Dualism has few adherents today is the problem of explaining how non-physical or non-natural phenomena can causally affect a physical world. And although some dualists retreat to Epiphenomenalism, the view that mental phenomena are caused by, but do not themselves cause any physical phenomena, this is widely seen as implausible. However, functionalists also have a problem. Even though they can and do insist that functional states are realized physically, arguably the functional states *per se* do no causing; what does the causing would seem to be the underlying physical properties of the physical realization. So, although functionalists avoid giving causal roles to the ‘non-natural’, it seems they must allow that mental properties *per se* do no causing.

Although the view that the mind is a natural phenomenon is now widely accepted (principally because of the causal problem for dualism), what this implies is highly contentious. Some hold that it simply means that mental phenomena supervene on physical nature in the sense that there can be no mental difference without a physical difference (see Supervenience of the mental). Donald Davidson thinks this can be true without there being any strict laws connecting the physical and the mental (see Anomalous monism). Others insist that a naturalist about the mind must reduce the mental to the physical in somewhat the way thermodynamics has been reduced

to statistical mechanics, so delivering neat lawful biconditionals linking the mental and the physical (see Reductionism in the philosophy of mind).

Much in this discussion turns on the status of Folk psychology, the theory of mind allegedly implicit in ordinary (folk) thought and talk about the mind. On one view, mental states are simply the states that fill the roles of this implicit theory, and the reduction consists in finding which internal physical states fill the roles and are, thereby, to be identified with the relevant mental states. However, defenders of Eliminativism, noting that any theory – especially a folk one – can turn out false, argue that we should take seriously the possibility that the mental states postulated by folk psychology do not exist, much as it turned out that there are no witches or phlogiston.

4. Issues in empirical psychology

Empirical psychology has figured in philosophy not only because its foundations have been discussed in the above ways, but also because some of its specific findings have been relevant to traditional philosophical claims. Thus, experiments on Split brains have undermined traditional conceptions of Personal identity (see also Mind, bundle theory of), and research on the reliability of people's self-attribution of psychological states has cast doubts on introspection as a source of specially privileged knowledge about the mind. The work of Freud on psychopathology (see Mental illness, concept of; Psychoanalysis, post-Freudian; Psychoanalysis, methodological issues in) and of Chomsky in linguistics (see Linguistics, philosophy of), suggests that the states of most explanatory interest are not introspectively accessible (see Knowledge, tacit; Unconscious mental states). Chomsky's ideas also seem to revive Rationalism's postulation of innate knowledge that was long thought to have been discredited by Empiricism (see also Nativism; Innate knowledge; Language, innateness of). And they have stimulated research beyond knowledge of grammar, into infant cognition (see Cognition, infant) generally (some of which treats the Molyneux problem of whether newly sighted people would be able to recognize shapes that they had previously only touched). Much recent work has concentrated on cognition in non-human animals (see Animal language and thought; Animal thought, recent work on). Other questions about the basic categories in which people understand the world have benefited from work on how these categories are understood and evolve in childhood (see Piaget, J.; Cognitive development; Moral development). A particularly important issue for the philosophy of mind concerns the origin of our mental concepts, a topic of lively current research (see Mind, child's theory of) that affects our understanding of Folk psychology.

5. Philosophy of action

Whether or not it is ultimately vindicated by empirical research, folk psychology is a rich fund of distinctions that are important in human life. The examination of them has tended to focus on issues in the explanation of Action, and, in a related vein, on psychological issues relevant to ethics (see Moral psychology).

The traditional view of action, most famously advocated by David Hume, is that an action needs both a desire and a belief. The desire provides the goal, and the belief the means of putatively achieving it (see also Reasons and causes; Desire; Belief). But what then is the role, if any, of Intention? Are intentions nothing more than some complex of belief and desire? And how, if at all, do we find a place in the Humean picture for the will? Is it something that can somehow act independently of beliefs and desires, or is it some kind of manifestation of them, some kind of 'all things considered' judgment that takes a person from dithering to action? (See Will, the.) Notoriously difficult questions in this regard concern whether there actually is anything as Free will, and how it is possible for a person to act against their better judgement, as they seem to do in cases of Akrasia, or 'weakness of will'.

Beliefs and desires seem intimately connected with many other mental states. Belief about the past is of the essence of Memory. Perception delivers belief about how things are around one, and Dreaming seems to be the having of experiences during sleep akin to (rather fragmented) perceptions in the way they tend to make you believe that certain things are happening. Even emotions and bodily sensations seem to have belief and desire components (see Emotions, nature of; Bodily sensations): anger involves both a belief that one has been wronged and a desire to do something about it, and pain involves the belief that something is amiss and the desire that it stop. Much contemporary philosophy of mind and action is concerned with teasing out the relationship between beliefs and desires and various other mental states, although approaches in cognitive science often focus upon more computationally active states, such as: noticing, deciding, and 'on line' processes of reasoning.

References and further reading

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(Discusses most of the live positions in the philosophy of mind; sympathetic to analytical functionalism.)

Guttenplan, S. (1994) *A Companion to the Philosophy of Mind*, Oxford: Blackwell.

(Collection of substantial essays by some of the best-known figures in the philosophy of mind.)

McGinn, C. (1997) *The Character of Mind*, Oxford: Oxford University Press, 2nd edn.

(Very readable introduction to philosophy of mind for the beginner, with particular emphasis on issues of consciousness and the self.)

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(Discusses most of the live positions in the philosophy of mind; sympathetic to the representational theory of mind.)

Smith, P. and Jones, O.R. (1986) *The Philosophy of Mind*, Cambridge: Cambridge University Press.

(An excellent, elementary introduction to philosophy of mind and action, from the standpoint more of traditional philosophy than of cognitive science.)

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