

- as chapter 9. For discussion relevant to various sections in this entry, see also chapter 8.)
- * McCann, H. (1991) 'Settled Objectives and Rational Constraints', *American Philosophical Quarterly* 28: 25–36. (A good representative of McCann's defence of the Simple View. Referred to in §5.)
 - * Mele, A. R. (1992) *Springs of Action*, New York: Oxford University Press. (Canvasses most central issues in the causal theory of intention and includes a comprehensive bibliography. For discussion relevant to: §1, see chapter 8; §2, see chapters 3, 8, 9 and 10; §4, see chapter 11; §5, see chapters 8 and 10.)
 - (1992a) 'Recent Work on Intentional Action', *American Philosophical Quarterly* 29: 199–217. (Excellent survey of important literature (1980–92) relating to most sections in this entry.)
 - Peacocke, C. (1985) 'Intention and Akrasia', in B. Vermazen and M. Hintikka (eds) *Essays on Davidson: Actions and Events*, Oxford: Clarendon Press, 51–73. (Includes Peacocke's criticisms of Davidson's 'pf' judgments. Relevant to §3.)
 - (1986) 'Intention and Practical Reasoning: A Reply to Donald Davidson', *Analysis* 46: 45–9. (Contains Peacocke's response to Davidson's rejoinder to Peacocke (1985). Relevant to §3.)
 - * Searle, J. (1983) *Intentionality*, Cambridge: Cambridge University Press. (Presents the theory that intentions are self-referential in chapter 3. See §4.)

ROBERT DUNN

INTENTION, ARTIST'S

see ARTIST'S INTENTION

INTENTIONAL FALLACY

see ARTIST'S INTENTION

INTENTIONALITY

Intentionality is the mind's capacity to direct itself on things. Mental states like thoughts, beliefs, desires, hopes (and others) exhibit intentionality in the sense that they are always directed on, or at, something: if you hope, believe or desire, you must hope, believe or desire something. Hope, belief, desire and any other mental state which is directed at something, are known as intentional states. Intentionality in this sense has only a peripheral connection to the ordinary ideas of

intention and intending. An intention to do something is an intentional state, since one cannot intend without intending something; but intentions are only one of many kinds of intentional mental states.

The terminology of intentionality derives from the scholastic philosophy of the Middle Ages, and was revived by Brentano in 1874. Brentano characterized intentionality in terms of the mind's direction upon an object, and emphasized that the object need not exist. He also claimed that it is the intentionality of mental phenomena that distinguishes them from physical phenomena. These ideas of Brentano's provide the background to twentieth-century discussions of intentionality, in both the phenomenological and analytic traditions. Among these discussions, we can distinguish two general projects. The first is to characterize the essential features of intentionality. For example, is intentionality a relation? If it is, what does it relate, if the object of an intentional state need not exist in order to be thought about? The second is to explain how intentionality can occur in the natural world. How can merely biological creatures exhibit intentionality? The aim of this second project is to explain intentionality in non-intentional terms.

- 1 The history of the concept of intentionality
- 2 The nature of intentionality
- 3 Intentionality as the mark of the mental

1 The history of the concept of intentionality

The term 'intentionality' derives from the medieval Latin *intentio*. Literally, this means a tension or stretching, but it is used by scholastic philosophers of the thirteenth and fourteenth centuries as a technical term for a concept. This technical term was a translation of two Arabic terms: *ma' qul*, Al-Farabi's translation of the Greek *noema*; and *ma' na*, Avicenna's term for what is before the mind in thought (see AL-FARABI §3; IBN SINA §3). In this context, the terms *noema*, *ma' qul*, *ma' na* and *intentio* can be considered broadly synonymous: they are all intended as terms for concepts, notions or whatever it is which is before the mind in thought (see Knudsen 1982). Scholars translate *intentio* into English as 'intention' – but it should be borne in mind throughout that this is not meant to have the connotations of the everyday notion of intention.

Medieval logicians followed Al-Farabi in distinguishing between first and second intentions. First intentions are concepts which concern things outside the mind, ordinary objects and features of objects. Second intentions are concepts which concern other intentions. So, for example, the concept *horse* is a first intention since it is concerned with horses, but the

concept *species* is a second intention, since it is concerned with first intentions like the intention *horse* (because of the nominalism prevalent at the time, the distinction between the concept/intention *horse* and the property of being a horse is not always clearly made). Many of the medieval philosophers, including Roger Bacon, Thomas Aquinas and John Duns Scotus, followed Avicenna in holding that second intentions were the subject matter of logic (see LOGIC, MEDIEVAL §4).

Some of these philosophers developed detailed theories about how intentions were connected to the things they concerned – what we would now call theories of intentionality. One of the most influential theories was that of Aquinas, whose starting point was Aristotle's theory of thought and perception. According to Aristotle, in thought and perception the mind takes on the form of the thing perceived, without receiving its matter. When I think about or perceive a horse, my mind receives the form of horse (see Sorabji 1991; see ARISTOTLE §18). Aquinas developed Aristotle's view. When I think about a horse, the form of horse exists in my mind. But the form has a different kind of existence in my mind than it does in a real horse. In a real horse, the form of horse has *esse naturale* or existence in nature; but in my thought of a horse, the form of horse has *esse intentionale* or intentional existence (see Anscombe and Geach 1961; Kenny 1984). The heart of Aquinas' view is that what makes my thought of an X a thought of an X is the very same thing which makes an X an X: the occurrence of the form of X. The difference is the way in which the form occurs (see AQUINAS, T. §11).

These scholastic terms largely disappeared from use during the Renaissance and the modern period. Empiricist and rationalist philosophers were of course concerned with the nature of thought and how it relates to its objects, but their discussions were not cast in the terminology of intentionality. The terminology was revived in 1874 by Franz Brentano, in his *Psychology from an Empirical Standpoint*. In a well-known passage, Brentano claimed that:

Every mental phenomenon is characterized by what the scholastics of the Middle Ages referred to as the intentional (and also mental) inexistence of the object, and what we, although with not quite unambiguous expressions, would call relation to a content, direction upon an object (which is not here to be understood as a reality) or immanent objectivity.

(Brentano [1874] 1973: 88)

A few clarifications of this passage are needed. First, Brentano is not particularly concerned to

distinguish between a mental state's (or as he called it, a mental act's) relation to a content and its relation to an object – although as we shall see in §2, later writers find a related distinction useful. And second, intentional inexistence does not itself mean that the objects of thought need not exist – although as we shall see, this is a relatively uncontroversial feature of intentionality. What inexistence means is rather that one thing – the object of thought – exists in another, as the object of the mental state itself (see Bell 1990, ch. 1).

Brentano's account of intentionality was developed by his student Edmund Husserl, who reintroduced the Greek term *noema* (plural: *noemata*) for that which accounts for the directedness of mental states. *Noemata* are neither part of the thinking subject's mind nor the objects thought about, but abstract structures that facilitate the intentional relation between subject and object. So *noemata* are not the objects on which intentional states are directed, but it is in virtue of being related to a *noema* that any intentional state is directed on an object at all. In this respect the concept of a *noema* resembles Frege's concept of sense: senses are not what our words are about, but it is in virtue of expressing a sense that words are about things at all (see FREGE, G. §3). In other respects, however, senses and *noemata* differ – for instance, *noemata*, unlike Frege's senses, can be individuated in terms of perceptual experiences (see Dreyfus 1984). The point of Husserl's phenomenological reduction was to provide an account of the structure of *noemata* (see PHENOMENOLOGY, EPISTEMIC ISSUES IN).

A striking claim of Brentano's is that intentionality is what distinguishes mental from physical phenomena:

This intentional inexistence is exclusively characteristic of mental phenomena. No physical phenomenon manifests anything similar. Consequently, we can define mental phenomena by saying that they are such phenomena as include an object intentionally within themselves.

(Brentano [1874] 1973: 88)

However, it is important to stress that by 'physical phenomena', Brentano does not mean physical objects. Phenomena are what are given to the mind, and Brentano does not believe that physical objects are given to the mind (see Brentano [1874] 1973: 77–78). The distinction he is making is among the data of consciousness, not among entities in the world: among these data, mental phenomena are those which exhibit intentionality, and physical phenomena are those which do not.

However, in analytic philosophy in the second half of the twentieth century, Brentano's distinction came

to be interpreted as a distinction between entities in the world. This was chiefly because of this period's prevailing realism. An important figure in this revival of interest in Brentano's notion of intentionality was R.M. CHISHOLM. In chapter 11 of *Perceiving* (1957), Chisholm argued against the behaviourism that was popular at the time by showing that it is not possible to give a behaviouristic account of, for example, belief, since in order to say how belief leads to behaviour one has to mention other intentional states (such as desires) whose connections with behaviour must themselves be specified in terms of belief and other intentional states (see BEHAVIOURISM, ANALYTIC). This suggests that we should postulate an irreducible category of intentional mental entities: reductive physicalism must be false. However, the argument can be taken in another way, as W.V. Quine argued: if we assume reductive physicalism, we can take the irreducibility of intentionality to demonstrate the 'baselessness of intentional idioms and the emptiness of a science of intention' (Quine 1960: 221). Work on intentionality in the analytic tradition in the 1980s and 1990s has attempted to resolve this dilemma. For example, Fodor (1987), Dretske (1980) and others have attempted to reconcile physicalism with the existence of intentionality by explaining it in non-intentional terms.

2 The nature of intentionality

Despite the interest in intentionality in twentieth-century philosophy, there is still controversy about how to characterize it. All writers agree that intentionality is the directedness of the mind upon something, or the aboutness of mental states, but the disagreements start when we try to explain these ideas in more detail.

To begin with, calling intentionality 'directedness' makes it look as if it is a relation between the mind and the thing on which the mind is directed. After all, if A is directed on B, then A and B are related – if an arrow is directed on a target, the arrow and the target are related. But if the arrow is genuinely related to the target, then the arrow and the target must exist. And similarly with other relations: if Antony kisses Cleopatra, Antony and Cleopatra must exist. But this is not so with intentionality, as Brentano observed (Brentano [1874] 1973: appendix). I can desire to possess a phoenix without there being any such thing. So what am I related to when I am in an intentional state?

One reaction is to postulate that intentional relations are relations to intentional objects. A phoenix is not the material object of my desire, but it is the desire's intentional object. However, it is not

obvious that this really solves any problems. For what are intentional objects? Are they real objects? Brentano and Husserl both thought so: intentional objects are just ordinary objects. But if this is so, then what does it mean to say that intentional objects need not exist? Alexius MEINONG, on the other hand, thought that intentional objects have a different kind of existence from real material objects. But this seems to misrepresent intentionality: if I want a phoenix, I want a real phoenix, with wings and feathers – not something with a different kind of existence. In any case, the idea that there are different kinds of existence is of dubious coherence. So whatever we say about intentional objects, they do not offer a satisfactory explanation of intentionality (see Scruton 1970–1).

A second important difference between intentionality and other relations is that with other relations, the way you describe the relata does not affect whether the relation holds. But with intentionality this is not so: you can believe that George Orwell wrote *Animal Farm* without believing that Eric Blair wrote *Animal Farm*, simply because you do not know that Orwell is Blair. But since Orwell is Blair, then your belief surely relates you to the same thing – so how can the obtaining of the relation (belief) depend on how the thing is described?

For these reasons, it seems impossible to regard intentionality as a relation at all. One way of avoiding these difficulties is to distinguish, as Brentano did not, between the intentional object of a state and its intentional content. Intentional content (like Husserl's *noema* or Frege's *thought*) is what makes it possible for a mental state to be directed on an object. Thus understood, intentional contents are not representations. Rather, they are what constitute something's being a representation: it is in virtue of the fact that a mental state has an intentional content that it represents what it does. It is in virtue of the fact that my belief that pigs fly involves some relation between me and an intentional content – the proposition or Fregean thought that pigs fly – that it represents what it does. This is what is meant by saying that intentional states, or propositional attitudes, are relations to propositions or contents (see PROPOSITIONAL ATTITUDES).

Although beliefs, desires and other intentional states are sometimes described in this way – as relations to propositions or contents – this idea should be sharply distinguished from the idea, just discussed, that intentional directedness is a relation. The intentional content expressed by the sentence 'Pigs fly' is not what my belief that pigs fly is directed on: the belief is directed on pigs and flying. Some have thought that all intentional directedness can ulti-

mately be reformulated in terms of relations to intentional contents: an intentional state is directed on an object X in virtue of the fact that it is a relation to an intentional content concerning X. However, this thesis has difficulty dealing with certain intentional phenomena, most notably the phenomenon of loving: no one has given a satisfactory reformulation of the notion 'X loves Y' in terms of X's relations to intentional contents.

There is much controversy about exactly what intentional contents are and how we should individuate them (see Salmon and Soames 1988). Some philosophers attempt to clarify (or even sidestep) these ontological and epistemological difficulties by adopting what Quine calls 'semantic ascent': they examine sentences which report intentionality rather than intentionality itself. A distinctive feature of many sentences reporting intentional states is that their constituent words do not play their normal referential role. Part of what this means is that the apparently uncontroversial logical principles of existential generalization (from *Fa* infer $(\exists x)Fx$) and Leibniz's Law (from *Fa* and $a=b$ infer *Fb*) fail to apply to all sentences reporting intentionality. For example, from 'I want a phoenix' we cannot infer that there exists a phoenix that I want; and from 'Vladimir believes that Orwell wrote *Animal Farm*' and 'Orwell is Blair' we cannot infer that 'Vladimir believes that Blair wrote *Animal Farm*' (see PROPOSITIONAL ATTITUDE STATEMENTS).

Contexts where these two principles fail to hold are known as 'non-extensional' contexts – their semantic properties depend on more than just the extensions of the words they contain. They are also called 'intensional' contexts, or contexts which exhibit intensionality (see INTENSIONALITY). The connection between intensionality and intentionality is not merely typographical: the failure of existential generalization in intensional contexts is the logical or linguistic analogue of the fact that intentional states can be about things which do not exist. And the failure of Leibniz's Law is the logical or linguistic analogue of the fact that the obtaining of an intentional relation depends on the way the relata are characterized.

However, the notion of intensionality must be distinguished from the notion of intentionality, not least because there are intensional contexts which are nothing to do with the direction of the mind on an object. Prominent among these are modal contexts: for example, from 'Necessarily, Orwell is Orwell' and 'Orwell is the author of *Animal Farm*' we cannot infer 'Necessarily, Orwell is the author of *Animal Farm*'. Other concepts which can create intensional contexts are the concepts of probability, explanation and dispositionality. But it is very controversial to hold

that these concepts have anything to do with intentionality.

Another (more controversial) reason for distinguishing between intensionality and intentionality is that intentionality can be reported in sentences which are extensional. Some philosophers have argued that the context 'x sees y' is like this. Seeing seems to be a paradigm case of the direction of the mind on an object. But if Vladimir sees Orwell, then there is someone whom he sees; moreover, if Vladimir sees Orwell, then surely he also sees Blair, and he also sees the author of *Animal Farm*, and so on. So although seeing is intentional, 'x sees y' seems to be an extensional context.

3 Intentionality as the mark of the mental

Thus, the notion of intensionality cannot provide a purely logical or semantic criterion of intentionality. We should be content with the psychological criterion: intentionality is the directedness of the mind upon something. As I remarked earlier, Brentano thought that intentionality was the mark of the mental: all and only mental phenomena exhibit intentionality. In discussing this claim – often called Brentano's thesis – I shall follow analytic philosophers in ignoring Brentano's own quasi-idealistic use of the term 'phenomenon'. Brentano's thesis shall be taken as a thesis about the distinction between mental and physical entities in the world.

Is Brentano's thesis true? We can divide this question into two sub-questions: (1) Do all mental states exhibit intentionality? (2) Do only mental states exhibit intentionality?

(1) It is natural at first sight to think that there are many kinds of mental state which do not have any intentionality. For instance, there are states like undirected anxiety, depression and elation (see Searle 1983: 2). On what are these states directed? Well, I can be anxious without being anxious about anything in particular – but this anxiety is at least directed at myself. Other popular examples of supposedly non-intentional mental states are sensations like pain. But while it may be true that pains are not propositional attitudes – if propositional attitudes are states reportable by sentences of the form 'X ϕ s that p', where ϕ is a psychological verb – this does not mean that pains are not directed on anything. I could have two pains, one in each hand, which felt exactly the same, except that one felt to be in my right hand, and the other felt to be in my left hand. This is a difference in intentionality – in what the mental state is directed on – so it is not true that pains exhibit no intentionality (see BODILY SENSATIONS §2).

However, there are properties of pains which do

seem to be wholly non-intentional, such as the naggingness of a toothache (see QUALIA). And these properties seem to be essential to pains. This shows that the distinction we need is between those mental states whose whole nature is exhausted by their intentionality, and those whose whole nature is not. Pains are in the latter category, since they seem to have essential non-intentional properties: there are elements of pains which are not exhausted by whatever intentionality those pains may have.

(2) So much, then, for the idea that all mental states exhibit intentionality. But is intentionality only exhibited by mental states? That is: is it true that if something exhibits intentionality, then that thing is a mind? Are minds the only things in the world that have intentionality?

To hold that minds are not the only things that have intentionality, we need an example of something that has intentionality but does not have a mind. This may seem easy. Take books: books contain sentences which have meaning and are therefore directed at things other than themselves. But books do not have minds.

The natural reply to this is to say that the book's sentences do not have intentionality in themselves – they do not have what some call 'original' intentionality – but only because they are interpreted by the readers and writer of the book. The intentionality of the book's sentences is derived from the original intentionality of the states of mind of the author and reader who interpret those sentences (for this distinction, see Haugeland 1990).

So we can reframe our question as follows: can anything other than minds exhibit original intentionality? One problem with this question is that if we encountered something that exhibited original intentionality, it is hard to see how it could be a further question whether that thing had a mind. The notion of intentionality is so closely bound up with mentality that it is hard to conceive of a genuine case of original intentionality that is not also a case of mentality. If, for example, we could establish that computers were capable of original intentionality, it would be natural to describe this as a case where a computer has a mind.

However, there is an interesting way in which original intentionality and mentality could come apart. Some philosophers want to locate the basis of intentionality among certain non-mental causal patterns in nature. So on this view, there would be a sense in which original intentionality is manifested by things other than minds. This is the hope of those philosophers who attempt to reduce the intentional to the non-intentional: the hope summed up by Jerry Fodor's quip that 'if aboutness is real, it must really be something else' (Fodor 1987: 97).

These philosophers are in effect trying to steer a course between the two horns of the dilemma presented by the passage from Quine's *Word and Object* quoted in §1: you can respond to the Chisholm–Brentano thesis of the irreducibility of intentionality either by accepting an autonomous theory of intentionality and rejecting physicalism, or by denying the reality of intentionality. There are those who are eliminative materialists and who deny the reality of intentionality (see ELIMINATIVISM), and there are those who are prepared to accept intentionality as an unanalysed, primitive phenomenon. But the orthodox line among late twentieth-century analytic philosophers is to reconcile the existence of intentionality with a physicalist (or naturalist) world view. This reconciliation normally takes the form of a theory of content: a specification in non-intentional terms of the conditions under which an intentional state has the intentional content it does, or concerns the object(s) it does. A common style of theory of content spells out these conditions in terms of hypothesized law-like causal relations between intentional states and their objects. The model here is the simple kind of representation or meaning found in nature: the sense in which clouds mean rain, and smoke means fire (see Dretske 1980). Causal theories of content hope to explain how the intentionality of mental states is underpinned by simple regularities like these. These theories have had great difficulty accounting for misrepresentation and the normative elements of mental states, and it is this problem that has received most attention in contemporary discussions of intentionality (see SEMANTICS, INFORMATIONAL; SEMANTICS, TELEOLOGICAL).

See also: BELIEF; DESIRE; INTENTION; PERCEPTION; IMAGINATION; EMOTIONS, NATURE OF

References and further reading

- * Anscombe, G.E.M. and Geach, P.T. (1961) *Three Philosophers*, Oxford: Blackwell. (The chapter on Aquinas gives a very clear and nontechnical account of his views on intentionality.)
- Bell, D. (1990) *Husserl*, London: Routledge (Clear and critical account of Husserl's philosophy. Chapter 1 is about Brentano.)
- * Brentano, F. (1874) *Psychology from an Empirical Standpoint*, trans. A.C. Rancurello, D.B. Terrell and L.L. McAlister, London: Routledge & Kegan Paul, 1973. (The classic work that revived the concept of intentionality when it was first published in 1874. Difficult reading.)
- * Chisholm, R.M. (1957) *Perceiving: A Philosophical Study*, Ithaca, NY: Cornell University Press.

(Chapter 11 contains the argument for the irreducibility of intentionality described in §1.)

- * Dretske, F.I. (1980) 'The Intentionality of Cognitive States', in P.A. French *et al.* (eds) *Midwest Studies in Philosophy* V, Minneapolis, MN: University of Minnesota Press. (Useful and accessible summary of Dretske's reductive theory of content.)
- * Dreyfus, H.L., with Hall, H. (eds) (1984) *Husserl, Intentionality and Cognitive Science*, Cambridge, MA: MIT Press. (Wide-ranging collection of essays on Husserl's ideas on intentionality and their relation to cognitive science.)
- * Fodor, J.A. (1987) *Psychosemantics: The Problem of Meaning in the Philosophy of Mind*, Cambridge, MA: MIT Press. (Influential account of intentionality from a physicalist perspective. Chapter 4 contains Fodor's theory. Original but not excessively technical.)
- * Haugeland, J. (1990) 'The Intentionality All-Stars', in J. Tomberlin (ed.) *Philosophical Perspectives 4: Action Theory and the Philosophy of Mind*, Atascadero, CA: Ridgeview. (Clear and readable survey of research in intentionality in the analytic tradition.)
- * Kenny, A. (1984) 'Aquinas: Intentionality', in T. Honderich (ed.) *Philosophy Through Its Past*, Harmondsworth: Penguin. (A straightforward discussion of Aquinas' theory of intentionality and an attempt to relate it to Wittgenstein's views.)
- * Knudsen, C. (1982) 'Intentions and impositions', in N. Kretzmann, A. Kenny and J. Pinborg (eds) *The Cambridge History of Later Medieval Philosophy*, Cambridge: Cambridge University Press. (Survey of the idea of an *intentio* as employed by the leading medieval philosophers.)
- * Quine, W.V.O. (1960) *Word and Object*, Cambridge, MA: MIT Press. (Chapter 6 contains Quine's influential discussion of intentionality and intentionality discussed in §2. A classic, but a difficult work for the beginner.)
- * Salmon, N. and Soames, S. (eds) (1988) *Propositions and Attitudes*, Oxford: Oxford University Press. (Useful collection of essays, many of them classics, on the notions of proposition and intentional content. Some technical logical material.)
- * Scruton, Roger (1970–1) 'Intensional and Intentional Objects', *Proceedings of the Aristotelian Society* 92, 187–207. (Clear and thorough discussion of the notion of an intentional object.)
- * Searle, J.R. (1983) *Intentionality*, Cambridge: Cambridge University Press. (A complete theory of intentionality, with material relating to the issues discussed in §§2–3. Chapter 1 is a good introduction.)
- * Sorabji, R. (1991) 'From Aristotle to Brentano: The

Development of the Concept of Intentionality', in H. Blumenthal and H. Robinson (eds.) *Oxford Studies in Ancient Philosophy*, supplementary vol. Oxford: Oxford University Press. (Informative discussion of how the concept of intentionality developed, particularly in later Greek philosophy, also with reference to Islamic and scholastic writers.)

Spiegelberg, Herbert (1976) "Intention" and "Intentionality" in the Scholastics, Brentano and Husserl', trans. L. McAlister, in L. McAlister (ed.) *The Philosophy of Brentano* London: Routledge & Kegan Paul, 1976, ch. 9. (A standard source for the origins of the different uses of these terms.)

TIM CRANE

INTERESTS *see* NEEDS AND INTERESTS

INTERNALISM AND EXTERNALISM IN EPISTEMOLOGY

The internalism–externalism distinction is usually applied to the epistemic justification of belief. The most common form of internalism (accessibility internalism) holds that only what the subject can easily become aware of (by reflection, for example) can have a bearing on justification. We may think of externalism as simply the denial of this constraint.

The strong intuitive appeal of internalism is due to the sense that we should be able to determine whether we are justified in believing something just by carefully considering the question, without the need for any further investigation. Then there is the idea that we can successfully reply to sceptical doubts about the possibility of knowledge or justified beliefs only if we can determine the epistemic status of our beliefs without presupposing anything about which sceptical doubts could be raised – the external world for example.

The main objections to internalism are: (1) It assumes an unrealistic confidence in the efficacy of armchair reflection, which is often not up to surveying our entire repertoire of beliefs and other possible grounds of belief and determining the extent to which they support a given belief. (2) If we confine ourselves to what we can ascertain on reflection, there is no guarantee that the beliefs that are thus approved as