

# Introduction: Thought as Language

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Western philosophy has a long-standing interest in the relationship between thought and language. This is not least because language-use and our mental capacities are so central to our human self-conception, as well as to the ways in which we have tried to think about other beings. Retrospectively, it is possible to identify certain broad traditions in the philosophical study of thought and language, traditions which also have their representatives in psychology and linguistics. In this introduction I shall focus on one such tradition, the one sometimes known as 'lingualism', in so far as it bears on the papers brought together in this volume.<sup>1</sup>

In the *Theaetetus*, Plato has Socrates answer the question 'What do you mean by "thinking"?' by characterising thought as 'A talk which the soul has with itself about the objects under its consideration' (189e). On such a conception, there is a logical or 'internal' connection between thought and language: thought just *is* the discourse of the mind with itself (see also Plato's *Sophist*, 263e). While this is not the only Platonic account, it is perhaps the one which has borne the most fruit. Most accept that there is *some* kind of intimate (even necessary) connection between thought and language. But is it, as the lingualist supposes, that thought must always take place 'in' language?

Construing thought as inner language certainly promises to explain some very important things, notably, several much-vaunted *parallels* between thought and language. Thoughts and utterances exhibit *semantic* parallels: not only are both candidates for meaning, reference, and truth-or-falsity, but the thought that *p* and the indicative statement 'p', produced in otherwise identical situations, must have the *same* meaning, reference and truth-value.<sup>2</sup> Against mystics who suppose that there can be ineffable thoughts, lingualists insist that whatever we are capable of thinking, we are in principle capable of saying, and vice versa. Furthermore, there are alleged *syntactic* parallels: the number of thoughts we can have (if this notion makes sense), their syntactic complexity, and the systematic relationships between those thoughts which are possible for a given thinker, are all mirrored in similar features of things one can say.

<sup>1</sup> I should perhaps stress that this is only one possible way to divide up the territory.

<sup>2</sup> Aside from exotic exceptions like that in which 'I am now stating that so-and-so' takes the place of 'p', of course.

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Lingualists, as we shall see, also make much of the fact that their account appears to be the *only* one which can make sense of contemporary cognitive-psychological theorising. Theories from cognitive psychology represent thought largely as a matter of computational operations on mental symbols at a 'sub-personal' level. Computer science shows us how computational manipulations might consist in the processing of linguistic tokens. To suppose, as the lingualist does, that thought is language, would therefore seem to solve problems and offer rewards at a stroke.

Unsurprisingly, Plato was by no means the only philosopher prior to the 'cognitive turn' to embrace a lingualist approach. René Descartes, who did much to re-orient the course of philosophy in the seventeenth century, did not straightforwardly identify thought with language. But John Cottingham's paper in this volume details the ways in which Descartes' conception of thought follows Plato's, as well as the ways in which it anticipates the twentieth-century computational conception. Cartesian 'ideas' and thoughts are publicly accessible, since they are linked with the ability to use language correctly. Descartes' dream of constructing an easily learnable formal language which would allow the ordered expression of all possible human thoughts was later pursued by Leibniz (1677), whose great project, the *ars combinatoria*, was to construct a perfect language in which thoughts would receive their most perfect (efficient and transparent) expression.

For Plato and Descartes, what really *does* the thinking is the *rational* (part of the) *soul*, rather than the whole human being. But this does not mean that 'immaterialism' is the most important commonality here: in fact, it seems to be of tangential relevance to lingualist views. Cottingham, for example, suggests that Descartes argued himself into immaterialism in a way which might not have persuaded him had he known what we now know about the brain. Contemporary lingualists certainly take pains to make their views compatible with moderate forms of *naturalism*, the view that psychological phenomena can be explained in ways acceptable within the natural sciences, and *materialism*, the view that the phenomena adverted to in such explanations must be physical. But there still remains the question of whether and how the brain can be credited with the semantic capacities these lingualists suppose it to have.

## Theories of Judgement

At the beginning of the twentieth century, the relationship between thought and language was debated in a new context. In his seminal

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essay 'Über Sinn und Bedeutung' (1892) and his 1894 review of Edmund Husserl's *Philosophie der Arithmetik*, the German logician Gottlob Frege insisted upon distinguishing between the 'objective content' and the 'subjective performance' of thinking. The former, that which can be thought, is capable of existing without a thinker, and of being the common property of several thinkers. The latter, the psychological episode in which the former is 'apprehended' or grasped, must have a bearer. The objective content of thinking Frege called 'the thought' (*der Gedanke*), and he identified this with the 'sense' of a sentence, that which is capable of being true or false. Always resisting the attempt to blur the boundary between psychology and logic, Frege's opposition to 'psychologism' came, in his later essay 'The Thought: A Logical Inquiry' (1918), to re-instate Platonism. There he expressed the relation between thought and language using a metaphor that has come to be familiar:

The thought, in itself immaterial, clothes itself in the material garment of the sentence and thereby becomes comprehensible to us. We say a sentence expresses a thought. (Frege 1918, p. 20; see also p. 26n)

From the supposition that the thought expressed by a sentence is both immaterial and non-psychological, together with his conviction that although psychological episodes need bearers, thoughts do not, Frege drew the conclusion that over and above the things of the 'outer world' (material objects) and those of the 'inner world' (psychological phenomena) we must recognise a 'third realm', whose contents cannot be grasped by the mind until they are dressed in language. On this conception, although 'thoughts' can and do exist independently of our grasping them, thinking consists in grasping them with a special mental capacity, and judging (that is, thinking that so-and-so is the case) consists in taking the thoughts thus grasped to be true. The view is lingualist not because it represents thoughts as linguistic (it need not), but because it construes thinking as coming to stand in a relation to 'objects of thought', these objects being the 'senses' of sentences, those things which are true or false.

This period in the history of our subject has been subjected to the closest of scrutiny by Michael Dummett and others. From it, Dummett has recently drawn conclusions about the nature and trajectory of philosophy itself. In this volume, the period in question and Dummett's interpretation of it are treated in the essay by Hans-Johann Glock. Glock rejects Dummett's claim that the difference between 'analytical' philosophy and philosophies from continental Europe influenced by phenomenology can be traced to a contrast

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between the philosophy of language and the 'philosophy of thought'. He traces the idea that the basic task of philosophy is to analyse thought back to its nineteenth-century roots, showing how the Kantian concern with representation was transformed by the 'linguistic turn' of the early twentieth century, instigated primarily by Wittgenstein.

Bertrand Russell, although he does not sit comfortably in the linguistic tradition, codified an associated perspective on psychological phenomena in a way which has influenced us down to the present day. To think, assume, believe, know, expect, remember, desire, hope and fear that so-and-so, Russell argued, are each matters of standing in different psychological relations to *propositions*. To believe that p is to believe the proposition that p. But although, according to Russell, 'it seems natural to say one believes a proposition and unnatural to say one desires a proposition ... as a matter of fact that is only a prejudice (Russell 1956, p. 218).' Generally, each having of a thought consists of an *object* (the proposition to which it is directed) and an *attitude* (the manner in which the subject is disposed towards the object). Russell, notoriously, changed his mind about what propositions are, conceiving of them (and their 'constituents') sometimes as linguistic, sometimes as non-linguistic. But he did hold firm to the thesis that to have the thought that p is to have an attitude towards the proposition p. He therefore dubbed all these psychological verbs 'propositional verbs', and the phenomena they pick out have come to be known as 'propositional attitudes'. To know what someone thinks, on such a conception, is correctly to identify the proposition which is the (abstract) object of their attitude.

Although this conception has a very prestigious pedigree, doubts about it are expressed here in the articles by John Searle and K. V. Wilkes. Russell's assumption that when one believes that p what one believes is the proposition that p has also come under fire from Alan White (1972, 1979), who argued that Russell conflated two different kinds of accusatives of psychological verbs. On the one hand, there is what is believed when someone believes a person or a story (the 'object-accusative' of the verb). On the other hand, there is what is believed when one believes that p (the verb's 'intentional-accusative'). In the first kind of case, thinking is a relation which obtains only if both terms of the relation exist. In the second, what is believed (namely, that p) need not obtain at all. The fact that, in his contribution to this volume, John Hyman deploys a closely related distinction in his study of the resemblance theory of pictorial representation demonstrates that the issue has relevance beyond the study of linguistic representation. Hyman defends the resem-

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blance theory by showing that it can be separated from an unacceptable theory of visual perception with which it has been associated. He challenges the rival semiotic theory of pictorial representation put forward by Nelson Goodman, which seeks to exploit a supposed parallel between pictures and words, arguing that Goodman's version of this theory invokes the very conception of visual perception which both Hyman and Goodman eschew.

The lingualist tradition came to something of a head in Ludwig Wittgenstein's *Tractatus Logico-Philosophicus* (first published in German in 1921). In a September 1916 entry from his *Notebooks*, Wittgenstein had already remarked that

[I]t is becoming clear why I thought that thinking and language were the same. For thinking is a kind of language. For a thought too is, of course, a logical picture of the proposition, and therefore is just a kind of proposition. (Wittgenstein, 1979, p. 82)

This line of thought is pursued in the *Tractatus*, the logical foundation of which is the 'picture theory' or 'model theory' of representation, according to which a proposition is both an expression of a thought (3.1) and a logical picture of reality (4.01). On the *Tractatus* conception, a thought, too, is a logical picture of facts (3), meaning that the thought that *p* must consist of psychological elements arranged in the same way as the elements of the propositional sign '*p*'. To think is to create psychological representations which are isomorphic with possible states of affairs. This view would commit Wittgenstein to the picture of language earlier endorsed by John Locke, for whom the primary function of language is to communicate thoughts by using perceptible signs to effect a correlation between the 'mental state' of the speaker and that of the hearer. Wittgenstein, notoriously, said almost nothing about the constituents of these psychological representations. In replying to a letter in which Russell had asked him about the constituents of a thought, Wittgenstein retorted

I don't know *what* the constituents of a thought are but I know *that* it must have such constituents which correspond to the words of Language. Again, the kind of relation of the constituents of the thought and of the pictured fact is irrelevant. It would be a matter of psychology to find out. (Letter of 19 August, 1919).

In contrast with Russell's early theory, which construed judgement as a relation between a judging subject *A* and a proposition *p*, Wittgenstein held that for *A* to judge that *p* is for a psychological

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fact to be true of A – a fact which, if p were true, would be isomorphic to the fact that p. One of the problems with this view is whether any such relation could possibly constitute judgement (or assertion, or thought): whether having a mental constituent with certain psychological properties is either necessary or sufficient for being truly said *to think that so-and-so is the case*.

Although Wittgenstein did insist that thoughts do not consist of words, he admitted that they comprise ‘psychical constituents that have the same sort of relation to reality as words’ (ibid.). However, the postulated relationship between these two kinds of pictures, language and thought, is not transparent. Wittgenstein put this in terms of the same metaphor Frege had used:

Language disguises thought. So much so, that from the outward form of the clothing it is impossible to infer the form of the thought beneath it, because the outward form of the clothing is not designed to reveal the form of the body, but for entirely different purposes. (4.002)

The task here envisaged for philosophy itself is to clarify thoughts, which are otherwise cloudy and indistinct (4.112), and to set limits to what can and cannot be thought, by ‘working outwards through what can be thought’ (4.114). The realms of the thinkable and the sayable coincide (5.61).

## Contemporary Lingualism in Cognitive Science

A very different but widespread contemporary conception of philosophy, facilitated by W. V. Quine’s well-known critique of the analytic/synthetic distinction, has it that philosophy is continuous with linguistics and psychology in forming part of an amalgam known as ‘cognitive science’ (roughly, the intersection of artificial intelligence, cognitive psychology, the neurosciences, Chomskyan linguistics, philosophy of mind and parts of related fields such as anthropology and sociology). Somewhat surprisingly, the *Tractatus* conception of thought, especially the idea that thinking is a kind of language, can be seen as an ancestor of this contemporary account, since the latter also centres around the idea of a *language of thought*.

This lingualist view received its canonical defence in Fodor (1975). In this book, Fodor aimed ‘to resurrect the traditional notion that there is a language of thought’ (ibid., p. 33), in order explicitly to provide an underpinning for cognitive theorising. He set out, for the first time, the philosophical and methodological presuppositions of this kind of psychology, arguing powerfully that

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contemporary cognitive theorising clearly presupposes not only that there must exist a language of thought, but also that cognition consists in computational operations upon sentences of that language, and that the language in question could not possibly be one which the subject had learned. This 'computationalist' view of cognition, at which John Searle's critique in this volume is aimed, portrays thinking as, or as the outcome of, the *computational* manipulation of mental symbols on a level below that of conscious awareness. Our knowledge of the operation of contemporary digital computers is supposed to give us a way to understand thinking itself. Searle complains that such computationalist explanations of cognition leave out the subject's consciousness. He sets out the features which characterise rule-governed, intentional behaviour, and argues that too few of them are respected by the explanations cognitive science offers. Further, he suggests that although cognitive scientists would like to portray their activity as continuous with the natural sciences, the phenomena they study do not satisfy a necessary condition for the objects of natural-scientific explanation: they are crucially *observer-dependent*.

The fully fledged *language of thought hypothesis* is that thinking consists, quite literally, in computational operations performed upon sentences of *mentalese*, an internal language with which thinkers are innately endowed.<sup>3</sup> For a creature to think, on this view, is for it to have rational symbol-manipulations occurring in its mental medium. (In a later collection of articles (1981, p. 1), Fodor admits that the theory of mind he intends to defend looks a lot like that of Descartes.) The mind is conceived of as a set of interlocking 'modules', characterised not in terms of their structure, or of the material they are 'realised' in, but in terms of their *functional inter-relations*. Their functioning consists in the processing of information encoded in *linguaform* mental representations. To believe that p is the case, for example, is to have a sentence which means 'p' in one's 'belief box' (to use Stephen Schiffer's memorable expression). Likewise, to hope, fear or desire that so-and-so, is to have the appropriate sentence in one's relevant mental module. Notice how clearly this gives expression to an updated Russellian perspective, with sentence-tokens (which are materialistically respectable, since they can supposedly be instantiated in brain states) standing in for problematic Russellian 'propositions'. If, as Fodor claims, our only remotely plausible accounts of minds and their capacities, or even our *best* such accounts, do presuppose that minds are such systems,

<sup>3</sup> For an excellent introductory critique of this account, see McGinn's (1982), Ch. 4.



we must take the contemporary lingualist case very seriously indeed.<sup>4</sup>

The essays in this volume by Donald Davidson, Hans-Johann Glock and Daniel Dennett raise certain problems for this account. Dennett, for example, argues that although we do talk silently to ourselves, and we do find ourselves thinking thoughts not framed in the words of any natural language, these are sophisticated phenomena rather than the foundation of cognition. He stresses the biological role of public words as tools, instruments which allow us to structure information, to stretch our faculties and even to recast the resources within our brains. The language of thought hypothesis, by contrast, is shown up as distinctly *unbiological*, and the analogy with a particular computer architecture on which it is premised is challenged along the way.

More recently, Fodor's arguments for a 'representational theory of mind' have been joined by an argument which in no way relies on psychological science. It is now claimed that the feature of 'propositional attitudes' known as *intentionality* itself forces upon us a theory of mental representations. The intentionality of thought consists in the fact that verbs of propositional attitude are *about* or *directed*, in a curious way upon, the situation specified in the proposition they contain. The curious feature is that those situations need not actually obtain: that is, one can believe that *p*, hope to  $\emptyset$ , or fear the *x*, without *p* ever being the case,  $\emptyset$  ever occurring, or *x* ever existing. The argument is then that for a mental phenomenon to be intentional (in this special sense) just *is* for it to be representational: a belief that *p* *represents* the world as being such that *p* is the case. So we are allegedly committed, simply by recognising the phenomenon of intentionality, to a theory of mental representations. The remarks in Searle's paper on the concept of information, when transposed into the key of 'representation', contain materials with which to criticise this argument.

### **The Problem-Solving Approach to Thinking**

Whether this contemporary lingualist picture falls victim to the same problems which flawed the *Tractatus* is an excellent question.

<sup>4</sup> This version of lingualism *might* also be able to explain the familiar 'tip-of-the-tongue' phenomenon – mentioned in several papers in this collection – in which one apparently finds oneself searching for words in which to frame one's antecedently existing thoughts. The idea would be that to have something on the tip of one's tongue is to have had the thought in question, but to be temporarily unsuccessful in translating it from mentalese into one's own natural language.



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Wittgenstein himself eventually moved to a perspective in which questions like ‘How do we use the expression “to think”, and its cognates?’ and ‘Might there be only a “family resemblance” between instances of thought?’ displaced his previous concern with the metaphysical preconditions for the possibility of thought. The later sections of Glock’s essay, in which the lingualist notion that thought must take place ‘in’ a medium is criticised, but which also seek to demonstrate the ‘internal’ relation between thought and language, exemplify this approach. In a related vein, it has been argued that Wittgenstein’s later perspective cuts the ground from underneath cognitivist theorising and the philosophical picture embroiled in it: see Hacker (1993), ch. IX.

This Wittgensteinian perspective has more in common with what Christopher Hookway identifies as the ‘problem-solving’ approach to thinking. Here, postulation of mental representations is apparently reined in (to varying degrees), in favour of a focus upon public problem-solving activities and the analysis of problem-solvers’ protocols. Like Quine, Hookway emphasises the way in which language amplifies and extends our problem-solving abilities, allowing us to cast our problems in an external form which makes them more tractable. He suggests that adoption of the problem-solving perspective would transform our understanding of the debate over the analytic/synthetic distinction, allowing us to re-evaluate Rudolph Carnap’s resistance to Quine’s critique. Subsequently, he argues that examination of the norms which govern reflective thought reveal that the relation between questions and answers, problems and solutions, is not a purely semantic matter, but involves pragmatic and contextual considerations.

Since the problem-solving approach lends itself readily to experimental investigation, it has been popular among psychologists, as the fascinating experiments detailed in Lawrence Weiskrantz’s paper in this volume bear witness. Weiskrantz is sceptical both about certain philosophers’ strictures on the possibility of thought without language, and about others’ tolerance as to what counts as thought. He proposes that we take ‘thinking’ to refer to activities like problem-solving, and argues that if we do so, then observations and experimental studies show these activities to be possible in the absence of natural language. But he hesitates to extend the thesis to conscious thought, ‘awareness’, since although human subjects with cognitive defects have the capacity to manipulate images and symbols (in some sense), they cannot bring their manipulation of these items to consciousness. Experiments show that they know how to perform the tasks in question, but also that they cannot be said to know that they can do so, since these subjects will respond by sin-

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cerely denying that they have the capacities in question. The phenomenon known as 'blindsight', which Weiskrantz himself has done so much to illuminate, and which has captivated the imagination of many philosophers, serves as only one example of this predicament.

The problem-solving approach also has other philosophical adherents, most notably within the tradition of pragmatism. The founding fathers of that tradition, as well as their successor George Herbert Mead and more recent thinkers influenced by them, such as W. V. Quine, Donald Davidson and Daniel Dennett, all agree in linking the presence of thought to the satisfaction of some publicly observable criterion (language, physiological processes, or problem-solving behaviour itself).

Quine, in his paper in this volume, gives a sophisticated account of language-learning along lines compatible with the strictures of the pragmatist tradition, strictures which he has already famously employed in his discussion of 'radical translation'. Here, both he and Davidson stress the intertwining of thought and language, and detail a series of scenarios and advances which may have brought us to where we are today, a possible history of thought and language in the species, reproduced in miniature within the development of the individual organism.

In his contribution, Davidson also extends his well-known critique of the idea that there could be rival conceptual schemes, showing how this idea is linked with the unacceptable metaphorical notion that we see the world 'through' language. For Quine, Davidson, and Dennett, our interaction with the world is direct, and language is not an representing intermediary but a set of tools which we use to cope with incoming sensory information. Davidson, for his part, compares language with a mode of perception in a way that bears comparison with Aristotle's discussion of thought and perception in *De Anima* 427<sup>a</sup>17.

William James, one of the founders of the pragmatist tradition, famously characterised the 'Self of selves' as consisting mainly in a collection of 'peculiar motions in the head or between the head and throat' (1890, ch. X). In this respect, the pragmatist approach has something in common with psychological behaviourism. John B. Watson, one of the founders of the latter movement, identified thoughts with 'the action of language mechanisms' (1919, p. 316), and B. F. Skinner, behaviourism's principal exponent, although he rejected the identification of thinking with sub-audible talking, associated thought with the probability of verbal behaviour. Linguism, evidently, can appear in very different guises.

Language of thought theorists, however, would undoubtedly reply that in so far as we have any idea of *how* creatures solve prob-

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lems, we simply *must* present such activity as consisting in the computational manipulation of mental representations. In support of this, they might well refer to the heartland of artificial intelligence, where accounts of problem-solving (and games-playing, planning, etc.) are, of course, exclusively computational.

### Thought Without Language?

Lingualism apparently derives little support from the ways in we conceptualise the behaviour of non-language-users since, arguably, they can be credited with certain kinds of thoughts (beliefs, desires, fears, etc.) in the absence of language. Possible cases of thinkers without language would include: pre-verbal infants, non-human animals and physiologically damaged humans (discussed here in the papers by Wilkes and Weiskrantz). Contemporary lingualists, however, preserve the intuitive judgement that such creatures think, since, according to their view, the behaviour such creatures exhibit itself necessitates the supposition that they are (unconsciously) manipulating mental representations.

In 1982, however, Donald Davidson published a provocative article in which he argued that only language-using creatures can have beliefs, or any other 'propositional attitudes'. Davidson (1982) softens us up by first arguing that there couldn't be *much* thought without language. He starts from the fact that we ascribe propositional attitudes 'holistically': either a creature has a rich network of such attitudes, or it has none. All the propositional attitudes require a background of beliefs. But in the case of non-language-users, it is impossible to say exactly *which* propositional attitudes they have: we have no conception of how to tell whether such creatures have certain specified beliefs, desires, etc., rather than other, very closely related ones. The complex patterns of behaviour needed to justify the attribution of specific propositional attitudes are present *only* in language-users. Davidson's argument proper is then that in order to have a belief (or any propositional attitude), it is necessary to have the *concept* of a belief, and in order to have this, it is necessary to have language. To have the concept of belief is to have the concept of a state of an organism which can be either true or false. In order to be able to think in this way, one must have grasped the subjective/objective contrast. One must be capable of identifying some pair of situations in the first of which one had a false belief, and in the second of which one acquired in its stead a true one. But the only way of revealing command of *this* contrast is by means of linguistic communication. Those who are tempted to reply to

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Davidson that it is not necessary to have the concept of belief in order to have beliefs will now have to contend with another aspect of the argument, developed in the present volume: that having concepts can in no way be separated from having fully fledged propositional thoughts.

### The 'Content' of Thoughts and Utterances

Contemporary philosophers have also been much exercised by the question of what fixes the 'content' of thoughts, that is, what makes my thought that *p* is the case a thought that *p*, rather than that *q*. The best-known theories on offer here are 'internalism', according to which the content of thoughts is fixed by what goes on in one's consciousness, and 'externalism' for which, by contrast, the content of thoughts is fixed by features of the (physical or social) environment. The latter version of this view – social externalism – is the subject of Andrew Woodfield's paper. Woodfield defends the idea that the contents of 'high-level' conceptual thoughts are fixed by the public meanings of the words in which those thoughts are expressed. He then argues that this view has important implications for psychology. Notably, he proposes that it supports a version of the Sapir–Whorf hypothesis, the hypothesis of 'linguistic relativity', according to which this kind of thinking is structured by the language(s) one has learnt to speak. Woodfield's view of concepts as intellectual norms or social traditions and Davidson's idea of concepts as ways of classifying, as well as their strategies for resisting conceptual relativism, might profitably be compared.

A neglected alternative to both internalism and externalism, defended here by Glock, is the view that what makes a thought the thought it is (though not in the *causal* sense of bringing about that thought) is how the thinker would explain it. Notice, however, that this Wittgensteinian view, taken by itself, has the same consequences as Davidson's argument, that non-language-users cannot be thinkers.

A rather different approach, championed by K. V. Wilkes, challenges the assumption that thoughts and utterances must have a determinate content in the first place. Wilkes argues that, to the contrary, there are plenty of cases in which what was meant by the speaker (or thinker) is simply indeterminate, that although answers to the question 'What did he mean?' must be restricted to some extent, we ought not to assume that such questions have a single right answer. (Quine's 'indeterminacy thesis' reverberates here). Like Searle and Hookway, Wilkes seeks to impugn the idea that

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beliefs, desires, hopes and fears are rightly characterised as attitudes toward propositions. If these more sceptical approaches to the problems surrounding 'mental content' are tenable, the conclusion that thoughts cannot be ascribed to non-human animals might well be placed in doubt.

### Conclusion

How does lingualism fare in the currents of contemporary debate? Although there is no general animus against representational theories of mind among the contributors to this volume, none of them subscribes to the language of thought hypothesis, and none of them explicitly equates thought with language. Opinions on computationalism and the merits of contemporary cognitive psychology are strongly divided. However, some contributors endorse positions closely related to the core lingualist thesis. Davidson and Glock, for example, see the ability to entertain complex thoughts (at least) as restricted to language-users. Many of the contributors take up and elaborate the theme, familiar from Vygotskian psychology, that words fulfil a crucial role in thought and problem-solving activity, and some accept the identification of thought with problem-solving. Indeed, perhaps the broadest commonality among the essays in this volume is in treating thought from the 'problem-solving' point of view, rather than from the subjectivist, individualist, 'internalist' perspective usually, but perhaps inappropriately, linked with the name of Descartes.

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