CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

1 Talking cognition: mapping and making the terrain

Jonathan Potter and Hedwig te Molder

Overview

This book addresses issues of conversation and cognition. For the first time some of the world's experts on interaction analysis have been brought together to consider the nature and role of cognition. They address the question of what part, if any, cognitive entities should play in the analysis of interaction. They develop different answers. Some are consistent with current thinking in cognitive psychology and cognitive science; others are more critical, questioning the idea that cognition is the obvious and necessary start point for the study of human action.

The question of the relation of language and thought has been a central one in cognitive and developmental psychology for more than thirty years. For the contributors here the focus is not on language as it is traditionally understood but rather on talk or, even more specifically, on talk-in-interaction. That is, not on language as an abstract set of words, meanings, or a system of contrasts as it has usually been conceived, but talk as a practical, social activity, located in settings, occurring between people, used in practices. This approach has significant implications for the way traditional issues of cognition are treated. Talk and cognition have been brought together only rarely in the past and often for particular purposes local to one discipline. However, there are some important precursors to the current enterprise, and we will describe them in detail below.

It is worth noting at the outset that because of its interdisciplinary focus this book is likely to have audiences with different levels of knowledge, understanding and expectation. In particular, we hope it will be of interest to at least three groups of researchers. First, it will be of interest to those people whose primary topic is the study of interaction. The issue of how (if at all), or in what way, cognition figures in interaction is a live and complex one with important implications for how analysis can be done and what might be possible. Second, it will be of interest to discursive psychologists and the wider community of social psychologists who have

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

attempted to develop an alternative to traditional social cognitive perspectives. For them, it will refine several of the issues and highlight the value of considering them in terms of natural interaction. Third, we hope the book will be interesting to the very broad community of cognitive scientists. Cognition has been understood in a wide range of ways in this community (some of which we will describe below) but only rarely has the start point been research on natural interaction.

The contributors to this book are some of the foremost analysts of natural interaction in the world. Although each has his or her individual take on things, they mostly draw on one or more of the connected approaches of ethnomethodology, conversation analysis and discursive psychology. We will have more to say about these approaches later. For the moment we will use thumbnails.

Ethnomethodology is an approach to the methods that people use for making sense of, and accomplishing the order of, their social worlds. It highlights the use of ad hoc, situation specific procedures to generate order. Most recently its emphasis has been on the way action must be understood in terms of the full, embodied, practical specifics of its setting. The key figure in the development of ethnomethodology is the sociologist Harold Garfinkel (Garfinkel, 1967, 2002). In this collection Michael Lynch, David Bogen and Jeff Coulter have been most associated with this perspective.

Conversation analysis (CA) is the study of natural talk as a medium for action and interaction. A very large body of studies from a conversation analytic perspective have been done on both everyday and institutional talk. Conversation analysis has its origins in the lectures of the sociologist Harvey Sacks (now published as Sacks, 1992), and the work of his colleagues Gail Jefferson and Emanuel Schegloff (e.g. Sacks, Schegloff and Jefferson, 1974). Many of the contributors to this collection have a broadly conversation analytic perspective, including Bob Sanders, Anita Pomerantz, Douglas Maynard, Nora Schaeffer, Robert Hopper, John Heritage, Paul Drew and Robin Wooffitt. This predominance reflects the way conversation analysis has become one of the most powerful and empirically cumulative fields in the study of interaction.

Discursive psychology (DP) is an approach that considers psychology as an object *in* and *for* interaction. That is, it focuses on how psychological categories and constructions are used by people in everyday and institutional settings. While ethnomethodologists and conversation analysts have mainly worked within sociology and have often found issues of cognition rather peripheral, discursive psychologists have mainly worked within psychology and consequentially have a longer history of addressing these issues. Key figures in the development of discursive psychology are

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

Derek Edwards and Jonathan Potter (Edwards, 1997; Edwards and Potter, 1992). In this collection Derek Edwards, Hedwig te Molder, Jonathan Potter and Robin Wooffitt (again) are most associated with this approach.

There is considerably more theoretical and analytic homogeneity here than even this listing of just three approaches suggests. Both conversation analysis and discursive psychology pick up from and develop themes from ethnomethodology. Moreover, for the most part all three approaches emphasise that:

a) Talk is a medium of action.
b) Talk is locally and situationally organized.
c) The point of view of the interactant is basic to understanding talk-in-interaction.
d) The primary analytic approach is empirical study of natural interaction.

These features have led researchers in this area in a very different methodological direction to most cognitive scientists. In particular, the emphasis on action, context and natural talk leads away from working with either experimental manipulations or invented and decontextualized examples. It is worth emphasising, however, that although this body of work has provided a basis for doubt about those methods it was not, on the whole, this that led researchers in the direction they took. The tradition of work in conversation analysis evolved out of a combination of novel theorizing about interaction stimulated by Garfinkel and Sacks, and the development of tape recording technology that allowed conversation to be studied in a way previously impossible. Having developed a powerful analytic approach for working directly with records of interaction, experimental simulations of interaction seemed to be of limited value and potentially misleading.

The broad sweep of the arguments here means that we will inevitably not be able to cover all potentially relevant literature. For example, we will not cover the writing of critics of cognitive approaches such as Gergen, Harré and Shotter (e.g. Gergen, 1994, 1999; Harré, 2002; Shotter, 1993) who work largely with theoretical and conceptual analysis. Examples of such work are collected together in Still and Costall (1991), and include a number of arguments inspired by the work of Gibson (1986). This work has some significant virtues, yet it does not provide for the focused investigation of questions about cognition in interaction that is developed in the chapters collected here.

In the rest of this introductory chapter we will try to accomplish a series of things. First, we will describe some of the questions that the book is intended to illuminate. Second, we will consider some of the historical, conceptual and philosophical features of the notion of cognition,

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

including its relation to language. Third, we will characterize some of the key features of the set of perspectives that has been developed in the broad field of cognitive science and cognitive psychology more specifically. This will introduce a set of issues that will help to explicate the relevance of work in interaction described later in this chapter, and in the chapters that follow. It is also intended to highlight the variety and complexity of what cognitive researchers have achieved and what points of entry into this work there might be for interaction researchers. Fourth, we will describe the way issues of cognition have been dealt with in existing work on interaction, concentrating particularly on ethnomethodology, conversation analysis and discursive psychology. Fifth, and finally, we will provide a synoptic overview of the contributions to this book ending with some comments on future progress.

1. Questions of cognition and interaction

The questions addressed in this collection are derived from empirical studies of interaction. The book is intended to extend and clarify issues to do with the nature and role of cognitive entities in interaction analysis. However, it is precisely that focus that makes for some interesting and potentially novel implications for more traditional cognitive psychologists and cognitive scientists.

The papers in this collection are relevant to a range of questions. Some of the most important are:

- How does cognition figure in the *analysis* of interaction? Alternatively, can (and should) such analysis be done without recourse to cognitive notions?
- If speakers draw on cognitive notions, what is their status? That is, what *kind* of thing is cognition for participants in interaction? How is it invoked, described and oriented to by speakers in the course of interaction?
- In the strongest case, is interaction only explicable in terms of a set of cognitive precursors (cognitivism)? How far can these precursors reflect lay notions and orientations of conversational participants and how far must they be derived from technical analyses?
- How does interaction research throw light on continuing questions about the possible relations between mental terms and cognitive entities?
- What implications does the exploration of these questions have for experimental work in cognitive science?

These are complicated questions that raise fundamental issues about method, theory and the nature of psychology. The aim is to clarify them, underscore their significance, and show the way towards their answers.

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

Some papers consider a cognitive level of analysis indispensable (e.g. Sanders). Some papers suggest that interaction analysis can reveal the role of particular kinds of cognitive entities (e.g. Schaeffer and Maynard, Drew and Pomerantz). Some suggest that analysis should respecify cognitive notions in interactional terms (Lynch and Bogen, Wooffitt). Some develop an agnostic approach (Hopper) or wish to consider cognitive notions in terms of topics or orientations in participants' talk (Edwards and Potter). One paper (Coulter) provides a trenchant (and conceptually based) critique of the whole enterprise of cognitive science.

2. Cognition as an object in language and philosophy

Characterizing contemporary cognition and its development is not an easy task. Cognitive science is now a broad and heterogeneous intellectual field cutting across the disciplines of psychology, computer studies, anthropology, linguistics, neuroscience and philosophy. It mixes highly technical conceptual and metaphysical analyses with issues that arise out of programming and domain-specific applied work on computer systems and human factors. There is no single notion of cognition cutting across this field. Histories in textbooks and encyclopaedias show a wide range of philosophers cited as key figures (including Plato and Aristotle, of course) as well as a varied selection of nineteenth and twentieth century psychologists and figures from other disciplines. Let us start with the dictionary.

The term cognition

The *Oxford English Dictionary* (2002) helpfully distinguishes an everyday sense of cognition from a more philosophical notion:

1. a. The action or faculty of knowing; knowledge, consciousness; acquaintance with a subject. (Obs.)
   1447 O. Bokenham Seyntys (1835) 154 Illumynyd she is wyth clere cognycyoun In hyr soule.
   1528 Lyndesay *Dream* 577 Filicitie they had Inuariabyll, And of his Godhed cleir cognitioun.
   1604 T. Wright *Passions* v. 237 With conscience and perfit cognition of innocencie.
   1606 Shakes. *Tr. and Cr.* v. ii. 63, I will not be my selfe, nor haue cognition Of what I feele.
   1682 Sir T. Browne *Chr. Mor.* (1756) 106 A retrograde cognition of times past.
   1796 Burney Mem. *Metastasio II.* 389 Tasting the first aliments of scientific cognition.
   b. Apprehension, perception. (nonce-use.)
   1822 Lamb *Elia Ser.* i. iii. (1865) 34 In thy cognition of some poignant jest.

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

2. Philos. a. The action or faculty of knowing taken in its widest sense, including sensation, perception, conception, etc., as distinguished from feeling and volition; also, more specifically, the action of cognizing an object in perception proper.
1651 Stanley *Poems* 231 This Divines call intellectual intuitive cognition.
1690 Locke *Hum. Und.* iv. iii. §6 Finding not Cognition within the natural Powers of Matter.
1847 Lewes *Hist. Philos*. (1867) I. Introd. 113 A faculty of cognition a priori.
1879 Adamson Philos. Kant 45 The several elements which, according to Kant, make up the organic unity of Perception or real Cognition.
b. A product of such an action: a sensation, perception, notion, or higher intuition.
1819 Shelley Peter *Bell III*, *473 note*, Peter's progenitor . . . seems to have possessed a 'pure anticipated cognition' of the nature and modesty of this ornament of his posterity.
1856 Meiklejohn tr. *Kant's Krit. P.R.* 79 The fact that we do possess scientific a priori cognitions, namely, those of pure mathematics and general physics.
1873 H. Spencer *Princ. Psychol. I. iii. viii.* 369 With purely intellectual cognitions . . . also with . . . moral cognitions.
1881 J. H. Stirling *Text-bk. Kant* 468 Let a cognition be intellectually what it may, it is no cognition proper, it is not properly Knowledge, unless and until it have an actual perceptive application.

A few things are worth noting about these definitions and the examples quoted. First, an idea of cognition residing *inside* the person (e.g. 'in hyr soule' from 1447) goes back several hundred years. Second, both the everyday and philosophical senses of the term have an epistemic element. Cognition is related to knowledge; it is cognition *of* something. This reflects the Latin root of cognition as getting to know, acquaintance, knowledge. The move from Latin to English, then, can be understood as a move from an objective to a subjective view of knowledge. Third, cognition can be of something which is itself 'psychological' (obviously the idea of psychology must be used with caution here or we will end in vicious circularity). Thus there is 'perfit cognition of innocencie' or 'cognition Of what I feele'. Alternatively, it can be something 'outside' the person, such as 'times past'. Fourth, note that the philosophical senses of cognition reflect the argument between empiricists and rationalists, with cognition requiring 'actual perceptive application' versus the idea of 'a priori cognitions' of 'mathematics and general physics'. Finally, we can see the linking of cognition to 'perception' that is at the heart of much modern cognitive psychology.

Philosophical precursors to cognitive science: Descartes and Locke

The modern philosophical account of cognition is crucially dependent on the work of two seventeenth-century philosophers: Rene Descartes and

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

John Locke. Descartes is, of course, the philosopher who most famously helped shape modern thinking about the nature and role of cognition. He addressed epistemic issues about truth and knowledge through considering what could be fallible in the quest for what could be indubitable. For him, the world of objects might not exist because, after all, they might be the vivid illusions of dreams. Yet there has to be an 'I' doing that thinking, whether true or illusory and that could be the foundation for knowledge. As he put it:

> It was absolutely essential that the 'I' who thought this should be somewhat, and remarking that this truth *'I think therefore I am'* was so certain and so assured that all the most extravagant suppositions brought forward by the sceptics were incapable of shaking it. (Descartes, 1970: 101)

We might not be able to see how things are in the outer world, but we do know their appearance in our inner world. Nothing, in the end, is better known to the mind than itself. By inventing a superior class of inner perceptions, Descartes ingeniously attempted to surmount the agonizing problem of the outer world's deceitfulness.

As Rorty (1979) argues in his critical analysis of the history of Western philosophy, the notion of mind does not emerge in philosophical debates until Descartes. For the Greeks, the essential matter was how to obtain an unmediated picture of reality, that is, how to see reality directly without being distracted by any of its mere appearances. After Descartes, knowledge was still understood in terms of perception, but now the eye as the central metaphor for acquiring knowledge had been exchanged for another powerful image: the mirror. Knowledge of the world was no longer directly available, but only through a mirror in which nature is being reflected indirectly. As Rorty puts it: 'The question "How can I escape from the realm of appearance?" was replaced by the question "How can I escape from behind the veil of ideas?"' (1979: 160).

Part of Descartes' legacy to cognitive science is a basic mind/body dualism. In his writing it is possible to see this as required to manage a problem of his own making. Having established the special nature of the mind, how can it make contact with anything else? Descartes' rather ad hoc pineal gland solution was an early attempt to solve a problem that is still very much alive in different ways in contemporary cognitive science.

Descartes set the scene for a treatment of perception as the mind's mirror on the world, with mind as the solid foundation for knowledge to be built on. Departing from earlier Greek and medieval conceptions, he developed the notion of an *idea* that would apply exclusively to the content of the human mind (Kenny, 1967). Some fifty years later Locke drew on this same notion of an idea in his account of the nature of knowledge and what has become a classic picture of the working of language.

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

Locke viewed ideas as a basic currency of thinking and therefore philosophy. These ideas came from 'sensation and reflection'. This is the way the famous white paper (*tabula rasa*) comes to be filled in its 'almost endless variety'. Knowledge in turn comes either directly from experience or, in a move echoed in modern cognitivism, 'the internal operations of our minds perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking' (Locke, Bk I, Ch. I, pt. 2). Simple ideas come through sensation to a passive mind. Then activities of mind turn these into complex ideas through basic processes of combination, comparison or separation. As he put it:

> The acts of the mind, wherein it exerts its power over its simple ideas, are chiefly these three: (1) Combining several simple ideas into one compound one; and thus all complex ideas are made. (2) The second is bringing two ideas, whether simple or complex, together, and setting them by one another, so as to take a view of them at once, without uniting them into one; by which way it gets all its ideas of relations. (3) The third is separating them from all other ideas that accompany them in their real existence: this is called abstraction: and thus all its general ideas are made. (Locke, Bk. II, Ch. XII, pt. 1)

Mind here is an agent processing information much as, in more refined and technical forms, it appears in contemporary cognitive psychology.

Locke's reasoning about mind is bound up with his account of language. He developed what Roy Harris (1988) has described as a *telementation* account of language. In this account language is understood as a conduit for communicating ideas from one mind to another.

> *Words are sensible signs, necessary for communication of ideas.* Man, though he have great variety of thoughts, and such from which others as well as himself might receive profit and delight; yet they are all within his own breast, invisible and hidden from others, nor can of themselves be made to appear. The comfort and advantage of society not being to be had without communication of thoughts, it was necessary that man should find out some external sensible signs, whereof those invisible ideas, which his thoughts are made up of, might be made known to others. (Locke, Bk. III, Ch. II, pt. 1, italics in original)

Note here the emphasis on ideas hidden invisibly inside the person and the role of language being to make them visible (Coulter develops Harris's argument about telementation in his contribution to this volume).

Words are secondary to ideas for Locke. Indeed, the first use of words is for *recording* thoughts, rather like a Dictaphone might be used to record a letter. The second use is for *communicating* thoughts. Because of their conventional and arbitrary nature (Locke prefigures Saussure here) he sees words as an imperfect way of transmitting ideas. The recipient may well find them doubtful and uncertain as cues to the precise ideas of the

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

speaker. In contrast, if you are recording your thoughts for yourself using words your record can be perfect:

> *Any words will serve for recording.* As to the first of these, for the recording our own thoughts for the help of our own memories, whereby, as it were, we talk to ourselves, any words will serve the turn. For since sounds are voluntary and indifferent signs of any ideas, a man may use what words he pleases to signify his own ideas to himself: and there will be no imperfection in them, if he constantly use the same sign for the same idea: for then he cannot fail of having his meaning understood, wherein consists the right use and perfection of language. (Locke, Bk. III, Ch. IX, pt. 2, italics in original)

Language, then, becomes an aid to thinking and can enable our own memories and ideas to be captured, yet can only capture those of others in an indistinct manner.

Rorty (1980) has argued that Descartes and Locke virtually invented the modern idea of the human mind. In Greek philosophy there had been no easy way to distinguish what might later be called 'states of consciousness' from objects and events in the world. Descartes extended the notion of thought so that it would cover many of what we would come to think of as cognitive psychological terms: doubting, understanding, imagining and so on. Locke extended these ideas into a quasi-scientific programme of considering the generation and composition of ideas and the processes this involved. Words were left as imperfect traces of those inner ideas.

We do not want to suggest that Descartes and Locke are the only important philosophical contributors to ideas about cognition. However, they lay out many of the features that stayed in place until the sorts of critique of this picture of mind came from linguistic philosophers such as Ryle and Wittgenstein in the twentieth century. They still have a central role in modern cognitive science. Some of these issues are explored below, particularly in Coulter's chapter. For the moment we will move away from philosophy to consider the development of modern cognitive science.

3. Modern cognitive science

Histories of contemporary cognitive science identify the key dates as just following the Second World War. For example, Gardner's (1985) excellent overview suggests the so called 'Hixon symposium' of 1948 as the setting where a number of key figures who had developed their thinking in different fields of war work came together. Many features of modern cognitive science have their origin in work on missile guidance systems, problems of people using complex apparatus such as cockpit displays,

© Cambridge University Press www.cambridge.org

CAMBRIDGE

Cambridge University Press
0521790204 - Conversation and Cognition
Edited by Hedwig te Molder and Jonathan Potter
Excerpt
More information

and the new science of computing. Technical advances here went in concert with the major social upheavals of the war and challenges to old orthodoxies. The most important orthodoxy to be challenged was that of the behaviourist tradition that had dominated for the three decades up to the war, particularly in North America. Its role as the position to be countered can be seen in the title of McCulloch's contribution to the symposium: 'Why the Mind Is in the Head'. The capitalization of 'Is' here went against the general behaviourist caution about the attribution of inner entities. Gardner describes this title as provocative in 1948 – yet within thirty years the success of cognitive science would make it as orthodox as what came before.

The five decades that have followed have been a period of furious development for cognitive science that has grown up with the evolution of integrated circuits, computing and the Internet. For us the interest is in the nature of the cognitive in cognitive science. What *kinds of things* are described as cognitive processes and cognitive states? What styles of explanation are characteristic in cognitive science? Our overview of cognitive science is not intended to be comprehensive. Instead we will highlight some central moments and features of the area.

Information theory and artificial intelligence: Shannon, Turing and Marr

Theoretical and technological advances in the mid twentieth century led to the development of information theory. Shannon's crucial insight was that the states of an electronic switch (on/off) could be treated as equivalent to logical propositions (true/false). This was refined into the notion of a *bit* of information, that is, the information required to reduce future uncertainty by choosing one of two equal options. This was crucial in the development of programming languages that would run on computers, where the transistors (on/off switches) in integrated circuits would allow large, and (with time) enormous, amounts of information to be 'processed' (Gardner, 1985).

Information here is an abstraction. It has been separated from *both* particular languages such as English or French, and also from particular processing or communication systems. It can be transmitted via wire or radio, and processed by different kinds of computers. Crucially it was possible to start thinking of human brains as processors of information. This, in turn, could allow the old behaviourist concepts of stimulus and response to be transformed into new information processing concepts of input and output.

If human brains could be treated as processors of information like computers, could the reverse be true? Could computers be treated like

© Cambridge University Press www.cambridge.org