

35 Conversation Analysis and Psychology

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1 Introduction

We begin by outlining a range of ways in which Conversation Analysis (CA) can be relevant to Psychology, and vice versa. This is a complex topic, so the following list is neither definitive nor exhaustive. The rest of the chapter will elaborate, necessarily selectively, on those we see as most relevant for CA.

- (i) Much of psychology conceives of language in a noninteractive fashion, as the psychology of grammar and meaning, and as a matter of specifying the mental processes underlying comprehension and production. This is the established domain of experimental psycholinguistics, and of various approaches to language in experimental Social Psychology, such as 'verb semantics' models of causal attribution (e.g. Brown & Fish, 1983; Semin & Fiedler, 1988). Such studies typically avoid everyday recorded talk-in-interaction in favor of sets of sentences or vignettes carefully constructed to test hypotheses about mental processing. We will not pursue this line of research in the space available here, being least relevant to CA, but see Edwards and Potter (1993) for a CA-inspired alternative way of approaching the claimed domain of relevance of such studies, which is the nature of people's everyday causal explanations of events.
- (ii) Psychology may study 'dialog', the scare quotes being there to distinguish most examples of 'dialog' from the kind of recorded interaction studied by

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CA. However, studies (e.g. Pickering & Garrod, 2004) generally proceed with scant reference to CA, producing instead an experimental science of mental states, individual cognitive processes, and the factors and variables that affect them. Research of this kind presumes, as much as it demonstrates, an individualist, cognitive understanding of what is happening when people talk to each other: that they are essentially engaged in formulating and conveying their thoughts to one another.

- (iii) Psychology may take CA as an inspirational source of hypotheses and variables for testing models of whatever individual cognitive processes are thought to be required in order for people to produce and comprehend dialog in the manner shown by CA (e.g. Clark, 1996). This approach sits more happily alongside CA, being informed by it and respectful of it, but it is not yet clear how it may contribute to CA itself, which anyway is not its aim. Emanuel Schegloff notes that, where other disciplines (such as Psychology, Anthropology and Linguistics) draw upon or use CA, they tend not to respect the 'integrity' of CA's coherent object of study, which is social interaction *per se*, the integrated orchestration by participants themselves, of what that they see and hear each other doing. Instead, "the return or payoff of the [non-CA] research redounds virtually entirely to the other domain and not to the corpus of conversation-analytic knowledge. It need not be so, but, so far, it has been so" (Schegloff, 2005b: 473).
- (iv) Psychology may take CA, in all its detail and with a clear understanding of its canonical data and methods, to be revealing the phenomena to which Psychology needs to address itself—that is, the domain of practices to which psychological explanations need to be directed. The assumption here is that, in order to do all the things that CA shows people to be doing (CA *itself*, that is, not a series of experiments inspired by it), individuals must possess a set of corresponding psychological processes to enable them to do it. Something of this sort appears to be Schegloff's minimal requirement for a psychology of conversational competence; "it is by reference to these [CA's own findings] that mechanisms for speech production and understanding need to be understood" (Schegloff, 2004b: 207).
- (v) CA may be considered to be *already* Psychology in a similar, though even more controversial, sense to how it is already Sociology. That is, it provides a basis for examining how psychological relevancies figure as members' concerns within, and for, the practices of situated talk. This is the approach taken by Discursive Psychology (DP) (e.g. Edwards, 2006; Potter, 2006). CA's methods and data are considered already adequate to the task, and there is no requirement for experimental testing beyond CA's own observational criteria (the systematic use of collections, the demonstration of robust patterns, the pursuit of deviant cases, etc.). Here, Psychology's relevance is as analytic topic, not explanatory resource (cf. Wieder, 1988), which makes DP radically different from the kinds of mainstream cognitive psychology outlined in points 1–4. Nevertheless, DP is not in all details the same thing as CA; it has a psychological focus in what it finds interesting, and it extends

- more readily to studies of written text (see Edwards, 1997; Edwards & Potter, 1992).
- (vi) The relationship can also be inverted; CA might in turn be informed by Psychology, which is to say CA *itself*, as an enterprise with its own aims and coherence, rather than CA practitioners becoming educated about corresponding brain processes and mental states, when that makes no difference to interaction analysis. There is a serious question here, as to what difference it *could* make to CA, to discover (or theorize about) what is going on in people's heads. As Schegloff (2005b) has argued, CA is self-contained and adequate to its purposes, in its integrated approach to data, method and analysis. So, what might an input from Psychology look like, as a contribution to the explication of public practices of social interaction? Possible examples include Michael Tomasello's work on how social interaction relies upon shared understandings of mental states (e.g. Tomasello, 2008); Pim Levelt's demonstration of how, in experiments, it takes a certain number of milliseconds to name a picture (Levelt, Roelofs & Meyer, 1999); and various psycholinguistic findings, such as the additional processing time it may take for the mind/brain to deal with negative rather than affirmative information (Clark, 1976). We will return to Tomasello's work below. Psycholinguistic and neuropsychological work on timings and brain function have a plausible relevance to CA phenomena such as word selection, repair initiation, and 'precision timing' issues generally, including delay in dispreference marking (see Pomerantz & Heritage, this volume, on preference; see also Clayman, this volume, on turn-taking). Note, however, that CA is programmatically concerned with what people *treat as* meaningful, publicly and for each other. If there turns out to be a neural basis for the kinds of conversational phenomena established by CA, then that does not mean those phenomena are biological *rather than* social; CA establishes them as social *no matter what*. Similarly, if *no* clear neural correlation were found for a range of demonstrable CA phenomena, that would not put their reality in doubt as independently demonstrable phenomena of social interaction. The relevance of such findings to CA *per se* (that is, to the 'integrity' of social interaction as an object of study) remains moot, but is clearly an exciting topic for future research.

In the remainder of this chapter, we draw upon these various kinds of relationship between Psychology and CA, using CA itself, rather than Psychology, as the first criterion of relevance. We begin with some key statements by Sacks, Schegloff and others, followed by sections on cognitive-psychological approaches to conversational competence, and then a series of sections dealing with psychologically-relevant topics that CA methods and findings can directly address, including cognitivism and method, understanding and intersubjectivity, knowledge and belief, attitudes and assessments, intentionality, and the proposed evidencing of mental states via CA's own data and methods. We also discuss the implications of CA for psychological methods, and end with some conclusions.

2 CA's Position on Mental Life

In his first published lecture, delivered in the Fall of 1964, Harvey Sacks indicated how psychological matters should be treated:

When people start to analyze social phenomena, if it looks like things occur with the sort of immediacy we find in some of these exchanges, then, if you have to make an elaborate analysis of it—that is to say, show that they did something as involved as some of the things I have proposed—then you figure that they couldn't have thought that fast. *I want to suggest that you have to forget that completely. Don't worry about how fast they're thinking. First of all, don't worry about whether they're 'thinking.'* Just try to come to terms with how it is that the thing comes off. Because you'll find that they can do these things. (Sacks, 1992: I: 11, emphasis added)

Even after nearly half a century, Sacks' suggestion still characterizes much of the work in contemporary CA. Unlike most approaches to language and interaction in Psychology and Neuroscience, there is no attempt, nor ambition, to make underlying cognitive structures, mental processes or neuronal objects the touchstone for explaining the patterning of conduct.

Instead of starting with cognition, Sacks started with interaction from the perspective of its participants, and focused on how its visibility/hearability is crucial to its operation. From this perspective, mind, thoughts, knowledge and so on (what contemporary psychologists would collect together as *cognition*) would be relevant to that interaction through the way they are seen or heard in the interactions themselves. In another lecture, from Fall 1965, Sacks showed how speakers can display 'shared knowledge' through collaboratively completing another speaker's utterance—this can show the recipient that the speaker not only shares knowledge of what s/he is talking about but also "that they 'know what's on each other's minds'" (Sacks, 1992 I: 147; see also Lerner, 2004a). A similar notion of interactive 'mind-reading' is invoked by psychologists who attribute to persons a 'Theory of Mind' by which they understand each other's actions (Baron-Cohen, 1995; Tomasello, 2008). Note, however, the way Sacks puts scare quotes around the idea. He also comments that sociologists have talked about shared knowledge, often in the sense of lists of items known in common, but have not addressed the question "how is it that what persons know 'in common' is organized" (Sacks, 1992: I: 23).

More explicitly, Sacks contrasts his own approach to how people can be said to 'understand' each other, with that traditionally taken in the experimental psychology of comprehension and memory. In a 1968 lecture on second stories, he remarked:

A typical device is if somebody tells a story, you give a hearer ten minutes and ask them to retell the story . . . Now what's impressive here is, instead of saying "Let's find a way of seeing whether people understand what somebody else says," we've asked "Is there some procedure *people use* which has as its product a *showing* that they heard and understood?" (Sacks, 1992: II: 30–1, emphasis added)

One principle of CA then, since its inception, has been that cognitive or psychological analysis should be bracketed off in favor of pursuing features of public interaction and how that unfolds. This, in itself, is not an anti-cognitivist position. The bracketing is what Robert Hopper (2005) calls an agnostic position, particularly compared with some arguments from ethnomethodology. For example, Jeff Coulter has developed a series of critiques of both cognitivism as a form of explanation in social science and cognition as a coherent object of study (see Button, et al., 1995; Coulter, 2005). In many ways, then, the CA position is closer to the perspective of Discursive Psychology (Edwards, 1997; Edwards & Potter, 1992, 2005; Potter & Edwards, 2003) than to the more extreme ethnomethodological tradition.

Whereas conversation analysts have long been engaged with CA's applicability to questions about the nature and basis of social organization and social structure, there has not been a corresponding engagement with Psychology. For the most part, conversation analysts have adhered to Sacks' injunction not to worry about what may be going on in people's heads (cf. "meaningful events are entirely and exclusively events in a person's behavioral environment . . . Hence there is no reason to look under the skull since nothing of interest is to be found there but brains," Garfinkel, 1963: 190). The occasional forays into a discussion of psychological issues have been isolated and have not come together into a program in the way the study of institutional talk has become a powerful and cumulative strand in CA. In one example, Anita Pomerantz (1990/91) weighed the virtues of a more cognitive versus a more interactional interpretation of a high-school attendance officer's calls to parents of absent pupils. Perhaps unsurprisingly, she concludes that the interactional interpretation provides more analytic leverage, and in particular, that the orientations to administrative records displayed by the clerk are better understood as doing something over and above simply reflecting inner states of knowledge. In another example, John Heritage (1990/91) uses two calls that have a very similar display of 'touched off' remembering to suggest that there is, in this case at least, evidence of mental or strategic planning guiding conversational conduct.

Also around this time Emanuel Schegloff (1991a) set out some of the implications of CA's findings about interaction, for Cognitive Psychology and in particular the idea of *socially shared cognition*. He emphasized that "the fundamental or primordial scene of social life is that of direct interaction between members of a social species" (154). He contrasted this with the cognitive science approach of studying cognition "in the splendid isolation of the individual mind or brain" (168). He went on to conclude that this latter stance on cognition:

may be deeply misconceived, because our understanding of the world and of one another is posed as a problem, and resolved as an achievement, in an inescapably social and interactional context—both with tools forged in the workshops of interaction and in settings in which we are answerable to our fellows . . . To bring the study of cognition explicitly into the arena of the social is to bring it home again.' (Schegloff, 1991a: 168)

Schegloff is developing here a strong critique of the methods of cognitive science with regard to talk-in-interaction, and the way they fail to capture a key environment for cognition. Two visions of the possible relationship between CA and Cognitive Psychology, from among those we have outlined, are in play here. On the one hand, there is a vision in which CA is a form of interaction analysis that captures the organization of psychological matters (understanding, knowledge, and so on) in a way that simply obviates the requirement for a more individual cognitivist approach. On the other hand, there is a vision where CA and Cognitive Psychology are parallel projects which can both be improved by mutual dialog. We consider the development and implications of both of these visions in the following sections of this chapter.

3 Cognition, Cognitivism and Method

In attempting to relate the findings and methods of CA to Psychology we face an initial difficulty in that cognitive or psychological states have been understood quite differently in different areas of Psychology. Modern Cognitive Psychology developed after World War II and was strongly influenced by developments in computing and information theory. In information theory, states of an electronic switch (on/off) were seen as equivalent to logical propositions (yes/no). Computers use transistors (types of on/off switches) in integrated circuits to process enormous amounts of information very quickly. In this model, information is viewed as independent of a particular language such as English and can be managed in any system that can include on/off switches. Influenced by these ideas, psychologists started to consider the ways in which human brains could be seen as information processors. Information would come in through some perceptual input (seeing, hearing); it would be processed in some ways; and the upshot of these processes would be output (actions of some kind). For a strong critique of this computational model of mind, grounded in Wittgensteinian and ethnomethodological principles and relevant to the foundations of CA, see Button, et al. (1995).

Once this picture of the brain took hold, as a biological input-output machine for processing information, the next stage was to consider what kind of thing this processing is, and where it takes place. It is common in Cognitive Psychology, for example, to distinguish between: (a) mental processing that people do consciously, manipulating images, say, or pondering math problems; (b) cognitive analysis that is outside consciousness, where a series of events might be connected by a particular cognitive schema; and (c) neuronal processing where neurons and ganglions combine in basic encoding of memories, and sift features such as lines and movement from patterns of activation in the retina.

These elements are combined into a perceptual-cognitive metatheory in which the world is apprehended perceptually and then represented mentally in the form of categories of information: the "base model is the lone, sense-making perceiver,

extracting sensory information, recognizing patterns, storing mental representations of things in the world, and (then) talking about them" (Edwards, 1997: 230–1). Note the contrast here to Schegloff's 'primordial scene' of speakers embedded in interaction. These opposed images underpin profoundly different research approaches.

Jonathan Potter and Hedwig te Molder (2005) have identified seven main contrasts between mainstream Cognitive Psychology and CA. These contrasts include, respectively: a focus on abstract as opposed to concrete notions of information; on competence rather than performance; computational models rather than psychological reality; abstract processes rather than ecological naturalism; the experimental manipulation of variables against the observational study of unconstrained interaction; underlying symbolic representations as opposed to the building of descriptions in talk; the decomposition of mental objects into inner modules as against psychological matters being built and displayed in talk. The important point is that these are not two methodological approaches directed at the same object; rather, the methods of Cognitive Psychology virtually wipe out the phenomena that are central to conversation analytic work.

Crucially, much Cognitive Psychology adopts what Roy Harris (1981) calls the *telementation* model of language, that treats it as a conduit for transmitting ideas (packets of information) from one mind to another. It fails therefore to conceptualize talk as a medium for action and interaction, a normative system, involving a range of ordered practices of repair, person reference, preference and so on. CA works with audio- and video-recordings of natural interaction precisely because these allow an appreciation of this detail of natural organization. Moreover, they allow an appreciation of the participants' own orientations to that detail, whose central importance was emphasized by Sacks, Jefferson and others and has been demonstrated in many studies discussed in other chapters of this book. This sets up an empirical and epistemic gulf between CA and the project of Cognitive Psychology. Even if not completely incommensurable, the task of connecting these projects is a challenging one.

The influence of Cognitive Psychology's telementation approach can be seen in work that is otherwise highly sympathetic to Conversation Analysis. For example, Herb Clark (1996) draws heavily on Conversation Analysis and yet Derek Edwards (1995, 1997, 1999b) highlights the tensions between CA's approach and the fundamentally cognitivist models of language and communication that Clark assumes. For example, Clark's notion of shared knowledge has it as "the sum of their mutual, common, or joint knowledge, beliefs, and suppositions" (1996: 93). Clark sets up the basic problematic thus: if two minds contain the same items of knowledge, how can they be coordinated through talk? The problem highlighted by Edwards is that this way of posing the problem obscures two practical concerns that are basic to interaction. First, in practice, issues of knowledge and of description are bound up together. For parties in conversation, and for interaction analysts, what is live in interaction are the descriptions, formulations, glosses and so on through which knowledge claims or states are constituted. There is no independent route to those things. It is the telementation perspective

that presents the descriptions as conveyors for mental objects. Second, agreement or the sharing of knowledge is not something that can be established independently of interaction. Rather, agreement is accomplished conversationally either explicitly or through some kind of display (such as a collaborative completion).

This same contrast of basic perspectives is shown by Schegloff's (2004b) commentary on Martin Pickering and Simon Garrod's (2004) account of the nature of dialog. Schegloff points out that the authors have, ironically, developed an account of dialog that omits much of what is crucial in interaction. In particular, he suggests that they fail to address "basic organizations of practice that deal with the various generic organizational contingencies of interaction" (Schegloff, 2004b: 207) such as how turns are taken, how sequences are organized, how troubles are managed, how words are selected and how all of this fits into, and contributes to, an overall structural organization. In another publication, Pickering and Garrod point ironically to the apparent ease with which speakers "do things that should be very hard" such as "comprehend incomplete or elliptical utterances . . . whereas giving a speech is highly challenging" (Pickering & Garrod, 2009: 1162–3). Yet the prospective difficulty with elliptical utterances stems at least partly from taking sentences and propositions as the units of analysis, rather than recorded turns-at-talk, which are often elliptical but take their completions from adjacent turns. Indeed, it is just such intimate building on prior turns, and with regard to prospective nexts, that participants deploy in showing a mutuality of understanding (Lerner, 2004a) and in smoothly progressing the interaction. Ironically, the observation that "giving a speech" is the more challenging activity flies in the face of what it has in common, as a basis for talking, with Cognitive Psychology's standard model in which talk is supposedly produced under the control of cognitive plans (see Suchman, 1987, for a cogent ethnomethodological critique of that model). The broader point, again, is that Pickering and Garrod's cognitivist perspective meshes with their experimental approach, and with Psychology's standard perspective on language and action, but together these things obscure features basic to talk-in-interaction.

Many contrasts between CA and Psychology stem from what we may call the 'psychologization' of social interaction. Rather than interaction being the "primordial" human condition as it is for Schegloff, Cognitive Psychology's start point is individuals and their thinking, such that coordinating thoughts and actions through dialog poses a range of horrendous difficulties. For example, Eric Chevalley and Adrian Bangerter (2010: 264–5), drawing on Clark (1996), discuss the problems that an imaginary couple, Bob and Camilla, must resolve when faced with the task of moving a heavy bench:

This entails deciding who will pick up the left end and who will pick up the right end . . . they need to agree on the details of their performance of each joint project and subproject . . . Joint commitments typically specify elements such as the participants' roles in a joint project, the actions they are to perform, when they are to do them, and where.

In doing all this, they must “agree to temporarily give up part of their freedom and to allow their actions to depend on those of others” (265). It is the psychologization and individualization of talk-in-interaction that forces us to conceive of having a conversation and acting together, as giving up our freedom. A different start-point would be sociality itself, or being-in-relation, where individuals and their agency are an abstraction from (and within) that social nexus, or a feature of accountability within it (we deal with ‘intentionality’ in a section below). A very different conception then emerges, of the kinds of problems participants must face in interacting with each other.

Michael Tomasello views the kinds of competencies that CA demonstrates, as being based on participants’ deployment of social-cognitive models of their own and other people’s mental life (i.e. a folk ‘Theory of Mind’): “Human beings are the world’s experts at mind reading . . . at discerning what others are perceiving, intending, desiring, knowing, and believing” (Tomasello, et al., 2005: 275). The idea that what people do and say is produced by a realm of beliefs, desires and intentions lying behind and governing their actions amounts to what Daniel Dennett (1987) calls ‘the intentional stance’. That this is indeed a ‘stance’, rather than simply the facts of the matter, is at least evidenced by Wittgenstein’s (1958) and Ryle’s (1949) opposition to it (cf. Coulter, 1979).

The adoption of such a stance makes little difference to CA as an analytic method, to the extent that it is also how participants are interpreting and accounting for what they do, and perhaps even a built-in presumption of language, culture and social interaction. However, to the extent that people talk and interact on that basis, they do so in the same sense that they take turns, answer questions, display preference, initiate repair, and so on. In other words, it is rightfully a *topic* for CA, part of the phenomena under examination, part of the displayed accountability of conversation itself, rather than necessarily the analyst’s preferred theory of what is going on. In fact, it turns out in talk-in-interaction to be a variable and defeasible character of actions, that they are as-described by another person, and intentional, or goal-driven, or evidence of the presence of one or another intentional state (Edwards, 2008; see also the section below on intentionality). For relevant critical discussion of ‘Theory of Mind’, see the October 1994 special issue of the journal *Theory & Psychology*, including papers by Wes Sharrock and Jeff Coulter (2004) and, with special relevance to CA, by Charles Antaki (2004). It is the intelligibility and deployment, not the psychological correctness, of an intention-action-goal model of human conduct, that CA makes amenable to investigation.

In the next sections we illustrate how CA provides a coherent framework for mapping the way psychological matters are topicalized or otherwise made relevant in and for interaction. In a sense this program avoids the temptation at combining CA with Cognitive Psychology, and instead builds its own alternative approach to mental and psychological matters. The advantage of this is that it can avoid the destruction of basic CA principles that is characteristic of much work in Cognitive and neuro-psychology. It stays true to Sacks’ original non-dualistic

focus on psychological matters as things that must be managed publicly for interaction to be intelligible.

4 CA as the Basis for an Alternative Psychological Program

4.1 *Understanding and intersubjectivity*

A basic feature of interaction is that speakers *display* their *understanding* through the sequential unfolding of their talk. As Schegloff (1992d: 1299–300) puts it, in turns-at-talk

speakers ordinarily address themselves to prior talk, and, most commonly, to immediately preceding talk. In doing so, speakers reveal aspects of their *understanding* of the prior talk to which their speech is addressed.

Thus when an invitation has been issued and the recipient provides an acceptance and appreciation, this displays, among other things, their *understanding* that what came before was an invitation. Indeed, issuing any second-pair part to an adjacency pair displays an understanding that the prior was the relevant first-pair part. This turn-by-turn display is central to how participants in talk comprehend one another and is the preeminent resource for analysts of conversation. Approaching how people understand one another in this fashion requires neither analysts nor participants to have privileged access to the cognitive or brain states of co-participants. This contrasts with the majority of psychological research methods which try to access mental states in ways that cut across these everyday practices of developing understanding (e.g. by structured or unstructured questioning, by reaction times or other performance measures, or indicators of brain activity such as evoked potentials or MRI scans). What CA focuses on, in contrast, is understanding as a public and practical feature of interaction. In this sense, CA is working in the tradition mapped out by philosophers such as Wittgenstein and Ryle (Coulter, 1979):

Try not to think of understanding as a “mental process” at all.—For *that* is the expression which confuses you. But ask yourself: in what sort of case, in what kind of circumstances, do we say, “Now I know how to go on”? (Wittgenstein, 1958: §154, emphasis in original)

Compatibly with our earlier quotation from Sacks, on “a *showing* that they . . . understood,” what we have here is a different conception of what conversational ‘understanding’ *is*. The linguistic philosophers define it *as* the kind of public demonstration to which Sacks’ empirical program was directed, *not* as an internal psychological state for which those public demonstrations are merely evidence.

CA's turn-based treatment of understanding provides a way of characterizing the nature of intersubjectivity. The coordination of turns shows that speakers are coordinating understanding, in the practical sense we are using the term. Furthermore, when trouble arises that threatens mutual understanding, the repair system of conversation can be used to maintain intersubjectivity—the display of 'misunderstanding' or 'confusion' can be identified, formulated and fixed. Schegloff (1992d) developed this into an account of the structural provision of slots in which intersubjectivity can be defended (see Kitzinger, this volume, for an overview of the repair system).

When a speaker issues a turn, the first and most important place in which understanding can be checked and therefore intersubjectivity defended, is the immediately following turn. This is the primary place that a range of other-initiated repair practices come into play. These attend to different kinds and degrees of confusion or trouble. Take the following example where we can see repair initiated in the turn by Tony, immediately following the turn containing the trouble source.

(1) Schegloff (1992d: 1302)

- 1 Marcia: . . . Becuz the to:p was ripped off'v iz car which
- 2 iz tihsay someb'dy helped th'mselfs.
- 3 Tony: Stolen.
- 4 (0.4)
- 5 Marcia: Stolen. Right out in front of my house.

In the next turn Tony offers a candidate understanding of Marcia's first turn; and she confirms this. If we consider this in terms of Schegloff's approach to intersubjectivity as practical and sequential, a next turn is a slot available in the normative system of conversation in which repair can be used to bring speakers back to a condition of intersubjectivity. Again, this is not a mental or private state that we need recourse to a questionnaire or brain scan to access; it is going on publicly as it has to do, so that it can be visible to, and a practical matter for, the parties as a basis for their ongoing interaction.

There is another feature that is worth highlighting here. Problems of understanding do not become apparent only when the repair initiator is issued in the second turn. We can see that Marcia is already attending to prospective problems of understanding her utterance in the course of building it. Note the way she reworks what she is saying to "helped th'mselfs", perhaps because of the possible ambiguity of "ripped off", and in this case, how the status of it *as* a reworking is signaled by the link "which iz tihsay". When Sacks claimed that talk is recipient designed, one thing being emphasized is that it is built to be understood, and this building is ongoing in real time as speakers attend to their own production and to the recipient's potential problems of understanding. Again, this is an intrinsically social-interactional phenomenon, rather than a matter of individual cognition.

Schegloff (1992d) suggests that, following next turn, speakers can, in third and fourth positions, correct trouble, this being the last structurally provided opportunity to maintain intersubjectivity. He notes that what speakers do in their second turns can “reveal understandings that the speakers of that prior talk take to be problematic—in other words, what they take to be misunderstandings” (1300). Here is one of his simpler examples:

(2) Schegloff (1992d: 1203)

- 1 Dan: Well that’s a little different from last week.
 2 Louise: heh heh heh Yeah. We were in hysterics last week.
 3 Dan: No, I mean Al.
 4 Louise: Oh. He . . .

Note the way in this group therapy data Dan, the therapist, repairs (in third position, line 3) the understanding that was offered by Louise at line 2, of what Dan said in first position, line 1, apparently in a way that indicated to Dan that she had misunderstood him.

For Schegloff, maintaining intersubjectivity in this way is not an abstract issue of the coordination of knowledge and perspective but a practical issue focused on the interactional dangers that can arise from letting failures of understanding slip past. Practical procedures are in place for producing and *constituting* common understanding (or ‘socially shared cognition’, or ‘intersubjectivity’). Participants do not have a way to check such understandings independently of those procedures. Psychologists’ attempts at such an independent checking are often damaged by their failure to attend to the way their research procedures displace participants’ own procedures for managing what they ‘know in common’.

4.2 *Knowledge and belief*

A foundational issue for Cognitive Psychology has been the nature of knowledge and belief, approached in terms of how knowledge is mentally represented, how it provides the basis for actions, and how expert systems of different kinds might work. Making direct links with CA is by no means straightforward, as ‘knowledge’ in Cognitive Psychology is typically approached in terms of its propositional content, and this is typically theorized in terms of cognitive representations. This does not link easily with the practical and interactional focus of CA. Nevertheless, there are key strands in CA that highlight an alternative approach, where being focused on public and interactional practices can provide a creative and theoretically coherent way of approaching this topic. The recent strand of CA work on epistemics is most relevant but this has had a longer tradition within CA (see Stivers, Mondada & Steensig, 2011b).

Heritage (2010; see also Heritage, this volume, on epistemics more generally) has shown that what people already know about a topic, at any conversational juncture, is managed by a range of conversational practices; the organization of conversation lays out the ‘epistemic landscape’ for the participants, highlighting

who is knowledgeable (K+) or who is not (K-), to whatever degree, on relevant matters. Thus a question design such as *Are you married?* places the questioner at a lower point on the epistemic gradient than a design such as *You are married, aren't you?* which offers a candidate answer for confirmation. Questions which are built from assertions and simply require confirmation—*You're married*—further flatten the epistemic gradient. That is, they display questioner and recipient as similarly knowledgeable. Heritage shows that these forms occasion different interactional upshots. Questions can be designed to offer a candidate answer (Pomerantz, 1988) or embody polar options to grammatically constrain response possibilities (Raymond, 2003). Each of these designs suggests a different epistemic relation, a different distribution of K+ and K-, between speaker and recipient.

The interactional and sequential logic of questions—where a questioner builds her or himself as uninformed on some topic and projects the answerer as informed—is closely linked to other conversational objects, such as the particle *oh*. Heritage (e.g. 1984a, 2002d, 2005) has produced a cumulative series of studies of *oh* and the way it operates to “propose that its producer has undergone some kind of change of state in his or her locally current state of knowledge, information, orientation or awareness” (1984a: 299). He shows how *oh* can be used to “embody the experience of a recollection” (2005: 188) such as in the following where a narrative is suspended and then resumed after some participants leave.

(3) Heritage (2005)

1 A: Yeah I use'ta- This girlfr- er Jeff's gi:rlfriend,
 2 the one he's gettin' married to, (0.9) s brother.=
 3 = he use'to uh,
 4 . ((13 lines of data omitted))
 5 . ((Some potential story recipients
 6 . leave the room))
 7 A: What was I gonna say.=
 8 A: -> =Oh:: anyway. She use'ta, (0.4) come over . . .

Heritage develops this line of thinking with an exploration of the relation between the use of *oh*-receipts and knowledge entitlement. *Oh*-receipts can be used to show superior epistemic positioning in interaction such as the following:

(4) Heritage (2005: 199)

1 Eve: No I haven't seen it Jo saw it 'n she said
 2 she f- depressed her ter[ribly
 3 Jon: [Oh it's [terribly depressing.
 4 Lyn: [Oh it's depressing.

In this sequence, Jon and Lyn, who have seen a film, agree with Eve, but *oh*-preface that agreement. In doing so they index the independence of their access to the film “and in this context that, relative to Eve, they have epistemic priority: direct rather than indirect, access to the movie” (Heritage, 2005: 199).

Epistemic relations can be finessed in a range of different ways using tag questions. They can index lowered epistemic status (K-) in the way that was highlighted by early work in sociolinguistics (Lakoff, 1975). By asking for confirmation from the other for a declarative, the other is treated in a K+ position from which s/he can ratify it. However, tag questions can also be used to mobilize support for a previously disputed assertion where the speaker presents him/herself in an authoritative (K+) position (Hepburn & Potter, 2011a).

4.3 *Attitudes and assessments*

A central notion in psychological Social Psychology (to distinguish it from the sociological tradition) has been that of attitudes. Within the framework of the Theory of Planned Behavior (Ajzen, 1991), for example, attitudes are seen as a major motivation for behavior. However, as discursive psychologists have pointed out for some time (Potter & Wetherell, 1987), the social psychological approach treats attitudes as response dispositions within individuals, and typically accesses those attitudes by using various survey measures that combine together a range of evaluative terms, organized into Likert scales. Almost as long as the notion of attitudes has been at the heart of Social Psychology, so has been the observation that behavior is neither easily nor strongly predicted by such attitude measures. Part of the problem with this program of work is its failure to ground its ideas about evaluation in a study of how evaluation figures in situated practice. Instead of starting with a focus on underlying, enduring attitudes, CA work has focused on conversational practices of making an assessment of something and has studied the ways such assessments unfold interactionally.

Pomerantz's (1984a) work shows that there is a strong normative expectation, on the issuing of an assessment, for the recipient to then issue an assessment of his/her own. Indeed, failure to issue a second assessment is often treated (by participants) as an indication of disagreement with the prior assessment. Pomerantz documented the way that agreeing versus disagreeing assessments were delivered differently, thereby formally introducing the concept of preference first broached by Sacks (see Pomerantz & Heritage, this volume). Specifically, she showed that agreeing second assessments typically:

- (i) follow directly;
- (ii) are upgraded;
- (iii) are simple.

In contrast, disagreeing second assessments typically:

- (i) are issued only after delay;
- (ii) have the disagreeing component pushed to later in the turn;
- (iii) are downgraded.

The nature of an assessment is a complex topic. Sometimes it involves the explicit use of moral or evaluative terms (*good, great, poor*) but at other times

assessments are built using descriptions. Assessments can be built as 'object side' or 'subject side' (*That coffee is nice* vs. *I love that coffee*, Wiggins & Potter, 2003) with different interactional consequences; and when delicate topics are addressed, assessments can be built as entirely separate from the wishes or values of the speaker (Edwards, 2007). Moreover, practices of assessment are bound up with issues of epistemic priority. For example, Heritage (2002d) studied *oh*-prefaced responses to assessments and the way such constructions can be used to manage the speaker's access to what has been assessed and therefore his/her rights to having his/her assessment take priority.

There is now a considerable CA literature on assessments. Our aim is not to review it here (see Lindström & Mondada, 2009, for a useful overview); rather the point is to highlight the way that CA has started to reveal the complex interactional logic of assessments that is bound up with the nature of the object, the involvements of different parties with that object, and the kinds of actions being done with the assessment. Assessments are formed differently and responded to differently: for instance compliments are handled differently from self-deprecations (Pomerantz, 1978b), in the delivery of good news and bad news in medical settings (Maynard, 2003), and they lie in complex relation to elements of the embodied settings in which they are delivered (C. Goodwin & M. H. Goodwin, 1992; Mondada, 2009a). High-grade and low-grade assessments appear in regular sequential positions in particular institutional contexts (Antaki, Houtkoop-Steenstra & Rapley, 2000; Lindström, 2009). Crucially, this interactional logic is bypassed by survey measures common in contemporary psychological research.

4.4 Intention

This final section on the way CA can offer an alternative program of psychologically relevant work considers the notion of intention. This is a further key notion in Cognitive Psychology. For example, it plays a central role in the Theory of Planned Behavior mentioned above. In that theory, intention is treated as a kind of mental push which will result in the person engaging in the actual behavior unless something intervenes to prevent it. Intentions in this perspective are postulated as underlying dispositions. In contrast, interaction work has focused on practical use of attributions of intention, of the term 'intention', and intentional language more broadly. There has been less interactional work conducted on this topic so we focus on one study, highlighting the way it builds its claims from specific analytic materials.

Edwards (2008) notes that a wide range of semantic and grammatical resources can be used to indicate that something was intended or done intentionally. Thus words such as *kick* imply agency while words such as *fall* imply passivity. And different grammatical resources can upgrade, cancel or modify the agency in some way. He starts with cases where the intentionality of an action was specifically topicalized by reference to a mental state. It is rare in everyday talk for such topicalization to occur except where there has been a problem—some action has been obstructed or postponed. Take the following example.

(5) Holt:1:4:2

- 1 Les: -> What time did you inten' getting here Keith.
 2 (0.3)
 3 Kei: Uh:: (1.4) prob'ly about uh::: ten o'clock.
 4 h's [train co]mes[in
 5 Les: [Well the-] [the trouble is you see uhm (1.1)
 6 uhh! (0.2) You better haa- (0.3) There's a- uh- (.)
 7 a ga:p,h (0.2) when: I'm out'n she's out but if you're
 8 early enough you c'n go with her I thi:nk, . . .

Lesley's query about Keith's arrival time (line 1) can be seen to be prompted by the prospect of trouble, which is introduced in line 5. However, Lesley already signals the potential for trouble at line 1 by using the term *intend*, which makes available a gap between thought and action (and indeed her use of past tense: "did you"). Note the way Keith orients to this as he delivers his time of arrival in a softened, delayed and hedged manner, preparing the way for a cooperative modification in plans. Edwards (2008) goes through a range of further examples which use terms that suggest intentional mental states (*think, like*) concluding that the formulation of baulked preferences or intentions is a major element in the building of accountability for failed actions (or ones that have been or are likely not to be realized).

Edwards uses this analysis to highlight some of the institutionally specific ways in which intentionality figures in recordings of British police interrogations. His first observation is that in contrast to the mundane materials, intentionality is a pervasive concern, and a concern that is not restricted to a focus on failed or baulked actions. Typically, some degree of intent is a key criterion for the status of the suspect's action as a crime. However, the notion of intent is interestingly extended. In English law there is a distinction between *actus reus* (the illegal action) and *mens rea* (the criminal intent); conviction will depend on the prosecution showing both of these things. And the *mens rea* can vary from full premeditation to recklessness with regards to consequences. Edwards suggests that recklessness would not be part of a more everyday notion of intention; yet in legal settings "recklessness is raised and negotiated alongside, and in terms of, intent and intentional states" (2008: 183).

Take the following example. The suspect has been accused of damaging a car following a row, and he has already admitted that he "smashed the car up."

(6) PN:2:2

- 1 P: You said, (.) smashed the car up.
 2 S: Well. (.) smashed the back window.
 3 P: What'd (y'hit.)
 4 (1.3)
 5 S: I [punched the window.]
 6 P: [(To get into)] the car.
 7 (0.3)
 8 P: Punched the back window.=

9 S: =Yeh.
 10 (3.7)
 11 P: Hh okha:yh h
 12 (2.0)
 13 P: -> What was y'r pur:pose when y'punched the window,hhh
 14 (0.6)
 15 S: Take th'temper outa me.
 16 (0.2)
 17 S: (_Th#at's #all_)
 18 (1.9)
 19 P: #R:#ight
 20 (0.7)
 21 P: -> Did you inte:nd to cause any damage to the
 22 window of the car,
 23 (0.4)
 24 S: #No not really,#
 25 (0.3)
 26 P: No,

Edwards suggests that across the range of interrogation examples the police work to parse events into action, effect and intent. The interrogator works to establish not only what the suspect did (in this case punch the window) but also what the effects were (the window was broken) and also what degree of intent there was with regard to those effects. Note how, having established a description of the action, the police officer moves to the issue of intent (line 13). The design of the question presupposes that the punching was done for some purpose. The suspect in this case avoids that presupposition by instead explaining the punching in terms of managing his emotional state—it was to “take th'temper outa” him (line 15). Having unsuccessfully established intent with a relatively open *wh*-question, the interrogator pursues the issues of intent with a yes-no interrogative in line 21. This move from open to closed forms of questions was recurrent in this corpus of interrogations.

In the extract above, the questions have not succeeded in eliciting the required admission of intent from the suspect. The police officer moves to an approach that Edwards notes is also recurrent in the corpus, which involves the use of normative and hypothetical reasoning.

(7) Continuation of (6)

27 (0.4)
 28 P: Ri#:ght#
 29 (2.1) ((papers rustling))
 30 P: -> What d'you think the likely outcome is if you punch
 31 a window of a carhh.
 32 (0.5)
 33 S: °Could sma:sh,°
 34 (0.3)
 35 P: It could sma:sh
 36 (1.7) ((papers rustling))
 37 P: -> °'Kay.° Did you think about that risk before you-

Su

38 punched it,
 39 S: #Didn't think about anythin:#
 40 (0.5)
 41 S: (#Punched it.#)
 42 (0.3)
 43 P: Righ'.
 44 (1.1)
 45 P: But you're aWA:RE that by punching something
 46 there's a risk.
 47 (.)
 48 P: By punchin' a window there's a risk of it breakin'.
 49 S: °#>Ye:h<#°

Note how at line 30, after the suspect has denied having the intention to break the window, the police officer builds a normative (generalized) and hypothetical question—what is the *likely* outcome *if* you punch *a* window? Moreover, the question asks about the suspect's mental state—what do you *think*? As in the earlier extract, the officer moves from an open *wh*-question to a yes-no interrogative in lines 37–8. When this is unsuccessful, the interrogator again issues a hypothetical that links punching a window to it breaking (lines 45–48), this time eliciting agreement (line 49).

Edwards' general observation is that the interrogations are an institutional setting that draw on, but refine, everyday practices of managing the intentionality of reported actions. Thus they go beyond the everyday invocation of intention when actions are baulked, to being an overt topic closely related to issues of criminal responsibility. The analysis highlights some of the practices through which such intent is built: separating action, intention and effect; moving from open *wh*-questions to yes-no interrogatives; asking hypothetical questions. Unlike the Theory of Planned Behavior, 'intention' here is not treated *by the analyst* as the driver of behavior, but is taken as a members' resource for accountability within particular everyday and institutional settings, and as having a defeasible status with regard to reported actions, those actions themselves being constituted by a potentially flexible, sometimes contested range of descriptions (cf. Drew, 1990). That is, rather than being a resource for cognitive explanations, and rather than adopting what is essentially the police officer's version of events (intentional actions resulting from plans and goals), the interactional analysis highlights participants' practices for *ascribing* cognitive objects.

5 CA as a Resource for Identifying Classical Cognitive Objects

Across the broad field of discourse studies it is common to view cognitive and discursive organizations as working as parallel and interconnected domains. Teun van Dijk's influential work (e.g. van Dijk, 2009) provides a strong and explicit development of this view. He argues that analyzing texts and interactional materi-

als requires identifying a range of cognitive phenomena such as mental models and shared representations. For the most part, CA has been conducted in a manner that follows from Sacks' cautions about the distorting effects of starting with what participants might be thinking and how that thinking might operate, while not fully endorsing the strong anti-cognitivist position of ethnomethodologists such as Coulter (2005) and Lynch and Bogen (2005). Nevertheless, there have been notable attempts by conversation analysts to consider more directly the status of cognitive objects. Let us consider two important and different ways to move from interaction to cognition developed by Robert Hopper and Paul Drew.

Building on Heritage's (1990/91) earlier work on the role of strategies in interaction, Hopper starts by distinguishing two senses in which conduct can be said to be strategic. On the one hand, there is a notion of strategy in which the actor 'thinks out' a goal beforehand and has a conscious, although possibly surreptitious, plan of how to achieve it. Hopper calls this a *pre-strategy*—a mentally represented strategy that exists prior to the relevant conduct and guides its subsequent unfolding. On the other hand, there is strategic action that is the result of simply following particular conversational routines (which might have some internal complexity) in a way that is neither planned nor necessarily conscious. Hopper calls this an *emergent-strategy* as the strategic action emerges with the interaction. As he puts it:

No participant anticipates or plans this pattern. Rather, the speakers generate the sequence out of the normal turn-by-turn course of interaction. The pattern turns out to be a kind of found art for analysts, and to some degree for actors. (Hopper, 2005: 140)

Although he resists a similar earlier distinction in Heritage's (1990/91) paper in terms of what is cognitive and noncognitive, it is clear that the pre-strategy is a more classically cognitivist notion with its sense of prior planning.

Hopper works with a corpus of phone calls made to President Lyndon Johnson's office soon after he became president. These calls were very similar—they were made over the course of a few hours soon after his election and typically involved thanking supporters and accepting congratulations. The virtue of this corpus for Hopper is that it offers a systematic collection through which to explore the operation of strategic thinking.

Hopper teases out possible evidence for a claim that Johnson is using pre-strategies. He notes that Johnson receipted a series of compliments in much the same way, but suggests that, as a competent conversationalist, such receipts are standard, and not something that needs to be consciously planned. However, he notes that the pattern of compliment responses evolves from call to call through standard forms to something close to boasting and fishing for compliments, then back to more standard compliment receipts. This is suggestive of Johnson actively and thoughtfully exploring different ways of dealing with the compliments—yet Hopper accepts that this can only be speculation and does not definitively pin down the operation on a pre-strategy.

Hopper focuses on another feature of the calls, which was the introduction of the term ‘thrif’ into compliment responses. Here is an example (C is compliment, CR is compliment receipt, T is the ‘thrif’ mention):

(8) Hopper (2005: 147)

1 DC: C-> . . . congratulations on what I thought was a
2 magnificent performance this morning.
3 LBJ: CR-> Well, I did the best I could.
4 OC: C-> Well, I thought it was just exceptional (.) really
5 LBJ: CR-> Bob Anderson and General Eisenhower did say (.)
6 T-> they’re glad we were talking about economy and
7 prudence and watching the dollar ((LBJ continues))

Again, Hopper explores the possibility that these mentions are pre-strategy, a way of Johnson subtly developing the cost-cutting agenda that was to become an important part of his early presidency while deftly doing compliment receipts. Yet even with these latter examples, it is hard to show it was planned beforehand, particularly with the fluid insertion in the conversational flow. Hopper notes that it is particularly hard, even with these suggestive materials, to identify precisely *when* such a pre-strategy might have come into operation. Moreover, although we may have a nontechnical intuitive sense of what kind of thing a pre-strategy is, that is quite different from the kind of technical notion required by much contemporary Cognitive Psychology (Potter & te Molder, 2005). Hopper’s cautious agnostic observations are particularly valuable for any researcher considering using CA to address topics of a cognitive nature; he highlights precisely the complexity of what is involved. In particular, we should note that any inferences about prior plans and intentions have no empirical grounding independent of the purported product of those cognitive machinations, that is, the talk itself.

Let us move on to Drew’s contribution to this area of work. This helps us to further clarify what is involved in using CA to directly address cognitive issues. Drew argues that a feature of the normative organization of conversation is that it will offer *cognitive moments*, that is, places where “cognitive states manifestly come to the interactional surface, although they are not overtly expressed” (2005b: 170). He takes the example of invitation refusals (declinations). Refusals typically involve three elements:

[Appreciation]+[(mitigated)Declination]+[Account]

Drew suggests that the existence of this normative structure may “enable speakers to disguise their actual states of mind (what their actual intentions are, what they really feel, etc.)” (162). When combined with more general elements of dispreferred second turns, such as delay and *well*-prefacing, it may allow recipients of declinations to identify them early in sequences. Take the following example:

(9) Drew (2005b: 170)

- 1 Emma: Wanna c'm do:wn 'av [a bah:ta] lu:nch w]ith me?=
 2 Nancy: [°It's js] ()°]
 3 Emma: =Ah gut s'm beer'n stu:ff,
 4 -> (0.3)
 5 Nancy: -> Wul yer ril sweet hon: uh:m
 6 (.)
 7 Emma: -> [Or d'y] ou'av] sup'n [else °()°
 8 Nancy: [L e t-] I :] hu. [n:No: i haf to: uh call Roul's
 9 mother, h I told'er I:d call'er this morning . . .

Drew suggests that Nancy's refusal starts to become apparent very early. The delay at line 4 and the [Appreciation] at line 5 are both characteristics of refusals. And Emma can be seen to orient to these features at line 7 as she offers a potential [Account] for Nancy not coming. Drew glosses this in the following manner:

This is a "cognitive moment", in a double sense: in order to make that move, before Nancy makes explicit her declination, Emma has to have *realized* that Nancy might be going to decline her invitation; she thereby *reads Nancy's mind*, attributing that *intention* to her. (2005: 170, emphasis in original)

And he suggests that Emma's turn at line 7 is contingent on the mental state of realizing that Nancy is to decline the invitation (note a parallel here with the interactional 'mind-reading' proposed by Tomasello, 2008, and others).

Drew's analysis highlights the way the normative organization of interaction provides for the early projectability of actions, and how recipients may capitalize on that early projectability to modify their own actions in appropriate ways. The issue is whether this offers a pathway to a parallel world of cognitive states or whether it instead provides the kind of subtle interactional organization that Schegloff suggests cognitive researchers should start to address. Drew's analysis offers a dualist, cognitive picture which distinguishes 'conduct' from 'states of mind', and uses the classic depth/surface figuration of cognitivism where cognitive states can 'come to the interactional surface' or remain 'disguised', implying that talk is pervasively underpinned by invisible cognitive states. However, it is not clear that this dualism is warranted by the data or else imported analytically. Consider the relationship between the delay (line 4), *well*-prefacing (line 5) and [Appreciation] (line 5) on the one hand, and the [Declination] (lines 8–9) on the other. Given the conventional nature of this relationship, with declinations typically following *well* and delay, it is potentially circular to treat these elements as signs of an intention to do the act of declining. Indeed, that conventionality, and its visibility, are the very basis on which Drew is able to spot them as 'early' signs of something to come. A less dualist approach would note that this is simply how declinations get done and, although no cognitive state is articulated, these are still highly informative conversational elements (for a more extended discussion of these points, see Potter, 1998, 2006). In other words, dispreference markers are

meaningful elements in their own right, publicly produced and contextually understood, rather than signs of something else going on behind or beneath them (Edwards, 2006).

Schegloff (2006b) has pressed a different kind of engagement between conversation analysts and cognitive and neuroscientists. This is an engagement that allows researchers in those traditions to consider the processes and competencies that might underlie the subtle performance phenomena revealed by CA. Rather than follow the route of attempting to use human conduct as a pathway to cognitive entities, he has tried to highlight the consequences of basic CA findings for classic forms of cognitive analysis. The findings of CA depict a highly complex and normative system of interaction that features aspects of conduct that set a profound challenge for classic psychological models to account for. These include phenomena of turn and sequence organization, repair, a wide range of projection phenomena and person reference. Schegloff highlights the kinds of competence that any interactant must possess in order to fully take part in conversation and, in particular, how that competence must deal with the different *possible* trajectories of conduct that arise in the contingency of actual talk. Speakers must be capable of designing their own talk and other conduct so that it can be “taken up for the ‘possible Xs’ that compose it” and they must attend to:

the talk and other conduct produced by a co-interactant so as to 1) address the multiple “possible Xs” that compose it, 2) resolve that multiplicity of possibilities and arrive at some determinate grasp of what the other was saying/doing, and 3) display that grasp in their own responsive conduct—sometimes correctly, sometimes not. (Schegloff, 2006b: 146)

With this approach, Schegloff is leaving the work of addressing any cognitive implications of these phenomena with cognitive researchers; his aim, though, is to highlight just how complex the conduct is that they need to model.

6 CA and Psychological Method

Another area where CA has important implications for psychological research and our understanding of psychological matters is its tradition of work on the organization of conduct in research methods. Discussions of method include Aaron Cicourel’s (1974b) ethnomethodological consideration of the relationship between the nature of method and the findings produced in a major study of Argentine fertility. CA research on various social-science research methods was stimulated by Lucy Suchman and Brigitte Jordan’s (1990) study of interaction in a social survey that was published with a set of responses. This highlighted the failure of survey researchers to conceptualize interaction properly, and showed how this failure undermined the goal of standardization. Indeed, survey interviewers might need to respond flexibly to the contingencies of natural conversation rather than follow fixed templates.

Since these early studies, a number of strands of work have been developed. Work on the systematic survey was developed by Hanneke Houtkoop-Steenstra (2000) and a collection of chapters by Doug Maynard and others (Maynard, et al., 2002). Houtkoop-Steenstra overviews the kinds of trouble that arise in systematic surveys, often because the question designs, question sequencing and fixed formats fail to be sensitive to local pragmatics. For example, a survey might use a complex question such as the following:

First of all I would like to ask you what is the highest level of education that you took in FULL-TIME daytime education. By full-time daytime education we mean a course or education that is taken at least three days a week.

The problem with a complex question such as this is that there is a plausible transition place after the second occurrence of "education" (see Clayman, this volume, on the transition-relevance place). Although participants will be aware that they are engaged in a specialized kind of interaction, it may not be immediately apparent how this specialization will show itself. In particular, participants are unlikely to be able to predict that they should withhold a response after the completion of the question. Houtkoop-Steenstra illustrates the trouble that can arise:

(10) Houtkoop-Steenstra (2000: 91–2)

- 1 I: .hh uh first of all I'd like to ask
 2 you what is the highest level of
 3 education that you took in full-time
 4 daytime education?
 5 R: in full-time day- uh basic knowledge course.
 6 I: no, I [mean the high[est-
 7 R: [() [the school.
 8 I: right, [the school,
 9 R: [the school.
 10 I: right, daytime school right.=
 11 R: =no, seven years of elementary school.
 12 I: that's- that's it?
 13 R: yes.

When the participant answers the question at line 5, at the point where she might normatively be expected to answer the question, she has not been coached in the idiosyncratic sense of the question, and this leads to an answer that is unclear, with the interviewer forced into repair and then into accepting an answer not properly fitted to the original question design. These kinds of problems eat away at the claims for standardization in survey interviews and raise questions for the status of findings as representations of individual (rather than interactionally-produced) attitudes and beliefs.

Another strand of work has focused on psychological assessments of people with a learning disability. Charles Antaki and colleagues (Antaki, 1999; Antaki & Rapley, 1996; Antaki, Houtkoop-Steenstra & Rapley, 2000) have focused on the

subtle and complex collaboration between interviewer and interviewee in the production of particular outcomes. Despite the consequential nature of such collaboration for the outcomes, within psychological research practices they are typically treated as straightforward records of psychological characteristics of the interviewees (see Antaki & Wilkinson, this volume).

Finally, Greg Myers, Claudia Puchta and Jonathan Potter (Myers, 1998, 2007; Myers & Macnaghten, 1999; Potter & Puchta, 2007; Puchta & Potter, 1999, 2002, 2004; Puchta, Potter & Wolff, 2004) have studied interaction in focus groups. This literature has highlighted the way various interactional features of focus groups generate opinions as individual objects. For example, Puchta and Potter (2004) document how terms such as *opinions* or *beliefs* perform practical tasks in eliciting certain kinds of answers (e.g. quick answers) and head off certain kinds of troubles (e.g. asking the researcher questions). Asking for spontaneous contributions and requesting first reactions (Puchta & Potter, 1999) seem to have a similar function as these behaviors imply that everybody can cooperate: after all, everyone is taken to have first reactions. Further, Puchta and Potter (2002) show the way that collaborative moves in the generation of opinions are interactionally stripped off to present opinions as entities possessed by individuals. This latter kind of study offers a challenge to more individualistic psychological approaches as it suggests that the individual nature of some psychological characteristics is not a discovery but rather an artifact, or product, of the way traditional methods operate.

7 Conclusions: Conversation and Cognition

The relationship between CA and theoretical notions such as cognitive states and processes, between the methods of Cognitive Psychology, cognitive science, social cognition and Neuroscience is a complex one. This chapter has highlighted some issues and questions and sketched some relationships. There is a spread of possibilities. At one extreme, some ethnomethodologists have developed lines of argument, often buttressed by the philosophy of Ryle and Wittgenstein, that rule out cognitivist work as conceptually incoherent (Coulter, 2005). At the other extreme, some cognitive psychologists have drawn knowledgeably and sympathetically on CA (Clark, 1996) for the development of hypotheses and theories of conversational competence. The danger of the first extreme is that it wipes out a potentially productive dialog across disciplines. The danger of the second extreme is that it distorts the basic project of CA (see Edwards, 1997; see also Schegloff, 2005b).

When CA researchers such as Hopper and Drew addressed cognitive questions, it is notable that they did not work with contemporary empirical studies and theorizing in Psychology. Using such contemporary studies is extremely challenging for conversation analysts because the methods typically obscure the basic interactional phenomena that makes CA possible. If bridges are to be built, it requires an openness to the conceptions and methods of CA. As Schegloff (2006b: 154) notes:

if colleagues in the neuro- or cognitive sciences of cognition are to work with us . . . it cannot be done in the conventional experimental settings of the past; it cannot be the product of individual minds planning and performing in splendid isolation.

Hopper and Drew developed their own *ad hoc* notions of cognitive states which had a very different sense from those that predominate in Cognitive Psychology and cognitive science. Their notions were simple, vernacular and phenomenological, rather than computational and causal. We anticipate exciting new developments in the relations between CA and Neuroscience, but suggest that Neuroscience needs to found its conception of talk-in-interaction on CA itself, rather than on a presumed realm of intermediary cognitive states.

Although dialog between CA and the cognitive sciences is currently one-sided and irregular, this does not mean that CA has nothing to say about Psychology. On the contrary, CA has provided a systematic and empirically-grounded perspective for a thoroughgoing reworking of the nature of Psychology. By taking psychological matters as fundamentally matters of interaction, in a Wittgensteinian vein, developed by Sacks, CA provides for an account of Psychology that is nuanced and located within actual interaction in actual settings. Indeed it provides a foundational method and body of findings for a discursive, social-interactive approach to Psychology (Edwards & Potter, 2005). It offers a way of building a naturalistic perspective on Psychology starting with records of people living their lives in families, workplaces and professional settings.