

8 Conversation Analysis

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Abstract

Conversation Analysis (CA) is an inductive, micro-analytic, and predominantly qualitative method for studying human social interactions. This chapter describes and illustrates the basic methods of CA. We first situate the method by describing its sociological foundations, key areas of analysis, and particular approach in using naturally occurring data. The bulk of the chapter is devoted to practical explanations of the typical conversation analytic process for collecting data and producing an analysis. We analyze a candidate interactional practice – the assessment-implicative interrogative – using real data extracts as a demonstration of the method, explicitly laying out the relevant questions and considerations for every stage of an analysis. The chapter concludes with some discussion of quantitative approaches to conversational interaction, and links between CA and psycholinguistic concerns.

Introduction

The language sciences are undergoing an interactive turn, as researchers in social neuroscience (Schilbach *et al.*, 2013), psycholinguistics (Pickering & Garrod, 2004; Levinson, 2016), and cognitive science (De Jaegher *et al.*, 2010, 2016; Fusaroli *et al.*, 2014) increasingly recognize interaction as the arena in which their diverse concerns

converge. Underpinning this robust stream of interaction research are decades of cumulative discoveries from Conversation Analysis (CA) on the organization of interactive language use. This chapter explicates conversation analytic principles, findings, and methods.

CA is an inductive, micro-analytic, and predominantly qualitative method for studying language as it is used in social interaction. It differs most distinctly from other methods in this handbook in its use of field recordings of naturally occurring conversation; its focus on language as a resource for social action; and its procedure of basing analyses on the details of participants' own behavior. As we will see, the method consists in the collection and curation of instances of an interactional phenomenon, the case-by-case analysis of that phenomenon, and the production of a formal account of its operation. The CA approach typically resonates with those who are interested in the specifics of human social conduct and committed to naturalistic observation. It offers researchers a well-developed descriptive apparatus for investigating conversational interaction and a rigorously empirical procedure for supporting analyses.

Historical and Conceptual Background

CA was developed in the 1960s to 1970s by Harvey Sacks with his colleagues Emanuel Schegloff and Gail Jefferson. It emerged as a distinctive approach in sociology principally via the influence of Erving Goffman and Harold Garfinkel. Goffman's (1967) major innovation was uncovering an entirely new domain of sociological inquiry, face-to-face interaction. As Goffman's students, Sacks and Schegloff developed an appreciation of interaction as a locus of social organization that could be investigated in its own right. Around the same time, Harold Garfinkel was establishing ethnomethodology, a unique perspective on everyday activities that critiqued prevailing theories of social order. For Garfinkel (1967), social order was not to be located in aggregate descriptions of social life, but in the very methodical procedures that people deployed *in situ* to render their local circumstances intelligible. As such, the intelligibility of any social activity was an achieved intelligibility, one that participants themselves designed, ratified, and sustained using common-sense knowledge and practical reasoning (Heritage, 1984). CA synthesized these two themes: the methods with which participants *themselves* go about recognizing and producing actions, *together* in actual episodes of social interaction.

CA's guiding principle is that interaction exhibits "order at all points" (Sacks, 1992(I), p. 484). This orderliness is *normative*—it is produced and maintained by the participants themselves in their orientations to social rules or expectations. One conversational norm is "one party speaks at a time" (Sacks, Schegloff, & Jefferson, 1974). This is evidenced not only by the fact that conversations everywhere tend to proceed in this way, but also by cases where participants depart from the norm. Imagine the following: while someone is speaking, another participant whispers to a third party. This is not evidence against the one-at-a-time norm. Rather, overlapping talk produced in a whisper and directed to a third party reveals an orientation to the norm itself. The whispering participant shows herself as "not the current speaker," thereby acknowledging the norm while demonstrably departing from it. Such participant orientations let us recover the normative order of social settings from the very details of interaction itself.

In CA, talk is seen as a vehicle for action. Participants attend to talk not for its propositional content, nor as a simple medium of information transfer, but because they care about the *actions* getting done through talk (e.g., asking, requesting, complaining, noticing, and so on), and the real life consequences of those actions (Schegloff, 1995). Further, talk is examined not as isolated utterances, but as talk-in-interaction, an activity that transpires in real settings between real people. In this respect, actions in interaction are always contextually situated; they are produced by someone, for someone else, at a certain time, in a certain way.

This approach to language and social interaction has over the last half-century resulted in a well-developed descriptive apparatus for analyzing interactional structures. There are several intersecting “machineries” of practice required for conducting conversation. We briefly describe four: *turn-taking*, *sequence organization*, *turn design*, and *repair*.

Turn-taking procedures address the recurrent problems of “who speaks next?” and “when do they start?” by coordinating the ending of one turn with the start of the next (Sacks *et al.*, 1974). Turns are composed of one or more *turn-constructive units* (TCUs), which consist of linguistic units (words, phrases, clauses, etc.) that form a recognizably complete utterance in a given context. As some turn approaches a place where it could be treated as adequately complete, then comes the possibility of turn-transfer—a *transition-relevance place* (TRP). At a TRP, participants use turn-allocation techniques (other-/self-selection) in a hierarchically organized way (other-selection by current speaker > self-selection by others > self-selection by current speaker). The turn-taking organization thus provides for the orderly distribution of turns-at-talk for conversation.

Sequence organization refers to how successive turns link up to form coherent courses of action (Schegloff, 2007). The *adjacency pair* is the basis of this organization: two turns/actions, produced by different participants, where the *first pair part* (FPP) is followed in next position by a type-matched *second pair part* (SPP), which, were it not produced, would be “noticeably absent.” Examples of adjacency pairs include greeting-greeting, question-answer, invitation-acceptance/declination, complaint-account, and so on. The property that unites FPPs and SPPs is called *conditional relevance* because the relevance of the second action is contingent upon the production of the first. Multiple adjacency pairs can be strung together to form complex courses of action by processes of sequence expansion.

Turn design refers to how speakers format their turns to implement some action, in some position, for some recipient(s) (Drew, 2013). A basic assumption in CA is that participants use talk and other conduct to produce recognizable actions, often employing particular grammatical formats as resources to do so (see Levinson, 2013). To make an offer, for example, speakers can design their turn as a conditional (*if your husband would like their address, my husband would gladly give it to him*), declarative (*I'll take her in Sunday*), or interrogative (*do you want me to bring the chairs?*), each of which systematically occurs in particular sequential positions (Curl, 2006).

Repair practices address troubles in speaking, hearing, and understanding (Schegloff, Jefferson, & Sacks, 1977). A repair procedure includes three basic components: trouble source (e.g., an unfamiliar word), repair initiation (i.e., a signal that begins a repair procedure), and repair solution (e.g., a rephrasing of the unfamiliar word). Either the speaker of the trouble source (self) or its recipient (other) can initiate a repair procedure and/or produce a repair solution. Thus a distinction is made between, for example, *self-initiated self-repair* (e.g., *so he didn't take Sat- uh Friday off*), in which the speaker of the trouble source initiates and executes the

repair procedure independently, and *other-initiated self-repair* (e.g., A: *so he didn't take Saturday off*. B: *Saturday?* A: *Friday.*), in which a recipient of the trouble source initiates the procedure and the speaker produces the solution.

Nature of the Data

Recording and Apparatus

Conversation analysts understand direct interaction between participants as the primordial site of sociality. Therefore, they almost exclusively use recordings of naturally occurring interactions, rather than constructed, imagined, or experimentally induced ones. Naturalistic data are preferred because field notes and memories of interactions are necessarily incomplete, and people's intuitions about how they behave in interaction often conflict with their actual behavior. Additionally, recordings may be played repeatedly and slowly, permitting the transcription and analysis of interactional details.

Any social occasion for which ethics permit recording is a potential site of interest, as any instance of people doing things together exhibits systematicity. The idea is to capture social life as it is lived—activities that would have taken place regardless of being recorded. This includes both “ordinary” interactions between friends and intimates, and “institutional” interactions occurring in hospitals, classrooms, and offices. Scripted interactions should be avoided (e.g., movies, television, plays), though call-in radio programs, broadcast debates, and interviews have been profitably used (e.g., Heritage & Clayman, 2010). CA traditionally relied on telephone calls and short, fixed-perspective video recordings of domestic life, meaning that much remains to be documented. Less well represented in the current literature are multiple recordings of the same participants, activity, or environment; multi-day recordings; usage of multiple cameras; and recordings of mobile activities.

While any activity is theoretically available for analysis, some may present challenges. Anything that impairs transcription of audible/visible conduct (e.g., poor lighting, cacophonous setting, substantial overlapping speech) makes an analysis less reliable. The researchers themselves may also impede analysis if they lack basic knowledge of the occasion being recorded. Analysis requires adequate familiarity with the language(s) and culture(s) represented, some understanding of who the participants are to one another, and a practical grasp of the situation being documented.

With respect to the recording apparatus, video is required if participants are face-to-face, and multiple cameras capturing different perspectives are preferable over single cameras. Richer data is of course obtained using the best technology currently available, such as high or ultra high definition video cameras. You may also consider using newly available technologies such as eye-tracking glasses, body-mounted or even drone-mounted cameras, wide angle or panoramic lenses. The resulting forms of data could yield novel findings when combined with a CA approach.

How much you need to record depends on the frequency of your phenomenon of interest and the practicalities of recording. CA dissertations, for instance, have been based on 10-50 hours of recordings. While most conversation analysts collect their own primary data, especially as PhD students when this is typically required, some corpora are publicly available (see *Further reading and resources*), and others are

readily shared among CA researchers. For discussion of camera positioning, consent forms, file format, and other practical considerations, see Mondada (2013).

Transcription

Transcription is an important part of doing CA. Conversation analysts produce detailed transcripts of the talk—and in some cases behaviors like gaze or gesture—before analyzing an episode of interaction. The conventions used in CA to transcribe talk (see *Transcription conventions*) were developed by Gail Jefferson and represent aspects of the phonetics, prosody, and timing of talk (Hepburn & Bolden, 2013). In CA transcripts, no detail should be ignored because one cannot know a priori what perceptible features of the talk participants may use when making sense of their circumstances. The precise length of silences, and the places where they occur, have been shown to be deeply consequential for how participants understand interaction (Hoey, 2015; Kendrick & Torreira, 2015; Sacks *et al.*, 1974). Transcripts should therefore show not only speech but also vocalizations like laughter, the boundaries of overlapping talk, the length of silences, inhalations and exhalations, sound stretches, prosodic contours, faster or slower speech, and so on. For the transcription of body behavior, we recommend Mondada's (2014) conventions for multimodal transcription.

Collecting and Analyzing Data

Identify a Candidate Phenomenon

Most analyses begin with an observation of something in the recorded data. Anything that participants treat as relevant for their interaction may be considered a candidate phenomenon for investigation. Observations might concern the structure of entire episodes of interaction, like “doctor’s consultation” or “playing a board game.” At a lower grain of organization, observations may concern the transaction of courses of action like “announcing bad news” or “arranging to meet.” Observations may be directed at the actions that constitute such sequences, like requesting, complaining, or assessing. And perhaps at the smallest level of structural organization, potential phenomena may lie in the composition of such actions, like their prosodic contours, their grammatical construction, or gestures that accompany their production.

Developing the skill to notice potential phenomena emerges from the study of naturalistic data. The CA policy here is ideally one of “unmotivated looking,” or approaching data with nothing particular in mind. While this particular technique will naturally involve a researcher’s particular interests, those intuitions and hunches are organically sculpted over time through experience with interactional data. Working knowledge of the basic structural organization of interaction (e.g., turn-taking, sequence organization, turn-design, and repair) is part of this, as is hands-on practice in analyzing interactional data. Most students of CA develop their analytical skills in *data sessions*, where students and experts in the CA community gather to examine data together. Data sessions are an important pedagogical site for learners and practitioners to build experience in “unmotivated looking.” And so as in other disciplines, the ability to “see” phenomena of potential interest is at least partially gained through coursework, practice, and training with expert analysts. Furthermore, the time spent analyzing the

same recordings over and over again allows you to familiarize yourself with the interactions. Commonly, something of interest in one place will remind you of a similar thing in another recording that you know well. In this way, familiarity with your materials also supports the ability to notice candidate phenomena.

In order to exemplify basic CA methods, we will introduce a candidate phenomenon that we noticed in a data session and we will examine it throughout the chapter. Ultimately, for reasons that will soon become clear, we will come to refer to the phenomenon as an *assessment-implicative interrogative*. But at this early stage in the research process, before the nature of the phenomenon is apparent, you should actively resist the urge to apply labels to the phenomenon because they will guide what you see and choose to analyze and can obscure as much as they elucidate. Extract 8.1 presents our initial specimen of the phenomenon. In it, three friends are discussing a popular British television show, and Clara asks the other two a question.

Extract 8.1 [01_EMIC_n03t]

- 1 CLA: Have you seen the American version of The
 2 Inbe[tweeners]
 3 AME: [Oh it is aw[ful. = it's so terrible
 4 BOB: [Um:: no::
 5 CLA: [It's so bad

We can start our analysis of this extract with some basic observations. First, Clara's question (lines 1-2) is formatted grammatically as a *yes/no* interrogative, which makes relevant a *yes/no* response (Raymond, 2003). Second, Amelia's response to the question does not contain *yes* or *no* (or some equivalent form), but rather a negative assessment of the television show (line 3). Third, in overlap with Amelia's response, Bobby responds to the question negatively and produces no assessment (line 4). Fourth, Clara, who asked the question, subsequently produces a negative assessment of her own (line 5).

With these observations, we can draw some tentative conclusions about the sequence. The observation that Amelia responds to the question with an assessment, rather than an answer, suggests that she has understood the question as something other than a straightforward request for information. This exemplifies the *next-turn proof procedure*: each turn in conversation displays, and thereby makes available for analysis, the speaker's understanding of the prior turn (Sacks *et al.*, 1974). Furthermore, the observation that Clara then produces a negative assessment herself, thereby agreeing with Amelia, suggests Amelia's understanding of the question was appropriate. Thus the participants' conduct provides evidence that the question at lines 1-2 does not request information *per se*, but rather implicates an assessment of the object under discussion.

These observations and inferences alerted us to the possibility of a regular practice. Is it the case, we wondered, that asking someone if they have seen some object (e.g., a television show) implicates an assessment of it? To a conversation analyst, Extract 8.1 raises such questions. The methods of CA, which we describe in this chapter, offer the possibility of answers.

An initial step in the research process is to produce a formal description of the phenomenon under investigation, which might be called the *assessment-implicative interrogative*. We provide a first description below, and we will revise it repeatedly throughout the chapter.

Formal description of phenomenon I

- Questioner produces *yes/no* interrogative
 - in *have you seen X* format,
 - making a *yes/no* response conditionally relevant.
- Question-recipient produces either
 - ASSESSMENT, or
 - *no*.
- Questioner produces a subsequent assessment
 - which agrees with the question-recipient's assessment.

Build a Collection of Cases

With a preliminary description of the phenomenon in hand, the next step is to examine additional audio and video recordings of social interaction to build a collection of cases that will form the empirical foundation of the analysis. The idea is to gather widely and generously so you catch a substantial range of variation in the target phenomenon and related phenomena. Include everything that satisfies the criteria you developed for your preliminary description, as well as everything that approximates but does not strictly conform to them. By gathering this way, you will start to detect the contours of the phenomenon and discern how it operates. As you examine additional data, you will revise your preliminary description as the nature of the phenomenon becomes clearer.

There are at least two approaches to collection building. The first involves examining recordings for all candidate cases of the phenomenon. While slow, this process has the benefit of being rigorous and systematic. You can claim, for instance, that 1 hour of data contained 100 cases of the phenomenon. The second approach is more serendipitous in nature. It involves stumbling upon cases of the phenomenon while working on something else (for example, in a data session), then adding it to the appropriate collection. While this approach is opportunistic rather than systematic, it allows for building multiple collections in parallel. And while gathering enough cases may take years, you can contemplate the phenomenon in a way that shorter time windows do not allow. Most conversation analysts use both approaches depending on the particularities of the project. The first approach is suitable for high frequency phenomena (e.g., assessments, overlap, nodding), and the second for phenomena that do not occur often, or do not occur in all settings/activities. Another relevant aspect of this process, as noted above, is familiarity with your own materials, since intimate knowledge of specific interactions will allow you to more quickly find instances of your phenomenon of interest. In a standard CA study, all recordings available to the researcher are drawn on in an opportunistic manner, while quantitative CA studies generally employ systematic sampling procedures (see Quantitative methods in CA).

Because the composition of our example phenomenon includes specific lexical items (i.e., *have you seen*), we first searched the transcripts of our data for additional cases. Although a textual search can be a useful tool, CA collections invariably go beyond simple searches. One reason for this is that CA transcription conventions do

not always use standard orthography. For example, the question *did you have coffee?* could be represented as *d'yih'av co:ffee?*, meaning that most searches for *you* or *have* would fail to locate it. A second reason is that not all phenomena of interest are discoverable by searching texts (e.g., prosody or body behavior). A third is that negative evidence is important in CA (Schegloff, 1996). Text searches only return things that occur; they cannot locate the non-occurrence of something in a position where it relevantly could or should occur.

With that said, our simple search nonetheless yielded additional candidate cases of the phenomenon, such as that in Extract 8.2.

Extract 8.2 [Poker]

- 1 BEN: Have you seen the ↓ chips that we play with
- 2 at yer house wi Roberto?=-
- 3 SHA: =Yeah, I was thinkin that those were tight
- 4 BEN: Those are fun ↓

This sequence satisfies many of the formal criteria we developed for Extract 8.1. The first speaker produces a *yes/no* interrogative in *have you seen X* format; the question-recipient responds with an assessment; then the first speaker produces a second assessment which agrees with the first. There is one important difference, however: in addition to an assessment, the question-recipient's response also includes an answer to the question itself (i.e., *Yeah*; cf. Extract 8.2, line 3). The sequences in Extracts 8.1 and 8.2 thus appear to be variants of the same phenomenon.

While we found cases like Extract 8.2 that conformed to our preliminary description, we also encountered cases that challenged it, like Extract 8.3.

Extract 8.3 [02_EMIC_n09t]

- 1 ALI: Oo::h have you had (.) fried green tomato:es:?
- 2 CHA: No[::,
- 3 BRI: [Those are [goo:d.
- 4 ALI: [°So goo:d.°

Note that this sequence is formally analogous to that in Extract 8.1. The question receives two responses—one which answers the question in the negative (line 2; cf. Extract 8.1, line 4) and one which assesses the object in question (line 3; cf. Extract 8.1, line 3)—and the questioner produces a second assessment in agreement with the first (line 4; cf. Extract 8.1, line 5). In contrast to Extracts 8.1-8.2, however, the *yes/no* interrogative here is not in *have you seen X* format. At this point, our choices are either to specify some criteria to exclude cases like Extract 8.3 from the collection, or to revise our description of the phenomenon to include it. The first option would fail to recognize the obvious commonality between *have you seen X* and *have you had X* interrogatives: both inquire into the recipient's perceptions or experiences. It thus seems more plausible that our initial description was too specific. Indeed, additional cases we identified support this conclusion and reveal further variation in turn design (e.g., *did you ever go to the Cheesecake Factory?*). Because participants treat different turn formats as the same *kind* of thing (e.g., by responding with assessments), we changed our description of the phenomenon accordingly.

An important methodological question at this stage is how big a collection needs to be. Schegloff (1996) suggests that 60 cases suffices, though other studies report on smaller and larger collections. Our collection contains 27 cases that satisfy the criteria below (changes underlined).

Formal description of phenomenon II

- Questioner produces *yes/no* interrogative
 - in {*did, have*} you + PERCEPTION/EXPERIENCE VERB + OBJECT format,
 - making a *yes/no* response conditionally relevant.
- Question-recipient produces either
 - ASSESSMENT,
 - *yes* + ASSESSMENT, or
 - *no*.
- Questioner produces a subsequent assessment
 - which agrees with the question-recipient's assessment.

Recommendation: Start with the Clearest Cases First

After building a collection, the next step is to analyze each case individually. As a general rule, it is a good idea to start with the clearest and most straightforward cases, even if they appear “boring” in comparison to others. Only after developing an analytic grasp of the clear cases should you tackle the more complex ones. Ultimately, of course, your analysis must account for the whole collection, but you should work from the inside out, as it were, starting with the dead center of the phenomenon. Here are a few general suggestions for how to begin.

- 1 Start at a beginning. A case that occurs close to the beginning of a new course of action (e.g., a new topic, activity, etc.) will be easier to analyze than one that is deeply embedded within a complex sequence. Such cases are often clearer because you can track the trajectory of action leading up to the focal phenomenon.
- 2 Capitalize on prior research. Cases that occur in interactional contexts that have already been well-described in the CA literature can shed light on the phenomenon. For example, if a case occurs within a recognizable action sequence (request-acceptance, question-answer, etc.), it may be easier to analyze than others.
- 3 Watch for self-repair. A powerful form of evidence in CA comes in the form of cases where participants' conduct directly confirms the analyst's account of some phenomenon. This can be seen in some instances of self-repair. For example, a speaker may start a turn as *why don't we* and then change it to *why don't I*. This self-repair displays the speaker's understanding of both formats, the action each implements, and how such an action would fit in the specific interactional context (Drew, Walker, & Ogden, 2013).

Analyze Each Case in the Collection

The next step is developing an analysis for each case in the collection. Start by considering the basic nuts and bolts of any interaction: activity, participation, position, composition, and action. An adequate analysis of any phenomenon rests on an understanding of how these facets of interaction operate line-by-line and moment-to-moment.

Activity is what participants are doing together through interaction. Relevant considerations include: What circumstances bring the participants into interaction? What resources or constraints does the activity furnish? Do participants orient to a shared-in-common activity structure, the environmental setting, or the communicative medium? Is it goal-directed, or more loosely organized? Are certain things done at certain times, in a certain order, by certain participants?

Participation refers to the roles that participants occupy over the course of a given activity. Consider questions like: What interactional roles do the participants occupy right now (e.g., someone who just started speaking, someone who just stopped speaking), in this specific turn at talk (e.g., speaker, recipient), in this sequence of action (e.g., speaker of trouble source, repair initiator), on this specific occasion (e.g., caller, called)? How do the participants orient to and flexibly exploit these participatory roles?

Position refers to where something occurs in the course of interaction. Consider how a turn-at-talk fits into the larger sequence of action. Does it initiate a sequence, mandating a response? Or is it responsive to a previous turn, potentially completing the sequence (Schegloff, 2007)? Take Extract 8.4 for example. Here, Rick initiates a sequence with a question in *did you see X* format. As we have seen, such questions can implicate a *yes/no* response, an assessment, or some combination thereof. None of these immediately follow the question, however. Instead, Luke produces a question of his own, an other-initiation of repair (OIR; see Kendrick, 2015a, for a review).

Extract 8.4 [05_Monopoly_Boys]

- 1 RIC: Didya see the Yankees didn- (.) resign Bernie,
- 2 (0.7)
- 3 LUK: Williams?
- 4 RIC: Mmhm
- 5 (1.0)
- 6 RIC: .TSK No.[(w- sh-)
- 7 LUK: [Ba:d idea.

After Rick confirms that Luke has understood the reference to Bernie correctly (i.e., Bernie Williams), Luke responds to Rick's initial question with an assessment: *Ba:d idea* (line 7). (Note that Rick's turn at line 6 is the beginning of a tease and does not bear on the basic structure of the sequence described here.) This example shows that the relevant response to a sequence-initiating action need not occur in the next turn and can be "displaced" by other activities, in this case an *insert sequence* (Schegloff, 2007). It also shows that sequences can have complex structures, with one adjacency pair (lines 3-4) embedded within another (lines 1 and 7).

Composition refers to the verbal, vocal, bodily, or material resources that form an action. Consider every turn component as possibly relevant: turn-initial inbreaths, clicks, or sighs (Hoey, 2014); the grammatical format of the turn (e.g., a *did you see X* interrogative); the selection of one word over another (e.g., *have you had* vs. *have*

Table 8.1 Questions and assessments from Extracts 8.1 to 8.3.

<i>Extract</i>	<i>Questions</i>	<i>Assessments</i>
1	Have you seen the <u>American</u> version of The Inbetweeners	oh it is awful it's <u>so</u> <u>bad</u>
2	Have you seen the↓ chips that we play with at yer house wi Roberto?	I was thinkin that those were tight Those are fun↓
3	Ooh have you had fried green tomatoes	Those are good So good

you eaten fried green tomatoes); the prosodic accents and intonational contours of the turn; and so on. How do these contribute to what's getting done? How would things change if alternative forms were used, or if something were left out? How does the composition reflect position? How does it deal with what came before? How is it designed for its recipients? Consider, for example, the composition of the questions and assessments in Table 8.1.

The questions feature interrogative syntax, second person subjects, verbs of perception or experience in past tense, detailed descriptions of the perceived or experienced object, and affective prosody. The assessments feature pronominal references, clearly valenced predicate adjectives, and are relatively short. These are all potentially relevant for an analysis. Take, for instance, the turn-initial particle *ooh* in Extract 8.3. Turn-initial particles can project the type of action that the incipient turn will implement (Levinson, 2013). As an affective particle, *ooh* imparts an emotional valence to the question and displays a positive stance toward fried green tomatoes. This implicit assessment may provide a place for other participants to display some stance toward fried green tomatoes as well.

Action refers to what some talk or other conduct accomplishes in interaction. A methodological mantra in CA is that “position plus composition equals action,” meaning that an analysis of what someone is doing is largely a question of where their conduct occurs and how it gets formatted (Schegloff, 1995). Thus a characterization of action should come after an adequate analysis of sequence structure and turn construction.

The goal of this stage in the process is to produce a line-by-line analysis of each case in the collection. Start at the beginning of the data extract and work through the transcript word-by-word, turn-by-turn, sequence-by-sequence. Write down your observations and inferences (e.g., as bullet points) and revise your formal description of the phenomenon as necessary to account for the data.

Analyze Variation in the Collection

The next step is to come to grips with the variation exhibited by the phenomenon. The analysis of variant cases should focus on those dimensions of variation that participants orient to as relevant and meaningful. The task is to track forms of variation across the collection and sort cases into ad hoc categories such that you can easily compare variants. Which dimensions of variation are relevant will depend on the nature of the phenomenon. We've already observed variation in Extracts 8.1-8.4. For instance,

question-recipients have the option to produce *yes*, *no*, or neither of these. The choice appears to be consequential for where an assessment occurs and which participant produces it. When the question-recipient responds with a *no* token, the assessment appears after it, produced by the questioner, as in Extract 8.3 and below in Extract 8.5.

Extract 8.5 [LUSI:Santa Barbara 2]

- 1 CIN: Yea:h have you tried there?
- 2 DAD: N:o.
- 3 CIN: They're a lot s:maller than the ones we got in L A:
- 4 but they're, >↑they're kinda <decent;

Conversely, when the question-recipient responds with a *yes* token, then the assessment appears directly after it, produced in the same turn by the question-recipient, as in Extract 8.2 and below in Extract 8.6.

Extract 8.6 [SBC045]

- 1 COR: Did you hear about that cop (.) in Milwaukee?
- 2 PAT: Oh: yeah, I loved that.

When the question-recipient responds with something other than a *yes/no* response, then the assessment is produced by the question-recipient, who places it either in the next turn (Extract 8.1) or after an insert sequence (Extract 8.4). Furthermore, when the question-recipient does give an assessment, the questioner may also give an assessment afterwards, as in Extracts 8.1 and 8.3.

From just six examples, we've identified several types of variation: what follows the interrogative (*yes*, *no*, something else); who provides the assessment (questioner, question-recipient, both); and where the assessment occurs (by itself, after *yes* in the same turn). More generally, these are intersecting matters of what gets done, in what order, by which participants, in what way, and so on. These are the sorts of considerations involved in analyzing variation.

One type of variation in the collection led us to modify our formal description. The question *Have you tried there* (Extract 8.5, line 1) does not contain an explicit object, but implicitly references a restaurant under discussion. Because the sequence nonetheless transpires as expected, we modified the formal description below (change underlined).

Formal description of phenomenon III

- Questioner produces *yes/no* interrogative
 - in {*did*, *have*} *you* + PERCEPTION/EXPERIENCE VERB + OBJECT format,
 - where OBJECT can be implicit,
 - making a *yes/no* response conditionally relevant.
- Question-recipient produces either
 - ASSESSMENT,
 - *yes* + ASSESSMENT, or
 - *no*.
- Questioner optionally produces a subsequent assessment.
 - which agrees with the question-recipient's assessment

Define the Boundaries of the Phenomenon

Standing in opposition to clear cases are boundary cases. These resemble the phenomenon under investigation but can be shown analytically not to be genuine instances of it. The process whereby one identifies such cases and develops criteria to exclude them from the core collection defines the boundaries of the phenomenon (see Schegloff, 1997).

For our phenomenon, we identified two types of boundary cases that forced us to amend our formal description. Take Extract 8.7 for example. Cindy had been to Mom's house to retrieve something from a closet. Mom has just finished explaining why her closet was so messy.

Extract 8.7 [LUSI:Santa Barbara 2]

- 1 MOM: So did- uh Matthew didn't tell you I'm a clothes horse
- 2 did'ee hahuhuh
- 3 CIN: That you're a WHAT?=
4 MOM: =Have you ever heard the expression <clothes horse>
- 5 CIN: ↑ No:: °what is it?°
- 6 MOM: Oh: my mother had a clothes fetish that means like you
- 7 have um: obsessive amounts of clothes haha

The question at line 4 clearly matches our formal criteria and was therefore included in our collection. However, it turned out to be problematic for our analysis because no assessment of the expression *clothes horse* ever occurs, nor is there any orientation to the non-occurrence of an assessment. On its face, this case contradicts the tentative generalization we've developed so far, namely that questions like *have you ever heard X* implicate an assessment of the object in question.

So what's going on here? A careful line-by-line analysis of the cases in the collection in terms of *position* provided a straightforward answer. Simply put, all other questions in our collection occur in a sequence-initial position; they are constructed with specific linguistic practices that practically mandate a responsive action. By contrast, the question at line 4 is not in sequence-initial position, but in a sequence-subsequent position. It occurs as part of a complex insert sequence that the participants produce to deal with Cindy's trouble in understanding the expression *clothes horse*. Our phenomenon appears to be restricted to the beginning of a course of action. Therefore, we excluded Extract 8.7 based on sequence-organizational grounds and amended our description to specify that the question must be in a sequence-initial position.

Now consider Extract 8.8. Like Extract 8.7, it presents a challenge because the question (line 4) fits our description, but no assessment ever occurs. However, we could not exclude this case, nor others like it, on sequence-organizational grounds because the question occurs sequence-initially.

Extract 8.8 [13_RCE28]

- 1 KEL: So i'wzlike- (.)> we could js<buy a private island,
- 2 (cuzs) cheaper than a house;
- 3 (0.8)

- 4 HEA: Did you see BBC Breakfast this £morn(h)ing?
 5 hhh-[hhh]
 6 KEL: [((snort/laugh)) £N(h)o:?
 7 HEA: It's a link, it's an island = h
 8 ((continues telling))

We were therefore left with two options: (i) concede that such cases contradict our analysis, or (ii) reanalyze the collection to determine whether such cases differ systematically from others. A careful analysis of the cases in the collection in terms of *composition* revealed a systematic difference in turn design: The question in Extract 8.8 contains the temporal adverbial phrase *this morning*, which localizes the experiential/perceptual event in time. In contrast, the clear cases of the phenomenon (e.g., Extracts 8.1-8.6) do not have temporal adverbials like this. They all exhibit what linguists call the experiential perfect aspect (Comrie, 1976), which portrays a situation as having held at least once during some time in the past—in other words, not specifically localized in time. This tense-aspect distinction can be grasped by comparing *Did you see BBC Breakfast this morning?* to *Have you seen the American version of the Inbetweeners* (Extract 8.1). Whereas the first question can be paraphrased as, “Did you see the particular episode of BBC Breakfast that aired this morning?”, the second communicates something like, “Have you ever, at any time in the past, watched the American version of the Inbetweeners?” The first asks about a specific point in the past; the second asks about one’s general past experience.

We therefore concluded that our collection in fact contained two types of questions, only one of which was part of our phenomenon. Across the collection, none of the questions with temporal adverbials like *this morning* (or *recently*, see below) elicit assessments. Thus we excluded Extract 8.8 and others like it from the collection on turn-constructural grounds and modified the description of our phenomenon accordingly, shown below (changes underlined).

Formal description of phenomenon IV

- Questioner produces *yes/no* interrogative
 - in {*did, have*} *you* + PERCEPTION/EXPERIENCE VERB + OBJECT format,
 - where OBJECT can be implicit,
 - where VERB is in experiential perfect aspect,
 - in sequence-initial position,
 - making a *yes/no* response conditionally relevant.
- Question-recipient produces either
 - ASSESSMENT,
 - *yes* + ASSESSMENT, or
 - *no*.
- Questioner optionally produces a subsequent assessment.
 - which agrees with the question-recipient’s assessment

Analyze Deviant Cases and Look for Normative Evidence

In one respect, the goal of CA is to describe the normative practices that participants use when organizing social interactions—that is, what people expect to happen in social situations. *Deviant cases* are an especially powerful kind of evidence for demonstrating the normative organization of some phenomenon. Deviant cases feature (i) a departure from an expected pattern, and (ii) an observable orientation to it *as* a departure from the norm (see Maynard & Clayman, 2003, pp. 177-182). Say you build a collection of hundreds of question-answer pairs. While this would provide evidence that statistically these actions co-occur, it would not show that participants normatively *expect* answers to follow questions. To demonstrate normativity, you must present something like the following: (i) a question-recipient does not provide an answer, and (ii) this gets treated as problematic (the questioner pursues a response, the question-recipient accounts for the non-response, etc.). This would show that the co-occurrence of questions and answers is not merely a statistical correlation but a socially normative organization (see Heritage, 1983, pp. 245-253).

Extract 8.9 presents possible normative evidence for our analysis. It begins with Molly asking Hannah about a mutual friend.

Extract 8.9 [11_RCE25]

- 1 MOL: Uhm what- (.) Have you seen: (.) other Jack.
 2 (0.4)
 3 MOL: recent[ly].
 4 HAN: [.hh No:, I think he: (1.0) uhm (0.7) he's
 5 just- (0.9) staying at home en:

At first blush, Molly's question looks like our phenomenon. However, neither participant goes on to produce an assessment. The question cannot be excluded on sequence-organizational grounds because it occurs in a sequence-initial position, nor can it be excluded on turn-constructional grounds—at least not initially—because the question in line 1 lacks a temporal adverbial. Note, however, that Hanna fails to respond to the question promptly, resulting in a 0.4-second gap (line 2). After this, Molly continues her turn, adding *recently*—a temporal adverbial that localizes the event in time. CA research has shown that a delay before a response can signal interactional trouble and that turn continuations like this can be used to address such troubles tacitly (see, e.g., Kendrick, 2015b, pp. 8-10). Therefore a plausible analysis here is that the non-response by Hanna was understood by Molly as an indication of trouble, and that Molly produced the turn continuation *recently* as a possible solution. But what sort of trouble could Hanna have had with the question? The turn continuation itself suggests an answer: *recently* transforms the question from one in the experiential perfect aspect to one that asks about an event in the recent past. Thus the tense-aspect distinction that we identified in the previous section is, in this particular case, oriented to by the participants in the course of interaction. This suggests that the distinction is a socially normative one, which participants use to produce and interpret recognizable social actions.

Produce a Formal Account of the Phenomenon

The final step in the research process is to produce a formal account of the phenomenon. The criteria that you have developed to identify the phenomenon and its boundaries are an essential part of this account, as is your analysis of the variation in the collection. The account should not only describe the nuts and bolts of the phenomenon, the linguistic forms and social actions that comprise it, but should also explain how it operates, the conditions under which variation occurs, and the sort of social-interactional problem for which the phenomenon constitutes a solution (see Schegloff, 1996).

For the phenomenon we have explored in this chapter, we walked through the initial steps of the research process carefully as an illustration of the basic practices and principles of the method. We (i) identified a candidate phenomenon; (ii) built a collection of cases; (iii) analyzed each case individually; (iv) examined variation across the collection; (v) defined the boundaries of the phenomenon; and (vi) looked for normative evidence for our analysis. But to complete the final step—that is, to develop a full account of our phenomenon—one would need first to answer two important questions that our tentative analysis has brought to light.

The first is whether the phenomenon is or is not a specific type of *pre-sequence* (Schegloff, 2007). A pre-sequence is an adjacency pair in which the first pair-part projects the contingent relevance of a subsequent first pair-part. For example, a question like *what're you doing tonight?* not only makes a response conditionally relevant; it also projects the production of a subsequent first pair-part and specifies its action (e.g., as an invitation). The recipient of such a *pre-invitation* can anticipate the projected action and either block its production (e.g., *I'm staying in tonight*) or allow it to go ahead (e.g., *nothing*). In the case of our phenomenon, the question is whether a first pair-part like *Oo::h have you had (.) fried green tomato:es:?* in Extract 8.3 should be analyzed as a *pre-assessment*. According to Schegloff's (2007) definition of a pre-sequence, a pre-assessment would be a first pair-part that projects the contingent relevance of a subsequent assessment and allows the recipient to either block its production or allow it to go forward. A *no* response such as that in Extract 8.3 might be analyzed as a go-ahead, which allows for the production of the projected assessment. The difficulty that such an analysis faces is that across the collection of cases either the speaker or the recipient goes on to produce an assessment, whether the response was *yeah* (e.g., Extract 8.2) or *no* (e.g., in Extract 8.3). That is, the set of response alternatives that we observe does not appear to include one that can block the progression of the sequence. Thus if our phenomenon is a pre-assessment, the organization of the sequence that it engenders differs from that of other pre-sequences described in the literature (see also Levinson, 1984, p. 360-364; Rossi, 2015). A full account of the phenomenon would therefore examine such differences in detail and describe the sequential organization of pre-assessment sequences as observed in the collection.

The second and related question that a full account would need to address concerns the management of social epistemics in assessment sequences (Heritage & Raymond, 2005). *Epistemics* refers to the social management and distribution of knowledge in conversation: who knows what, who has the right to know what, and so on. Speakers select different linguistic forms depending on their recipient's epistemic access to an assessable object. For instance, something like *That sounds interesting* is hedged with the word *sounds*, and is found to occur when a recipient has no access or derived

access to an assessable. Conversely, if a recipient is known to have access, then a speaker who gives an assessment might use a tag question, as in *That's interesting, isn't it?* This displays an orientation to the type and scope of knowledge that a recipient has relative to a speaker. For our phenomenon, speakers first inquire into recipient's experience with some object, thus orienting to their recipient's epistemic access to that object as a practical precondition for assessment. This connects to the matter of pre-sequences discussed above, in that the sequence may be designed to establish the recipient's epistemic access in advance of the assessment. We would want to integrate an analysis of sequence and epistemics for a fuller formal account of the phenomenon, looking at the ways in which recipient's access to an assessable affects the trajectory of the assessment-implicative interrogative sequence across the collection.

Although important questions remain unanswered, we have nonetheless learned a great deal about our example phenomenon, the assessment-implicative interrogative. Our results suggest that asking about another's perceptual experience of some object or event (e.g., *have you seen X*), in a sequence-initial position (e.g., as a new topic), formulating it as a question about general past experience (i.e., in the experiential perfect aspect), makes relevant or otherwise implicates an assessment of the object or event in question. Should the account developed here bear out, then we will have recovered from the fine details of talk a recurrent practice by which interactants engage in a commonplace activity: assessing things together.

Quantitative Methods in CA

CA is an inductive, data-driven method for the discovery and description of interactional practices and organizations of practice observed in naturally occurring social interaction. As over 40 years of empirical research in CA demonstrates, quantitative and experimental methods are not necessary to produce valid accounts of the organization of social interaction. Indeed, conversation analysts have been deeply skeptical of the use of quantification, let alone experimentation, as an analytic tool (Schegloff, 1993). A principle concern is that researchers should first identify, describe, and understand a phenomenon of interest *before* they count and code instances of it, lest the statistical results not reflect the true nature of the phenomenon. However, quantitative methods such as coding and counting together with standard inferential statistics have been used by conversation analysts to investigate interactional phenomena for which qualitative analyses already exist (see Stivers, 2015). Such studies can not only replicate previous results, but also refine previous empirical observations and, in some cases, challenge conventional wisdom.

To cite but one example, in their seminal study of the organization of repair in conversation, Schegloff *et al.* (1977) observed that other-initiations of repair (OIR; e.g., asking *what?* if you didn't hear the prior turn) are systematically delayed (see, e.g., Extract 8.4, lines 2-3). Yet nowhere in the article did the authors report the statistical distribution of cases or the precise timing of the delay. A quantitative CA study later showed that the modal gap duration before OIRs is approximately 700 ms, which was longer than the modal 300 ms observed in responses to *yes/no* questions in the same corpus (Kendrick, 2015b). The results thus replicated and further specified Schegloff *et al.*'s general observations. But the study also made an

unexpected discovery: one type of OIR, other-correction, was in fact produced *without* delay, contra Schegloff *et al.*'s claims. This shows that CA can use quantitative methods not only to reproduce and refine previous observations, but also to make new discoveries about well-described phenomena.

Advantages and Disadvantages

The dominant model for scientific research is the hypothetico-deductive method: A researcher formulates a hypothesis that could be proved false by empirical observation and then tests it, often through experimentation. Although qualitative research can be hypothesis driven, the CA method, by contrast, begins not with a hypothesis about what participants in social interaction might do, but rather with an actual specimen of what some participants have in fact done. This initial specimen acts as the seed from which the analysis grows, inductively. An advantage of this approach over others is its *ecological validity* (i.e., the extent to which the results generalize to everyday life). Given that the primary data in CA are recordings of everyday life, the only concern regarding ecological validity is the possibility that the researcher's recording equipment could influence the interaction (see Hazel, 2015). In experimental research, however, participants may be asked to perform unfamiliar or unusual tasks that have few parallels to their everyday experience (e.g., naming a series of pictures that appear on a computer screen, maintaining prolonged eye-contact with a stranger). For this reason, conversation analysts are generally skeptical of results from social and psychological experiments.

One disadvantage of CA, especially from the perspective of psychology, is its lack of experimental "control." Psychological experiments aim to isolate and manipulate some independent variable to determine its effect on some dependent variable, and thereby infer causality. In controlled experiments, only the value of the independent variable should differ between conditions. In a CA study, however, the thick particulars of each case differ—the participants, their relationships, the setting, the topic, and so on. With so many "extraneous variables" how can conversation analysts be certain of their results? The answer is that CA methods exploit the inherent variability of naturally occurring data. Consider the collection we built for this chapter. It includes cases from face-to-face interactions and telephone calls, recorded in quiet rooms and outside in public, with participants engaged in other activities (e.g., playing a game) and not. With a diverse collection of cases, whatever extraneous variable one might posit as explanatory in one particular case is unlikely to hold for another, let alone for all cases in the collection. Rather than minimize variability through experimental control, the CA method exploits the variability of naturally occurring social interaction.

CA and Psycholinguistics

In many ways, CA and psycholinguistics are an odd couple. The two fields differ markedly in their approaches to data collection, the basic units of their analyses, and the emphasis they place on social versus cognitive processes. Whereas much

psycholinguistic research takes the production and comprehension of single words or sentences elicited under controlled conditions as its basic unit of analysis, CA research treats the interactional exchange of utterances by two or more participants recorded in naturally occurring social situations as its basic unit. And whereas psycholinguists generally seek to reveal the cognitive processes of individuals that underlie observable behavior, conversation analysts set aside inquiries into cognition and instead aim to describe and model interactional processes that involve the coordination of multiple participants and that produce the orderliness observed in conversation and other forms of talk-in-interaction.

With that said, the CA literature nonetheless offers a wealth of rich descriptions of interactional phenomena whose relevance to psycholinguistic theory is hard to question. Consider turn-taking in conversation (Sacks *et al.*, 1974). The gaps between turns are on average 200-300 ms (Stivers *et al.*, 2009), yet according to psycholinguistic experiments, speakers require at least 600 ms to plan even a single word (e.g., in picture naming tasks; Indefrey & Levelt, 2004). This suggests that a next speaker begins planning his or her turn well before the current turn is complete, and that processes of language comprehension and production overlap in conversation (Levinson, 2016). This raises problems for psycholinguistic theory, such as the proposal that comprehension uses the production system for prediction (e.g., Garrod & Pickering, 2015). As the example of turn-taking shows, CA research on the organization of conversation, using the methods described in this chapter, can inform models of production and comprehension and suggest avenues for future research.

Take Extract 8.10. After Jamie confirms that he plans to play football, Will asks when the game starts.

Extract 8.10 [RCE15a]

- 1 WIL: You gonna come to football tonight,
- 2 JAM: Yeah.
- 3 (0.9)
- 4 JAM: hhh[h
- 5 WIL: [W'time is it?
- 6 (0.2)
- 7 JAM: Four o'clock.

The question-answer sequence at lines 5-7 presents a psycholinguistic puzzle: the duration of the question is only 295 ms and the following gap 185 ms, yet Jamie answers the question with apparent ease. Two explanations are possible: either he planned the noun phrase *four o'clock* in less time than the minimum of 600 ms observed in picture naming tasks (Indefrey & Levelt, 2004), or he anticipated Will's question and prepared his response in advance. Although we find the first explanation more plausible, both raise questions for psycholinguistic research. One might question the ecological validity of the experiments that established such temporal minimums, and use CA research to create new paradigms for language production experiments. Alternatively, one could investigate the circumstances under which speakers plan answers to questions not yet asked. The temporal adverb *tonight* could in theory activate a representation for *four o'clock*, and the long gap during which Will doesn't speak (line 3) could serve as a signal of trouble and prompt Jamie to search for its source. The rapidity of Jamie's response could therefore be a byproduct

of the sequential organization of talk. Whichever explanation one prefers, sequences such as this, in which speakers go faster than the psycholinguistic limits, are easy to find using CA methods and would surely repay psycholinguistic investigation.

Acknowledgments

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Key Terms

Action The social action (or “speech act”) that a participant performs through the production of an utterance (e.g., greeting, asking, telling, offering, requesting).

Collection A set of data extracts (e.g., video clips) from recorded interactions that forms the empirical foundation for an analysis.

Composition The structure of the practices that a participant uses to perform an action.

Deviant case A case in which a departure from a pattern is oriented to as a departure, which provides evidence that the pattern is socially normative.

Ethnomethodology The study of the methods that people use for understanding and producing social order.

Interactional phenomenon An observable locus of order in social interaction that serves as an object of study.

Naturally occurring interaction A social interaction, ordinary or institutional, that was not arranged expressly for the purpose of scientific research.

Next-turn proof procedure A method whereby a turn is analyzed as evidence of its speaker’s understanding of the prior turn.

Position The location of an action within a sequence of actions or the overall structure of a social occasion.

Transcription Conventions

(.)	Short, untimed pause
(1.4)	Timed pause
hh	Exhalation
.hh	Inhalation
(word)	Unclear hearing
((comment))	Transcriber’s comment
w[ord	Overlapping onset
wor]d	Overlapping offset
wor-	Cut-off word
>word<	Faster speech rate

<word>	Slower speech rate
↓word	Markedly lower pitch
↑word	Markedly higher pitch
word=	Latching, rush into next turn or segment
<u>word</u>	Prominent stress
WORD	Higher volume than surrounding talk
w(h)ord	Laughter in word
£word	Smile voice
°word°	Lower volume than surrounding talk
wo:rd	Lengthening of segment
.	Falling intonation
,	Level or slight rise intonation
?	High rising intonation
¿	Mid rising intonation

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Further Reading and Resources

Readings:

Sidnell, J. (2010). *Conversation analysis: An Introduction*. Malden: Wiley-Blackwell.

Sidnell, J., & Stivers, T. (Eds.). (2013). *The handbook of conversation analysis*. Malden: Wiley-Blackwell.

Software:

ELAN: <https://tla.mpi.nl/tools/tla-tools/elan/>

CLAN: <http://childes.psy.cmu.edu/clan/>

Transcriber: <http://transcriber.en.softonic.com/>

Corpora:

CABank (English, Spanish, Mandarin, others): <http://talkbank.org/cabank/>

Language and Social Interaction Archive (English): <http://www.sfsu.edu/~lsi/>