Conversation Analysis

1. Learning Objectives

After reviewing this chapter readers should better be able to:

- Introduce researchers in medicine to the nature and methods of conversation analysis;
- Describe the main dimensions of conversation analytic research in medical practice;
- Describe some of the findings of conversation analysis in the context of primary care;
- Illustrate the practice of conversation analytic reasoning using medical data; and
- Describe the integration of qualitative and quantitative analysis within conversation analysis.

Office of Behavioral and
Social Sciences Research

Department of Health
and Human Services

National Institutes
of Health

2. Introduction

Conversation analysis (CA) is the dominant contemporary method for the analysis of social interaction. Originating at the University of California during the 1960s (Sacks, 1992), the field has a broad interdisciplinary reach, and is used to study interaction in many languages on an effectively worldwide basis.

> **The term 'conversation analysis' reflects the origins of the field in studies of everyday casual conversation, but CA is also used to study many more specialized forms of communication including interaction in educational, legal, political, mass media, and medical settings.**

CA begins from the notion that conversational interaction involves 'doing things with words,' and that, for example, describing, questioning, agreeing, offering and so on are all examples of social actions that we use words to perform. It developed from social science perspectives that recognized the fundamental nature of human action and interaction in the formation and management of personal identity, social relationships, and human institutions. These perspectives stress four main features of actions that pose immensely challenging issues for the systematic analysis of social life. CA was developed specifically to deal with these four issues:

1. Human actions are meaningful and involve meaning-making.
2. Actions are meaningful and make meaning through a combination of their content and context.
3. To be socially meaningful, the meaning of actions must be shared (or intersubjective). This sharing may not be perfect, but it is normally good enough for the participants to keep going.
4. Meanings are unique and singular. Actions function in particular ways to create meanings that are also particular.

2. Introduction

Human actions are meaningful and involve meaning-making

Human actions (whether spoken or otherwise) are meaningful. Unlike the processes of the physical universe, they are goal-directed and based on reasoning about the physical and social circumstances that persons find themselves in. This reasoning involves knowledge, socio-cultural norms and beliefs, and a grasp of the goals and intentions of others. Because goals, intentions, and the 'state of play' in interaction can change rapidly, this knowledge and reasoning is continuously updated, during the process of interaction itself. Social interaction also involves meaning-making. Actions, no matter how similar or repetitive, are never identical in meaning. Each of them is singular, if only because it takes place in a new and singular situation.

> **Each action therefore is, in some degree, creative in the meaning it creates and conveys.**

For example, the actions making up even the most routine of medical visits conducted by an experienced primary care physician are never identical: they involve unique meaning-making by particular human beings in a situation that has its own singular history and context. Somehow this is all being managed, for the most part, through spoken interaction.

2. Introduction

Actions achieve meaning through a combination of their content and context

Self-evidently most spoken actions embody specific language content, describe specific circumstances, and implement specific actions just by virtue of the creative power of language. However to this creativity of content must be added the creative power of context. The meaning of even the most formulaic of actions (such as "okay," 'mm hm" and so on) is in fact, differentiated by their context.

> **The contextual variation (and specification) of action is a profound feature of human socio-cultural life, and a second major source of creativity and meaning-making in interaction that works in tandem with the creative power of language.**

Analysis of action cannot avoid this contextual variation without appearing superficial and irrelevant, not least because human beings exploit context in the construction of action. 'Context' is complex and layered. It embraces the immediately preceding action (someone just said or did something you have to respond to), through medial (for instance, that someone is an older patient), to distal (for instance, that this must all be accomplished within a new managed care regime).

To be socially meaningful, the meaning of actions must be shared

Human actions are socially meaningful only to the extent that their meaning is shared by the actor, the recipient(s) of the act, and (sometimes) other observers. Absent this and actions will be unintelligible to others and will fail to achieve their desired objectives. The shared meaning of actions is made possible by the common use of methods for analyzing actions-in-context.

> **This means that there must be procedures for persons to check whether their understandings about the meanings of earlier actions are correct, and of whether their responses are 'on target.'**

As persons construct interaction on an unfolding sequence of moves, they will also have to keep score of 'where they are' in the interaction and of the interaction's 'state of play.' Like 'context,' shared (or 'intersubjective') meaning is also layered on a gradient from the most public (I asked you a question and you replied "No"), to less public but available to some observers (your response betrays the fact that you are not an expert on that condition), to more private (your "No" is rationalizing an unstated anxiety, or reflects a private promise you made to someone else).

2. Introduction

Meanings are unique and singular. Actions function in particular ways to create meanings that are particular.

Implicit in the first three principles is the idea that actions and their meanings are highly particularized.

> **At first sight the extraordinary singularity of human action would seem inimical to any sustained achievement of coherent meaning. Yet it works – somehow!**

A key to this working can be glimpsed in the contrast between the number of colors that are perceptible to the average human (around 7.5 million) and the basic color terms used by the average speaker of a language (between 8 and 11). Somehow all that particularity is being conveyed by very general descriptive terms (red, yellow, etc.). The key to the process is that most description takes place in plain sight of the colored object ("the guy in the red sweater," "the blue humming bird") and the color term can do its job by being amplified and particularized by its context ("this red would work better than that one").

> **Context elaborates the meanings of utterances. A similar principle applies in interaction: "Is it serious?" is understood differently in the context of a sprained ankle and a cancer diagnosis.**

The four features of action described so far have been discussed within the fields of anthropology and sociology for about 150 years, where they have mainly been considered as potential constraints on, or obstacles to, a natural science of society. Nonetheless, these are the characteristics that a conception of interaction must come to terms with. Social participants somehow manage their interactions in daily life while coping with, and in fact actually exploiting, these characteristics of human conduct. Conversation analysis is a discipline that was developed to come to terms with, and model, these capacities.

3. Basic Principles of CA

Sequence

The foundational principles of CA tackle these four fundamental facts of human action by exploiting the concept of *sequence* (Schegloff, 2007). The basic idea is actions are simultaneously context shaped and context renewing. Current actions invite (and in some cases, mandate) responses, and in turn form the most basic and proximate context in which a next turn at talk occurs and should be understood. It is a default assumption in human conduct that a current action, should be, and normally will be, responsive to the immediately prior one. Indeed persons have to engage in special procedures (e.g., "Oh by the way…") to show that a next action is not responsive to the prior.

The inherent turn-by-turn contextuality of conversation is a vital resource for the construction of understanding in interaction.

> **Since each action will be understood as responsive to the previous one, the understanding that it displays is open for inspection.**

3. Basic Principles of CA

⌨ **Example 1: Complaint vs. Invitation**

For example, in the following case, Ann's turn in line 1 is treated as an invitation by a response that 'accepts' it:

> Ann: Why don't you come and see me some[times.
> Bar: [I would like to

If, by contrast, Barbara had responded with an apology and an excuse:

> Ann: Why don't you come and see me sometimes.
> Bar: I'm sorry. I've been terribly tied up lately.

then it would have been apparent that Barbara had understood Ann's initial utterance as a complaint rather than an invitation (Heritage, 1984).

These two understandings are built into the design of the two different responses. They are apparent to observers but, *and this is the important point*, they are apparent to the participants: however the sequence plays out, Ann will find from Barbara's response how Barabara understood her and that, Barbara has, or has not, understood her correctly.

We can take this analysis a step further by recognizing that at this point, Ann knows how Barbara understood her turn, but Barbara does not know whether she understood it correctly. Continuation of the sequence allows Barbara to make this judgment (Schegloff, 1992):

> Ann: Why don't you come and see me some[times.
> Bar: [I would like to
> Ann: I would like you to

Ann's 'accepting' response to Barbara's acceptance confirms Barbara in her belief that she understood Ann correctly. But it could have gone otherwise:

> Ann: Why don't you come and see me some[times
> Bar: [I would like to
> Ann: Yes but why don't you

In this second scenario, Barbara would see that her understanding of Ann's first turn at talk as an invitation was mistaken. Ann's response, which renews and indeed escalates her complaint, conveys that her original utterance was in fact intended to have been just that.

The sequential logic inherent in these examples is central to the construction of human interaction as a shared sense-making enterprise, regardless of its social context. Because it is the foundation of courses of conduct that are mutually intelligible, this logic underwrites both the conduct of social interaction and its analysis.

Exercise 1: Characteristics of Human Action

Drag and drop each concept with the four main characteristics of human action that conversation analysis was developed to deal with.

Actions, no matter how repetitive, are never simply identical in meaning

Context elaborates the meanings of utterances.

The contextual variation (and specification) of action is a profound feature of human socio-cultural life.

There must be procedures to check whether understandings about the meanings of earlier actions are correct, and responses are 'on target.'

Concept	Characteristic
	Human actions are meaningful and involve meaning making
	Human actions are meaningful by virtue of their content and context.
	The meaning of human actions is shared through the use of common methods for analyzing actions-in-context.
	The meanings of actions are unique and singular.

3. Basic Principles of CA

Practices

CA investigates interaction by examining the practices that participants use to construct it.

> A **'practice'** is any feature of the design of a turn in a sequence that (i) has a distinctive character, (ii) has specific locations within a turn or sequence, and (iii) is distinctive in its consequences for the nature or the meaning of the action that the turn implements.

Example 2: Conversational Practices

Here are three examples of conversational practices:

(a) Turn-initial address terms designed to select a specific next speaker to respond: (Lerner, 2003)
A: Gene, do you want another piece of cake?
(b) Elements of question design that convey an expectation favoring a 'yes' or a 'no' answer: in this case the word 'any' conveys an expectation tilted towards a 'no.' (Heritage et al., 2007)

Doc: Do you have any other questions?

(c) Oh-prefaced responses to questions primarily conveying that the question was inapposite or out of place: (Heritage, 1998)

Ann: How are you feeling Joyce?
Joy: Oh fine.
Ann: 'Cause- I think Doreen mentioned that you weren't so well?

3. Basic Principles of CA

Validation of Practices

Within CA methodology, the significance of these practices is validated internally: that is, by reference to the actions of the parties. The researcher may look at the frequency of particular types of response, at the occasions when a practice is used, or at more subtle turn-internal patterning. For example, if the use of address terms selects next speakers, the addressed persons should normally speak next and if other than the selected speaker responds, that should be associated with some difficulty no matter how momentary. If the word 'any' is built to convey the expectation that a response will likely (or even ideally) be negative, then it should be liberally found in contexts where that is the case. For example in the physician's first and third questions in the datum below, it is clear that 'other medical problems' and 'lung disease' are being treated both as undesirable and as unlikely in this case:

Doc: And do you have any other medical problems?
Pat: Uh No
      (7 seconds of silence)
Doc: No heart disease?
Pat: ((cough)) No
      (1 second of silence)
Doc: Any lung disease as far as you know?
Pat: No

Finally, if an oh-prefaced response to a question treats the question as inapposite, then we would expect it to occur in places where that is the case, and we would expect, under certain circumstances, the questioner to defend the relevance of the question. In the previous illustrative case, Ann, having asked for an update on a known condition (with 'How are you feeling?'), hears Joyce's response as questioning its relevance (Robinson, 2006). She then proceeds to defend her question by reference to what she has heard from a third party (Doreen).

> **The fact that practices of conversation have known meanings and implications, and are associated with specific effects that are validated by data-internal analysis is of central significance to the study of medical communication.**

Neither doctors nor patients abandon these ordinary conversational practices at the door of the clinic. Rather, these everyday practices of meaning making and action construction fully inhabit the medical interview, albeit with some modifications and adjustments. Knowledge of their workings is of considerable importance to the analysis of medical communication, especially when they are associated with significant and sometimes unrecognized consequences for the participants and for medical outcomes (Heritage and Maynard, 2006).

3. Basic Principles of CA

Organizations

The practices that CA finds in interaction cluster around fundamental orders of conversational and social organization. Detailing these is beyond the scope of this contribution. Suffice it to say that some are clearly central to the management of interaction itself. For instance, there are:

- Clusters of practices that are associated with taking a turn at talk;
- Practices of repair that address systematic problems in speaking, hearing and understanding talk; and
- Practices associated with the management of reference to persons and objects in the world (Schegloff, 2006).

Other organizations of practices address more broadly social dimensions of interaction: a substantial number of practices are associated with the management of ties of social solidarity and affiliation between persons, favoring their maintenance and militating against their destruction; yet others are associated with the management of epistemic rights to knowledge between persons which is an important dimension of personal identity (Heritage, 2008).

Exercise 2: Important Analytic Tool

Determine whether the statement below is true or false:

Statement:
'Sequence' is an important analytic tool for understanding how interaction works.

True   ✗ False
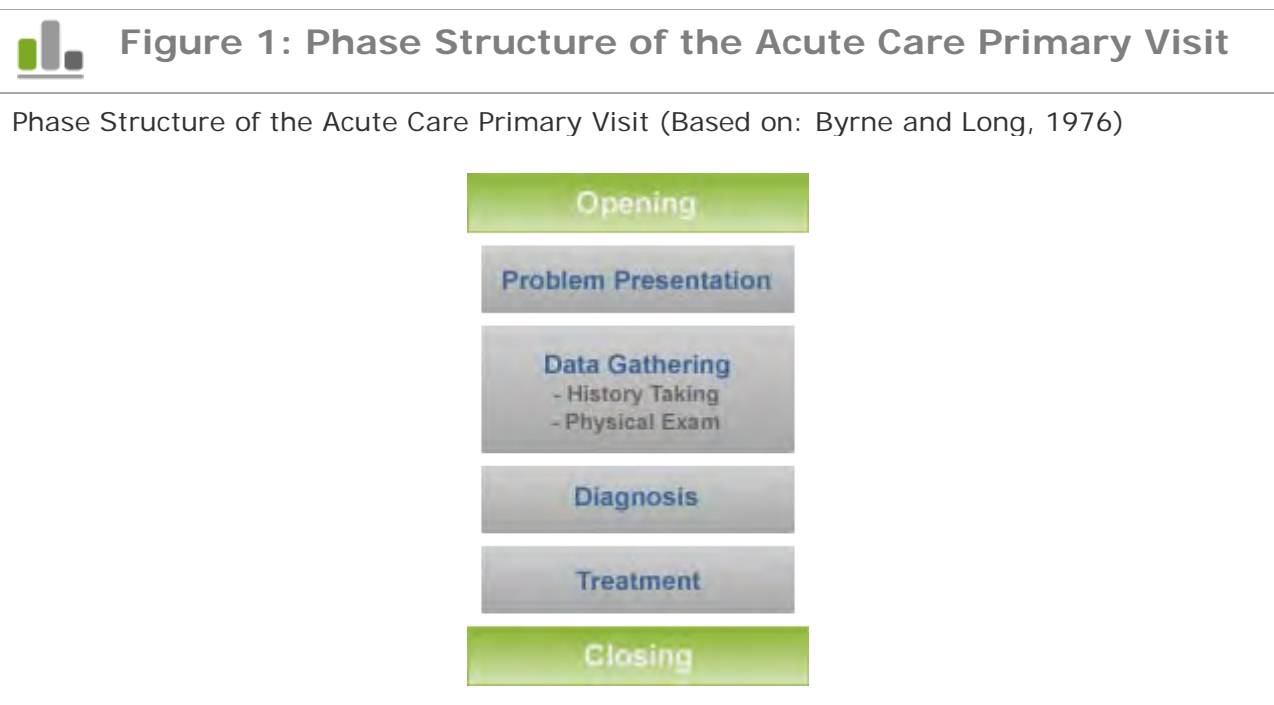
4. CA and the Medical Encounter

Levels of Analysis

CA approaches the medical visit at several levels of analysis, which can easily be seen in the acute primary care visit.

1. Overall phase structure
2. Sequence Organization
3. Turn Design
4. Lexical Choice

Overall Phase Structure

At the broadest level is the overall structure of the visit. This has been institutionalized in American medicine since the 1880s and taught in medical school, and has been learned inductively by patients ever since. An ideal model of this structure, recognizable to clinicians and patients alike is represented below.

Figure 1: Phase Structure of the Acute Care Primary Visit

Phase Structure of the Acute Care Primary Visit (Based on: Byrne and Long, 1976)

As Byrne and Long (1976) note, this structure is idealized: many visits embody departures from this organization (Robinson, 2003). However its value does not lie in its capacity for exact

representation of the events of the medical consultation, but rather in the ways it supplies the participants with a normative road-map or schema of how medical visits normally run. With the use of this schema, the participants can orient themselves to:

- Recognizable landmarks in the visit;
- The relevancies that come into play during particular phases;
- Appropriate and expectable conduct given a particular phase; and
- What may be expected to happen next.

This orientation is highly visible at phase boundaries, where phase transition is imminent or contested (Robinson and Heritage, 2005; Robinson and Stivers, 2001).

4. CA and the Medical Encounter

Sequence Organization

At the next level down is sequence organization which, as previously noted, concerns how sequences of actions are put together. For example much of primary care question-answer sequences are punctuated by clinician acknowledgements that indicate a willingness to see the patient continue with a response (such as "yes" or "mm hm"), or, alternatively, acknowledgments that indicate a preparedness to shift to some new topic, or activity (such as "okay" or "right"). Because of these differences in inviting sequence expansion or sequence closure, these acknowledgments have the effect of compiling questions into topical 'blocks,' treating their topics as remaining to be further clarified or, alternatively, as closed.

Example 3: Physician-initiated Sequence

For example, in the following pediatric history, the clinician treats the mother's initial response to his question as sufficient (line 4) but, following her elaboration, he does not intervene again until line 9 when he pursues the matter of how the child's cough sounds.

```
01 Doc:     Has he been coughing uh lot?
02          (0.2)
03 Mom:     .hh Not uh lot=h[h
04 Doc: ->                  [Mkay:,
05 Mom:     But it- it <sound:s:> deep.
06          (1. 0)
07 Mom:     An' with everything we heard on tee v(h)ee=hhhh
08          £we got sca:re.£
09 Doc: ->  Kay. (An' fer i-) It sounds deep?
10          (.)
11 Mom:     Mm hm.
12 Doc:     Like uh barky cough?
13 Mom:     .hh (1.1) Uhhhm=hhh It sounds very:=uhm (.)
14          (I don't know:=wwlike:) (0.2) It sounds- (2.5)
15          Tlk .hh Tlk Not like that like:
16 Doc:     [Not (barky.)
17 Mom:     [Like when someone has bronchitis that it sounds (   )
18 Doc: ->  Okay
19 Doc:     Does he sound like uh dog er uh seal barking?
20 Mom:     No.
21 Doc: ->  Okay.
```

After his subsequent question at line 12, he boundaries off the mother's inconclusive response (at line 17), and then resets the terms of his question at line 19, finally gaining a clear response.

Physician-initiated sequences in medicine can vary significantly in terms of the conditions under which they may be closed. Clinicians can proceed from diagnosis to the treatment plan without the necessity of explicit acknowledgement of these findings by the patient (Heath, 1992; Peräkylä, 1998; Stivers, 2007). This observation, however, does not apply to the treatment plan: it is difficult to leave the treatment phase of a medical encounter without some overt sign of acceptance by the patient, and this can be exploited by patients who can and do deploy a form of 'passive resistance' to medical recommendations as a means of influencing clinicians to revise the treatment plan (Stivers, 2005, 2007).

4. CA and the Medical Encounter

💻 Example 4: Perspective Display Sequence

In a study of informing interviews with parents of children who have been tested for mental disabilities, Maynard (2003) describes the use of a 'perspective display' sequence in which clinicians begin by asking the parents for their view of their child's condition, as in the following example (Maynard, 1992). At line 1, the clinician asks the child's mother for her view of the child's condition, eliciting a response that acknowledges the existence of language difficulties (lines 3-7).

```
01 Doc:     What do you see? as- as his (0.5) difficulty.
02          (1.2)
03 Mom:     Mainly his uhm: (1.2) the fact that he doesn't
04          understand everything.
05          (0.6)
06 Mom:     And also the fact that his speech (0.7) is very hard
07          to understand what he's saying (0.3) lot[s of time
08 Doc:                                              [Right
09          (0.2)
10 Doc:     Do you have any ideas wh:y it is? are you: d[o you? h
11 Mom:                                                  [No
12          (2.1)
13 Doc:     .h Okay I (0.2) you know I think we basically (.) in some
14          ways agree with you: (0.6) .hh insofar as we think that
15          (0.3) Dan's main problem (0.4) .h you know does: involve
16          you know language.
17          (0.4)
18 Mom:     Mm hm:
19          (0.3)
20 Doc:     You know both (0.2) his- (0.4) being able to understand
21          you know what is said to him (0.4) and also certainly to be
22          able to express:: (1.3) you know his uh his thoughts.
23          (1.1)
24 Doc:     .hh Uh:m (0.6) .hhh in general his development
25          ((continues))
```

The significance of this prefatory solicitation is that it enables clinicians to anticipate the stance that the parent has to the child's condition. Stances that may emerge in the form of resistance or denial can be anticipated and addressed. Moreover the perspective display sequence also allows physicians where possible, to build their clinical judgments as in agreement with the parent's conclusions (see lines 13-16 above). An important outcome of this process is that the parent may be better prepared for adverse conclusions (Maynard, 1996, 2003).

4. CA and the Medical Encounter

Turn Design

At a further level of detail, the actions that are built into sequences must be implemented in turns at talk.

> **Turns** are the objects of design and selection which are communicative and revealing.

🖥 Example 5: Turn Design

Early in a British community nurse's first home visit to a primiparous mother, the nurse, apparently noticing the baby chewing on something, initiates the following exchange Drew and Heritage (1992):

```
01 HV:        It's amazing, there's no stopping him now, you'll be
02            amazed at all the di[fferent things he'll start doing.
03 F:                             [(hnh hn)
04            (1.0)
05 M:     -> Yeh. They [learn so quick don't they.
06 F:     ->           [We have noticed hav'n't w-
07 HV:    -> That's right.
08 F:     -> We have noticed (0.8) making a grab for your bottles.
09            (1.0)
10 F:         Hm[:..
11 HV:          [Does he: (.) How often does he go between his feeds?
```

Here the nurse's comment attracts very different responses from the child's parents. The father's turn is entirely occupied with agreeing with the nurse's observation. The mother's response however, by treating the nurse as implying that her child is hungry, embodies a defense against this implication and is infused with laugh particles which are often associated with such responses (Haakana, 2001).

Similarly in the following sequence, which occurs less than a minute later in the encounter, the following occurs (Drew and Heritage, 1992):

```
01 HV:        It's amazing, there's no stopping him now, you'll be
02            amazed at all the di[fferent things he'll start doing.
03 F:                            [(hnh hn)
04            (1.0)
05 M:      -> Yeh. They [learn so quick don't they.
06 F:      ->           [We have noticed havn't w-
07 HV:     -> That's right.
08 F:      -> We have noticed (0.8) making a grab for your bottles.
09            (1.0)
10 F:         Hm[::.
11 HV:          [Does he: (.) How often does he go between his feeds?
```

While both husband and wife design their responses as agreements with the nurse at the arrowed turns, the design of those agreements is quite different. The father (lines 6 and 8) agrees with reference to their own child, and indicates that they have started to notice the rapid development that the nurse mentions. The mother is more guarded. She makes no reference to her own child, confining her agreement to the learning capacities of children in general.

It is tempting to suggest that a relatively conventional sex-role division of labor informs both of these sequences. The father, who may have little responsibility for the day to day care of the child, is inclined to agree in an open-hearted way with the nurse, and even to claim a little credit for having noticed things that the nurse – the accredited 'baby expert' – comments on. The mother, with overall responsibility for the child, may encounter the nurse's expertise as a threat to her own, and to resent the 'surveillance' that is the unavoidable concomitant of a series of home visits (Heritage and Sefi, 1992).

4. CA and the Medical Encounter

Turn Design in Problem Presentation

In the context of problem presentation, turn design can have very significant consequences. Patients can format a concern by only describing symptoms, or by offering a candidate diagnosis (Stivers, 2002):

Symptoms Only

```
Doc:        And so: do- What's been bothering her.
            (0.4)
Mom:        Uh:m she's had a cou:gh?, and stuffing- stuffy
        ->  no:se, and then yesterday in the afternoo:n she
        ->  started tuh get #really goopy eye:[s, and every=
Doc:                                          [Mm hm,
Mom:    ->  =few minutes [she was [(having tuh-)
Doc:                    [.hh     [Okay so she ha-
            so when she woke [up this morning were her eyes=
Mom:                         [(   )
Doc:        =all stuck shut,
```

Candidate Diagnosis

```
Doc:        Al:ri:ght, well what can I do [for you today.
Mom:                                      [(°hm=hm=hm=hm.°)
Mom:        .hhh Uhm (.) Uh- We're- thinking she might have an
        ->  ear infection? [in thuh left ear?
Doc:                       [Okay,
Doc:        Oka:y,
Mom:        Uh:m because=uh: she's had some pa:in_
            (.)
Doc:        [Alrighty?
Mom:        [over thuh weekend
```

As Stivers shows, these two practices for presenting a problem differ in the extent to which they indicate doubt about a condition and its treatment. 'Candidate diagnoses' anticipate the medical investigation to come, and may already anticipate treatment outcomes (Stivers et al. 2003) in a way that 'symptoms only' presentations do not.

4. CA and the Medical Encounter

Turn Design in History Taking

Physician questions are likewise replete with differences in levels and types of presupposition – compare "What kind of contraception do you use?" with "Are you using any contraceptives?" They also vary in terms of whether questions are tilted, for example to promote positive medico-social outcomes in sequences of 'optimized' questioning (Boyd and Heritage, 2006).

Example 6:

In the following case the patient presented with upper respiratory symptoms:

```
Doc:     ->    .hh Any fever at home? at all?
Mom:           No:.=
Doc:           =Okay,
Mom:           [No-
Doc:     ->    [No vomiti:ng, er[:
Mom:                            [No:_
Doc:           Any other problems like that huh,
```

Or whether, conversely, they anticipate the confirmation of adverse medical signs in sequences of questions which (Stivers, 2007) labels 'problem attentive' as in the following case in which the patient presented with flu symptoms:

```
Doc:     ->  Which ear's hurting or are both of them hurting

             (0.2)

Gir:         Thuh left one,

Doc:         °Okay.° This one looks perfect, .hh

( )          (U[h:.)

Doc:            [An:d thuh right one, also loo:ks, (0.2) even more

             perfect.

Gir?:        (      )

Doc:     ->  Does it hurt when I move your ears like that?

             (0.5)

Gir:         No:.

Doc:         No?

Doc:     ->  .hh Do they hurt right now?

             (2.0)

Gir:         Not right now but they were hurting this morning.

Doc:         They were hurting this morning?

             (0.2)

Doc:         Mka:y,
```

In contrast to the previous example, each of these questions is geared towards an affirmative, and problematic, response and is sensitive to the symptoms with which the child presented.

4. CA and the Medical Encounter

Lexical Choice

Turns are, of course, made of words, and word selection is a significant feature of turn design. Thus patients may elect to formulate time references in terms of calendrical 'clock' time, or in biographical terms.

🖥 Example 7: Biographical Reference Point

In the following well-known example, the patient has disclosed extensive and regular drinking prior to going to bed (Mishler, 1984):

Doc:		How long have you been drinking that heavily?
Pat:	->	Since I've been married
Doc:		How long is that?
Pat:		((giggle)) Four years

Here the patient's use of a biographical reference point in her response to the physician's questions first question clearly implicates her marriage as a causal factor in her drinking, though without saying so explicitly. The clinician pursues a quantitative estimate in his second question, and the patient complies with a calendrical formulation ("Four years.").

---

4. CA and the Medical Encounter

A rather different issue of lexical choice is evident in the next example. Here a mother is presenting her eleven year old daughter's upper respiratory symptoms. The time is Monday afternoon, and the daughter has not attended school. The mother begins with a diagnostic claim (lines 1-2, 5) which strongly conveys her commitment to the veracity of her daughter's claims about her symptoms, and may imply the relevance of antibiotic treatment (Stivers, 2002; 2007).

```
01 Mom:        .hhh Uhm (.) Uh- We're- thinking she might have an
02             ear infection? [in thuh left ear?
03 Doc:                      [Okay,
04 Doc:        Oka:y,
05 Mom:        Uh:m because=uh: she's had some pain_
06             (.)
07 Doc:        [Alrighty?
08 Mom:        [over thuh weekend:. .h[h
09 Doc:                              [No fever er anything?,
10 Mom:        Uhm[:
11 Doc:           [Mkay:[:?
12 Mom:               [An' uh sore throat_
13             (0.2)
14 Mom:        An:' like uh (.) cold.
15             (.)
16 Doc:        Wow.
17 Mom:        (An' thuh)/(Kinda thuh) cold symptoms, huhhh.
18 Doc:        Was it like that over thuh weekend too?
19             (0.2)
20 Mom    ->   Uh:m: When did you notice it.
21             (.)
22 Mom:   ->   Yesterday you mentioned it.
23 Pat:        Yesterday.
24 Doc:        M[kay,
25 Mom:         [It started yesterday. (        )/(0.5)
26             (0.2)
27 Doc:        °#Lemme write that i:n,#°
```

The clinician begins to take a history at line 18 and, in the absence of a response from the child patient, the mother asks when her daughter "noticed" her symptoms. This verb conveys a quite distinct notion of attention and cognition. It suggests that the child's perception of her symptoms emerged in an unlooked for and, hence, unmotivated way. Its use is one of several ways in which the mother conveys her commitment to the factual status of her daughter's symptoms, and especially works against any possibility that they were fabricated as a means of not attending school -- an issue that can hang heavily over Monday visits to the pediatrician! Subsequently the mother distinguishes between the child's noticing her symptoms and "mentioning" them - thus opening up the possibility that the child has endured them for longer than 24 hours, which would further underwrite the unmotivated nature of their discovery and report. Here then what is at issue is how the 'discovery', and the process of the coming to recognize, 'medical symptoms' is to be portrayed (see Halkowski (2006) for an extended discussion of this subject).

> **Here then, are four broad levels at which the analysis of doctor-patient interaction can proceed. Each one is significant and consequential for the meaning-making process that is the medical encounter.**
>
> - **Overall phase structure**
> - **Sequence organization**
> - **Turn design**
> - **Lexical choice**
>
> **The four levels are nested within one another and in practice all four levels may be involved in the analysis of actual episodes of interaction.**

Exercise 3: Conversation Analysis

Determine whether each of the statements below is True or False.

Statement 1: It is important for people studying the doctor-patient relationship to understand interactional practices that are normal for ordinary conversation.

✓ True | ✗ False

Statement 2: The question "How are you feeling?" is more appropriate in an acute care primary care visit.

✓ True | ✗ False

Statement 3: The significance of the fact that patients normally do not acknowledge the presentation of diagnoses, but do acknowledge the presentation of treatment plans means that they can passively withhold assent to treatment by saying nothing.

✓ True | ✗ False

5. CA in Action

In this section, the reader will find an illustration of what a CA treatment of a sequence in doctor-patient interaction looks like. The sequence to be analyzed concerns smoking and drinking, and forms a part of comprehensive history taking. The participants are an internist and a middle aged female patient who is divorced with a daughter in her late twenties. The patient is the owner-manager of a restaurant, has recently gained some weight, and is hypertensive.

📺 Example 8: CA in Action

The exchange goes as follows:

```
01 Doc:      tch D'you smoke?, h
02 Pat:      Hm mm.
03           (5.0)
04 Doc:      Alcohol use?
05           (1.0)
06 Pat       Hm:: moderate I'd say
07           (0.2)
08 Doc:      Can you define that, hhhehh ((laughing outbreath))
09 Pat:      Uh huh hah .hh I don't get off my- (0.2) outta
10           thuh restaurant very much but [(awh:)
11 Doc:                                    [Daily do you use
12           alcohol or:=h
13 Pat:      Pardon?
14 Doc:      Daily? or [:
15 Pat:                [Oh: huh uh. .hh No: uhm (3.0) probably:
16           I usually go out like once uh week.
17           (1.0)
18 Doc:      °Kay.°
```

5. CA in Action

🖥️	**Example 8a: CA in Action**

In what follows we can examine a series of sub-sequences in this passage of interaction.

01 Doc:	tch D'you sm<u>o</u>ke?, h
02 Pat:	Hm mm.
03	(5.0)
04 Doc:	Alcohol use?
05	(1.0)
06 Pat	Hm:: m<u>o</u>derate I'd say

The sequence begins with a "yes/no" (or polar) question about smoking, to which the patient responds negatively with a brief headshake, and a dismissive "hm mm" (a minimized version of "no"). At this point, the clinician turns to the question of alcohol. His initial question "Alcohol use?" is devoid of a verb and is elliptical as between the polar question "Do you use alcohol?" and the more presupposing "How much alcohol do you use?" This design allows the clinician to circumvent the "yes/no" question, while permitting the patient to decide how to frame a response. After a one second silence (a substantial period of time in an engaged state of interaction) during which the patient assumed a 'thinking' facial expression, the patient articulates a sound which conveys pensiveness ("hm::"), and then offers an estimate ("moderate"), concluding her turn with "I'd say" which retroactively presents her response as an estimate, albeit a 'considered' one. Though presented as a 'considered opinion,' and in scalar terms, the patient's estimate is unanchored to any objective referent. The scene is now set for a pattern of questioning that will be familiar to primary care physicians: an attempt to extract a quantitative estimate from the patient.

5. CA in Action

🖥	**Example 8b: CA in Action**

06 Pat	Hm:: moderate I'd say
07	(0.2)
08 Doc:	Can you define that, hhhehh ((laughing outbreath))
09 Pat:	Uh huh hah .hh I don't get off my- (0.2) outta
10	thuh restaurant very much but [(awh:)

The physician begins this effort by inviting the patient to 'define' moderate (line 8). As he concludes his turn, he looks up from the chart and gazes, smiling, directly at the patient, and briefly laughs. Laughter in interaction is quite commonly associated with 'misdeeds' of various sorts (Jefferson, 1985, Haakana, 2001). Because the laughter in this case is not targeted at a single word or phrase but follows the physician's entire turn, it will, by default, be understood as addressing the entire turn. In this case, it appears designed to mitigate any implied criticism of the patient's turn as insufficient or even self-serving.

In her reply, the patient begins with responsive laughter (Jefferson, 1979) but does not continue with a 'definition.' Instead she takes a step back from such a definition to remark: "I don't get....outta thuh restaurant very much but", and her subsequent development of this line is interdicted by the clinician. While this remark may be on its way to underwriting a subsequent estimate, its proximate significance is to convey the context of her alcohol use, or "how" she drinks. Specifically this remark purports to indicate that her drinking is 'social': she does not drink alone in her apartment, nor does she drink on the job. In this way, the patient introduces a little of her 'lifeworld' circumstances into the encounter, conveying that her drinking is 'healthy' or at least not suspect or problematic.

5. CA in Action

> ### 💻 Example 8c: CA in Action
>
> ```
> 09 Pat:      Uh huh hah .hh I don't get off my- (0.2) outta
> 10           thuh restaurant very much but [(awh:)
> 11 Doc:                                    [Daily do you use
> 12           alcohol or:=h
> ```

The next phase of this sequence will be easily recognizable to those who have read Elliot Mishler's The Discourse of Medicine (1984). In that study, Mishler elaborated a distinction between what he called the 'voice of medicine' preoccupied with objectivity and measurement, and the 'voice of the lifeworld' preoccupied with personal experience. Mishler depicted these two orientations as frequently in conflict, and so they are here. The clinician pursues a measurable metric for the patient's alcohol use by asking "Daily do you use alcohol or:=h". The question invites the patient to agree that she uses alcohol on a daily basis, thereby permitting her to take a step in the direction of acknowledging a 'worst case scenario' (Boyd and Heritage, 2006). The movement of the word "daily" from its natural grammatical position at the end of the sentence to the beginning, has the effect of raising its salience, presenting a frequency estimate as the type of answer he is looking for. Finally, the 'or' at the end of the sentence, invites some other measure of frequency, and thereby reduces the physician's emphasis on 'daily' as the only possible (or most likely) response for the patient to deal with.

5. CA in Action

Example 8d: CA in Action

```
09 Pat:        Uh huh hah .hh I don't get off my- (0.2) outta
10             thuh restaurant very much but [(awh:)
11 Doc:                                      [Daily do you use
12             alcohol or:=h
13 Pat:        Pardon?
14 Doc:        Daily? or [:
15 Pat:                  [Oh: huh uh.
```

At this point in the interaction, the physician and patient are no more than two feet apart. Yet the patient's response to the question is to ask the physician to repeat it. In his analysis of these kinds of repeat requests, Drew (1997) observes that they are produced either when there is a hearing problem, or alternatively, when there is a problem in grasping the relevance of the talk to be responded to. A hearing problem is out of the question because of the objective circumstances of the participants, and it is subsequently ruled out by the conduct of both of them. However a 'relevance' problem is not out of the question. After all the patient's remark at lines 9 and 10 (that she didn't get out of the restaurant "very much") was most likely on its way to suggesting that she didn't have many opportunities to drink. The transition from this implication to an inquiry about whether she drinks on a "daily" basis may indeed have been somewhat jarring, and difficult to process.

Earlier it was suggested that the parties ruled out a 'hearing problem' as the basis for the patient's request for repetition. The physician rules this out when, rather than fully repeating his previous question, he repeats a reduced form in which only the two most salient words are left: "daily" and "or." Only a full repeat would have been compatible with a belief that his patient had not heard him. A drastically reduced repeat like this one conveys, to the contrary, that he believes she heard him. For her part, the patient confirms this analysis when she proves fully able to respond to this abbreviated repeat, beginning before it is even concluded. Here then the objective circumstances of the interaction and the actual conduct of the parties is compatible with only one interpretation of the patient's "Pardon?": that it expressed a difficulty with the relevance of the question.

This same difficulty is expressed in a different way when the patient begins to respond. The response includes "huh uh," a casual and minimizing version of "no" designed to indicate that "daily?" is far off the mark. It is also prefaced by "oh" which, as noted earlier, communicates that a question was irrelevant or inapposite (Heritage, 1998).

5. CA in Action

	Example 8e: CA in Action

```
14 Doc:      Daily? or [:
15 Pat:            [Oh: huh uh. .hh No: uhm (3.0) probably:
16           I usually go out like once uh week.
17           (1.0)
18 Doc:      °'Kay.°
```

After she rejects the physician's frequency proposal of "daily" as an estimate of her alcohol consumption, the patient finally comes up with an estimate of her own: "once a week." However she packages this as an estimate of how frequently she "goes out." This framing has two consequences. (i) It estimates her actual drinking in an implicit way, leaving it to the clinician to draw the relevant inference. (ii) It renews her insistence on the social, and morally acceptable, nature of her drinking, implicitly ruling out, for example, solo drinking at work, or at night after work.

With lines 15-16, physician and patient have arrived at a compromise: the physician has a frequency estimate of the patient's drinking, while the patient has been able to retain her focus on "how" she drinks. At line 17, the physician turns to the patient's chart and starts to write, subsequently acknowledging the patient's response with a sotto voce "okay" and terminating the sequence.

Exercise 4: Conversation Analysis

Determine whether each of the statements below is True or False.

Statement 1: The value of perspective display sequences is to allow clinicians to avoid explicit questioning by a patient.

✓ True   ✗ False

Statement 2: 'Candidate diagnosis' problem presentations anticipate a diagnosis, whereas 'symptom only' presentations do not.

✓ True   ✗ False

Statement 3: Questioners end their questions with the word 'or' to reduce biasing the response in a specific direction.

✓ True   ✗ False

5. CA in Action

> The transactions of this sequence will be relatively familiar to most physicians. Physicians need anchored, and preferably quantitative, information as a basis for clinical judgments. Patients are often inclined to give more contextualized descriptions.

These different orientations were conceptualized by Elliot Mishler (1984) in terms of the 'voice of medicine' with its technical priorities, and the 'voice of the lifeworld' with its experiential grounding. As we observed earlier, Mishler portrayed these two orientations as in conflict with one another, and this conflict is apparent in this datum. Yet it is a conflict which is virtually mandated by the positions of clinician and patient. In particular, there may be a special vulnerability for patients who offer quantitative estimates of their drinking too readily or too 'technically' (e.g., "Twenty units a week."). Patients who are tempted to respond in this manner may reflect that it could be treated as portraying too great a preoccupation with alcohol consumption, a preoccupation which is itself suspect and may attract further inquiry. Persons do not 'talk this way' about alcohol in everyday life and, even in the doctor's office, too radical a departure from ordinary ways of talking about ordinary concerns may be undesirable (Sacks, 1984).

6. Interactions and Outcomes

From Qualitative to Quantitative Research: Interactions and Outcomes

The analyses presented in previous sections are relatively detailed and nuanced. **But do the issues described here demonstrably matter with respect to medical outcomes?** Common sense would suggest that they do, but this cannot easily be demonstrated in a case by case analysis. For example, if we wish to demonstrate the relevance of interaction for medical decision making, data on interactional practices needs to be merged with clinical information, data about health beliefs and attitudes, and clinical decisions. All this implies the creation of coded, quantitative data from individual cases, involving the sacrifice of nuance and detail for 'big picture' features of the interaction which translate across individual cases. In this process, it is advisable to do careful qualitative conversation analytic preparation (and to keep the individual cases to hand), so as to retain an awareness of what was 'lost' in the transition to coded data.

> Because the application of conversation analysis to medicine is a relatively recent phenomenon, the results of quantitative analysis are very recent and comparatively sparse. Nonetheless they strongly indicate the value of the method.

7. Unmet Concerns

Take, for example, the observation made earlier that the word 'any' in a yes/no question means that the question is designed for a 'no' answer, as in "Do you have any other conditions that you know of?" The consequences of this are multiple.

- Clinicians will be understood by patients to be conveying their expectations of a 'yes' or 'no' response by their use, or lack of use, of 'any.'
- In taking a history for an acute condition, the shift to a 'no'-inviting question format may be understood by the patient as indexing a question about a more serious or consequential symptom (e.g., "Any blood in the stool?").
- In some contexts, patients may be induced to believe that the clinician would actually prefer the answer to be 'no,' as in "Anything else?" towards the end of a fifteen minute visit.

To test this latter hypothesis in relation to patients' unmet concerns, Heritage et al (2007) asked clinicians to vary a follow-up question inviting additional concerns at the end of the patient's presentation of the principal concern. The question was: "Is there something/anything else you would like to address in the visit today?" They found that, among those who had listed additional concerns in a pre-visit survey, patients were nearly twice as likely to respond affirmatively to the "something" version of the question than the "anything" version (90.3% vs 53.1%). Relative to non-intervention cases, the "something" version of the question reduced the likelihood of patients ending the visit with unmet concerns by 78%, while the outcomes from the "anything" version of the question could not be statistically distinguished from the control cases.

Consider this...

Consider how the significance of particular interactional practices is validated within the conversation analysis method. Illustrate your response by reference to the argument that the word 'any' in a question is tilted towards, and invites, a 'no' response.

The significance of interactional practices are investigated by (i) looking at how actions in which they occur are responded to; and (ii) at the contexts in which these questions are produced.

In the case of the claim that questions containing the word 'any' are tilted towards a 'no' response, the finding is that (i) persons are more likely to respond 'no' to questions containing the word 'any' than the same question with the alternative word 'some,' and (ii) that questions containing the word 'any' are more likely to occur when asked about symptoms that the physician has no a *priori* reason to suppose are present, for example in comprehensive history taking.

8. Prescribing Decisions

CA techniques have been extensively employed in studies of antibiotic prescribing decisions by Stivers, Mangione-Smith and colleagues. The background of these studies is that physicians' perceptions of patient pressure for antibiotics are associated with inappropriate prescribing (Mangione-Smith et al., 1999). Interactional conduct was found to influence these perceptions strongly. Two studies found that patients (or in pediatric contexts, parents) who present their concern with a 'candidate diagnosis' are frequently perceived to want antibiotic treatment for the condition, and that this is associated with increased rates of inappropriate prescribing (Stivers et al., 2003; Mangione-Smith et al., 2006). Parents' resistance to a non-antibiotic treatment plan was also found to have the same effect (Mangione-Smith et al., 2006).

Physician behaviors were also found to be influential in this process. When physicians explicitly ruled out antibiotic treatment (e.g., "This is something that antibiotics won't fix"), patients' resistance to the treatment plan was enhanced (Mangione-Smith et al., 2006). On the other hand, 'online commentary' about physical exam findings that was reassuring about what the physician was encountering reduced patient resistance to the treatment plan, leading to less inappropriate antibiotic prescriptions (Heritage and Stivers,1999; Mangione-Smith et al., 2003).

Siimilar results showing the relevance of interaction in decisions to go ahead with tympanstomy surgery have also been reported (Kleinman et al., 1997; Boyd, 1998; Heritage et al., 2001).

9. CA as Intervention

A final application of conversation analysis in the medical field involves a return to the detail and nuance of individual cases. In training workshops and other contexts, many providers find it helpful and illuminating to 'work through' the particular interactional pitfalls and opportunities that are to be found in individual case analyses. This kind of workshop activity can be effective in one-on-one or collective sessions, and in conjunction with subsequent work with standardized patients.

> The examination of real data using CA is found by many to be a potent experience capable of triggering changes in attitudes and clinic practices that are beneficial for patient care.

Exercise 5: Conversation Analysis

Read the following and determine which statements are the most appropriate uses of conversation analysis.

Question: How can conversation analysis be used in research and training?

Statement 1: Conversation analysis provides insights into the practices through which persons communicate social meaning. It can provide a validated basis for coding schemes which integrate communication with data about attitudes and expectations, demographics and patient outcomes.

[Appropriate] [Inappropriate]

Statement 2: Conversation analysis is not appropriate for apprehending the organizational contexts of social interaction. These contexts are best studied using ethnographic or other social science methodologies. Once investigated, these contexts may be found to articulate closely with the interactional conduct associated with them.

[Appropriate] [Inappropriate]

Statement 3: Conversation analysis studies the attitudes, opinions and beliefs that persons articulate 'on record' in specific, situated contexts of interaction. For this reason, conversation analysis is not a substitute for appropriately collected survey data, though data about attitudes, opinions and beliefs may be appropriately triangulated with interactional data using conversation analysis methods.

[Appropriate] [Inappropriate]

Statement 4: Detailed analysis of individual interaction sequences can provide the basis for workshop and training activities in which the opportunities and pitfalls of medical communication can be discussed in depth.

[Appropriate] [Inappropriate]

e-Source
Behavioral & Social Sciences Research

10. Transcription Symbols

Table 6: Transcript Conventions

Symbol	Example	Explanation
[	C2: quite a [while Mo: [yeah	Left brackets indicate the point at which a current speaker's talk is overlapped by another's talk.
]	C2: and i thought] Mo: you said]	Right brackets indicate the point at which two overlapping utterances end.
=	W: that I'm aware of = C: =Yes. Would you confirm that?	Equal signs, one at the end of a line and one at the beginning, indicate no gap between the two lines.
(.4)	Yes (.2) yeah	Numbers in parentheses indicate elapsed time in silence in tenths of a second.
(.)	to get (.) treatment	A dot in parentheses indicates a tiny gap, probably no more than one-tenth of a second.
_____	What's up?	Underscoring indicates some form of stress via pitch and/or amplitude.
::	O:kay?	Colons indicate prolongation of the immediately-prior sound. The length of the row of colons indicates the length of the prolongation.
WORD	I've got ENOUGH TO WORRY ABOUT	Capitals, except at the beginnings of lines, indicate especially loud sounds relative to the surrounding talk.
.hhhh	I feel that (.2) .hhh	A row of h's prefixed by a dot

		indicates an inbreath; without a dot, an outbreath. The length of the row of h's indicates the length of the in- or outbreath.
( )	future risks and ( ) and life ( )	Empty parentheses indicate the transcriber's inability to hear what was said.
(word)	Would you see (there) anything positive	Parenthesized words are possible hearings.
(( ))	confirm that ((continues))	Double parentheses contain author's descriptions rather than transcriptions.
-	talking about- uh	A hyphen after a word or part of a word indicates a cutoff or self interruption, often done with a glottal or dental stop.
°	C2: and then° I remember	The degree sign indicates that the talk following it was markedly quiet or soft.
_: or :	C2: In the gy:m?	If the letter(s) preceeding a colon is underlined, it indicates the pitch turning downwards.
><	>we were just<	"Greater than" and "less than" carrots in this order indicate that the talk between them is rushed or compressed.
<>	>	"Less than" and "greater than" carrots in this order indicate that the talk between them is markedly slow.

↓ or ↑	↓are you↓	The up and down arrows mark sharp rises or falls in pitch or may mark a whole shift or resetting of the pitch.
#	# it was in the	Indicates a rasping or 'creaky' voice quality.
£	£ it was so	Indicates the speaker is smiling while speaking.

11. Summary

This chapter provides an overview of Conversation Analysis as an approach to the study of clinical communication. It summarizes major social science concerns, centering on the open and creative relationship between language and context, that the perspective is designed to address, and describes major principles of conversation analytic research and methodology. Different levels of organizational structure in interaction are described and exemplified, and the approach is exemplified in a detailed treatment of an exchange between a patient and clinician about lifestyle issues.

12. References

Boyd E., Heritage J. (2006). "Taking the history: Questioning during comprehensive history Taking." In: Heritage J., Maynard D., Ed, *Communication in Medical Care: Interactions between Primary Care Physicians and Patients*. Cambridge, UK: Cambridge University Press**:** 151-184.

Boyd E. A. (1998). "Bureaucratic authority in the "company of equals:" The interactional management of medical peer review." *American Sociological Review* **63**(2): 200-224.

Byrne P.S., Long B.E.L. (1976). *Doctors talking to patients: A study of the verbal behaviours of doctors in the consultation.* London: Her Majesty's Stationary Office.

Drew P. (1997). "'Open' class repair initiators in response to sequential sources of trouble in conversation." *Journal of Pragmatics* **28**: 69-101.

Drew P., Heritage J., Eds. (1992). *Talk at work: Language use in institutional and work-place settings.* Cambridge, UK: Cambridge University Press.

Haakana M. (2001). "Laughter as a patient's resource: Dealing with delicate aspects of medical interaction." *Text* **21**(1): 187-219.

Halkowski T. (2006). Realizing the illness: Patients' narratives of symptom discovery. In: Heritage J., Maynard D., Ed, *Communication in medical care: Interactions between primary care physicians and patients.* Cambridge, UK: Cambridge University Press, 86-114.

Heath, C. (1992). The delivery and reception of diagnosis and assessment in the general practice consultation. In Drew P., and Heritage J., Ed, *Talk at Work*. Cambridge, UK: Cambridge University Press, 235-267.

Heritage J. (1984). *Garfinkel and ethnomethodology*. Cambridge, UK: Polity Press.

Heritage J. (1998). Oh-prefaced responses to inquiry. *Language in society* **27**(3): 291-334.

Heritage J. (2008). Conversation analysis as social theory. In: Turner B., Ed, *The new Blackwell companion to social theory.* Oxford, UK: Blackwell.

Heritage J., Boyd E.A., Kleinman L. (2001). "Subverting criteria: The role of precedent in decisions to finance surgery." *Sociology of Health and Illness* **23**(5): 701-728.

Heritage, J., Maynard, D.W. (2006). "Problems and prospects in the study of physician-patient interaction: 30 years of research." *Annual Review of Sociology* **32**: 351-374.

Heritage J., Robinson J.D., Elliott M., Beckett M., Wilkes M. (2007). "Reducing patients' unmet concerns: The difference one word can make." *Journal of General Internal Medicine* **22**: 1429-1433.

Heritage J., Sefi S. (1992). "Dilemmas of advice: Aspects of the delivery and reception of advice in interactions between health visitors and first time mothers." In: Drew P., Heritage J.,Ed, *Talk at work*. Cambridge, UK: Cambridge University Press, 359-417.

Heritage J., Stivers T. (1999). "Online commentary in acute medical visits: A method of shaping patient expectations." *Social science and medicine* **49**: 1501-1517.

Jefferson G. (1979). "A technique for inviting laughter and its subsequent acceptance/declination." In: Psathas G., Ed, *Everyday language: Studies in ethnomethodology*. New York: Irvington Publishers, 79-96.

Jefferson G. (1985). "An exercise in the transcription and analysis of laughter." In: Teun A. Dijk (Ed), *Handbook of discourse analysis Volume 3*. New York: Academic Press, 25-34.

Kleinman L., Boyd E., Heritage J. (1997). "Adherence to prescribed explicit criteria during utilization review: An analysis of communications between attending and reviewing physicians." *Journal of the American Medical Association* **278**(6): 497-501.

Lerner G. (2003). "Selecting next speaker: The context sensitive operation of a context-free organization." *Language in Society* **32**: 177-201.

Mangione-Smith R., Elliott M.N., Stivers T., McDonald L.L., Heritage J. (2006). "Ruling out the need for antibiotics: Are we sending the right message? *Archives of Pediatric and Adolescent Medicine* **160**: 945-952.

Mangione-Smith R, McGlynn E., Elliott M.N., Krogstad P., Brook R.H. (1999). "The relationship between perceived parental expectations and pediatrician antimicrobial prescribing behavior." *Pediatrics* **103**(4): 711-718.

Mangione-Smith R , Stivers T., Elliott M., McDonald L., Heritage J. (2003). "Online commentary during the physical examination: A communication tool for avoiding inappropriate prescribing?" *Social Science and Medicine* **56**: 313-320.

Maynard D. (1992). "On clinicians co-implicating recipients' perspective in the delivery of diagnostic news." In: Drew P., Heritage J., Ed, *Talk at work: Social interaction in institutional settings*. Cambridge, UK: Cambridge University Press, 331-358.

Maynard D. (1996). "On 'realization' in everyday life." *American Sociological Review* **60**(1): 109-132.

Maynard D. (2003). *Bad news, good news: Conversational order in everyday talk and clinical settings*. Chicago: University of Chicago Press.

Mishler E. (1984). *The discourse of medicine: Dialectics of medical interviews*. Norwood NJ: Ablex.

Peräkylä A. (1998). "Authority and accountability: The delivery of diagnosis in primary health care." *Social Psychology Quarterly* **61**(4): 301-320.

Robinson J.D. (2003). "An interactional structure of medical activities during acute visits and its implications for patients' participation." *Health Communication* **15**(1): 27-57.

Robinson J.D. (2006). "Soliciting patients' presenting concerns." In: Heritage J., Maynard, D., Ed, *Communication in Medical Care: Interactions between Primary Care Physicians and Patients*. Cambridge UK: Cambridge University Press, 22-47.

Robinson J.D., Heritage J. (2005). "The structure of patients' presenting concerns: The completion relevance of current symptoms." *Social Science and Medicine* **61**: 481-493.

Robinson J. D., Stivers T. (2001). "Achieving activity transitions in primary-care encounters: From history taking to physical examination." *Human Communication Research* **27**(2): 253-298.

Sacks H. (1984). "On doing 'Being Ordinary'." In: Atkinson J.M., Heritage J., Ed, *Structures of social action*. Cambridge UK: Cambridge University Press, 413-429.

Sacks H. (1992) [1964-72]. *Lectures on conversation (2 Vols.)*. Oxford: Basil Blackwell.

Schegloff E. A. (1992). "Repair after next turn: The last structurally provided defence of intersubjectivity in conversation." *American Journal of Sociology* **95**(5): 1295-1345.

Schegloff E. A. (2006). "Interaction: The infrastructure for social institutions, the natural ecological niche for language and the arena in which culture is enacted. In: Enfield N.J., Levinson N.C., Ed, *The roots of human sociality: Culture, cognition and interaction*. New York: Berg, 70-96.

Schegloff E. A. (2007). *Sequence organization in Interaction: A Primer in Conversation Analysis Volume 1*. Cambridge, UK:, Cambridge University Press.

Stivers, T. (2002). "Presenting the problem in pediatric encounters: 'Symptoms only' versus 'Candidate Diagnosis' Presentations." *Health Communication* **14**(3): 299-338.

Stivers, T. (2005). "Parent resistance to physicians' treatment recommendations: One resource for initiating a negotiation of the treatment decision. *Health Communication* **18**(1): 41-74.

Stivers, T. (2007). *Prescribing under pressure: Parent-physician conversations and antibiotics*. New York: Oxford University Press.

Stivers T., Mangione-Smith R., Elliott M.N., McDonald L., Heritage J. (2003). "Why do physicians think parents expect antibiotics? What parents report vs what physicians perceive." *The Journal of Family Practice* **52**(2): 140-148.

13. Author Biography

John Heritage, PhD's research focuses on the sphere of social organization that Erving Goffman calls the "interaction order." This involves looking at social interaction from the point of view of how it is constructed; the social, cultural and psychological factors that impact its implementation; and its impact on social outcomes, including the distribution of goods and services and the (re-)production of social structure.

Currently his work is concentrated on three broad areas. First there is the interaction order itself, which he approaches as a conversation analyst. Here his recent work has focused on ways in which persons claim (and defer to) authority in interaction, and the identities that are invoked and validated in this way.

Dr. Heritage also does research on interaction in political arenas: this work includes the analysis of political speeches and audience reactions to them, a number of works on the news interview as a genre of political communication and, most recently, a historical study of presidential news conferences over the past 50 years.

The third, and largest, part of his current research program focuses on interaction in medicine. Dr. Heritage has published a number of papers on interactions between new mothers and community health nurses, on decision-making in health care contexts including surgery and antibiotics prescribing, and on social interaction in general primary care. His current projects include research on interventions to improve cancer screening rates, communication within primary care teams, and experimental interventions to test specific changes in the ways physicians communicate with patients. Dr. Heritage is also closely involved in studies of antibiotics prescribing, and methods of intervening to alleviate chronic pediatric pain.