

THE UNIVERSITY OF CHICAGO

DECONSTRUCTING 'TOPIC':  
RELEVANCE, CONSCIOUSNESS, AND THE MOMENTUM OF IDEAS

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## Abstract

This paper challenges the long-standing notion that users of language always organize their production into discrete chunks, identifiable as ‘topics’. It further challenges analytical methods which rely on segmenting, labeling, and piecing together chunks of data into a hierarchy of ‘topics’, ‘purposes’, or ‘projects’. Problematic examples from recorded conversations are presented, providing evidence that many coherent stretches of discourse cannot be divided into identifiable ‘topics’ and ‘subtopics’ with clear beginnings and ends. The more modern “purpose hierarchy” annotation of Barbara Grosz (cf. Nakatani et al. 1995) also frequently fails, especially for data involving two or more participants (as opposed to single-speaker monologues). Although better equipped to illustrate the real-time, emergent flow of ideas among multiple participants, Herb Clark’s (1996) “joint project” hierarchies are still inadequate, since they rely on assigning whole stretches of conversation with clear broad projects and subprojects, each with an identifiable beginning and end consciously agreed upon by the participants. The data suggest that participants in a conversation instead rely crucially on an *instantaneous* construal of the state of their interaction at a given moment, and that their particular *ideational momentum* and associated *ideational trajectory* will sometimes undergo smooth, imperceptible changes, and at other times experience more sudden shifts, in varying degrees. A segment of discourse, if clearly bounded before and after by regions of suddenly changing ideational momentum, might be described in some modes of analysis as a single ‘topic’ or project, ignoring whether the trajectory of ideas undergoes gradual but overall large changes *during* the segment. The participants may

link their contributions in coherent, *sequentially relevant* fashion (cf. Schegloff & Sacks 1973), but allow their discussion to diverge smoothly away from an earlier trajectory. Insights from the work of Wallace Chafe (1994) add support to this view: the human capacity to attend to information is inherently limited, which predicts ‘topics’ to be susceptible to gradual (and often unattended) changes in the realm of ideas they enclose. The participants in a conversation may be unaware that their trajectory of ideas has changed direction greatly over time if their local contributions have each flowed smoothly from one to the next. Stable ‘topics’, when they occur, can be conceptualized as special cases in which a stretch of discourse, bounded by clear regions of sudden change in ideational momentum, has a stable and consciously maintained trajectory and realm of ideas. The conscious maintenance of such ‘topics’ takes extra work, and they may still not always develop as first intended.

### **Introduction: What is a ‘topic’?**

There is a long-standing notion that speakers and writers of language organize their production into coherent chunks, identifiable as ‘topics’. There is the further notion that these topics have locatable beginnings and ends, and can be labeled and strung together into a list or hierarchy, thus forming a useful map of “what was talked about” (or written about) during the course of a given period of language use. As Brown & Yule (1983: 69-70) describe, many analysts appeal to such a notion of ‘topic’ in order to divide their data into coherent chunks:

The conversationalists stop talking about ‘money’ and move on to ‘sex’. A chunk of conversational discourse, then, can be treated as a unit of some kind because it is on a particular ‘topic’. The notion of ‘topic’ is clearly an intuitively satisfactory way of describing the unifying principle which makes one stretch of discourse ‘about’ something and the next stretch ‘about’ something else . . . .

Before moving on to discuss attempts to deal theoretically with this intuitive notion of ‘topic’, I feel I must warn of the terminological morass surrounding it, and mention several other ways in which the word ‘topic’ has been used in the literature. First of all, there is the notion of “sentential topic” (Brown & Yule 1983: 70), which basically refers to the sentence-internal “topic/comment” relationship described by Hockett (1958: 201) (see also Ochs 1979), which in English usually equates the ‘topic’ with the grammatical subject

of a sentence. There is also the notion of “speaker’s topic” (Brown & Yule 1983: 88), which refers to an instantaneous notion (rather than a broader discourse concept) of what an individual speaker personally feels is being talked about at a given moment. Although Brown & Yule (1983, ch. 3) provide a good survey of the various ways ‘topic’ has been used in the literature, they contribute to the morass with the easily confused terms “speaking topically” and “speaking on a topic” (p. 84). By “speaking topically”, they mean speakers are following Grice’s (1975) maxim of relation and making their contributions *relevant* to the current “topic framework” (a notion discussed below). By “speaking on a topic”, speakers are “concentrating their talk on one particular entity, individual or issue”, independent of whether or not they are “speaking topically”. The idea behind “speaking topically” is crucial: Grice’s maxim of relation is of primary importance. But as we will see, it is not necessarily crucial to make one’s contribution relevant to anything that could be identified as a ‘topic’. The idea of “speaking on a topic”, meanwhile, amounts to little more than an assertion that one’s contributions can be *about* something specific. While the terms themselves are confusingly similar and will be of no use to us here, they do point to the important notion that speakers express *ideas* of some sort, and that their contributions are *relevant*, to a greater or lesser degree, to what has recently been, or is currently being, expressed or talked about. I use the word ‘idea’ here in a purposefully vague sense, to mean any expressible notion that indexes any of the functions of language (and any combination thereof), such as those six outlined by Jakobson (1960). Briefly, these functions are labeled *referential* (denotative), *emotive* (expressive, speaker oriented), *poetic* (for example, employing a particular “choice of words”), *phatic* (dealing with aspects of the contact that exists between participants), *metalingual* (dealing with issues of the language code itself), and *conative* (oriented towards the addressee(s), as with imperatives). The “function” of an utterance may include any



combination of the functions of language outlined above, and it would be a mistake to constrict our attention to just one function while ignoring the others.

We return now to discuss attempts to deal with an intuitive notion of ‘topic’ as a means of organizing “stretches” of discourse. Many have recognized the inadequacy of a notion of discourse topic in which any fragment of conversation can be assigned a single topic (expressed as a phrase or sentence) (see, for example, Brown & Yule 1983: 71, discussing Keenan & Schieffelin 1976). The problem is that in any fragment of conversation, speakers express multiple ideas, for multiple reasons, relating to multiple contextual factors. Brown & Yule (1983: 73-9, 83-7) choose to focus on a concept of a “topic framework”, defined as the contextual framework “within which the topic is constituted”, consisting of “*activated features of context*” (“those aspects of the context which are directly reflected in the text, and which need to be called upon to interpret the text”). This formulation presents a few problems. First of all, the features of context which are salient for participants, at the time of interaction, may not all be later identifiable by the analyst, nor will they necessarily all be directly reflected in the “text”. The notion that any “text” or transcript of a conversation provides an adequate record of the actual interaction is also quite primitive. Even in the best of all possible worlds, with perfect cameras and audio equipment, and video data analyzable in three dimensions at high resolution, there will still be important aspects of the participants’ shared context and co-text that will go unnoticed, or worse, misidentified by the analyst. Furthermore, the term “topic framework” runs the risk of being misconstrued as a richer notion of the word ‘topic’ itself, contributing to the terminological morass. Despite these problems, Brown & Yule’s discussion of “topic framework” does highlight the critical necessity of examining both the fluid shared context in which any conversation is situated, as well as all available data from the conversation thus far, and points to the necessity for conversational participants to make

their contributions *relevant* to the currently salient elements of the context and to the currently “activated” co-textual elements from the conversation thus far. In examining the physical context and the interaction itself, the analyst must use video as well as audio data, in order to observe the wealth of communicatively salient gestures that are invariably present (including any other, non-manual aspects of communication in the visuo-spatial modality, such as eye-gaze, facial expressions, body orientation and postures, etc.) (cf. McNeill 1992). Given the obvious, but often ignored, revelation that a written transcript of speech contains just “footprints in the sand” (Clark 1996: 337), we must also assert that a simple audio recording contains only somewhat deeper footprints. Recent work by a variety of scholars shows that people present and re-present ideas gesturally in complex, inventive ways (cf. papers in McNeill 2000), synchronizing closely their verbal and gestural output, and that addressees pay at least as much attention to information presented in the visuo-spatial modality as to information presented via a sound signal (McNeill et al. 1994, Cassell et al. 1999). A more modern term meant to encompass everything that goes into Brown & Yule’s “topic framework”, including every salient aural and visual element of the interaction itself, is *common ground* (Clark 1992, 1996). Using this broad notion, we can state simply that speakers make their contributions compatible with what they believe to be the current, mutually construed state of their common ground, and with each new utterance (or better, with each new word or syllable or gesture), their common ground advances and builds upon itself.

Critical to the success of any attempt to describe sections of conversational discourse is the recognition that such sections cannot be analyzed as static objects, as if the “essence” or “overall outcome” of each section were identifiable, and the only crucial thing participants kept in mind at the time. Herb Clark (1996: 342) shows a keen understanding of the dynamic nature of conversation: “Discourse topic is a static notion

that doesn't do justice to the dynamic course of joint actions and what develops out of them" — and he suggests that we throw out the notion of 'topic' entirely, replacing it instead with a notion of "joint projects". As the following excerpt illustrates, he still believes firmly that conversation can be segmented into hierarchical sections:

Conversations often seem organized around a set plan, but that is an illusion. This organization is really an *emergent* property of what the participants are trying to do. When Ben talks to Charlotte, he has goals, some well defined and some vague, and so does she. Most of Ben's goals, however, require her cooperation. She has the power to complete, alter, decline, or withdraw from any joint project he proposes, and she can propose joint projects of her own. The broadest projects they agree on emerge as sections, and the narrower ones, as subsections or digressions. The organization of their conversation emerges from joint actions *locally* planned and *opportunistically* carried out. (Clark 1996: 337, my emphases)

As a means of labeling discourse transitions between joint projects and subprojects, he suggests the following taxonomy: "Next" ("enter next project"), "Push" ("enter subproject"), "Pop" ("return from subproject"), "Digress" ("enter digression"), and "Return" ("return from digression") (Clark 1996: 342-5). Such a system provides a handy way of segmenting conversation into sections and subsections, such as the following convenience store exchange (Clark 1996: 343, using data from Merritt 1984: 140):

- (1) C: Hi, do you have uh size C flashlight batteries?  
 S: [Next] Yes sir.  
 C: [Next] I'll have four please.  
 S: [Push] Do you want the long life or the regular?  
     [Push] See the long life doesn't last ten times longer than the regular battery.  
     [Next] Usually last three times as long.  
     [Next] Cheaper in the long run.  
     [Next] These're eight-eight.  
     [Next] These're thirty-five each.  
 C: [Pop] Guess I better settle for the short life.  
 S: [Next] How many you want?  
 C: [Next] Four please.  
 S: [Pop] Okay (picks four and puts on counter).  
     [Next] That's a dollar forty and nine tax, a dollar forty-nine.

The above system seems intuitively plausible and does a good job of graphically displaying how broader joint projects can consist of embedded, smaller projects. But it would be a mistake to attempt to apply the simple taxonomy to any and all conversational data. Problems arise on a number of fronts: first of all, Clark assumes that each joint project has an identifiable beginning and end, allowing them to be stacked one after another in the manner shown above. Unfortunately, we will later discuss data which seem to show that while participants may find themselves interacting jointly as if engaged in a particular “project”, there may be no clear spot where that particular project began (even though at earlier points the project was clearly different), and there may not be a clear end either. Furthermore, given Jakobson’s (1960) insight that language can perform various functions simultaneously, a given project may, for example, continue along the same lines referentially, but become wholly different in its emotive connotations, complicating any attempt to draw boundaries for the participants’ joint projects. In Clark’s own example above, it seems unclear that the second line, “Yes sir”, forms a new project distinct from the first line’s request. Yet another troublesome aspect of imposing a hierarchical framework is that there is a misleading use of indentation to show the level of nestedness of the various joint projects. The second-to-last line “Okay” seems more plausibly to be a direct response to the previous line (and thus on the same “level”), rather than a ‘pop’ and a response to the initial “I’ll have four please”. This ‘pop’ is only motivated in light of the fact that a ‘push’ was coded earlier, implying a bias that any entrance into a subproject should end with a return to the level of the broader project. But there is no reason to think that the participants thought of things this way during their interaction—in fact, the shopkeeper seemed to be unaware of how many batteries the customer wanted, as evidenced by the fact that s/he asked after already being told once (one could argue the shopkeeper’s question was designed mainly for confirmation—but there is no way to tell from the written

transcript). At least from S's point of view, the "Okay" at the end was not a 'pop' to return to the project initiated by C at the beginning.

Given the limited ability of human consciousness to keep things actively "in mind" (discussed at length below), it seems likely that many transitions "downward" into subprojects or digressions will be terminal, leading to 'next' transitions or further 'push' and 'digress' transitions with comparatively few 'pop' and 'return' transitions.

Unconstrained communication that lacks a specific task, such as occurs at parties, is a prime example of conversation where each digression becomes the new jointly governed "project", completely abandoning the last, a phenomenon the reader can surely corroborate from personal experience. The analyst would then be faced with a coding nightmare, and must either attempt to force the data onto fewer discourse levels than it seems to display, or follow the data completely and end up with indentations reaching beyond the right margin of the page. The solution, of course, is that even if each transition seems to nest the next utterance into a subproject, such changes in level are *relative*, not absolute. The relative change is most significant at the point of transition and directly thereafter, but may lose all significance as talk proceeds. The analyst therefore ought not to assign special importance to a discrete number of "discourse levels" as describing specific degrees of "detail", and he or she furthermore ought not to assume that all the utterances following a given 'push' or 'digress' transition will, in any verifiable sense, continue along at the same level of embeddedness (cf. Ochs 1979 for a discussion of the many ways a transcript's visual presentation can mislead the analyst). This is especially true given the ability of projects to become altered drastically over time, but smoothly and with no clear transitions at the local level (as discussed at length later in this paper). In reality, when transitions into subprojects and digressions are identifiable, the level of embeddedness can at times be thought of as proceeding in a manner reminiscent of the painting by M. C. Escher, *Ascending and*

*Descending*, whose figures climb up and down the stairs but never actually succeed in reaching higher or lower points in space.

Barbara Grosz has developed a system of organizing discourse into a hierarchical structure not unlike that of Clark above. The main difference between their systems is that, instead of a notion of “joint projects”, Grosz and her colleagues focus on the assertion (Nakatani et al. 1995) that segments of discourse have a *purpose* underlying them, agreeing with Brown & Yule’s (1983: 77) statement that “any consideration of topic involves asking why the speaker said what he said in a particular discourse situation”. Like Clark, Grosz and her colleagues propose a system where speech is partitioned into segments and subsegments (the example in Nakatani et al. 1995 is a monologue of instructions for preparing shrimp). Their basis for this partitioning is a notion that each broad section of discourse can be assigned a broad purpose, with nested purpose subsegments embedded within. The data below is a fragment of an attempt by me and KaLynne Harris at assigning a “purpose hierarchy” to a ten-minute dialogue. Although the system in Nakatani et al. (1995) was designed to be applied to monologues, we attempted to use it for this dialogue by assuming each “purpose subsegment” would be initiated by one subject or the other, and that the remaining subject would then either join in with that purpose or initiate a new segment of his or her own. The subjects in all my data were undergraduates at the University of Chicago and native speakers of American English. In the following example and in later examples, the subjects were discussing how to round up and capture a family of wombats that had holed themselves up in an abandoned movie theater in the tiny town of Arlee (a plastic model of the city sat between the subjects). I refer the reader to my transcription conventions (largely based on Chafe 1994, 1997) listed at the end of the text (p. 51), which have been designed for maximum readability (that is, I have attempted to keep the data free of clutter, while still trying to convey a sense of what the speech actually

sounded like as I watched and listened during my transcription and analysis. Any transcript is, as noted above, just “footprints in the sand”—the reader should note that the rather qualitative judgments below were made not from the transcript but by repeated observation of a video/audio recording of the conversation).

(2) *(subject pair #1)*

**6 = start over, review entire plan again**

A ...(1.5) okay,

A .. y'knów what we'll dò=,

A well thís's what we'll dò.

**6.1 = reaffirm pen idea**

A ... # the pén idèa is góod.

**6.2 = reiterate how wombats will be scared out (same as 5.1)**

A .. so yóu'll be òut at the frònt,

A with yer pót an' yer stíck,

A màking lots of <sup>1</sup>[nó=ise,]<sup>1</sup>

B <sup>1</sup>[yeah]<sup>1</sup>

A ... an' thèn=,

A wé'll scàre them out the frónt.

A ... out the báck. (*a self-correction*)

**6.3 = reiterate how pen will be built (refers back to 5.3.1)**

A # an' thèn= ùm==

A ...(1.8) (smack) we'll búild like,

A ... a ÷pén=?

A <sup>1</sup>[out of]<sup>1</sup> these ÷bóuldèrs?

**6.3.1 = give details about shape of pen**

B <sup>1</sup>[s==]<sup>1</sup>

B sémicircle,

B ... yeah.

A {w— ng—}

A ... yéah.

A .. but it'll be clósed óff.

**6.4 = reiterate how wombats will be rounded up**

A .. an' thèn what wè'll dò=,

A # is we'll jùs=t .. sort of try to ÷róund them úp?

A ... into this==

B yéah.

**6.4.1 = discuss details of the rounding up operation**

A ... like wè'll—

A ... we'll sort of màke like,

A .. a páthwày,

A with like a big ... círcle at the ènd of it.

A ... an' <sup>1</sup>[then we'll try' to dríve—]<sup>1</sup>

B <sup>1</sup>[an' then we'll clóse]<sup>1</sup> off—

- B okày,  
 B ..<sup>2</sup>[we'll clóse off—  
 A ..<sup>2</sup>[an' then we'll clóse off the páthway  
 B .. ókay.  
 B .. so we gót'em—]<sup>2</sup>  
 A an' then we'd]<sup>2</sup> hàve .. áll the wòm bats<sup>3</sup>[in thére.]<sup>3</sup>  
 B<sup>3</sup>[in thére.]<sup>3</sup>  
 A # an' thèn we'll pén them ùp there,  
**6.4.2 = justify efficacy of pen, based on wombats' physique**  
 A .. becàuse they're fát.  
**6.4.2.1 = give detail about why fatness of wombats is relevant**  
 A .. they càn't jump óut or a<sup>1</sup>[nyth]<sup>1</sup>ing.  
 B<sup>1</sup>[yéah.]<sup>1</sup>  
 A .. so= ònce they're thére,  
 A .. we're prétty sùre they'll be okáy.  
**6.5 = discuss roles of A and B after wombats are rounded up in pen**  
 A # an' só==,  
 A # whíle,  
**6.5.1 = go into details about B's role**  
 A ... sínce yóu're out front doing nothing but bànging your pót .. {<sup>1</sup>[nn]<sup>1</sup> yer sh}—  
 B ..<sup>1</sup>[yéah.]<sup>1</sup>  
 A .. with your stíck,  
**6.5.1.1 = refute A, clarify role**  
 B well Í'm<sup>2</sup>[gonna]<sup>2</sup> be rùnnìng<sup>3</sup>[thróugh.]<sup>3</sup>  
 A<sup>2</sup>[you'll—]<sup>2</sup> <sup>3</sup>[you'll—]<sup>3</sup> you'll— you'll come @back óut@<sup>4</sup>[when—]<sup>4</sup>  
 B<sup>4</sup>[yéah.]<sup>4</sup>  
 A .. when thèy're thére.  
 A # and,  
 A ... yóu kèep an èye on thèm an' Í'll go with= the péople in hòuse—  
 A .. from e—  
 A w— thirty-thrèe or thirty-five,  
**6.5.2 = discuss calling authorities**  
 A # an' we'll cáll up líke,  
 A ...(1.2) ánimal contròl 'r whatever.  
**6.6 = (unclear purpose)**  
 A ... an' then  
 A ... we'll==,  
**6.5.2 (return) = discuss calling authorities**  
 A ... or=,  
 A ... y'know.  
 A ... the authórites in Austrália n' we'll make a phóne càll an' say we have these wóm bats that need to go back to Austrália or—  
 A # (*quite loud:*) or we'll cáll a local zóo.  
 A ...(1.1) an' júst be líke we've càught these wóm bats and we néed you to còme táke thèm==  
 A líke bàck to Austrália or whatever.  
 (*continues...*)

As can be seen, we were reasonably successful in our attempt, but only because this stretch of conversation lended itself well to being segmented into a series of purposes and subpurposes. The reader will notice that this part of the conversation consisted mainly of a



“cinematic” or “play by play” description, thoroughly dominated by participant A, of the plan for rounding up the wombats. Her description outlined a series of subtasks within subtasks, all geared toward the larger task of capturing the wombats, and all described fully and in chronological order, as if an action movie detailing the operation were playing in her head. Since each subtask had an easily identifiable purpose functioning as a clear subpart of the larger mission goal, thus forming a *hierarchy* of tasks and nested subtasks, it was a straightforward matter to organize her speech into an identical hierarchy of purposes, each labeled according to what she was trying to describe. There is very little interference from participant B, which allowed A to keep tight control over her presentation of the plan. In other words, the dialogue above behaves much like a *monologue*, with a participating but fairly submissive listener. Combining this observation with the fact that the talk was highly goal oriented, it is not surprising that it works well in a Grosz-style system, which in the case of Nakatani et al. (1995) was designed specifically to deal with goal oriented, task-driven monologue.

Unfortunately for those who would apply this type of analysis to non-monologic conversations, we will later examine data that utterly fails to conform to a strict “purpose hierarchy” coding system. It was, in fact, my attempt at creating a purpose hierarchy for such data that originally motivated the present work. The problem is that this system suffers from all the same troubles as Clark’s, plus a few extra. As with Clark, there is an attempt at segmenting conversation into chunks of broad purpose (broad joint projects, in Clark’s system), consisting of subsegments of smaller purposes (for Clark, smaller joint projects). While Clark’s system allows that a joint project may become altered during the course of its subprojects, the system of Nakatani et al. seems to assert the need to assign a single-phrase purpose to every segment, including broader discourse segments. Even if we allow that individual utterances generally have a purpose of some sort, the system has the

fatal flaw of treating large chunks of discourse as static wholes. In reality, many apparent purpose subsegments will string together to form a larger chunk with no identifiable purpose applicable to the section as a whole (as illustrated later in this paper). Regardless of a speaker's desire to initiate a large section of discourse that conforms to a general purpose, the discussion will often diverge bit by bit, and participants can easily lose sight of what the original purpose was, only to seize back onto it later. Multi-person conversations are the prime environments for purpose divergence and subtle purpose "usurpation and alteration", but even in monologues the attention of the speaker can lose its focus, and embedded purposes may drift outside the scope of a previously recognized broader purpose.

In the above example (2), participant A begins with

(3) ... (1.5) okay,  
 .. y'knów what we'll dò=  
 well thís's what we'll dò.

signaling her intention to describe the plan of action. By the end of the sample (approximately one minute later), it can reasonably be said that each nested subpurpose is still part of the originally intended broad purpose of discussing the complete plan of action. Thus this stretch of conversation appears to be "friendly" to a purpose hierarchy analysis. Yet even in this example, trouble areas exist: it is sometimes difficult to determine where one subpurpose ends and the next begins, as for example in segment 6.5 of (2) above. In this segment, participant A seems to be preoccupied with discussing the roles of A and B. At the beginning she seems to be setting up some sort of two-part description through the use of the word "while", but then she moves on to a description of specifically B's activities (possibly meant to form a *subpart* of a broader description of their separate activities), returning suddenly to speech that seems to indicate her readiness to combine both their activities into a single intonation unit (a notion to be discussed below), with (4:b):

- (4) a # and,  
 b ... yóu kèèp an èye on thèm an' Í'll go wìth= the péople in hòuse—  
 c .. from e—  
 d w— thirty-thrèè or thirty-five,

Thus, I have created segment 6.5.1 as a *subpurpose* of the broader purpose of 6.5, and (4:a-b) above seem to signal a return (or ‘pop’) back to the level of 6.5. But my coding is approximate, a mere suggestion—it is difficult to unequivocally pinpoint discrete lines of transcript or even words that signal shifts in subpurpose, from more detailed to more general, and so on. Inter-coder disagreement (among two to three separate coders) existed at many points in the data, suggesting that there may be no clear “most correct” purpose hierarchy analysis for many parts of a given conversation or even a monologue. Indeed, the segmentation of 6.5 in (2) above (my current “best guess”) is considerably altered from the original consensus reached earlier by me and Ms. Harris. As another example of where even this “friendly” data creates problems for the analysis, consider that although segment 6.5.2 begins with a discussion of A’s and her helpers’ role (now situated as a complement to the description of B’s role), the discussion at the end of the example does not necessarily have as a broader purpose the notion described in 6.5, “discuss roles of A and B”. That is, 6.5.2 is a smooth discussion, with just one quickly abandoned interruption, but the purpose driving it need not (by the end) have anything to do with the purpose of 6.5.

Fundamentally, speakers often “shirk” the broader purpose that led to their current discussion, even though that broader purpose may have been critical at the inception of their current “smoothly flowing” discussion.

To summarize, these purpose hierarchies, like Clark’s joint project hierarchies, have the problematic need of segmenting discourse into sections with identifiable beginnings and ends, and the same misleading indentation convention exists. In addition, these “purpose segments” must be given discrete labels, as if they were static and unified, which can lead to severe, but often unverifiable discrepancies between the analyst’s assigned purpose and the

actual (and often unidentifiable) moment-to-moment goals held by the participants during the course of the conversation.

The motivation behind many of these theories, all of which attempt to utilize a notion of ‘topic’ (or some related incarnation) to partition conversation into coherent chunks, seems to be to uncover what “drives language forward”. Wallace Chafe, whose (1994) notion of ‘topic’ we will examine in due course, has even claimed (1997) that “what keeps language moving is . . . essentially the introduction and development of topics.” The fundamental problem with attempting to apply such a notion to any and all data is the implication that each ‘topic’ has an identifiable start and finish, and that the discussion within a ‘topic’ will proceed along roughly similar lines, before shifting more sharply at a point of ‘topic shift’. Conversation can and often does proceed this way, but as we shall see, even if a segment of conversation is enclosed by what appear to be topic transition points, sometimes the ideas discussed within cannot be reasonably said to belong to a single ‘topic’. The trajectory of ideas being discussed can change just as much *during* one of these so-called ‘topics’ as it can when conversation hits a clear point of ‘topic shift’. Before examining data that bring these problems to light, and proposing a new notion to account for the flow of ideas in conversation (both those that conform to ‘topic’ structure and those that do not), we will take two necessary asides and discuss key aspects of relevance and consciousness.

### **Relevance**

Gilles Fauconnier (1997: 187) has highlighted the remarkable complexity of the cognitive operations necessary for using language, noting that “their complexity far exceeds the overt information that a language form could carry.” Indeed, “language serves to prompt the cognitive constructions by means of very partial, but contextually very efficient,

clues and cues.” The notion of *relevance*, I suggest, is behind this “poorly understood human ability to resolve massive underspecification at lightning speeds.”

In order for language to be contextually and co-textually “efficient”, language users must rely on an *assumption of relevance*—that is, they must assume one another are following Grice’s maxim of relation, which states simply “be relevant” (Grice 1975). But what does it mean to be “relevant”? Grice himself could not answer, but highlighted some of the important issues:

Though the maxim itself is terse, its formulation conceals a number of problems that exercise me a good deal: questions about what different kinds and focuses of relevance there may be, how these shift in the course of a talk exchange, how to allow for the fact that subjects of conversation are legitimately changed, and so on. I find the treatment of such questions exceedingly difficult . . . . (1975)

Many years ago, Bartlett also had something to say on the matter:

. . . it is legitimate to say that all the cognitive processes which have been considered, from perceiving to thinking, are ways in which some fundamental ‘effort after meaning’ seeks expression. Speaking very broadly, such effort is simply the attempt *to connect something that is given with something other than itself*. (1932: 227, quoted from Brown & Yule 1983: 61, their emphasis)

In their citation, Brown & Yule assert that Bartlett meant to comment on “the importance of relating a particular experience to other similar experiences”, and that he suggested “the individual . . . generalises over particular experiences and extracts from these a number of *types* of experience.” But his fundamental insight was the recognition of the conceptual *connections*, or *links* people make, and it can be extended to include any sort of conceptual link made between the current talk and elements of the mutually constructed and understood contextual framework, as well as with salient ideas from the discourse thus far (the current “domain of discourse”, cf. Karttunen 1974). In other words, for something to be *relevant*

in a conversation, it must be relevant in terms of the current common ground of the participants (cf. Clark 1992, 1996).

“Relevance” as I have been using it is very similar to the commonly appealed to notion of “coherence”. For example, Brown & Yule state that when “interpreting linguistic messages”, people rely on an “assumption of coherence” (1983: 224). “Coherence” is not to be confused with “cohesion”, however. As discussed by Lyons (1995: 263-4) and Brown & Yule (1983: 197), *cohesion* in text has to do with creating linkages of *form*, while *coherence* in communication has to do with creating linkages of *content*. The ideas contained in language can be linked to their surroundings in many different ways, and an utterance can be said to be relevant in some way as long as it pertains to some salient aspect or element of the current, but continually advancing, common ground of those participating in the communication. This common ground contains a vast amount of information—with such a variety of possible links to be made, language users need a strategy to help them make the correct links quickly. Brown & Yule (1983: 60) suggest speakers will attempt to interpret meaning through as little processing as possible, and that they do this by way of an assumption of *local interpretation*, which they refer to as the “local interpretation constraint.” In other words, if participants can coherently advance their common ground by interpreting an utterance in terms of the most recently put forth utterances and ideas, they will do so. Given the already mentioned limited capacity to keep ideas at the foreground of our attention (see the next section), it seems logical that drawing conceptual links with more recently foregrounded ideas would require less processing than drawing links to more distant concepts. Thus speakers can be said to have a local interpretation *bias*, which highlights the importance of Harvey Sacks’ (1975) notion of *sequential relevance*. The processing required for both production and interpretation of a given signal is likely minimized when it is sequentially (most locally) relevant.

As I mentioned in the preceding paragraph, an utterance can only be given a local interpretation if it can be coherently integrated into the current common ground of the participants. But what does it mean for an utterance to be coherently integratable, and thus relevant? Many would appeal to the simplistic notion of ‘topic’, claiming that a contribution will only “make sense” if it is “on topic”. Indeed, even if we were to eliminate the idea that conversation is always made of identifiable chunks with clear ‘topics’, it still seems to be true that participants try to have a clear idea of the state of their interaction *at a given moment*. In terms of Clark’s (1996) joint projects, a contribution that is sequentially relevant will generally be interpretable as part of, or as an alteration of, the *current* joint project. This is true even if the mutually construed current state of the interaction is one that emerged gradually, without a clear, agreed upon starting point. But even contributions that are clearly *not* part of the current joint project can still be relevant, though often not sequentially relevant. Tannen & Wallat (1987) discuss the broader, though continually shifting *interaction frames* in which people find themselves (that is, in which people *believe* themselves to be, and on which they believe they and other participants have mutually agreed). An interaction frame is often suggested and reinforced by the current physical context, as well as the personal experiences of the participants, and exerts heavy expectations on what can be considered relevant contributions. While waiting in a doctor’s office, for example, our personal experience tells us that the next interaction will likely be with a nurse, who will expect us to answer questions about our physical condition. Clark would refer to these frames of interaction as the broader joint projects and “arenas” in which smaller projects are embedded (cf. Clark 1992, a veritable encyclopedia of the diverse “arenas” in which language use occurs). This works as far as it goes, but it is important to remember that like the smaller projects, a given frame or “arena” of interaction and its associated expectations will not necessarily have a clear start and end point. While speaking

with a doctor for the first time, for example, the conversation may gradually shift from a formal “doctor-patient” frame into a more relaxed “friendly advice” frame. Even physical contexts, though inherently more stable, can change gradually and imperceptibly (imagine, for example, the slow change of the landscape during a long-distance train ride). The important point, if communication is to proceed smoothly, is that participants key in on and coordinate their construals of the *current* state of their interaction, allowing their joint construal to form part of their current common ground. Thus, although a group of friends at a party may all be drinking together, a joke told by one of the drunken revelers might only be funny to those at a similar level of intoxication. This is an example of a single “language arena” in which an invisible aspect (blood alcohol level) of the physical context for each participant may be constantly changing and not always the same for everyone, resulting in a certain amount of interactional incoherence.

The claims made in the above paragraphs are reasonably compatible with the “Relevance Theory” pioneered by Sperber & Wilson (1986/1995). This is especially true concerning their claim that one of the factors determining relevance is ease of processing. Certainly, given that speakers rely on an assumption of relevance, a wholly irrelevant comment will cause a great deal of (perhaps fruitless) processing aimed at drawing some link between that utterance and the current common ground, while a relevant comment is designed to be interpreted through the straightforward drawing of such a link, and will therefore require less processing as long as the addressee interprets it as the speaker intended. Another point of agreement is their claim that many of Grice’s maxims, in particular the maxim of “quality” or truthfulness (cf. Grice 1975), can be subsumed under the all-important maxim of relation (cf. Wilson & Sperber, under review). There are, however, certain other aspects of their theory which I find more difficult to incorporate. For example, their description claims the following two factors work together to define



relevance: first, that the less processing required, the more relevant an utterance will be, and second, that the greater the “cognitive effect” of an utterance, the more relevant it is (cf. Sperber & Wilson 1990). While the first claim is reasonable, the notion of “cognitive effect” seems more slippery. Certainly, a relevant utterance must cause *some* sort of cognitive effect (except in the unlikely frame in which language is expected but also meant to be ignored), but we shall see later that there is a certain kind of strong “cognitive effect” which may be partly independent of relevance.

At this point, we are ready to move on to a discussion of consciousness. Hopefully, the above discussion will have effectively reversed Brown & Yule’s (1983: 68) assertion that a notion of ‘topic’ is “essential to concepts such as ‘relevance’ and ‘coherence’.” Instead, since it is possible to discuss relevance and coherence even at times when ‘topic’ becomes problematic, it seems likely that the notions of relevance and coherence will themselves be crucial to any notion of ‘topic’, if a sensible notion can be arrived at.

### **Consciousness**

In his book Discourse, Consciousness, and Time (1994), Wallace Chafe includes a great deal of discussion on the nature of human consciousness, for which he provides convincing evidence from recorded instances of real language use. First of all, consciousness requires an *orientation*, which gives individuals information about themselves with respect to the crucial domains of “space, time, society, and ongoing activity” (Chafe 1994: 30). He elaborates later,

Without such an orientation, consciousness simply cannot function coherently. A disoriented or, better, unoriented consciousness is unable to go about its normal duties of providing the mind with a coherent sequence of ideas . . . .

There appears to be an especially important need for orientation in space and time—a solid basis, for example, for the folk belief that someone who has accidentally become unconscious says first, on regaining consciousness, “Where am I?” . . . . [perhaps] continuing with “What time is it?” or “What day is it?” (Chafe 1994: 128)

Appealing to this notion of orientation may help explain why contributions which are not sequentially relevant will take more processing time, more “effort”, to produce and interpret. In order for them to be coherent contributions, the speaker must provide the addressees with extra information to aid them in reorienting toward what were previously less salient or completely absent elements in their common ground. Take the following example, extracted from midway through another pair of subjects’ discussion of the wombat scenario introduced earlier:

- (5) *(subject pair #2)*
- A # since this is a smàll tòwn we should wear conservàtive clóthing.  
 B ... # ... yéah.  
 A .. @nóne@ of that ... gáy stuff.  
 B <sup>1</sup>[@@@@@]<sup>1</sup>  
 A <sup>1</sup>[@@@@@]<sup>1</sup> #  
 B # @ # @@@ #  
 (*high pitch:*) anyway,  
 ... # an’ máybe y’know while we’re thèrè we còuld .. y’know,  
 # stày with thèm an’,  
 ... pàrty with thèm an’,  
 (*continues. . .*)

After the clothing joke and ensuing laughter had died down, participant B decided to initiate discussion along somewhat different lines, and we can observe his use of reorienting devices. His first word, “anyway”, is often used to signal that the next contribution will not be sequentially relevant (Schiffrin 1987 provides an overview of the patterns of use of many such “discourse markers”). Such a signal “primes” subject A to expect that her consciousness will require reorienting shortly thereafter. In the following line, B provides a

new temporal and spatial basis for orientation with the words “while” and “there”, respectively.

Another critical aspect of consciousness is that it has a *focus*. That is, it involves “the activation of only a small part of the experiencer’s model of the surrounding world, not the model in its totality” (Chafe 1994: 29). Necessarily then, most of what is available to be focused upon will not be in a person’s active consciousness at a given moment:

This limited activation allows a person to interact with the surrounding world in a maximally productive way, for it would hardly be useful to activate everything a person knew at once. Aside from the burden such a process might place on neural resources, most of that vast store of information would be irrelevant to one’s interests at any particular time. (Chafe 1994: 29)

Consciousness also maintains, as a context for its current focus, a “periphery of *semiactive* information” (Chafe 1994: 29). After focusing on a given idea and moving on to the next, the former does not normally drop out of one’s head immediately. Without a principle of semiactive consciousness, relevance and coherence could not exist, and communication could not consist of sequences of related ideas flowing one to the next. The focus of consciousness is *dynamic*, “moving constantly from one item of information to the next . . . . One focus of active information is replaced by another, each finding coherence in the contexts provided by the surrounding semiactive information . . . .” (Chafe 1994: 29-30). To solidify this view of consciousness, we can turn to a powerful analogy, provided eloquently later in the book:

*Consciousness is like vision . . . .* There is foveal vision and focal consciousness. Surrounding this small area of maximum acuity lies, on the one hand, peripheral vision and, on the other hand, peripheral consciousness, both of which not only provide a context for the current focus but also suggest opportunities for its next moves. Beyond peripheral consciousness lies a vast treasury of information, some of which will at some time be brought into focal or peripheral consciousness, but all of which lies unattended at the

moment . . . . Both [consciousness and vision] are in constant motion, the eye with its brief fixations, the mind with its continual shifting from one focus to the next. Both . . . exist in a state of constant restlessness. (Chafe 1994: 53, my emphasis)

This picture of a lively, dynamically flowing consciousness allows a convenient trichotomy between *given* (actively focused on), *accessible* (strongly or weakly contained in semiactive, peripheral consciousness), and *new* (previously unattended) information (Chafe 1994: 72). Chafe also stipulates that depending on the kind of information communicated, ideas have a particular *activation cost*, which differentiates given, accessible, and new information on a continuum. Such a notion is very much in line with the claim of Relevance Theory (Sperber & Wilson 1986/1995, 1990; Wilson & Sperber, under review) that the most relevant contributions will require the least processing, and it allows us to further differentiate examples of new, accessible, and given information with the claim that, for example, relevant new ideas will have a lower activation cost than irrelevant new ideas. We expect given information to require the least processing at all, but in order to be relevant it generally must be used in combination with newer information, in order to advance the conversation into new territory.

Building off the notion of the varying *activation states* (active, semiactive, inactive) of consciousness, Chafe makes the important claim that *intonation units* are the fundamental units of speech. His hypothesis is that “an intonation unit verbalizes the speaker’s focus of consciousness at that moment” (Chafe 1994: 63). These units are definable in prosodic terms, with characteristic (but language-specific) intonation patterns and pauses often bounding them (cf. Chafe 1994: 56-61), but perhaps more important is their function. Since language tends to function by adding new information to what is already focused on or still in semiactive consciousness, every intonation unit should contain a certain amount of given or accessible information, and a certain amount of new information. Intonation units

typically have a *starting point*, which is generally *given* (sometimes *accessible*) information and in English generally realized as the sentential subject, coupled with some sort of new information (or at least given information that brings about some new effect). The discovery, drawing from a great deal of data, that English sentential subjects of more than trivial importance are almost never completely *new*, Chafe dubs the “light subject constraint” (Chafe 1994: ch. 7). An even more important discovery is Chafe’s claim that, just as consciousness can only focus on one thing at a time, there is typically only *one new idea* per intonation unit, a result which he dubs the “one new idea constraint” (Chafe 1994: ch. 9) (in Chafe 1997 he refers to it in somewhat more flexible terms, as the “one-new-idea-per-intonation-unit hypothesis”). Thus, although we may be able to find cases where a sentential subject is presented as new information, we will find that there is at most one piece of new information in each intonation unit. Chafe also provides evidence that in the Seneca language, although structurally distinct in many ways from English (it does not conform to any sort of “light subject constraint” or any notion of “starting points”), speakers also constrain their utterances to contain only one new idea per intonation unit (Chafe 1994: 152). Such a discovery seems to suggest that the one new idea constraint is related to some sort of cognitive universal: “the ability to activate only one new idea per focus of consciousness seems to depend on limitations inherent in human mental processing, regardless of the language one speaks” (Chafe 1994: 159). Compatible with this view and the intonation unit model in general, McNeill & Duncan (2000) present a model which theorizes a minimal psychological unit known as a “growth point” as the vehicle by which speakers translate, during thinking-for-speaking (cf. Slobin 1987), a single focus of consciousness into a single pulse of information carried simultaneously by language and gesture.

Based on the success of the intonation unit model as describing the minimal units with which speakers parcel their contributions, I have followed Chafe and attempted to present my data with exactly one intonation unit per line of transcript. This practice seems much more sensible than the presentation of data in sentence form, for a number of reasons: intonation units seem to be “stable units of remembering”, with the same content being grouped in the same intonation units during multiple retellings of a story (Chafe 1994: 144). Sentences, however, though they may represent “superfoci of consciousness” and sometimes have certain characteristic final intonation contours, evidently “do *not* represent stable units in the mind. They are constructed . . . with varying degrees of functional, prosodic, and syntactic coherence” (Chafe 1994: 144). The following excerpt from (2) above shows that although (6:g) at first seems extraordinarily long, it is actually a very clearly demarcated intonation unit, consisting of a long stream of smoothly continuous, very rapid speech surrounded by pauses, ending as a syntactically mal-formed sentence fragment.

(6) *(subject pair #1)*

- a # an' we'll cáll up like,
- b ...(1.2) ánimal contròl 'r whatéver.
- c ... an' then
- d ... we'll==,
- e ... or=,
- f ... y'know.
- g ... the authórites in Austrália n' we'll make a phóne càll an' say we have these wómbàts that need to go back to Austrália or—
- h # (*quite loud:*) or we'll cáll a local zóo.

As can be seen, an interruption in a speaker's flow of presentation is a perfect spot to pause and take a breath, regardless of whether this results in a “good sentence” or not. In this case, (6:h) can be combined with (6:g) to form a single syntactic sentence, but this is not essential; after the pause, both speaker and hearer have cognitively “reset themselves”, and are ready to deal with a new pulse of information—the foci of consciousness expressed in

(6:g) and (6:h) are clearly distinct. Although (6:g) is very long, it does not violate the one new idea constraint—in fact, not a single idea here is new: every element of the intonation unit had been activated recently in the conversation.

Taking into account all that has been discussed thus far, we are now ready to examine data which consistently refuses to conform to any sort of ‘topic’ analysis.

### **Deconstructing ‘topic’**

Wallace Chafe also has an opinion on the existence of conversational ‘topics’:

We can think of each . . . topic as an aggregate of coherently related events, states, and referents that are held together in some form in the speaker’s semiactive consciousness. A topic is available for scanning by the focus of consciousness, which can play across the semiactive material, activating first one part and then another until the speaker decides that the topic has been adequately covered for whatever purpose the speaker may have in mind. (Chafe 1994: 121)

While this notion is appealing, and a great deal of real conversation may occur this way, Chafe seems to assume that conversations *always* have such a structure: “One of the things that seems intuitively true of conversations is that they focus on different topics . . . at different times, moving from one topic to another” (Chafe 1994: 121). The problem with stipulating such a theory as fundamentally underlying all conversation is that, like with the theories of Herb Clark (1996) and Barbara Grosz and her colleagues (cf. Nakatani et al. 1995), we will fail to identify clear ‘topics’ in actual stretches of discourse if the talk proceeds haphazardly and without clear points where any speaker deems the talk has “adequately covered” the ideas whose full discussion required organization within a ‘topic’. Compared to these authors, I have a more pessimistic view of the amount of control conversational participants have over the course of talk across lengthy intervals. Clark himself asserts that conversations are typically *emergent, locally governed, and opportunistic* (Clark 1996: 337), but still seems to claim that a joint project will continue

along similar lines unless specifically altered by one of the participants. I propose that instead, the limited scope of human consciousness will cause talk to drift constantly away from, in Clark's terms, whatever broader project has given rise to the current minimal joint project. After a speaker initiates discussion that s/he hopes will remain within a particular bounded realm of semiactive consciousness (a 'topic' in Chafe's sense), the participants have limited resources with which to ensure the mutual continued awareness of those boundaries (and they may not all have agreed on the boundaries in the first place). During the course of "scanning" across the semiactive material with their ever-restless foci of consciousness, one or more participants may begin to lose track of the originally intended boundaries, allowing their understanding of the "semiactive realm" of *current* discussion to gradually move farther and farther from the original. There are myriad factors, deserving of much further study, affecting how well the participants can keep discussion within the original boundaries of a 'topic', once initiated: the physical context and interactional frame/expectations, plus aspects of the talk itself (whether it is in the narrative *genre*, or a debate, etc.). Schegloff & Sacks (1973) have recognized the existence of "topic shading", which on the surface seems to include the phenomenon I am referring to, but their notion falls short of describing the real-time, emergent reality of conversation: they still assume the absolute existence of identifiable topics, and claim that rather than explicitly ending a topic, "differently focused but related talk" is "fitted . . . to some last utterance of a topic's development." In other words, their "topic shading" consists of individual events, where recognizable small shifts occur as one 'topic' leads into the next. While we may be able to identify instances of this sort, my claim is that the trajectory of ideas may at other times be continuously shifting direction in a smooth manner, preventing us from identifying a "last utterance of a topic's development."



Consider the following stretch of conversation, the beginning of which was already presented as part of (5) above. The reader should have no trouble following the ideas presented, but will have trouble describing the ‘topic’ of what is largely a smoothly flowing, unbroken segment of discourse (up to but not including the mention of helicopters):

- (7) *(subject pair #2)*
- B ... # an' máybe y'know while we're thère we còuld .. y'know,  
 # stày with thèm an',  
 ... pàrty with thèm an',  
 ... èat <sup>1</sup>[their fòo=d an',]<sup>1</sup>
- A <sup>1</sup>[bring a few—]<sup>1</sup> ... bèers,
- B ... fr— yèah bring a few b—  
 .. ingratiàte oursèlves with thèe uh,  
 # with the tòwn= ... prèacher,
- A ... <sup>1</sup>[m-hm.]<sup>1</sup>
- B ... <sup>1</sup>[#]<sup>1</sup> with a few bèers,  
 ... @<sup>2</sup>[@@]<sup>2</sup> @ ... #
- A <sup>2</sup>[@@]<sup>2</sup> ..... #
- B mày—  
 .. Ì don' know .. maybe we could gèt some diví=ne help,  
 .. to gèt rìd of the wó=mbàts=  
 # <sup>1</sup>[m—]<sup>1</sup>
- A ... oh <sup>1</sup>[y]<sup>1</sup>éah.  
 yòu're Cáptholic áren't you.
- B # ... yéah.  
 we could hà—  
 ... like wè could .. s=èe if they had any hólly water on hànd an',
- A .. @
- B ... {w}ait .. màybe they're demónic @ .. wòm=bàts@ <sup>1</sup>[@@@@]<sup>1</sup>
- A <sup>1</sup>[@@@@]<sup>1</sup>  
 ... @ and crú@cifixes.
- B .. @
- A .. #—
- B .. # and crúcifixes.  
 .. and gár<sup>1</sup>[lic.]<sup>1</sup>
- A <sup>1</sup>[thà]<sup>1</sup>t would be rèally gòod.
- B # gárlic we could ùse as bàit,  
 mày<sup>2</sup>[be wómbàts like gárlic.]<sup>2</sup>
- A <sup>2</sup>[yéah I b— .. I bèt th]<sup>2</sup>ere're vámpires lìving in the—  
 ... abàndoned movie theater.
- B và<sup>3</sup>[mpire wòm bats.]<sup>3</sup>

- A # <sup>3</sup>[’cause you knów where— #]<sup>3</sup> where there’re báts= there’re vámpires too.  
 ... an’ ònce we find their còffins we can búrn’em.
- B ... yés==.
- A or expóse’em to the lìght of dày.  
 #
- B ... yés==.  
 ... <sup>1</sup>[àbso]<sup>1</sup>lùtely.
- A ... <sup>1</sup>[yeah.]<sup>1</sup>  
<sup>2</sup>[.. (smack)]<sup>2</sup>
- B <sup>2</sup>[#]<sup>2</sup> becàuse y’knòw,  
 # vámpires and wòm bats are wònt to lìve in .. old abàndoned móvie theaters.
- A <sup>3</sup>[.. m-hm.]<sup>3</sup>
- B <sup>3</sup>[#]<sup>3</sup> in smàll tòwn= USÀ.
- A .. @
- B ... @  
 # um=,
- A ... or—  
 ... or hélicòpters.  
 # maybe we could just còver the entire—  
 (continues. . .)

There is one spot which may be a good candidate for Schegloff & Sacks’ (1973) “topic shading”. In the following excerpt from the above, the laughter in (8:g-h) forms a natural division, and in (8:i-k) subject B seems to refocus discussion to a somewhat new area, though it is obviously motivated by his mention of the town preacher in (8:d):

- (8) a(A) <sup>1</sup>[bring a few—]<sup>1</sup> ... bèers,  
 b(B) ... fr— yèah bring a few b—  
 c .. ingrátiate oursèlves with thèe uh,  
 d # with the tòwn= ... prèacher,  
 e(A) ... <sup>1</sup>[m-hm.]<sup>1</sup>  
 f(B) ... <sup>1</sup>[#]<sup>1</sup> with a few bèers,  
 g ... @<sup>2</sup>[@@]<sup>2</sup> @ ... #  
 h(A) <sup>2</sup>[@@]<sup>2</sup> ..... #  
 i(B) mày—  
 j .. Ì don’ know .. maybe we could gèt some diví=ne help,  
 k .. to gèt rìd of the wó=mbàts=.

But throughout the rest of the segment presented in (7), the discussion moves with perfect sequential coherence from one sequentially relevant contribution to the next, with no

consideration as to whether the analyst will later be able to fit a ‘topic’ to this stretch of conversation. The segment began with “partying with the townsfolk” (or more conservatively, with “getting divine help”), and had reached “location and destruction of vampires in their coffins” (and subsequent light humor about wombats and vampires), before subject A changed direction completely (creating what would be identified traditionally as a ‘topic shift’) and began discussing the use of helicopters. What is the ‘topic’ of the entire smooth stretch in (7)? What is its broad ‘purpose’? We certainly cannot label it with the purpose, “discuss partying with townsfolk, utilization of divine help, question of demonic wombats, investigation for and destruction of possible vampires” or some such absurdity. None of the purposes named here would apply to the entire stretch of conversation as a whole—instead, each of these purposes may be applicable during some, but not all, of the segment (since each utterance had at least some sort of identifiable, *currently* relevant purpose at its moment of being spoken). We also have a hard time pinning down the “minimal” sections, or “minimal joint projects” as Clark (1996) refers to them, that purportedly should string together to form the whole, with one project ending as the next begins. This is because at the local level, the talk before and after a given contribution of (7) is mutually construed by A and B to be part of the same “project”. The flow of ideas is sequentially completely smooth; it is only when examining the whole that we find it impossible to claim that the participants scanned a ‘topic’ with their “foci of consciousness”, playing across a unified chunk of semiactive material, “activating first one part and then another until . . . the topic has been adequately covered for whatever purpose the [participants] had in mind” (Chafe 1994: 121). As a caveat, there could be much more happening between the two participants than is clearly apparent to the analyst: part of what keeps the subjects going in the example above seems to be their mutual desire to enjoy “brainstorming” as many extensions as possible to the amusing string of associations they

have gotten themselves on. One could account for this by appealing to Jakobson's (1960) *poetic* and *phatic* language functions: the subjects are taking advantage of their friendly familiarity to weave together an amusing joke of indefinite length, adding on to it opportunistically and impulsively, while still confining the general orientation of their attention to the model city before them and their supposed mission. But such talk does not form a 'topic' in and of itself, because it emerges more as a gradual layering of more and more absurd conjectures—a joke that begins with great subtlety and only gradually becomes too absurd to follow further.

It is inappropriate to refer to such segments as being defined by their 'topics', since this term implies some sort of unity to the ideas discussed. The only explicit unity found in such a segment is the progressive, sequential linking of its ideas. They all also link back to some accessible (that is, in semiactive consciousness), constant elements in the participants' common ground (such as the fact that the participants in (7) believe themselves to be participating in the *directed task* of discussing a plan for the wombats' capture), but this is true of every otherwise unrelated chunk of talk that emerges during the conversation. There may also be invisible (to the analyst) interactional forces under the surface, becoming significant as the discussion invokes certain shared experiences. These influences are difficult to identify from the data, but in any case they are still subject to the limitations of human consciousness, and will fade or be altered just as easily as the participants' understanding of the overtly presented ideas. Since the participants seem to construe their interaction in (7) as one of continuous, smoothly unfolding but virtually unconstrained discussion in which internal "mini-topics" or "minimal joint projects" cannot be readily identified, we should not even refer to such a section as being "polytopical", as some analysts have done (Linell & Korolija 1997). If in a given segment of conversation, it is found that every idea presented is strongly related to every idea previously presented in that

segment, then the analyst can later, upon observing it in frozen, transcribed state, assign it a single ‘topic’ that summarizes the strong commonality observed among the contributions. But a segment without such relational unity will not be assignable with a ‘topic’. From the point of view of the actual participants, their contributions occurred in real-time, emergent, opportunistic fashion, so either type of conversational segment may seem equally coherent. Speakers do not always expect talk to proceed in a fashion that continually indexes the same “organizational” group of elements introduced previously. Rather, contributions need only be *relevant*, given the current interactional expectations and most recent talk at hand (keeping in mind that while taking account of the most recent talk, a contribution can, with extra effort, be made relevant instead to more distantly prior talk or experiences). The expectations governing a given interaction at a given moment may include the expectation that initiated realms of discussion (Chafe’s ‘topics’) or initiated joint projects (cf. Clark 1996) should be adhered to as much as possible, but this need not always be the case.

My proposal is this: in order to properly understand the coherent flow of contributions in conversation, regardless of whether there appears to be an identifiable ‘topic’, we can appeal to the notion that ideas have *inertia*, and that the act of communicating ideas imparts conversation and the ideas themselves with a sort of *ideational momentum*. Indeed, Chafe has recognized that a conversation can attain “momentum”, but he describes this momentum as something that “sustains topics” (Chafe 1994: 127). In my view, it is more useful to describe this momentum as the strength with which ideas cause conceptual associations to other ideas, whether or not these associations are ‘on topic’. The human mind seems to involuntarily draw links from one idea to the next, in a sort of internal “association engine”. Once communicated in a conversation, an idea becomes relevant, and depending on the momentum it carries it will lead all participants to energetically or weakly draw associations (links) to related ideas, including those which may not be at all relevant to

the current discussion. In many interactional situations, participants are expected to ignore these irrelevant associations and verbalize new information based not only on what was just now in focus, but also on the salient pieces of information still in semi-active consciousness. Many divergent possibilities still exist, since each new idea, once verbalized, becomes given information and thus a potential starting point. The likelihood of divergence increases with the number of participants, both because of the increased variety in conceptual associations being made, and because the separate consciousnesses of separate minds have a limited ability to synchronize. Since consciousness has only a single, constantly restless focus and a limited ability to maintain peripheral attention on salient pieces of semiactive information, staying ‘on topic’ requires the tough work of continually re-foregrounding ideas as they pass out of active consciousness, become faded in semiactive consciousness, and begin to slip out of a speaker’s control. A speaker in a monologue may be able to effectively stage his or her contributions so that a coherent, hierarchicalized ‘topic’ emerges (see example (2) in the introduction), but the presence of more than one active participant inevitably causes unexpected twists and turns, due to the emergent nature of the *jointly* constructed interaction, which in its details is not predictable by any of the individual participants (cf. Clark 1996).

Recall our earlier assertion that the most relevant ideas require the least processing time, meaning that they require less of a need to adjust *orientation*. As Chafe describes, boundaries between “episodes” of talk are often observable as points of sudden *reorientation* (Chafe 1994: 138), and he even recognizes that these boundaries may occur “in different strengths, depending on the degree of reorientation that is necessary” (cf. Linell & Korolija 1997 for a discussion of the diverse ways these identifiable boundaries arise). Such points of reorientation occur when participants present ideas not compatible with the current joint orientation of consciousness—that is, when the ideas presented are not locally relevant. Just as there can be varying degrees of *irrelevance*, there will be varying

strengths to these boundaries. Speakers do not always jointly reorient the consciousness of all participants involved before launching in a new direction. This occurs especially when the new idea is immediately relevant to the speaker, but to no-one else. For example, take the following exchange (from Linell & Korolija 1997, their translation of the original Swedish, employing their transcribing conventions), in which one participant in a multi-party conversation suddenly notices the veins on the arms of one of his companions (some details have been omitted from the transcript):

- (9) ((from an ongoing episode))  
 G:1 >no but this about< bad (0.8s) bad blueberries >I heard that  
 you< (1.7s) said something about that ((the crockery clatters))  
 (1.5s) we're short of blueberries  
 B:2 >yes yes< that was up in Dalsland in  
 J:3 ((clears his throat))  
 G:4 m:  
 B:5 =in any case °right°  
 G:6 it's been about the same here (0.7s) *unbelievably* bad (0.9s)  
 but then it got  
 V:7 °mm°  
 J:8 I'll be *damned* if I ever saw such veins as those you have on  
 your arms (0.7s) I have never noticed that before  
 G:9 then we got some *later*, Bosse (1s) after eh (.)  
 C:10 ((gives a laugh))  
 G:11 =the rain (1.1s) (by the end of July August) °so°  
 C:12 no it's (0.8s) not so hard to locate them you know  
 B:13 it came then (xx)  
 G:14 later there suddenly turned out to be some eh some  
 J:15 no:  
 G:16 some berries (0.6s) when one thought it was d- over and  
 done with  
 C:17 it's bad if you *cut* yourself °>for that matter<° (0.7s) >but it's  
 not so d- full speed< on  
 B:18 °yeah yeah°  
 J:19 >how come< that they lie so superficially then? (2.7s)  
 ((cutlery scrapes))  
 C:20 we:ll it was included in the the (0.6s) ((clears his throat))  
 extra extra start package that I had when I was born  
 J:21 ((laughs))  
 ((all participants now focus on C; the episode continues))

In turn 8, J suddenly addresses C about the veins on his arms, causing a period of joint incoherence between the J/C pair and the B/G pair, the latter of which continues the

discussion on blueberries. We can say that the talk of B and G still carried *momentum* from the earlier discussion, even after the sudden change by J. Until their consciousness could become reoriented to J's wholly irrelevant contribution, their talk proceeded for a time according to the orientation they held at the moment of J's contribution.

The previous examples serve to illustrate a necessary extension of our principle of *ideational momentum*. If ideas and conversation can have, at a given moment, "momentum", then they must also follow a *trajectory*. It is crucial to keep in mind that a trajectory need not emerge with any sort of 'topic' structure, since the points along a path can be described in terms of individual, *instantaneous* directional vectors, independent of any group coherence. We must examine the discourse thus far (indeed the entire common ground of the participants, up to the given moment) in order to gain some understanding of the current trajectory, but knowledge of this trajectory predicts the future course of talk *only in the short term*. Every moving entity follows some trajectory, but it is obvious that if that entity has any sort of free will, it is generally impossible to predict its exact movements very far into the future (imagine a darting sparrow, an energetic kitten, or a six-year-old child).

We noted earlier that Chafe observed stronger or weaker boundaries between sections of talk to be points of stronger or weaker reorientation, respectively. To account for this observation, we can claim that the degree of required reorientation is related to the degree of change in ideational momentum (in terms of altered trajectory, or magnitude, or both). Such a notion allows a group of people engaged in conversation to shift the direction of talk in varying degrees of severity. Given the limited attention of consciousness, shifts in trajectory that occur gradually over large periods of time will be less noticeable (and require less reorientation) than shifts that occur quickly, just as the occupants of a turning car will perceive stronger or weaker accelerations depending on the speed of the turn. Along the same lines, a shift from silence to talk forces the magnitude of ideational momentum to shift



suddenly from zero to a positive value, requiring reorientation, just as the occupants of a car will experience a jolt when it starts up from a stop. The degree to which conversational participants, at a given moment, will notice the momentum of their talk changing can thus be said to be a reflection of “ideational acceleration”. It could not be otherwise: the rate of change of the momentum of any inertia-bearing (i.e., mass-bearing) entity is proportional to its acceleration.

The above discussion creates a portrait of “conversational structure” very different from the traditional model. Rather than describing the flow of ideas solely in terms of ‘topics’ which cover stretches of discourse, the participants can be said to be engaged in talk with a certain *instantaneous* momentum. Their current (that is, instantaneous) common ground includes their mutual beliefs about the state of the interaction at that moment, including their *current* beliefs about what previous states (and trajectories) the talk has passed through, which may differ from their *previous* beliefs (which were current at previous points in time). Places commonly identified as points of ‘topic shift’ can be characterized as short periods of strong ideational acceleration—typically, intervals of strong change in the magnitude or direction of ideational momentum over a short period of time, with corresponding strong reorientation of consciousness over the same short period of time. At other times, talk may proceed while the trajectory of ideas changes slowly, resulting in a net large change in trajectory, but no traditionally identifiable places of ‘topic shift’. In (7) above, the discussion moved from “partying with townsfolk”, to “killing vampires”, to “using helicopters to cover the town with a net”. The trajectory of ideas at all three of these points is quite distinct, but only by examining the local flow of ideas can we discover that the transition between “partying” and “vampires” was quite smooth and took a long time, while the transition between “vampires” and “helicopters” was much more sudden. It would clearly be a mistake, then, to rely on only the points of obvious

‘topic shift’ (strong rate of change of ideational momentum) as our main markers of “conversational structure”. What have so often been called ‘topics’, it would seem, are fundamentally segments of smoothly changing ideational momentum. Whether or not the discussion remains ‘on topic’ throughout one of these segments is a consequence not wholly under the participants’ control—a successful ‘topic’ in Chafe’s sense takes careful planning and the actual desire to maintain, for a time, a discussion with strict boundaries, as well as conscientious awareness of what those boundaries are, and assertive “damage control” to recover from the divergent contributions so common in multi-party interactions.

The data examples below will build further evidence for many of the claims made above. Consider the following, in which subject A asserts his control over the trajectory of the discussion:

- (10) *(subject pair #3)*
- A ... so we gò to house thírty-thrèe.  
 B ... okày.  
 A ... we tálk to the pèople <sup>1</sup>[there.]<sup>1</sup>  
 B <sup>1</sup>[okày.]<sup>1</sup>  
 A ... alright.  
 B ... uh-hùh.  
 A ... we do the sàme thìng for house thirty-<sup>2</sup>[fíve].  
 B <sup>2</sup>[(click) w — what are we ás]<sup>2</sup>king them.  
 A we'll knòw thirty-fíve—<sup>2</sup>  
 → ... (1.1) hòld on one <sup>3</sup>[sècond.]<sup>3</sup>  
 B <sup>3</sup>[álrìght.]<sup>3</sup>  
 A ... we'll knòw thirty-fíve because of the constrúction out front.  
 B ... o<sup>4</sup>[==]<sup>4</sup>h.  
 A <sup>4</sup>[see.]<sup>4</sup>  
 B ... okay.  
 A ... thàt's thirty-fíve.  
*(continues. . .)*

The arrow points to A’s curt response to B’s interruption, designed to reassert control as well as demand B’s undivided attention. The two subjects were actually engaged in a sort of mock military briefing, with A assuming the role of the commanding officer briefing his

single soldier, so it is not surprising that A chose such a direct method of preventing interference.

The following example illustrates a number of interesting aspects of ideational momentum and reorientation attempts (it is a continuation of the conversation excerpt presented in (7)):

- (11) *(subject pair #2)*
- a(B) <sup>2</sup>[#]<sup>2</sup> becàuse y'knòw,  
 b # vàmpires and wòm bats are wònt to lìve in .. old abàndoned mòvie theaters.  
 c(A) <sup>3</sup>[.. m-hm.]<sup>3</sup>  
 d(B) <sup>3</sup>[#]<sup>3</sup> in smàll tòwn= USÀ.  
 e(A) .. @  
 f(B) ... @  
 g # um=,  
 h(A) ... or—  
 i ... or hélicòpters.  
 j # maybe we could just còver the entíre—  
 k # like using hélicopters we could còver the entíre—  
 l # tówn with a hùge nét.  
 m(B) # máybe so.  
 n .. (smack) (*high pitch:*) um==,  
 o .. (smack) <sup>1</sup>[why' are we sènding th]<sup>1</sup>em bàck to Austràlia,  
 p(A) <sup>1</sup>[wòuldn't that be ¿fún?]<sup>1</sup>  
 q(B) why càn't we just kíll them àll=  
 r(A) ...(1.4) Í don' knòw.  
 s(B) # why' can't we júst like <sup>2</sup>[...]<sup>2</sup> búrst in the mòvie thèater with bàrel<sup>3</sup>[s smóking.]<sup>3</sup>  
 t(A) <sup>2</sup>[#]<sup>2</sup> <sup>3</sup>[íssues]  
 fro]<sup>3</sup>m héadquarters.  
 u(B) ... @-#  
 v .. òh= okày.  
 w ... so we háve to send them bàck.  
 x(A) ...(1.9) maybe they líke .. vàm<sup>1</sup>[ires ìn]<sup>1</sup> .. Austràlia.  
 y(B) <sup>1</sup>[so==,]<sup>1</sup>  
 z # (*high pitch:*) n== ... màybe they dó.  
 (*continues...*)
- 

In (11:e-g), the ideational momentum of the conversation drops to zero. That is, whatever associations may be taking place inside the minds of A and B, neither one feels compelled to add anything more than a cursory laugh, and so the conversation as a whole is “dead in

the water”. At these points, since the momentum has dropped to zero, its directional vector (which traces a trajectory over time) is of zero magnitude and does not favor any direction over another. This means that any direction the discussion takes will require roughly equal reorientation, and often the most recent talk does not take precedence on a scale of relevance, since restarting talk in *any* direction, including that of the previous discussion, seems to require equal reorientation (but note that some speakers feel comfortable “revamping” talk as if it had not lost momentum, even after a very long pause, sometimes causing momentary joint incoherence for the conversation as a whole if the other participants are not ready for it). It is not surprising, therefore, that participants often choose to take discussion in a new direction (along a new *trajectory*) after long pauses or other such “dead zones”. In the example above, A uses this freedom to attempt (in 11:h-l) to initiate a discussion of helicopters and nets. She seems to be succeeding, except that in (11:m-o, q) B decides to disrupt her flow of ideas and move discussion along yet another new trajectory. Since the current talk already has a certain momentum, he uses a cursory “maybe so” as a means of feigning cooperation, of “joining her momentum” before redirecting it himself. The “lip-smack” and high pitch “umm” sends the message (whether consciously or unconsciously) that what he is about to say will not be in the same trajectory as A’s previous contributions. A does not pick up on this signal, however, and allows her current momentum to carry her forward, as evidenced by her statement in (11:p), even as B simultaneously takes over the helm. A’s long pause and “I don’t know” in (11:r) is a tell-tale sign that her consciousness has been “lurched” out of orientation by B—she has not yet had enough time to reorient and fully consider B’s question. Shortly thereafter, in (11:t), she seems to have caught her bearings and is able to offer a curt response. After a long pause at (11:x) (another point of zero momentum), subject A could have returned to her earlier helicopter idea. But it would seem that after B’s interruption (perhaps as a consequence of it), the idea

about helicopters has dropped completely out of her mind—her contribution is instead relevant to A’s discussion of sending things to Australia, coupled with the more distantly prior (but amusing and thus memorable) discussion of vampires.

Earlier in the same conversation, A makes an association (12:k) that, though relevant for *her*, causes a “lurch” which badly disorients B’s consciousness:

- (12)
- a(A) # I guéss we need to bring= some big nèts=.
- b(B) # <sup>1</sup>[okay.]<sup>1</sup>
- c(A) ... <sup>1</sup>[first of all.]<sup>1</sup>
- d(B) big nèts=.
- e # um= are there ány—
- f ... like—
- g ... wòmbàt ... tràps= ... ¿òut thére== for sále?
- h(A) ... yéah well,
- i we could lòok on the ínternè=t,
- j or call z—
- k ...(2.5) càll Jim Cárrey’s @¿friènds?@ # } A causes joint incoherence
- l ... did you èver wàtch ¿that móvie?
- m(B) n= .. whàt movie. ← B is disoriented
- n(A) .. um==
- o ... h= I càn’t even remémber.
- p ... it was—
- q # um=
- r ... it was a séries.
- s ... an=d,
- t ... an’ like the—
- u ... the sécond òne was abòut bát dung.
- v(B) ...(1.3) In Lìving ¿Cólor?
- w(A) nó=.
- x no-no-n—
- y ... <sup>1</sup>[it]<sup>1</sup> had Jim Cárrey in it.
- z(B) ... <sup>1</sup>[w—]<sup>1</sup>
- aa ... In Lìving Cólor.
- bb(A) # nó.
- cc .. Jim Cárrey.
- dd # nó=-no-no.
- ee # it was a s—
- ff # it was a móvie.
- gg ... <sup>1</sup>[[with the]]<sup>1</sup>
- hh(B) ... <sup>1</sup>[ó=h]<sup>1</sup> a móvie. ← B finally succeeds in orienting to A's discussion
- ii(A) ... twò sèries mòvie.

jj ... (1.6) bùt ányhow that's impórtant.  
 kk # únimpòrtant.  
 ll(B) ... okày.  
 mm(A) (smack)-# bùt .. um=  
 nn # .. I— .. yèah I guèss some n— .. nèts would be gò=d,  
 (*continues. . .*)

In (12:k), subject A draws an association between the wombat catching operation and the Jim Carrey movie “Ace Ventura: Pet Detective”. The relevant link exists only in A’s mind, however, and not in the conversation as a whole, so their joint coherence (between the two speakers’ mental representations, as described in Gernsbacher & Givón 1995) falls apart. B provides evidence for this with his curt, disoriented “nn what movie?” in (12:m), and due to A’s unskillful explanation in her following contributions (causing more confusion, for example, by using the word “series” to describe the two movies), B’s attempts at understanding A’s orientation are not successful until many seconds later, in (12:hh). After A’s forceful derailment in (12:jj-kk) of her own previous momentum, she finally returns to the matter first discussed in (12:a). As evidenced by her slow start in (12:mm-nn), including many devices which seem to offer a (perhaps unconscious) public account of her slow reorientation (“(lip-smack)-#”, “but ..”, “umm”, “I— ..”), the refocusing onto the ideas first verbalized in (12:a) is not a matter of simply “returning” from the Jim Carrey digression by just “popping” back up to the level of previous discussion (cf. Clark 1996). (12:a) is too far in the past, and the trajectory of talk has led them too far away to simply jump back, so a full reorientation of consciousness is in order.

The final pair of subjects we will examine exhibits, more explicitly than we have yet seen, the tendency to allow the *poetic function* of language to become the main force driving the ideational momentum of certain sections, as well as the tendency to diverge smoothly from “task-oriented” discussion into talk that is humorous, but irrelevant-to-the-task. In

the following example, the subjects have decided to employ a pack of dingoes to aid in the capture of the wombats:

- (13) *(subject pair #4)*
- a(A) # um==  
 b ... okày= so we hàve dínɡoes,  
 c .. dingo mu—  
 d ... dingo= ¿múzzles?  
 e .. and dingo léashes.  
 f # a' we pròb'ly also née=d,  
 g to get a little dingo fòo=d and dingo wáter.  
 h(B) I <sup>1</sup>[thìnk so.]<sup>1</sup>  
 i(A) # <sup>1</sup>[perhás a]<sup>1</sup> small dingo ¿dishbowl?  
 → j <sup>2</sup>[#]<sup>2</sup> y'know I saw the cú<sup>3</sup>[=test ... @dógfood bowl.@]<sup>3</sup>  
 k(B) <sup>2</sup>[@]<sup>2</sup> <sup>3</sup>[@@@@@@@@@@@@@]<sup>3</sup>  
 l ... téll me abòut it.  
 m(A) @@@  
 n # òh== Gó=d.  
 o .. ókay.  
 p # u=n,  
 q an' thén,  
 r ... we nèed to deci=de wàt to càpture them with.  
 s ... I think làrge bütterfly nèts. @@@  
 t # does ¿thát sound gòod?  
*(continues. . .)*

At the beginning of the example, subject A seems to attain a sort of “poetic momentum”, driving her to continue naming as many items as possible beginning with the word “dingo”. This continues until (13:j), when the idea of a “dingo dishbowl” suddenly reminds her of a personal experience completely unrelated to the task at hand, which she does not hesitate to share. In terms of “the object referred to”, (13:j) seems relevant, for the mention of having seen a dogfood bowl is surely facilitated by the immediately preceding mention of a need for a dingo dishbowl. But interactionally, her eye-gaze and gestures index her partner, and this combined with the emphatic intonation indicates that she means to step completely outside the bounds of the clearly demarcated “discussion of task at hand” framework. (13:j) is interesting in that it is generically relevant in a denotational

sense, and also socially relevant to the common ground that existed between A and B before they entered the experiment (they are friends who enjoy amusing each other), but it is meant to be completely irrelevant to the task at hand. In general, when participants believe themselves to be “officially” engaged in a particular project (the task of discussing how to capture the wombats), they will judge the appropriateness of their contributions based on that interaction frame. But for this pair of subjects, other interactional possibilities seem to be lurking beneath the surface at all times. (13:j) was irrelevant in terms of the *current* interactional framework, but it had a favorable “cognitive effect” (lots of giggling), because subject A was able to reorient her joint consciousness with B during the communication of (13:j) itself, using powerful intonational and gestural cues to do so. The above example seems to suggest a complication to Sperber & Wilson’s (1986, 1990; Wilson & Sperber, under review) model: a given contribution may have multiple, contrasting relevance relations with various aspects of the context in which it occurs. The momentum imparted by (13:j), or its “cognitive effect”, is independent of its “relevance” in terms of the interactional expectations at the moment before it was uttered.

The next several lines (13:k-n) seem to exhibit a tension between a desire to enjoy the humorous momentum imparted by (13:j) and an awareness of the need to return to the “serious discussion”. Immediately thereafter, in lines (13:o-q), subject A succeeds in reorienting her consciousness (and consequently, that of B) back to the directed task. In many other instances, however, their discussion smoothly diverges into humorous, highly “energetic” territory (that is, with high ideational momentum), and it takes a good deal longer for them to return to the task at hand. A typical pattern, illustrated well by (14) below, is that the slow divergence will begin with a comment that is, in spite of being highly relevant to the task, also highly humorous. The humorous momentum imparted by such a contribution then seems to lead the subjects down an involuntary path of creating more and



more humorous associations, leading them farther and farther astray from the task, until it all comes to a crash in a flurry of giggles, followed by a long pause, at which point they are finally ready to return to the directed task. (Note that, before the following example begins, the subjects have irreverently decided that a “family of wombats” consists of exactly twenty-seven creatures):

- (14) A # then we need twènty-sèven dínɡòe=s,  
òne for each wómbat.  
B ... if we have an unlímitèd ζbúdgèt?  
A # ... (*high pitch*.) n== ... I don' knów.  
B ... w<sup>1</sup>[e àre]<sup>1</sup> crack óperatives.  
A <sup>1</sup>[I don' —]<sup>1</sup>  
# yéah,  
.. but we're còmíng ìn by ζpássenger tràin=?  
do you rèally wanna have twènty-<sup>@</sup>sèven<sup>@</sup> ζ<sup>2</sup>[dínɡoes]<sup>2</sup> with you=?  
B <sup>2</sup>[@@]<sup>2</sup>  
A when <sup>3</sup>[you—]<sup>3</sup>  
B <sup>3</sup>[we'd]<sup>3</sup> hàve to drèss them ú<sup>4</sup>[==p an' —]<sup>4</sup>  
A <sup>4</sup>[@@@@]<sup>4</sup>@yéah.<sup>@</sup>  
# we'd hàve to get little s=úits for thèmm=  
do you know how .. hárd it is to fit a ζdóg into a súit? #  
B .. an' we'll have to keep them entertáí=ned.  
A @@@@<sup>@</sup>right.<sup>@</sup> #  
... what do you think they'd wànt to wá=tch. #  
B .. d'knòw=  
... the— the jòke is dògs playing póker ζis it nó=t? @@@<sup>1</sup>[@@@]<sup>1</sup>  
A <sup>1</sup>[@@@]<sup>1</sup>@#  
...(3.4) hm==. ← Long pause, followed by return to on-task discussion  
B ... bütterfly nets,  
... or gèntle dínɡoes.  
... Ì'll let yòu decíde. @@  
A # well we—  
... le— why` don' we ùse ... nón-gèntle dínɡoes to scáre them.  
B ... ókày.  
(*continues...*)

Climax of laughter



Long pause, followed by return to on-task discussion



For other similarly amusing and illustrative examples, I refer the reader to the appendix (p. 52). The last data example we will examine here concerns another instance of “poetic momentum” taking hold. The subjects are discussing whether or not to ask for

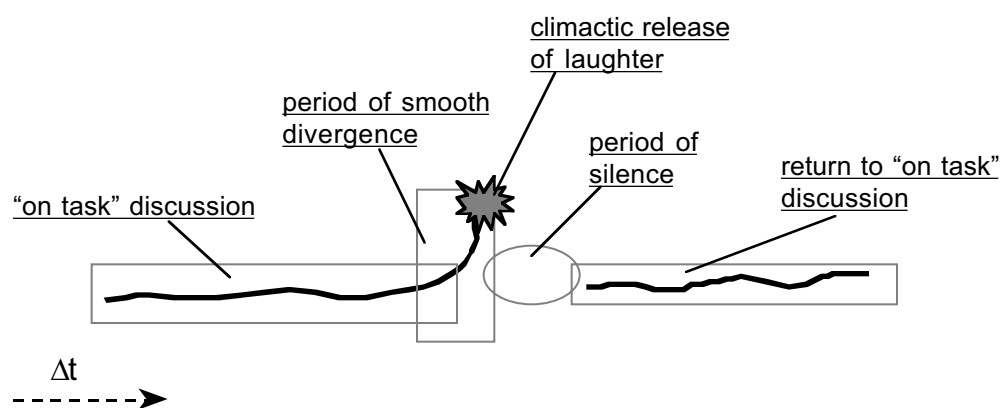
help from the inhabitants of Arlee's two houses (as stated before, a plastic model of the entire town sits before the subjects throughout the discussion):

- (15) B @the inhàbit@ants of hòuse thirty-fí=ve would be <sup>2</sup>[wìll]<sup>2</sup>ing ta— ... ta—  
 A <sup>2</sup>[@@]<sup>2</sup>  
 ... yéah <sup>3</sup>[I don' know how gòd their áim]<sup>3</sup> uh— is.  
 B # ... <sup>3</sup>[contribute ¿a little fíre-power?]<sup>3</sup>  
 A ... máybe it's like a thrée-year-old kíd,  
 and like a nínety-séven-year-old ... bli=nd ¿<sup>4</sup>[gránd]<sup>4</sup>mother?  
 B <sup>4</sup>[@@@]<sup>4</sup>  
 .. and nínety-seven ¿cáts? @@<sup>5</sup>[@]<sup>5</sup>  
 A <sup>5</sup>[@]<sup>5</sup>@ and nínety-seven cáts. #  
 B ... nìnety-seven cáts,  
 ... <sup>6</sup>[twènty-seven]<sup>6</sup> dín goes,  
 A ... <sup>6</sup>[nine—]<sup>6</sup>  
 ... @@ twènty-seven wómbats,  
 B ... and two of us.  
 A .. <sup>7</sup>[hm=== @@@ #]<sup>7</sup>  
 B .. <sup>7</sup>[hm=== @@ ... #]<sup>7</sup>  
 ...(2.7) uh= whàt is that knòt of wòd be<sup>@</sup>hínd thee um,<sup>@</sup>  
 ...(1.0) móvie house.  
 .. do you ¿knów?  
 A ... (*high pitch*:) u===nh,  
 ... n<sup>1</sup>[ó=.]<sup>1</sup>  
 B ... <sup>1</sup>[is]<sup>1</sup> that a ¿trée?  
 ...(1.1) could the wómbats escàpe ¿thát way?  
 (*continues. . .*)

As in the previous example, the subjects find themselves being driven forward by a continuously building humorous momentum, which in this case also involves the “poetic” repetition of numbered sets of people and animals, all stemming from B’s reaction to A’s conjecture about the newly invented “grandmother’s” age. During the periods of smooth divergence in these examples, the subjects (pair #4) exhibit a tremendous amount of joint coherence (cf. Gernsbacher & Givón 1995), even more so than did pair #2 during the “vampire episode”. As can be seen clearly in the example above, their “poetic divergence” ended with a remarkably synchronized and “sing-song” sounding “hmmmmm”, followed by laughter and a long pause, and the expected return to task-oriented discussion. These

humorous and “poetic” divergences, like the “vampire episode” of pair #2, illustrate that coherent conversation can consist just as easily of sections with amorphously, smoothly altering ideational trajectory, as of sections with more clearly demarcated points of shift in momentum (the traditional points of ‘topic shift’). The data presented here is not strange or “exceptional” in any way—a great deal of directed-task oriented conversation may emerge into reasonably hierarchical structure, but less constrained interactions, such as conversations at informal parties, are likely to exhibit a great deal more of the kinds of phenomena I have described here. A particular pattern that can emerge in a discussion belonging to the “task-oriented” genre, as illustrated especially well by the examples from pair #4, is that talk will diverge subtly away from the official business, continue building until some sort of breaking point is reached (in this case, a flurry of laughter), and then snap back, as shown in Figure 1 below. In other cases, such as the “vampire episode”, talk proceeds more or less within the contextual constraints of the directed task, but in a continually modulating “brainstorming” fashion, rather than in distinct steps.

**Figure 1:** The development and collapse of a gradual divergence in directed-task conversation



The claim I have hoped to support, by way of the lengthy discussion above, is that neither the traditional notions of ‘topic’, nor any of their more modern counterparts, can form a fundamental, universally applicable theory for the analysis of discourse structure. ‘Discourse topics’, in Chafe’s sense, are simply not a *requirement* for coherent language use. The concept of ideational momentum allows conversational trajectory, an emergent, jointly determined phenomenon dependent on the mutually dependent trajectories of individually communicated ideas, to proceed with varying degrees of alteration over time. Sudden changes in this trajectory (as well as the periods of zero magnitude associated with long pauses) may often be noted by analysts, who might then label these places as the points of ‘topic shift’, but this would be a simplistic, incomplete analysis, since the trajectory can also become altered quite drastically over a long period of time and without any sudden changes. In multi-party situations, the multiple points of view will result in each participant interpreting the current talk and current common ground in slightly different ways. Their individual contributions involve interpreting and incorporating the meanings they construe the other participants to have intended, rather than just their own. Thus discussion will drift naturally, often as an unintended consequence, but at other times on purpose, when skillful conversationalists use the natural drift to bend discussion toward their personal goals. Speakers have diverse, constantly changing goals, which they attempt to fulfill in conversation by finding the most opportune points when the momentum of ideas is most compatible with their plans—designed on the fly *during* talk, not before—to adjust discussion toward a goal they may have just now focused on. Sections of conversation that emerge into something like a ‘topic’ in Chafe’s (1994: 121) sense have two added constraints: they must be demarcated by clear beginnings and ends, and participants must contribute in a manner that is not only sequentially relevant but also pertains to a set of notions which the participants agree form the ‘topic’, the range of which needs to be

brought back repeatedly to the foreground of the participants' consciousnesses. 'Topic' is thus a convenience, a socially governed device that may vary across languages and cultures, which allows for more efficient, complete discussion of specific groups of ideas. It takes extra work to bring 'topics' about, and they may not always go as planned, as is clear from the data presented here.

**Epilogue: Historical influences responsible for the traditional notion of 'topic'**

We have illustrated with various examples that the traditional notion of 'topic' cannot always account for the flow of ideas in what seem to be perfectly coherent conversations. The claim that 'topics' form a fundamental aspect of *all* discourse structure, situated "above sentence level" and below the level of the "entire discourse", is therefore not viable. But what caused the emergence of the traditional notion of 'topic'? First and foremost is the influence of the eons-old text-based tradition. Any sample of written discourse obviously masks most of the conscious processes that went into its preparation—it acquires organized, *static* structure due to the author's imposing upon it his or her unified vision for how it should exist as a whole. In other words, the author can present a set of discrete 'topics' which succinctly cover the ideas the author wants to express, in precisely the order and grouping desired, without modification by other parties, exactly to the point at which the author is satisfied. The reader, if committed to understanding the author's ideas, must conform to the author's presentation and cannot alter it through interjected comments. But even when reading, ideational momentum has influence: while interpreting the author's written ideas, the reader will be constantly forming links to various other related ideas. Some of these associations may be quite irrelevant to the author's specific presentation, and it takes special effort to remain concentrated on the specific relevance relations the author is demanding the reader focus on.

In addition to the various associations triggered by ideas presented in the writing at hand, many readers will find themselves unable to resist thinking of unrelated goals or desires (especially if the reading fails to engage their interest)—the foregrounding of certain ideas in the text or the reader’s own free associations can at any time impart enough momentum to send the reader off on an extended chain of sequentially linking ideas, meanwhile the reader continues scanning the words on the page without realizing that he or she is no longer processing them. A similar “daydreaming” effect will typically occur from time to time to students listening to a lecture, or more rarely, to a participant in a conversation (with potentially dire social consequences!).

Speech and, in particular, unplanned conversation (as opposed to lectures, etc.) is constructed in emergent, opportunistic fashion in real time, so it is especially suited to revealing the nature of the “flow of consciousness” (cf. Chafe 1994). Chafe (1997) puts it, “conversational language reflects the natural workings of the mind more closely than language of any other kind . . . . People do not thereby create a static object, but are engaged in a constant interplay of constantly changing ideas.” Attempting to apply traditional methods of text-based discourse analysis to the study of conversation or any other spontaneously produced data is therefore absurd in the extreme. Imagine the reverse situation: if a highly developed system for analyzing spontaneous, multi-party conversation were applied to written text, the novice analyst would assume the text to have been written feverishly in quickly fading ink by multiple pens at once, with their owners sometimes fighting for control of the page, sometimes writing on top of each other’s words, and not always even looking at what each other had written before it faded away.

In this paper I have focused on discussing instances of the failure of ‘topic’ in spontaneous conversation, perhaps underplaying the fact that even in these same dialogues, there were sections which would not have posed so many problems for a more traditional

analysis. Human experience in general seems to become the target of much talk (but certainly not all), and the way in which we remember our experiences may actually strongly *favor* the emergence of topics in conversation, if Chafe is right. “It seems preferable to think of [experience as being stored in memory] in terms of coherent spaces, coherent temporal continuities, coherent configurations of characters, coherent event sequences, and coherent worlds” (Chafe 1994: 138). Assuming that experiences are stored this way, their description would naturally take on an organized structure to match the structure of the spaces, event sequences, and so on themselves, and such descriptions would tend to be monologic (given the autonomy of every human’s experiencing self). We have already described how monologue can relatively easily be organized into a topic structure, but Chafe (1997) describes how even multiple individuals, all having experienced the same event, can succeed in weaving together a “polyphonic” narrative that succeeds, for a time, in conforming to a ‘topic structure’.

But if such descriptions of human experience are to emerge as clear topics, they must be sanctioned by the current interactional expectations. In the realm of spoken language, the diversity of interactional frames and expectations that speakers can mutually communicate under is limited only by the diversity of human life. Indeed, many of these culturally developed, semi-conventionalized systems of expectations have the power to constrain ideas into more or less rigid bounds of discussion. True institutional frameworks are the most constraining, but even in an unconstrained conversation among English-speaking friends, a participant may begin “telling a story” (of an *experience*) which will pull the other participants into an interactional frame where they are expected to allow the speaker to craft and complete the narrative. Such interactional expectations may constrain ideas to more or less narrow trajectories, but we must note that they are socially-defined,

culturally variable phenomena and should not be treated as if they were *cognitive* requirements for communication.

The constraining effect of such culturally defined interactional frames may be very helpful indeed for facilitating efficient discussion of complex ideas in their entirety, providing a crucial organizational basis for communication in situations where such organization is needed. Such needs (along with types of communication which lend themselves naturally to organized hierarchical structure, such as the narration of human experiences) inevitably lead to plenty of documented conversations that appear to cohere to fairly strict ‘topic structure’—these should not be ignored, but neither should they be taken as representative of a default structural base that is fundamental to all language use. The myriad socio-culturally defined interactional frames, which may temporarily constrain ideational trajectory into usefully narrow paths, are continually counterbalanced by a universal human cognitive creativity which attempts to send discourse willy-nilly in unpredictable, diverse directions. While some interactional frames may place heavy expectations on what is relevant and force contributions to conform to certain frameworks, other interactional frames place fewer constraints on relevance, often allowing normal discourse to proceed in a manner which defies any traditional notion of ‘topic’. Whenever two or more participants are active and contributing significantly, their joint ideational trajectory may smoothly diverge away from earlier paths (perhaps with periods of joint incoherence between the participants’ own individual trajectories). Therefore, even within the wider contextually and interactionally defined conditions of discussing completion of a task (such as the “wombats’ capture”), participants can communicate in a manner that flouts the notion of ‘topic’.



## Transcription conventions

- Symbols defined by me: ‘ ı ? ( )
  - Symbols defined by McNeill Lab conventions, University of Chicago: # { }
  - All other symbols and definitions are paraphrased from Wallace Chafe (1994 and 1997), (some definitions have been elaborated; definition for “secondary accent” is considerably altered).
- 
- ˊ primary accent (a pitch deviation accompanied by loudness or lengthening)
  - ˋ secondary accent (for syllables with qualitatively weaker-than-primary stress, including lengthened syllables with such stress) (example: ‘ínternè=t’)
  - .. a very brief (on the order of 0.1 seconds or less) pause or break in timing
  - ... a “typical” pause (between around 0.1 and 0.7 seconds for most speakers, at times up to one second in places where this is still “typical” and unmarked)
  - ...(2.4) a longer pause (measured in seconds)
  - # a pause coinciding with an audible intake of breath
  - ’ marks points where letters have been omitted from normal orthography, in order to represent more accurately the speaker’s pronunciation (beyond a generic reading in American English); also used for standard spellings of contractions
  - = lengthening of the preceding vowel or consonant sound (of the pronounced word, ignoring “silent” elements in the orthography) (examples of this: ‘there=’ ‘yeah=’ ‘uh=’)
  - , marks the end of an intonation unit as having a terminal contour which is not sentence-final
  - . marks the end of an intonation unit as having a sentence-final falling pitch
  - marks an intonation unit or word as aborted or suspended
  - ı ? encloses stretches of speech that have a rising pitch contour typical of a yes-no question (includes many instances of “up-talk”)
  - @ a pulse of laughter or giggling
  - @ @ encloses words spoken while laughing or giggling
  - <sup>2</sup>[ ]<sup>2</sup> a segment of speech that overlaps with another segment uttered by a different speaker (indexed by common superscripts; when there is a period of silence directly before overlapping speech begins, both speakers are coded with a pause, but it is placed outside the brackets in order to make explicit the areas of overlapping speech)
  - ( ) encloses a description of a non-speech sound, or a description (in italics) of a relevant characteristic of the immediately following or preceding speech.
  - { } encloses a doubtful transcription

**Appendix: Full data examples, including some not discussed in the text**

*Subject Pair #1*

(W-4: 06:50:17 -- 08:21:15)

- A ... (4.5) okáy.  
 .. so Í think what we should dò= is jus' —  
 .. I think the pèn idea is a ÿgóod one?  
 ... (1.2) but I think we should fix it such that like,
- B ... then they háve to go to ÿAustrália?  
 A ... yeah they hàve to go bàck to Austrália.  
 ... (1.5) okay,  
 .. y'knów what we'll dò=,  
 well thís's what we'll dò.  
 ... # the pèn idèa is góod.  
 .. so yóu'll be òut at the frònt,  
 with yer pót an' yer stíck,  
 màking lots of <sup>1</sup>[nó=ise.]<sup>1</sup>
- B <sup>1</sup>[yeah]<sup>1</sup>  
 A ... an' thèn=,  
 wé'll scàre them out the frònt.  
 ... out the bàck. (a self-correction)  
 # an' thèn= ùm==  
 ... (1.8) (smack) we'll bùild like,  
 ... a ÿpén=?  
<sup>1</sup>[out of]<sup>1</sup> these ÿbóulders?
- B <sup>1</sup>[s==]<sup>1</sup>  
 sémicircle,  
 ... yeah.
- A {w— ng—}  
 ... yéah.  
 .. but it'll be clósed óff.  
 .. an' thèn what wè'll dò=,  
 # is we'll jùs=t .. sort of try to ÿróund them úp?  
 ... into this==
- B yéah.  
 A ... like wè'll—  
 ... we'll sort of màke like,  
 .. a páthwáy,  
 with like a big ... círcle at the ènd of it.  
 ... an' <sup>1</sup>[then we'll try' to drive—]<sup>1</sup>
- B <sup>1</sup>[an' then we'll clóse]<sup>1</sup> off—  
 okáy,  
 .. <sup>2</sup>[we'll clóse off—]
- A .. <sup>2</sup>[an' then we'll clóse off the páthway]
- B .. ókay.  
 .. so we gót'em—]<sup>2</sup>  
 an' then we'd]<sup>2</sup> hàve .. áll the wòm bats <sup>3</sup>[in thére.]<sup>3</sup>  
<sup>3</sup>[in thére.]<sup>3</sup>
- A # an' thèn we'll pèn them ùp there,  
 .. becàuse they're fát.  
 .. they càn't jump óut or a<sup>1</sup>[nyth]<sup>1</sup>ing.
- B <sup>1</sup>[yéah.]<sup>1</sup>
- A .. so= ònce they're thére,  
 .. we're prétty sùre they'll be okáy.  
 # an' só==,  
 # whíle,  
 ... since yóu're out frònt doing nothing but bànging your pót .. <sup>1</sup>[nn]<sup>1</sup> yer sh}—  
 .. <sup>1</sup>[yéah.]<sup>1</sup>
- A .. with your stíck,  
 B well Í'm <sup>2</sup>[gonna]<sup>2</sup> be rùnnìng <sup>3</sup>[thróugh.]<sup>3</sup>  
 A <sup>2</sup>[you'll—]<sup>2</sup> <sup>3</sup>[you'll—]<sup>3</sup> you'll— you'll come @back óut@ <sup>4</sup>[when—]<sup>4</sup>  
 B <sup>4</sup>[yéah.]<sup>4</sup>
- A .. when thèy're thére.  
 # and,  
 ... yóu kèep an èye on thèm an' Í'll go with= the péople in hòuse—  
 .. fròm e—  
 w— thirty-thrèe or thirty-five,  
 # an' we'll cáll up like,  
 ... (1.2) ánimál contròl 'r whatever.  
 ... an' thèn  
 ... we'll==,

- ... or=,  
 ... y'know.  
 ... the authórites in Austrália n' we'll make a phóné cáll an' say we have these wómbàts that need to go back to Austrália or—  
 # (*quite loud*:) or we'll cáll a local zóo.  
 ... (1.1) an' júst be like we've càught these wómbàts and we néed you to còme táke thè= like bàck to Austrália or whatever.
- B they néed a—  
 .. yeah.  
 ... ánimál= contról.  
 ... they= còme with their lárge—  
 ... thèir .. cáge,
- A ... yéah.  
 ... an' thèn they take the wómbàts away  
<sup>1</sup>[an' they—]<sup>1</sup>
- B <sup>1</sup>[an' then]<sup>1</sup> they—  
 they pút the <sup>2</sup>[thing]<sup>2</sup> around its néck,
- A <sup>2</sup>[an' then—]<sup>2</sup>  
 ... r—
- B ... an' thèy can pút it in a= .. thínng.  
 A ... ríght.  
 an' thèn= sò=,  
 .. thèn=,  
 .. thèn áll b—  
 .. b' [àsic]<sup>1</sup> ally áll we have to do is júst gét them òut into the pén=,
- B ... <sup>1</sup>[take—]<sup>1</sup>  
 A an' thèn we call ànimál contról.  
 ... or the zóo.  
 .. an' thèn=,  
 thèy còme an' tàke them awáy.  
 (*continues*..)

*Subject Pair #1, continued*

(W-4: 08:51:14 -- 09:24:05)

- A so Ì sáy we cáll the zòo,  
 an' thèn=,  
 ònce we hàve the marsúpials,  
 they'll còme an' tàke'em awáy.  
 ... ÷sound góod?
- B ... (1.7) hm=====
- A ... (3.5) (*snorted, voiceless*:) @
- B ... ònce we constrúct a bòx,  
 ... outta the dóo=rs,  
 ... (1.3) of these pèople's hóuses,
- A ... constrúct a ÷bòx?  
 # well <sup>1</sup>[whát would yòu—]<sup>1</sup>
- B <sup>1</sup>[like we could ú]se thèse—  
 (*voiceless*:) @ <sup>2</sup>[@]<sup>2</sup>
- A <sup>2</sup>[sée]<sup>2</sup> but th—  
 ... the whóle pòint is is that the thínng ìs,  
 .. we still nèe=d a wáy to get them óutta <sup>3</sup>[here.]<sup>3</sup>
- B <sup>3</sup>[thát]<sup>3</sup> you—  
 ... you shíp'em in the bóx.  
 A ... (1.3) (*quite loud*:) you réally thínk thèse wómbàts are gonna go to Austrália in a bó=x you màde @out of ÷ó=ld dóo=rs?@
- B ... <sup>4</sup>[I— I don' knów.]<sup>4</sup>
- A # <sup>4</sup>[yòu nót being]<sup>4</sup> a cárpenter ÷at áll?  
 nó you need profèssionals to còme tàke'em awáy.  
 (*continues*..)

*Subject Pair #2*

(W-D11: 02:49:16 -- 04:24:04)

- A (click)-# so=,  
 I guéss—  
 .. um= ... (1.7) (*swallows during pause*)  
 # I guéss we need to brìng= some big nèt=.
- B # <sup>1</sup>[okay.]<sup>1</sup>
- A ... <sup>1</sup>[first of all.]<sup>1</sup>
- B big nèt=.  
 # um= are there ány—  
 ... like—  
 ... wòmbàt ... tràps= ... ÷òut thère== for sále?

- A ... yéah well,  
we could lòok on the internè=t,  
or call z—  
...(2.5) càll Jim Cárrey's @\_frìends?@ #  
... did you èver wàtch ìthat móvie?
- B n= .. whàt movie.
- A .. um==  
... h= I càn't even remémber.  
... it was —  
# um=  
... it was a séries.  
... an=d,  
... an' like the—  
... the sécond òne was abòut bát dung.
- B ...(1.3) In Lìving ìCólor?
- A nó=.
- B no-no-n—  
... <sup>1</sup>[it]<sup>1</sup> had Jim Cárrey in it.
- B ... <sup>1</sup>[w—]<sup>1</sup>  
... In Lìving Cólor.
- A # nó.  
... Jim Cárrey.  
# nó=no-no.  
# it was a s—  
# it was a móvie.  
... <sup>1</sup>{with the}<sup>1</sup>
- B ... <sup>1</sup>[ó=h]<sup>1</sup> a móvie.
- A ... twò séries móvie.  
...(1.6) bùt ányhow that's impórtant.  
# únimpórtant.
- B ... okây.
- A (smack)-# bùt .. um=  
# .. I— .. yèah I guèss some n— .. nèts would be gò=d,  
... àn=d maybe some protéctive clòthing  
sò= the bàts dòn't— # um= ... scrápe us.
- B # well màye we could get rèally bìg ìbágs=?  
# and like ... còver= the ìbàck dòors?
- A ... yèah,  
... <sup>1</sup>[yeah.]<sup>1</sup>
- B ... <sup>1</sup>[like]<sup>1</sup> .. complètely,
- A ... m-hm.
- B # and thàt would be their ònly way òut.
- A ... rìght.
- B ... and thèn they would fly^= into the bà=gs=.
- A ... rìght.
- B # (loud and high pitched:) òr nèts=,
- A ... <sup>1</sup>[m-hm.]<sup>1</sup>
- B ... <sup>1</sup>[#]<sup>1</sup> 'cause ìf—  
# 'cause ìf um=  
...(1.1) 'cause they could sée through nèts.
- A ... m-hm.
- B ... an=d,  
... ìf {they}—  
... ìf it was just a ... blàck bá=g ... <sup>1</sup>[òut]<sup>1</sup> thèrè they wòuldn't fly ìnto it.  
... <sup>1</sup>[rìght.]<sup>1</sup>
- A ... thát makes sènsè.
- B ... (breathy:) so==,
- A (smack) <sup>2</sup>[eh—]<sup>2</sup>
- B ... <sup>2</sup>[um=]<sup>2</sup>
- A ...(1.3) eh= wè could do a little rèsèarch on wòmjàts.  
... before we go ... <sup>3</sup>[to Árlee.]<sup>3</sup>
- B # <sup>3</sup>[yeah.]<sup>3</sup>
- A #—
- B (exhale) ... like we could ... lìne the nèts= .. with ... báit or something.  
(continues. . .)

*Subject Pair #2, continued*

(W-D11: 05:42:21 -- 08:11:08)

- B ... # an' máybe y'know while we're thèrè we còuld .. y'know,  
# stày with thèm an',  
... pàrty with thèm an',  
... èat <sup>1</sup>[their fóo=d an']<sup>1</sup>
- A <sup>1</sup>[bring a few—]<sup>1</sup> ... bèers,
- B ... fr— yèah bring a few b—

.. ingratiàte oursèlves with thèe uh,  
# with the tòwn= ... prèacher,  
A ... <sup>1</sup>[m-hm.]<sup>1</sup>  
B ... <sup>1</sup>[#]<sup>1</sup> with a few bèers,  
... <sup>2</sup>[@@]<sup>2</sup> @ ... #  
A ... <sup>2</sup>[@@]<sup>2</sup> ..... #  
B mày—  
.. I don' know .. maybe we could gèt some diví=ne help,  
.. to gèt rid of the wó=mbàts=  
# <sup>1</sup>[m—]<sup>1</sup>  
A ... oh <sup>1</sup>[y]<sup>1</sup>éah.  
yòu're Cáholic áren't you.  
B # ... yéah.  
we could hà—  
... like wè could .. s=èe if they had any hóly water on hànd an',  
A ... @  
B ... {w}ait .. màybe they're demónic @ .. wòm=bàts@ <sup>1</sup>[@@@@]<sup>1</sup>  
A ... <sup>1</sup>[@@@@]<sup>1</sup>  
... @ and crú@cifixes.  
B ... @  
A ... #—  
B ... # and crúcifixes.  
.. and gár<sup>1</sup>[lic.]<sup>1</sup>  
A <sup>1</sup>[thà]<sup>1</sup>t would be rèally gòod.  
B # gárlic we could ùse as bàit,  
mày<sup>2</sup>[be wòmàts like gárlic.]<sup>2</sup>  
A <sup>2</sup>[yéah I b— .. I bèt th]<sup>2</sup>ere're vâmpires living in the—  
... àbàndoned movie theater.  
B vâ<sup>3</sup>[mpire wòmàts.]<sup>3</sup>  
A # <sup>3</sup>[ 'cause you knów where— #]<sup>3</sup> where there're bàts= there're vâmpires tóo.  
... an' ònce we find their còffins we can búrn'em.  
B ... yés==.  
A or expóse'em to the lìght of dây.  
#  
B ... yés==.  
... <sup>1</sup>[àbso]<sup>1</sup>lùtely.  
A ... <sup>1</sup>[yeh.]<sup>1</sup>  
<sup>2</sup>[... (smack)]<sup>2</sup>  
B <sup>2</sup>[#]<sup>2</sup> becàuse y'knòw,  
# vâmpires and wòmàts are wònt to live in .. old àbàndoned mómie theaters.  
A <sup>3</sup>[.. m-hm.]<sup>3</sup>  
B <sup>3</sup>[#]<sup>3</sup> in smàll tòwn= USÀ.  
A ... @  
B ... @  
# um=,  
A ... or—  
... or hélícòpters.  
# maybe we could just còver the entíre—  
# like using hélícòpters we could còver the entíre—  
# tòwn with a hùge nèt.  
B # máybe so.  
.. (smack) (*high pitch*:) um==,  
.. (smack) <sup>1</sup>[why' are we sènding th]<sup>1</sup>em bäck to Austrália,  
A <sup>1</sup>[wòuldn't that be ùfún?]<sup>1</sup>  
B why càñ't we just kíl them àll=  
A ... (1.4) I don' knòw.  
B # why' can't we júst like <sup>2</sup>[...]<sup>2</sup> búrst in the mómie thèater with bàrrèl<sup>3</sup>[s smóking.]<sup>3</sup>  
A <sup>2</sup>[#]<sup>2</sup> <sup>3</sup>[issues fro]<sup>3</sup>m hédquarters.  
B ... @-#  
.. òh= okây.  
... so we hàve to send them bäck.  
A ... (1.9) maybe they líke .. vâmp<sup>1</sup>[ires ìn]<sup>1</sup> .. Austrália.  
B <sup>1</sup>[so==,]<sup>1</sup>  
# (*high pitch*:) n== ... màybe they dó.  
... # maybe we can {sènd} the vâmpires bäck,  
# with the wó=mbàts.  
... (3.3) but,  
... (1.2) wè digrèss. @<sup>1</sup>[#]<sup>1</sup>@@#@  
A <sup>1</sup>[@]<sup>1</sup>  
B ... (*high pitch*:) um=,  
... (2.3) n== (three tongue clicks)  
A ... this tòwn is pretty bóring.  
B ... yéah.  
... (1.2) # thère's conìstrúction you sáid?  
A ..uh-huh.  
B but àll I sèe is líke .. rúbble in the ròad,  
.. so whát are they dóing. @@#  
A @@ ... (1.3) #

B màybe we can tàke the big ròcks an' húrl them at the wómbàts.  
 A @ ... <sup>1</sup>[@]<sup>1</sup>  
 B <sup>1</sup>[@]<sup>1</sup>@@#  
 ... an' knòck them uncòncious or sòmething.  
 an' whíle they're out còl=<sup>2</sup>[d we could—]<sup>2</sup>  
 A <sup>2</sup>[#@#]<sup>2</sup>  
 B ... stúff them into a sáck an'—  
 A cápture them.  
 B ... <sup>3</sup>{capture'em}<sup>3</sup>  
 A ... <sup>3</sup>[yeah]<sup>3</sup> we'll défínitely need ... glòves for thís.  
 # óh .. we—  
 B ... ò=h <sup>4</sup>[glòves.]<sup>4</sup>  
 A # ... <sup>4</sup>[so, # ]<sup>4</sup> whó's gonna ... dò whát.  
 .. I mèan are yòu gonna s=— .. stànd in the bàck or—  
 .. whò's gonna gò # into the frónt.  
 B # um=  
 A .. <sup>1</sup>[n' whò's gonna stànd in the bàck.]<sup>1</sup>  
 .. <sup>1</sup>[I think— .. I think you]<sup>1</sup> should gò into the frónt because=  
 B .. yòur fáce would just scáre them.  
 A ... @ ... <sup>2</sup>[@@@@@]<sup>2</sup>  
 B @<sup>2</sup>[@@@@@]<sup>2</sup>  
 (continues. . .)

*Subject Pair #2, continued* (W-D11: 11:35:15 -- 12:27:13)

A ... # ... and um=  
 ...(1.3) # àfter we gò to those hóuses,  
 .. we first ..(1.1) put néts ... over the bàck dòors,  
 .. and then I'll walk bàck to the frónt.  
 .. and thèn I'll go in.  
<sup>1</sup>[#]<sup>1</sup>  
 B <sup>1</sup>[#]<sup>1</sup> ... okày.  
 # with gùns blázing of còurse.  
 A ... yéah.  
 .. with .. tórches n' dó=<sup>2</sup>[gs.]<sup>2</sup>  
 B <sup>2</sup>[tór]<sup>2</sup>ches an'—  
 .. an' pítchforks n'—  
 A .. @  
 B ... for the vámpires of còurse.  
 A ..yéah.  
 ... and hòly wàter.  
 B ... and hòly wàter.  
 A # ...(1.7) oh lóok.  
 .. the chùrch is òpen.  
 B ...(2.3) # ...(2.6) that's— ... that's a bàd thíng.  
 ... they— ... they might let Gód out.  
 A ... @  
 B @@#  
 ... If they leave the dóo=rs open too lóng.  
 A ... @##  
 B (exhale)  
 ... the hòly spírít might just .. “wóop” .. fly` out the dóor,  
 and .. óops .. it's gòne.  
 # ... um== (exhale)  
 ...(2.6) # (loud sigh)  
 ...(2.3) is thís= the sèven minute ù,lúll= ... in the conversàtion?  
 A @@  
 B @@@@  
 A @@  
 (continues. . .)

*Subject Pair #3* (W-D20: 00:54:09 -- 01:07:15)

A ... so we gò to hóuse thírty-thrèe.  
 B ... okày.  
 A ... we tàlk to the pèople <sup>1</sup>[there.]<sup>1</sup>  
 B <sup>1</sup>[okày.]<sup>1</sup>  
 A ... alright.  
 B ... uh-hùh.

- A ... we do the sàme thing for house thirty-<sup>2</sup>five.  
 B <sup>2</sup>[(click) w— what are we ás]<sup>2</sup>king them.  
 A we'll knòw thirty-five—<sup>2</sup>  
 ... (1.1) hòld on one <sup>3</sup>[sècond.]<sup>3</sup>  
 B <sup>3</sup>[álrìght.]<sup>3</sup>  
 A ... we'll knòw thirty-fíve because of the constrúction out front.  
 B ... o<sup>4</sup>[==]<sup>4</sup>h.  
 A <sup>4</sup>[see.]<sup>4</sup>  
 B ... okay.  
 A ... thàt's thirty-fíve.  
 (continues. . .)

Subject Pair #4 (W-D4: 04:01:08 -- 04:27:00)

- A # um==  
 ... okày= so we hàve dingoés,  
 .. dingo mu—  
 ... dingo= ìmúzzles?  
 .. and dingo léashes.  
 # a' we pròb'ly also née=d,  
 to get a little dingo fòo=d and dingo wáter.  
 B I <sup>1</sup>[think so.]<sup>1</sup>  
 A # <sup>1</sup>[perháps a]<sup>1</sup> small dingo ìdishbòwl?  
<sup>2</sup>[#]<sup>2</sup> y'know I saw the cú<sup>3</sup>[=test ... @dógfood bowl.@]<sup>3</sup>  
 B <sup>2</sup>[@]<sup>2</sup> <sup>3</sup>[@@@@@@@@@]<sup>3</sup>  
 ... téll me abòut it.  
 A @@@  
 # òh== Gó=d.  
 .. ókay.  
 # u=n,  
 an' thén,  
 ... we need to deci=de wàt to càpture them with.  
 ... I think làrge bútterfly nèt. @@@  
 # does ìthát sound gòod?  
 (continues. . .)

Subject Pair #4, continued (W-D4: 04:52:25 -- 05:34:11)

- A # then we need twènty-sèven dingoè=s,  
 òne for each wómbat.  
 B ... if we have an unlímited ìbúджет?  
 A # ... (high pitch:) n== ... I don' knòw.  
 B ... w<sup>1</sup>[e àre]<sup>1</sup> crack óperatives.  
 A <sup>1</sup>[I don'—]<sup>1</sup>  
 # yéah,  
 .. but we're còmìng ìn by ìpàssenger tràin=?  
 do you réally wanna have twènty-<sup>2</sup>sèven<sup>2</sup> ì<sup>2</sup>[dìngoes]<sup>2</sup> with you=?  
 B  
 A when <sup>3</sup>[you—]<sup>3</sup>  
 B <sup>3</sup>[we'd]<sup>3</sup> hàve to drèss them ú<sup>4</sup>[==p an'—]<sup>4</sup>  
 A <sup>4</sup>[@@@@@]<sup>4</sup>@yéah.  
 # we'd hàve to get little s=úits for thèmm=  
 do you know how .. hárd it is to fit a ìdóg into a súit? #  
 B .. an' we'll have to keep them entertái=ned.  
 A @@@@ríght.@ #  
 ... what do you think they'd wànt to wá=tch. #  
 B .. d'knòw=  
 ... the— the jòke is dògs playing póker ìis it nó=t? @@@<sup>1</sup>[@@@@]<sup>1</sup>  
 A <sup>1</sup>[@@@@]<sup>1</sup>@#  
 ... (3.4) hm==.  
 B ... bútterfly nèt,  
 ... or gèntle dingoés.  
 ... ì'll let yòu decíde. @@  
 A # well we—  
 ... le— why' don' we ùse ... nón-gentle dingoés to scáre them.  
 B ... ókày.  
 (continues. . .)

*Subject Pair #4, continued*

(W-D4: 06:12:01 -- 07:02:19)

- A ... wéll .. but—  
(exhale) I don' knó—  
... you sée like—  
... we don' know ánything about these pèople in houses thirty-thrèe ÷ and thirty-five?
- B ... so they're júst across ÷ the stréet?
- A ... yeah.  
... that's the ònly reason we're—why— ... why we're tálking to them.
- B ... I— I<sup>1</sup>[think I—]<sup>1</sup>
- A ... <sup>1</sup>[I would r]àther almost pút them— ... out of the picture en<sup>@</sup>tírely.<sup>@</sup> @@
- B ... wéll—  
... I knów but I thínk I sèe a trophy móosehead back there.  
so máybe,  
... uh==
- A ... a— ÷ are you sérious?
- B ... @@<sup>@</sup>no.<sup>@</sup> #<sup>1</sup>[@@@# .. @ .. @]<sup>1</sup>
- A ... <sup>1</sup>[@@@# .. @=<sup>@</sup>@@]<sup>1</sup>
- B ... the inhàbit<sup>@</sup>ants of hòuse thirty-ff=ve would be <sup>2</sup>[will]<sup>2</sup>ing ta— ... ta—  
<sup>2</sup>[@@]<sup>2</sup>
- A ... yéah <sup>3</sup>[I don' know how gòod their áim]<sup>3</sup> uh— is.  
# ... <sup>3</sup>[contribute ÷ a little ffre-power?]<sup>3</sup>
- A ... máybe it's like a thrée-year-old kíd,  
and like a ninety-séven-year-old ... bli=nd ÷ <sup>4</sup>[gránd]<sup>4</sup>mother?
- B ... and nínety-seven ÷ cáts? @<sup>5</sup>[@]<sup>5</sup>  
<sup>5</sup>[@]<sup>5</sup>@ and nínety-seven cáts. #
- A ... nínety-seven cáts,  
... <sup>6</sup>[twènty-seven]<sup>6</sup> díngees,
- A ... <sup>6</sup>[nine—]<sup>6</sup>  
... @@ twènty-seven wómbats,
- B ... and two of us.
- A ... <sup>7</sup>[hm=== @@@ #]<sup>7</sup>
- B ... <sup>7</sup>[hm=== @@@ ... #]<sup>7</sup>  
...(2.7) uh= wàt is that knòt of wòod be<sup>@</sup>hínd thee um,<sup>@</sup>  
...(1.0) móvie house.  
... do you ÷ knów?
- A ... (high pitch:) u===nh,  
... n<sup>1</sup>[ó=.]<sup>1</sup>
- B ... <sup>1</sup>[is]<sup>1</sup> that a ÷ trée?  
...(1.1) could the wómbats escàpe ÷ thát way?  
(continues. . .)

*Subject Pair #4, continued*

(W-D4: 08:37:28 -- 09:12:20)

- A ... I would like a hélícòpter,  
... ròof—  
... lì=ke a hélícòpter ÷ ròoftop {capture}?  
they would like .. cóme out .. this= trap ÷ dóor or something?  
# an' we'd .. pick them ùp by ÷ hélícòpter?
- B ... we<sup>1</sup>[ll=.]<sup>1</sup>
- A ... # <sup>1</sup>[so—]<sup>1</sup>
- B the móvie theater is prètty run-dówn.  
màybe we should jus' help the wómbats rénovà=te n',  
... try' to br<sup>2</sup>[ing some]<sup>2</sup> cúlture to this smàll tówn. @<sup>3</sup>[@]<sup>3</sup>
- A ... <sup>2</sup>[óh=.]<sup>2</sup> <sup>3</sup>[y]<sup>3</sup>éah=.
- ... we— .. we could shòw *Airáune*.  
... <sup>4</sup>[èvery n]<sup>4</sup>íght.
- B ... <sup>4</sup>[@@@]<sup>4</sup>  
... we cóu=ld.  
... wómbats doing the vóice-over. @@
- A ... (breathy:) óh==.
- B ... (high pitched and whiny:) what's that cháttering nòise. <sup>1</sup>[@@@]<sup>1</sup>
- A ... <sup>1</sup>[@ ... @]<sup>1</sup>@@@ ... #  
... (loud:) óh== my éars.  
...(1.2) (very quiet:) yéah.  
... (very quiet:) thà'd be áwesome. #
- B ... (1.0) so have we ÷ compléted—?  
... um=  
... th— the ÷ míssion do you thínk? or=,  
... do you wàнна rèthink thee ah—  
... do you wàнна do the Sànta Claus bà=g an' the ÷ fóam?  
(continues. . .)



*Subject Pair #4, continued*

(W-D4: 09:37:17 -- 10:35:23)

- B ... are we in *¿*Austrália?  
why` do we have wómbats hère.
- A # ... thée== uh— ... vw— wómbat—  
... this—  
... I thínk this is a smàll tòwn in América an' the wòmbats jus' cá=me,  
... fròm Aust<sup>@</sup>rália<sup>@</sup> somehow.
- B ... those dàmn ímmiggants jus',  
... <sup>1</sup>[còme to]<sup>1</sup> take our jó=bs, <sup>2</sup>[@@]<sup>2</sup>
- A ... <sup>1</sup>[m— @]<sup>1</sup>  
<sup>2</sup>[thàt's]<sup>2</sup> why we should kill the wómbats.
- B .. never shoul<sup>3</sup>[da signed NÁFTA is what]<sup>3</sup> it í=s. @@@  
A ... <sup>3</sup>[because they're jú's' @gonna come bák. @]<sup>3</sup>  
.. @yéah. @ #
- B ...(1.1) pròb'ly bring their fám'lies in=,  
...(1.0) whò knóws.
- A ... whò knóws.  
...(1.0) they might take àll the jòbs that *¿*wé don't wànt to dò=?  
lèaving ònly the *¿*hígher paying one<sup>1</sup>[s ópen for us?]<sup>1</sup>
- B <sup>1</sup>[@@@]<sup>1</sup>
- A # ... thàt wòuld sú=ck.
- B ...(1.7) thèy will núrse our chíldren.  
... @thèy will wásh our díshes. @ @@<sup>2</sup>[@@]<sup>2</sup>
- A <sup>2</sup>[@@]<sup>2</sup>@@ríght. @  
# (*high pitch*;) they will cléan our séwers.  
...(3.2) ókay.  
... yéah.  
... ókay.  
... th— d— sò we nèe=d,  
...(1.0) ah= lét's sà=y,  
...(1.0) òne tòn= of ... *¿*sóap?
- B ...(1.1) <sup>1</sup>[okày]<sup>1</sup>
- A ...(1.1) <sup>1</sup>[and a f—]<sup>1</sup>  
... *¿*a lòng fíreho=se?
- B ... wáit.  
.. so whò does the sóap.
- A ...(1.1) # ... um==
- B would I tie the díngoes=— ... ùp out <sup>1</sup>[*¿*frònt?]<sup>1</sup>
- A <sup>1</sup>[@@]<sup>1</sup>
- B I càn't sèe is there a ...(1.1) *¿*fíre hydrant or sòmething?
- A ...(1.3) ùm .. ah— .. yòu could just ... tie them to the dóorpost  
(*continues. . .*)

## REFERENCES

- Bartlett, F.C. 1932. Remembering. Cambridge: Cambridge University Press.
- Brown, G. and Yule, G. 1983. Discourse Analysis. Cambridge: Cambridge University Press.
- Cassell, J., McNeill, D. and McCullough, K.-E. 1999. "Speech-Gesture Mismatches: Evidence for one underlying representation of linguistic and nonlinguistic information." *Pragmatics & Cognition* 7(1):1-34.
- Chafe, W. 1994. Discourse, Consciousness, and Time: The flow and displacement of conscious experience in speaking and writing. Chicago: The University of Chicago Press.
- Chafe, W. 1997. "Polyphonic Topic Development." In T. Givón (ed.), 41-53.
- Clark, H.H. 1992. Arenas of Language Use. Chicago: The University of Chicago Press and Stanford CA: Center for the Study of Language and Information.
- Clark, H.H. 1996. Using Language. Cambridge: Cambridge University Press.
- Fauconnier, G. 1997. Mappings in Thought and Language. Cambridge: Cambridge University Press.
- Gernsbacher, M.A. and Givón, T. (eds). 1995. Coherence in Spontaneous Text. Amsterdam: John Benjamins.
- Givón, T. (ed.). 1997. Conversation: Cognitive, communicative and social perspectives. Amsterdam: John Benjamins.
- Grice, H.P. 1975. "Logic and Conversation." In P. Cole and J.L. Morgan (eds), Syntax and Semantics 3: Speech arts, New York: Academic Press, 41-58. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 76-88.
- Hockett, C.F. 1958. A Course in Modern Linguistics. New York: Macmillan.
- Jakobson, R. 1960. "Closing Statement: Linguistics and poetics." In T.A. Sebeok (ed.), Style in Language, Cambridge MA: The MIT Press, 350-77. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 54-62.
- Jaworski, A. and Coupland, N. (eds). 1999. The Discourse Reader. New York: Routledge.
- Karttunen, L. 1974. "Presupposition and Linguistic Context." *Theoretical Linguistics* 1:181-94.
- Keenan, E.O. and Schieffelin, B. 1976. "Topic as a Discourse Notion: A study of topic in the conversations of children and adults." In C.N. Li (ed.), Subject and Topic, New York: Academic Press, 335-84.

- Linell, P. and Korolija, N. 1997. "Coherence in Multi-Party Conversation." In T. Givón (ed.), 167-205.
- Lyons, J. 1995. Linguistic Semantics: An introduction. Cambridge: Cambridge University Press.
- McNeill, D. 1992. Hand and Mind: What gestures reveal about thought. Chicago: The University of Chicago Press.
- McNeill, D. (ed.). 2000. Language and Gesture. Cambridge: Cambridge University Press.
- McNeill, D., Cassell, J. and McCullough, K.-E. 1994. "Communicative Effects of Speech-Mismatched Gestures." *Research on Language and Social Interaction* 27:223-238.
- McNeill, D. and Duncan, S.D. 2000. "Growth Points in Thinking-for-Speaking." In D. McNeill (ed.), 141-61.
- Merritt, M. 1984. "On the Use of Okay in Service Encounters." In J. Baugh and J. Sherzer (eds), Language in Use: Readings in sociolinguistics, Englewood Cliffs NJ: Prentice-Hall, 139-47.
- Nakatani, C.H., Grosz, B.J., Ahn, D.D. and Hirschberg, J. 1995. "Instructions for Annotating Discourses." Technical Report TR-21-95, Center for Research in Computing Technology, Harvard University: Cambridge MA.
- Ochs, E. 1979. "Transcription as Theory." In E. Ochs and B. Schieffelin (eds), Developmental Pragmatics, New York: Academic Press, 43-72. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 167-82.
- Sacks, H. 1975. "Everyone Has to Lie." In M. Sanches and B.G. Blount (eds), Sociocultural Dimensions of Language Use, New York: Academic Press, 57-80. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 252-62.
- Schegloff, E.A. and Sacks, H. 1973. "Opening up Closings." *Semiotica* 8:289-327. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 263-74.
- Schiffrin, D. 1987. Discourse Markers. Cambridge: Cambridge University Press.
- Slobin, D. 1987. "Thinking for Speaking." In J. Aske, N. Beery, L. Michaelis and H. Filip (eds), Proceedings of the 13th Annual Meeting of the Berkeley Linguistics Society, Berkeley CA: Berkeley Linguistics Society.
- Sperber, D. and Wilson, D. 1986. Relevance: Communication & Cognition. Oxford: Blackwell (2nd edn. 1995).
- Sperber, D. and Wilson, D. 1990. "Rhetoric and Relevance." In D. Wellbery and J. Bender (eds), The Ends of Rhetoric: History, theory, practice, Stanford CA: Stanford University Press, 140-55.

Tannen, D. and Wallat, C. 1987. "Interactive Frames and Knowledge Schemas in Interaction: Examples from a medical examination/interview." *Social Psychology Quarterly* 50(2):205-16. Excerpts reprinted in A. Jaworski and N. Coupland (eds), 346-66.

Wilson, D. and Sperber, D. Under review. "Truthfulness and Relevance."