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INTERPRETING DISCOURSE: COHERENCE AND THE ANALYSIS  
OF ETHNOGRAPHIC INTERVIEWS

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By: Michael Agar  
Department of Anthropology  
University of Houston  
Houston, Texas

Jerry R. Hobbs  
Artificial Intelligence Center  
Computer Science and Technology Division



333 Ravenswood Ave. • Menlo Park, California 94025  
(415) 326-6200 • Cable: SRI INTL MPK • TWX: 910-373-1246

## 1. Introduction

Practitioners of ethnography, in seeking to discover and describe complex patterns of behavior, face a number of serious problems. First, the patterns should be described in as formal a fashion as possible, and yet the formalisms that ethnographers have availed themselves of are simply inadequate to the task. Secondly, data such as ethnographic interviews constitutes the most common way of discovering a culture, but there is a dearth of formal methods for going from a text to the cultural presuppositions that underlie it. Finally, it is difficult to know in ethnographic interviews how much of what is said is a reflection of the culture, how much is the speaker's personal interpretation, and how much is due to the interview situation itself.

Artificial intelligence can be viewed in large part as the investigation of complex formalisms. Heretofore, these have been applied primarily in simple domains. In this paper, we outline an attempt to use AI formalisms as a formal language of description for the complex conversational behavior that occurs in ethnographic interviews. We are thus addressing the first of the ethnographers' problems by exploring the use of formalisms that begin to be adequate to the task. Moreover, work on discourse analysis in the AI framework has sought to characterize the structure of texts in terms of the goals and beliefs of the speaker. It thus suggests methods of using the structure of the text to force the explicitation of the underlying belief system, addressing the second of the ethnographers' problems. This confronts us with the third problem, and our approach has suggested some tentative ideas for dealing it.

The data we analyze is from a series of life history interviews with a career heroin addict in New York, collected by Agar (1981). We analyze this data in terms of a combination of two AI approaches to discourse. The first is work on the inferencing that must take place in people's comprehension and production of natural language discourse. The second approach to discourse applies work on planning to the

planning of individual speech acts and to the plans speakers develop for effecting their goals in larger stretches of conversation.

In this paper we first outline how we apply these approaches to the ethnographic data. We discuss three kinds of coherence in terms of which we analyze a text, and then describe our method more generally. We next give an example of the method of microanalysis on a short fragment of an interview, and then show how the beliefs, goals and concerns that the microanalysis has revealed are tied in with the rest of the corpus. Finally, we discuss the significance of this work for ethnography.

## 2. Review of the Literature

Traditionally, ethnographic fieldwork relies heavily on two kinds of written material--"informal interviews" and "field notes." There is some literature on the nature of these "informal" interviews. For example, one article advocates a simple reflecting back of previous informant statements as the major role of the interviewer (Rogers 1945). In another, the author notes that there are greater and lesser degrees of informality, depending on the amount of participation and the degree of focus in the questions (Whyte 1960). At the other extreme, much work in cognitive anthropology was devoted to the development of highly specific questions in the informant's language to explore systematically some conceptual domain (see Spradley 1979 for examples, and D'Andrade 1976 and Frake 1977 for critiques).

The specific fragment analyzed in this paper lies at the most uncontrolled end of the spectrum, taken from the ethnographer's point of view. Though the interview situation is itself something of a focussed question that constrains the informant's talk--something we discuss in detail later--the fragment is for the most part a monologue. The informant controls the flow of talk. With the exception of some backchannelling signals by the interviewer, the fragment emerges according to the informant's plan.

It is just this kind of uncontrolled material that creates problems for analysis. There are numerous stories in anthropology about the plaintive cry of the budding ethnographer -- "But what do I do with all this stuff?" Some helpful discussions have emerged. Glaser and Strauss (1967), for example, spend some time dealing with ways of allowing categories to emerge from the material. Hutchins (1979) has done some work on specifying the underlying folk logic necessary to understand such materials.

These and other developments point in promising directions. Nevertheless, it remains true that the more the informal interview is controlled by the informant, the less the ethnographer knows how to deal

with it. This holds true when we shift to the anthropological literature on the life history. In their reviews of the use of the life history method in anthropology, both Langness (1965) and Mandelbaum (1973) note that there is little sense of what to do with such material beyond fairly straightforward presentations of the interview as narrated by the informant. In fact, they both point to Kluckhohn's early evaluation (Gottschalk et.al. 1945)--life histories are valued for their person-centered, holistic display of principles otherwise discussed more abstractly in ethnographies, but there is not much discussion of how to make those links explicit.

Recently there has been some work on the application of a phenomenological perspective to life history material (Watson 1976, Frank 1979). Another promising line of research, as exemplified in Linde (1980), is the exploration of discourse analysis for suggestions on how to approach such material. With the recent interest among language-oriented researchers in stretches of talk greater than the single sentence, we should find research that is helpful in the problem of developing an approach to ethnographic interviews.

Recent research on discourse analysis has taken several directions, some of which we are attempting to bring together in our work. One thrust in the study of discourse concerns genres that occur in people's talk. Perhaps the earliest effort along these lines was Propp's (1968) work on the structure of Russian folk tales. A more recent application of Propp's ideas is found in the work of Colby (1973, 1977), where folktales are analyzed for their sequential pattern across cultures using content areas which he calls "eidons". Related is Agar's (1979) work on "themes", where recurrent content areas are abstracted from informal interviews together with a specification of the relationships that hold among them. This work informs our concern with "thematic coherence".

Recently, Labov and Waletzky (1967) and Labov (1972) have investigated the structure of narratives, Hasan (1980) the structure of sales dialogues, Linde and Labov (1975) the structure of apartment

descriptions, and Linde and Goguen (1978) the structure of planning dialogues. This work has typically taken the form of proposing a grammar or other structural description of the texts under investigation. The implication is that the structure associated with the genres we use is part of our cultural property that gets called upon when we engage in discourse.

Building on Labov's work, Polanyi (1978) develops a methodology for using the structure of narratives and constraints on the placement of narratives in conversation as a means of discovering the cultural presuppositions underlying the narrative. Polanyi's aims are thus very similar to ours. The principal differences between her work and ours is that we are building on a somewhat different tradition in discourse analysis than she did, and that we are considering not just narratives but other stretches of discourse as well.

At a more detailed level, the ethnomethodologists have investigated the structure of conversational interactions -- such phenomena as turn-taking (Sacks, Jefferson and Schegloff 1974), repairs (Schegloff, Jefferson and Sacks 1977), side sequences (Jefferson 1972), openings (Schifferin 1977), and closings (Schegloff and Sacks 1973). Typically, the investigators postulate a set of rules that seem to characterize the manner in which such conversational structures are accomplished.

Also at this level of detail, a number of authors have looked for structure in longer monologues and written texts. Typically, this structure is described in terms of "coherence relations" (Hobbs' term) between successive sentences or larger segments of text. Among these investigators are Grimes (1975), Halliday and Hasan (1976), Isenberg (1971) and, most extensively, Longacre (1976, 1979). Attempts have been made in artificial intelligence to define the relations formally in terms of the content, explicit and implicit, of the text, e.g. by Phillips (1975), Lockman (1978), and Hobbs (1976, 1978). The work we will build on most directly is that of Hobbs (1978) who argued for the adequacy of a small set of broadly characterized coherence relations between segments of a text, defined in terms of the information conveyed

by the segments and linked to the goals the speaker has by virtue of the nature of the discourse situation. This work forms part of the theoretical framework we are bringing to bear on the ethnographic data. It, together with the work on the genre of narratives, informs our approach to local coherence.

Another line of research is on the processes involved the social production of discourse. In their recent work, Gumperz (1979) and Kaltman (Gumperz & Kaltman 1980) focus on discourse in its interactive situation. They document the problems that can occur in cross-ethnic communication when there is a lack of sharing what they call "contextualization cues". Such cues, often prosodic in nature, signal the relevant frameworks for the interpretation of the ongoing interaction. When interactants read cues differently, the distinct interpretive schemata that result can have disastrous consequences, especially when one of the members is a "gatekeeper" in an important social institution. Tannen (1979) similarly shows the importance of differences in conversational styles even within the same culture.

In a related vein, Labov and Fanshel (1977) give a very detailed and subtle analysis of what a woman and her therapist are trying to accomplish with each of their utterances. They show the extraordinary complexity of functions single utterances in rich dialogues can serve. Two shortcomings of their work are that they lack formalisms adequate for characterizing the complexity that they find, and they are not able to talk about a speaker's long range goals in the dialogue and how plans for implementing them can change over time.

Recent developments in artificial intelligence can perhaps give us a handle on these problems. They arise out of extensive research on planning, beginning with Newell, Shaw and Simon (1959) and Miller, Galanter and Pribram (1960), and extending through Fikes and Nilsson (1971), Sussman (1975), Waldinger (1975), Sacerdoti (1977) and others. This research dealt for the most part with planning by a single agent in a simple domain. Recently, however, attempts have been made to extend the work to the problems of discourse. One approach has been to study

discourse where the domain involved plans by the participants or by characters in the text of a story, and to study how the structure of the plan influenced the structure of the discourse. This includes analysis of task-oriented dialogues (Grosz 1977, Grosz & Hendrix 1979, A. Robinson 1980, Hobbs and J. Robinson 1979), instructional dialogues (Mann, Moore and Levin 1977), and stories (Schank and Abelson 1977, Wilensky 1978, Bruce and Newman 1978, Beaugrande 1980).

More relevant to our concerns is research on the planning of utterances themselves. Speech act theorists, such as Austin (1962), Searle (1969, 1975), Grice (1975), and Gordon and Lakoff (1975), investigated the actions people perform with their utterances and the conditions on the successful performance of these actions. Perrault and Allen (1978) and Cohen (1978) have applied planning mechanisms to the generation and recognition of speech acts, viewing a speech act as an action in a plan to change the belief state of one of the participants.

Analysis of larger stretches of conversation in terms of the goals the participants are seeking to achieve has been pursued by Winograd (1977), Levy (1979), and recently by Hobbs & Evans (1979). Here the effort is to understand how the conversation progresses in terms of the goals the participants have, the plans they must be developing to implement these goals, and the changes in the plans that result from what happens in the interaction. This work forms the theoretical framework for our investigations of global coherence.

From this brief review, it is apparent that concerns with discourse are varied, representing the host of problems that present themselves when one's interest in language moves beyond the isolated sentences traditionally treated in linguistics. Our work focuses on a particular piece of discourse -- a fragment of a life history interview. The fragment is for all purposes a monologue, since the interviewer participates only through minimal backchanneling signals. We adopt the theoretical language of recent artificial intelligence work in planning and inferencing to bring into the analysis the important aspects of purpose, context and world knowledge in the interpretation of the



interview. A central notion arising from this work is "coherence", so before moving into an analysis of the specific fragment, a more thorough presentation of the idea of "coherence" is necessary.

### 3. The Threefold Nature of Coherence

The coherence that we find in texts can usefully be divided into three kinds:

1. Global coherence. The speaker has global goals which he is trying to accomplish by speaking. Hobbs and Evans (1979) proposed using planning formalisms developed in artificial intelligence as a language of description for conversational behavior. The speaker is assumed to develop a conversational or narrative plan for effecting his goals, by breaking them into subgoals and the subgoals into further subgoals, until the subgoals can be directly effected by means of single utterances. The plan is built up out of the speaker's knowledge or beliefs about what causes or enables what, or frequently out of smaller prestructured plans, as when he is telling a story he often tells. As he speaks, he monitors what he says and the listener's responses, and when he infers from them that his plan is going awry, he modifies or debugs the plan and continues on.

An account of a conversation in this approach is a specification of the sequences of the participants' developing and changing plans. In the analysis of each utterance, we need to flesh out the speaker's plan to the point where we understand the role the utterance plays in it. This relation of the utterance to the speaker's overall plan we refer to as global coherence.

2. Local coherence. At some point in the development of a textual plan, the subgoals will be less concerned with things that the speaker is trying to effect in the world and more concerned with things the speaker is trying to effect in the text, in what he is saying. For example, he may want to tell of a particular event, but in order to do so, he needs to provide certain background information. Or something needs to be told from more than one perspective, so after telling about an event, he elaborates on it from another angle, before going on to the next event.

Hobbs (1978) proposed a small set of coherence relations or coherent continuation moves to a next utterance, that link not just individual utterances but also larger segments of text. He showed how the relations arose naturally out of typical goals associated with the discourse situation, and defined them formally in terms of the information they conveyed, or the inferences that could be drawn from them.

Since this work is central to our method of analysis, some elaboration is in order. Two continuation moves or coherence relations that play a role in the microanalysis below will serve as examples: (1) One way to remain coherent is to tell "what happened next", and Hobbs postulated an "occasion" continuation or relation, which is stronger than simple temporal ordering but weaker than causality. It's formal definition in brief is roughly as follows: from the event asserted by the first segment we can infer a change whose final state is presupposed by the second segment. Here the coherence in the text is a reflection of coherence in the world. (2) Another way to remain coherent is to elaborate on what has just been said. This serves the obvious goal of enriching the listener's understanding of what the speaker is saying. Its definition is roughly -- from the assertion of each segment the same proposition can be inferred. Segments of a text can also stand in a parallel relation to one another; this relation has a motivation and definition similar to those of elaboration. Other coherence relations that figure in the analysis below are contrast, explanation, and consequence.

A fuller account of the coherence relations is given in Hobbs (1976, 1978). Their formal definitions play an important role in our method of analysis, for they are a forcing function in our reconstruction of the speaker's set of beliefs, or as we call it below, his cognitive world.

The structure that these coherence relations or continuations impart to the text we will refer to as local coherence. If global coherence gives us a top-down view of the production of extended talk,

local coherence gives us a bottom-up view. The requirements of global coherence say, "Given the overall goals I am trying to accomplish, what can I say next that will serve them." Local coherence says, "Given what I just said, what can I say that is related to it." For the most part, what is said next will satisfy both sets of requirements. Occasionally however, we get examples where one or the other seems to get lost. For example, we have found cases in which the speaker entered a kind of "associative slide", remaining locally coherent while derailing his global plan. On the other hand, we frequently find a sudden break in the narration after one high-level narrative goal has been satisfied, and it is time to move on to the next. Here requirements of local coherence have been sacrificed to the overall plan.

3. Themal Coherence. In any coherent text, we will find certain chunks of content -- call them themes -- that figure importantly again and again. Agar (1979, 1981) has investigated themes that occur explicitly in ethnographic data as paraphrases or instantiations. The method of analysis we are using here will allow identification of themes of a less explicit nature, including recurrent implicit underlying assumptions, the use of particular devices for particular discourse functions, frequent distinctive coherence structures, and long-range narrative strategies and concerns. These recurrent themes impart a third kind of unity to the text, which we call themal coherence. We will refer to repeated occurrences of themes through the text as "threads" of themal coherence.

Themal coherence reflects a long standing anthropological concern with the move from the detailed analysis of ethnographic material to broader statements of individual and cultural pattern (cf. Spradley 1979, Agar 1980, for recent methodological discussions of this concern). It serves as a pointer from the specific piece of text to more general properties of the speaker's world. At the same time, it addresses a problem in Hobbs' previous work on validating and modifying one's initial assumptions about the speaker's beliefs and goals (Hobbs 1978, Hobbs & Evans 1979). As discussed in the analysis presented below, the

simultaneous concern with the three types of coherence synthesizes artificial intelligence and ethnographic approaches in a way that suggests a resolution of the difficult problem of interpreting discourse.

Figure 1 illustrates the three kinds of coherence for a segment of text S2. Its global coherence is its relation G to the speaker's overall plan. Its local coherence is its relations L to adjacent segments S1 and S3. Its themal coherence is its relation T to segments Si, Sj, in other parts of the interview or other interviews, exemplifying the same themes.

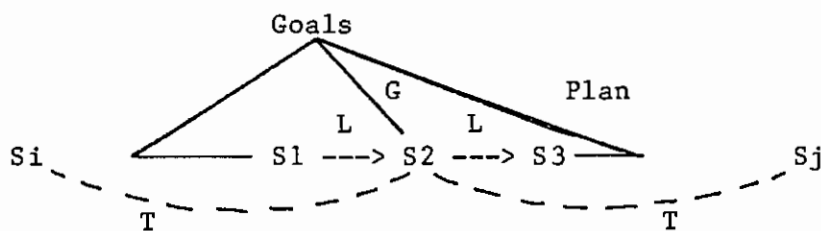


Figure 1. Three Kinds of Coherence

For terminological convenience, we will refer to the work we are building on as our "formal theory of coherence".

#### 4. The Method of Investigation

Our method of investigation is as illustrated in Figure 2.

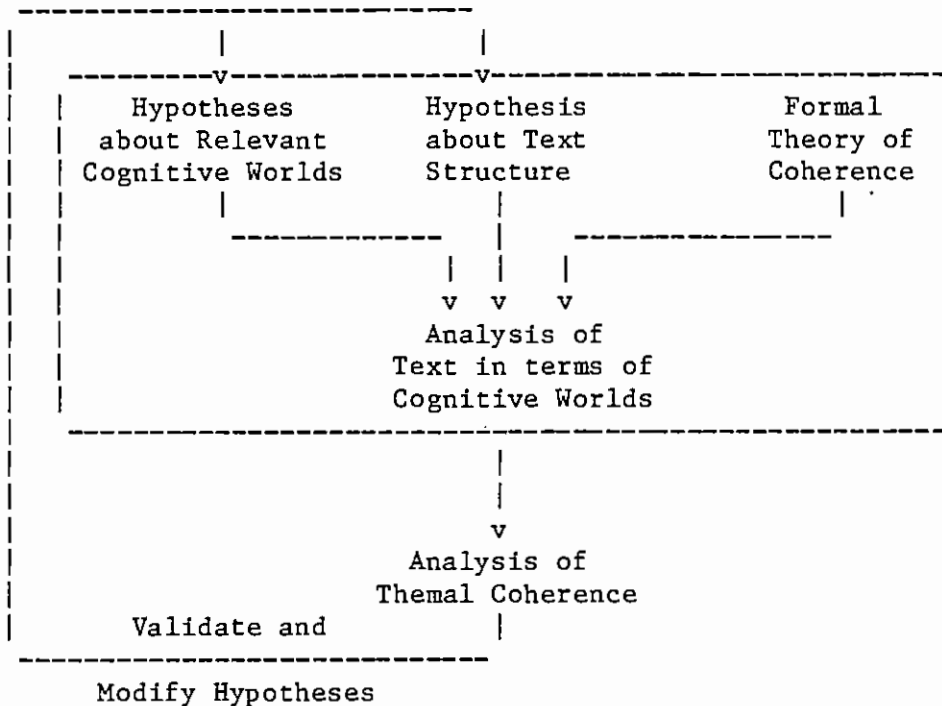


Figure 2. Method of Analysis

Three elements are brought to bear in the microanalysis of a text. The first is our current best hypotheses about what we will call the relevant "cognitive worlds". Two terms here require explanation. We intend "hypothesis" here and elsewhere in the paper in the broadest informal sense as the best guesses we can make on the basis of our background knowledge and the investigation so far. By "cognitive world" we mean a unified, possibly formalizable collection of beliefs, goals and conversational practices and concerns; one of our aims is to push toward formalization insofar as possible. One relevant cognitive world is the collection of the speaker's beliefs, goals and so on, which he believes the listener shares and which are required for interpreting the text produced by the speaker (cf. Clark & Marshall 1978). But a cognitive world is not necessarily anchored in any single individual's

cognition. It could represent a body of cultural knowledge and concerns that an ideal member of the culture might possess, such as the "junkie cognitive world", or it could represent a set of concerns that arise out of a specific situation, such as the "interview cognitive world". We will frequently refer to a cognitive world simply as a "world".

The second element that is brought to bear in microanalysis is our initial hypothesis about the structure of the text, which comes from close reading. This is an exegesis of the text, of the traditional sort, but it is only the beginning, not the final product of our analysis.

The third element is the formal theory of coherence sketched in the preceding section, defining structural properties of the text in terms of the speaker's beliefs and goals. The third functions as a kind of Procrustean bed that will reshape the first two. The product of the microanalysis is simultaneously an explication of the text and a presentation of a specific portion of the speaker's cognitive world, that part which the formal theory of coherence has forced us to assume if we are to explicate the text. (For an example of the product of a detailed microanalysis of the sort we have in mind, see Hobbs (1976).)

When microanalysis has been performed on a number of fragments of the corpus, threads of themal coherence begin to emerge. Certain dominant themes recur again and again in different forms, as has been revealed by the microanalysis. So the next step in the analysis is to look for all such threads. These themes are beliefs, goals, or conversational resources or practices of the speaker, and we can use them to validate and modify our initial hypotheses about the structure of the text and the geography of the speaker's cognitive world.

This reconstruction of the speaker's cognitive world can be viewed as a start toward formalizing what Hirsch (1960), with Husserl, calls the "inner horizon" of the text -- that knowledge which the speaker or writer consciously or unconsciously assumes he shares with the listener or reader, who, in felicitous communication, calls on it in constructing his interpretation of the text.

By way of summary, we may emphasize how this method differs from "mere close reading". First, the formal theory of coherence constrains the possible analyses. Secondly, an analysis must be validated in terms of themal coherence. Finally, formalization, insofar as it is possible, imposes precision and rigor on the analysis.

A further stage is suggested at this point. The analysis so far has only revealed the bare facts about the speaker's cognitive world, not how it is structured into a unified whole. But when we record the threads of themal coherence in the text, we discover an interesting fact. The themes are highly intermixed. For example, three successive utterances may be realizations of morality, time, and place themes, respectively. Since the utterances in the text have been linked by the microanalysis into a coherent whole, these links should reveal something about the relations among their underlying themes, for example, between themes of place and morality. An analysis along these lines should begin to give us a handle on how a person's set of beliefs is structured or integrated into a functioning world view. But we have not yet reached this point in our work.



## 5. Background of the Study

The material which we analyze is from an extensive life history interview with a career heroin addict. The material was obtained in 24 sessions during 1974-5 in New York City. The informant, whom we call by the pseudonym "Jack", became an addict at approximately age 15 in Chicago. Shortly afterwards he moved to New York City, where he has since been resident, with the exception of occasional travels to other parts of the country and time spent in prison and treatment centers. At the time of the interview, Jack was 60 years old and a patient in a New York methadone program.

Initially, Jack was contacted by Agar as part of a proposed project on the ethnohistory of the New York narcotics scene. The first few interviews reflect this bias, with questions tending to focus on chemicals as their use waxed and waned in the streets through the years. It soon became apparent that Jack was an articulate interviewee who had had a variety of experiences in many of the country's drug scenes since the 1930s. Consequently, the more general ethnohistory project was abandoned in favor of an explicit focus on Jack's life history.

The fragment analyzed here is from an interview obtained about midway through the sequence. It centers on how Jack became a burglar. Jack had referred to the experience in an earlier interview, and suggested that Agar request a more detailed account later. Agar's specific request for the interview set the frame for the material we examine.

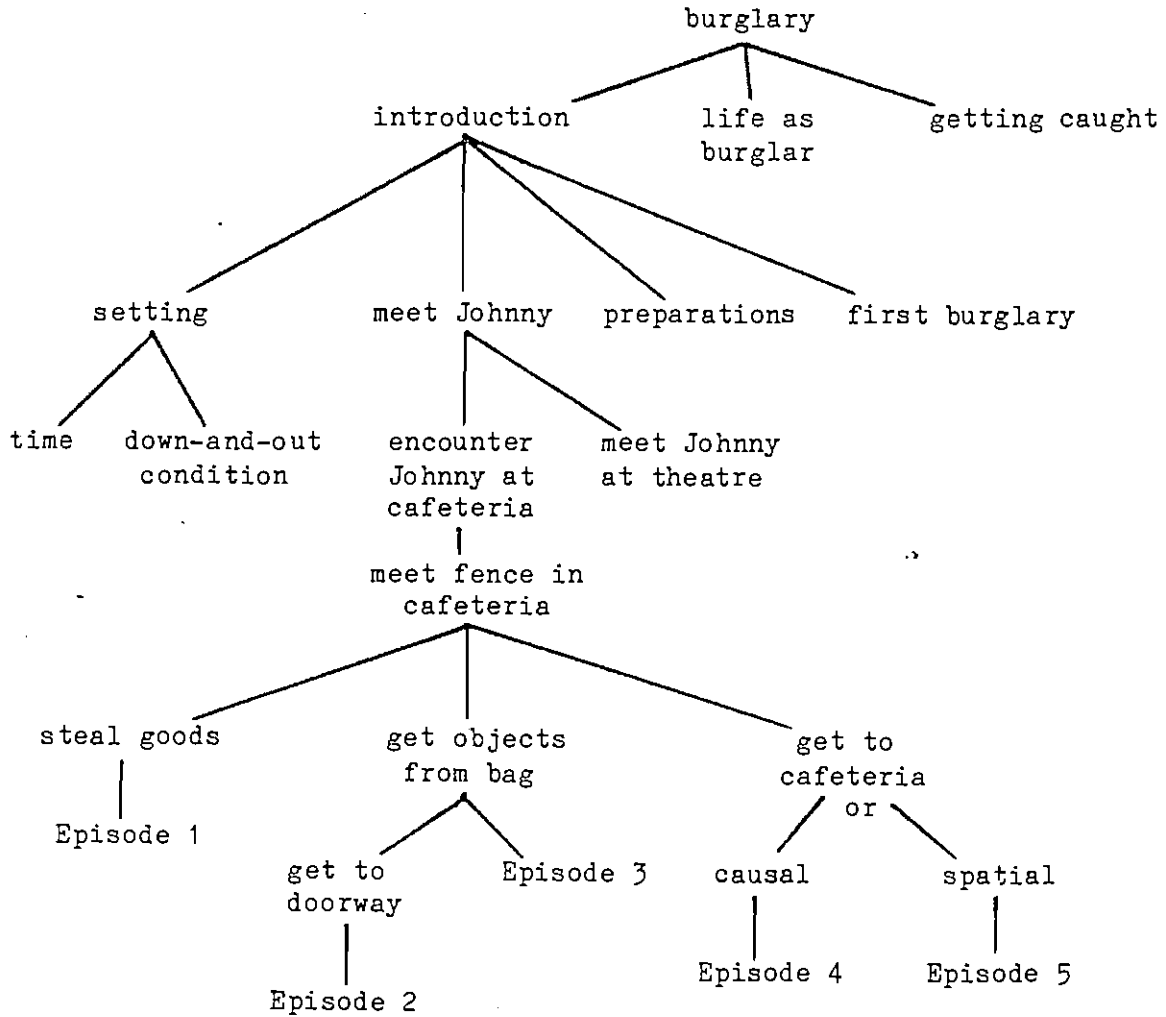
The story unfolds as Jack outlines the time and place -- around the late 1940s in New York -- and explains his down-and-out condition then and the reasons for it. He goes on to describe his meeting with "Johnny" -- the person who taught him burglary. Johnny aggressively pursues Jack after their first encounter, and in spite of Jack's reluctance, persuades him to be his partner. Johnny then takes Jack to Staten Island, where with no warning, he enters a residence and motions for Jack to enter. Jack then relates how Johnny instructed him in the

art of burglary and goes on to describe their successful return to New York. From that point on, the story recounts the changes in Jack's life as he continues his partnership with Johnny. A woman is added to the team and, after a particularly successful theft of a diamond necklace, they purchase a car. Other examples of burglaries are given as well. The story ends with Jack explaining how the partnership came to an end and how Jack eventually served time on a felony conviction because his partner gave the police information under pressure of his own arrest.

In the fragment we analyze, Jack is trying to explain the circumstances that led him to meet Johnny in the first place. To meet Johnny, Jack must give us an account of how he came into possession of some stolen goods and then took them to a fence to sell. It is while dealing with the fence that he first encounters Johnny. The fragment opens with Jack's theft of a person's luggage in a railroad station, and ends with his walking us through the places that he must introduce to provide the transition from the train station to the all night cafeteria where he goes to meet the fence.

The global narrative structure of the story is illustrated in Figure 3. An account of a segment's global coherence is an account of its place in this structure.

Figure 3. Global Narrative Plan



## 6. Microanalysis of the Data

### 6.1. Microanalysis: Episode One

Episode One is as follows (J is Jack. M is the interviewer. Brackets before successive lines indicate overlapping utterances. Underlining indicates emphasis.):

- (1.1) J: And one Sunday morning about ohhhh five o'clock in the morning  
(1.2) I sat down in the Grand--  
(1.3) no no, not in the Grand Central, in the Penn Station,  
(1.4) and while I was sitting there a young cat came up to me,  
(1.5) and he had his duffel bag and a suitcase,  
(1.6) and he said, "Look," he said, "maaan," he said, "I've got to make the john.  
(1.7) Will you keep your eye on the-- on my stuff for me?"  
(1.8) Well there were two . . black fellows sitting down at the end of the line, watching this procedure, you know and I --  
(1.9) for a few minutes I thought well fuck it, I -- you know I'm gonna --  
(1.10) the guy trusts me,  
(1.11) what's the use of trying to beat him.  
(1.12) But one of the black guys came over,  
(1.13) and said, "Hey maaan, why don't you dig in and see what's there, maaan,  
(1.14) maaan, you know, maybe we can split it,  
(1.15) and I said we're not going to split it at all,  
(1.16) it's mine,  
M: [ [laugh]  
(1.17)J: [and I picked up the suitcase,  
(1.18) threw the duffel bag over my back and I split,  
(1.19) and left a very irritated guy there,  
(1.20) "I'll catch you motherfucker," he said,  
(1.21) and I said, "well maybe you will and maybe you won't,"  
(1.22) and I'm hightailing it as fast as I can.

Episode One is a short narrative, and has a structure seen in many narratives: First there is a setting (1.1 - 1.3), in which time and place are specified, as well as the fact that Jack is "sitting there". Then a problem is presented (1.4 - 1.7), when the enabling conditions for a "rip off" are established by the account of the "young cat" who asks Jack to watch his luggage while he goes to the bathroom. Next the main character considers a first alternative (1.9 - 1.11), a report of

his own feelings that he will not steal the young cat's luggage. Finally some circumstance occurs (1.8, 1.12 - 1.14), one of two "black fellows" coming over to encourage him to go through the luggage and share whatever is worth taking. This leads to the choice of a second alternative (1.15 - 1.18), Jack asserting his right to the luggage. An outcome results (1.19 - 1.22); the black fellow reacts by threatening Jack, but Jack shrugs it off and closes the episode with "I'm hightailing it as fast as I can."

Figure 4 illustrates this structure in terms of local coherence relations. (Coherence relations in this and subsequent diagrams are represented both as nodes in a tree dominating the segments they link, and as labels on links. These are formally equivalent, but the former suggests a structural perspective, while the latter suggests a process perspective.)

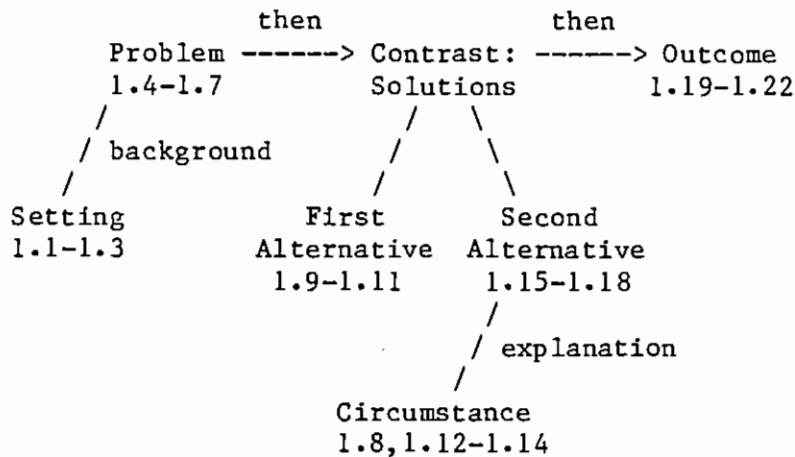


Figure 4. Structure of Episode One

Most American readers would see this episode as a coherent narrative in its isolated form. However, by analyzing its structure more closely with respect to the different relevant worlds, we see a much richer coherence than might at first appear to be there.

In the first line -- "One Sunday morning about oh five o'clock in the morning" -- Jack is doing something rather startling. His usual specifications of time is inexact. In fact, in other areas of the

interviews, when he feels the need to specify time exactly, he usually presents it as a problem that needs to be worked out, often apologizing for his inability to give precise years and dates. As argued in another paper (Agar 1981), Jack has a "time theme" that might be characterized as stressing the unimportance of chronological time. The theme makes sense, because of the unimportance of the clock and calendar in street life.

Utterance 1.1 shows an interesting kind of themal coherence, then, in that it violates the listener's expectations, given the usual time theme. The violation occurs at an important structural point: Jack is shifting from eleven minutes of background material to the narration of the events that led up to his meeting with Johnny. It thus exhibits global coherence, since it marks a major organizational shift in getting the story told.

The utterance also reinforces another recurrent theme. The reference specifies a time that is unusual in the straight world -- five o'clock in the morning -- emphasizing differences between the two worlds. This ties it in themally with much of the rest of the interview, where Jack repeatedly notes that one feature of the settings he describes is their 24-hour availability.

Just in the first utterance, then, we see the richness of the coherence ties in Jack's story. The utterance is locally coherent, playing a well-defined function in the story of Episode One. It shows global coherence by signalling a shift in the overall organization of the interview as a whole. It also shows themal coherence, tying in with various other portions of this and other interviews in the way it makes use of facts about Jack's world and in the role it plays in the situation of a straight listening to a story by a junkie.

Not all utterances, of course, are this rich. But even the specification of place that follows the time statement -- "I sat down in the Grand- no not the Grand Central, in the Penn Station" -- coherence other than local is displayed. The utterance ties in themally with discussions earlier in the interview where Jack mentions train stations

as places that are important because they are warm and access to them is free. The theme of places with these characteristics occurs throughout the interview, for example, in Episode Five analyzed below. This, in turn, connects in a global fashion with a major point of the story -- the transition from a down-and-out street hustler to a competent well-off burglar. In other words, the place theme with which these statements connect in itself connects with the global content of the story.

Another interesting feature of this statement is Jack's correction of the place specification. Throughout the interviews, Jack demonstrates a commitment to tell his story accurately. He sees the interviews as an opportunity to set down his story as accurately as possible, and here as elsewhere he verbally demonstrates that commitment. This theme of self correction, which derives from the world of the interviews, is particularly important from a methodological point of view. It may be a grounded characterization of one of the aspects of a good informant.

The next series of statements sets up the conditions for the rip off. The young cat comes up and asks Jack to keep an eye on his luggage while he goes to the bathroom. This presents Jack with a problem. In structural terms, it introduces the conflict. But for us to see it as a problem, we must understand certain things about Jack's world. First of all, by street rules anybody foolish enough to leave his property unguarded is a "mark", who can be manipulated out of his goods. It is automatic that one can steal that person's goods. Jack reinforces our notions that the person is especially susceptible to the rules by his style of quoting him -- "'Look,' he said, 'maaan,' he said, 'I've got to make the john.'" That's street talk, not straight talk, and this is emphasized by exaggerated intonation and vowel lengthening. The young cat should have known better.

However, the interview world is also part of the straight world. Jack goes on to make an important statement about himself by saying that he wasn't going to "beat" the guy, even though he is in a down-and-out

situation. The fact that the first alternative is an alternative at all comes from a tension between street and straight morality. The "black fellow" comes over and properly, from a street point of view, suggests he and Jack go through the bags to see what's there. As Jack portrays the situation, he has no choice at that point but to share the take or take it all himself. By street rules, he would be foolish to defend the mark's goods until he returns, and even by straight rules, his obligations would be limited. Jack properly makes the best choice and takes off with the bags.

Jack shows little concern for the black fellow's threats (1.19). By street rules, he shouldn't. He hasn't done anything wrong that would motivate the black fellow to go to the trouble to find him and seek revenge. As the situation is portrayed, the bags belong to Jack. The fact that a further conflict situation is not thereby set up thus rests on our knowledge of Jack's world.

The description is something of a morality play that neatly synthesizes the street world and the straight world. On the one hand, Jack is a knowledgeable street hustler; on the other, he is in an interview in which he is explaining himself in a straight context. He does what is right by street rules, though he is forced to by others; he does what is right by straight rules, since he was not going to rip off the young cat's bags until forced to. It is a masterful synthesis.

In this first episode, then we have clear local coherence in the narrative structure. There is themal coherence that ties utterances into other parts of this and other interviews in the life history. Finally, some utterances and the episode as a whole show global coherence by helping to effect some of the overall goals of the story focus and organization. Discovering these coherencies leads us into the worlds relevant to the life history -- Jack's world as a street junkie which is the source of the story and the world of the straight interview within which the story is told.



## 6.2. Microanalysis: Episode Two

In this episode Jack is trying to connect the globally planned first and third episodes. He now has the stolen luggage. His next problem is to show us that there was something in that luggage that made the trip to the fence worthwhile. Since he has just been confronted by a "black fellow" and is now "hightailing it" as fast as he can at the close of the first episode, he needs a quieter setting to search through the luggage for anything of value. In earlier portions of this interview, Jack introduced us to the network of underground passages available to him. He begins the second episode with

(2.1) J: Now there's a passage that goes under Gimbel's all the way over to Sixth Avenue.

The utterance coheres locally with the end of the first episode by elaborating on the "hightailing". It also repeats the theme of underground passages, a subtheme of the theme of free warm places, and therefore provides themal coherence. At the same time it begins what looks like a smooth transition in setting between two globally important episodes of the narration.

The next sequence of utterances, 2.2 - 2.5, repeats the content, shifting to the habitual past tense:

(2.2) J: That's the way we used to come,  
(2.3) we used to come down Sixth Avenue,  
(2.4) and then under Gimbel's,  
(2.5) there's a- there's a passageway that leads right down  
underneath the uh --

This repetition ties the present world of underground passages which Jack and the interviewer share to the routines he practiced when he was down and out in the late 1940s. This interview world problem of relating the present to the past -- the problem of history -- recurs throughout the interview and provides a thread of themal coherence as a result.

The next sequence of utterances, 2.6 - 2.12, results from the same past/present interview world problem, only this time it is not so successfully resolved.

- (2.5) J: What was the hotel,  
(2.6) it's the uh- Pennsylvania Hilton now,  
(2.7) I guess it used to be the old Pennsylvania Hotel, I guess,  
M: [ uh huh  
(2.8) J: [that's what they called it, I think.  
(2.9) Maybe it had another name.

Jack's smooth transition is destroyed by his inability to resolve a problem in local coherence. His preceding utterance, "right underneath the...", commits him to name the hotel. It is disrupted when he cannot remember its former name. Because of his interview world commitment to be accurate, he tries unsuccessfully to recall it and then criticizes his own efforts as uncertain. He ends the problem by asserting its current name in 2.10:

- (2.10) J: At any rate it's a -- it's a Hilton hotel now.

This gives Jack a partial resolution, since tying the location to a place that makes sense to the interviewer at least links what he is saying to the interview world. The problem is dismissed, and Episode Three begins.

### 6.3. Microanalysis: Episode Three

The third episode is as follows:

- (3.1) J: Anyway I got over there,  
(3.2) and I stepped into a doorway,  
(3.3) there was nothing there,  
(3.4) just the guy's personal things,  
(3.5) and I began to feel worse all the time.  
(3.6) But he had a really fine pair of gloves,  
(3.7) and uh along with the gloves he had uh a-- a cheap camera,  
(3.8) I don't know, it was a-- a Brownie, I think,  
(3.9) and one or two other little objects that didn't amount to doodly doo,  
(3.10) but uh you know I dropped them in my pocket,  
(3.11) I tied the duffel bag up and the suitcase,

(3.12) and I left it there.

The third episode tells about Jack's examination of the contents of the stolen bags. It divides into three parts. First, utterances 3.1 - 3.2 tell the sequential events leading up to the examination. Jack never explicitly states that he is examining the bags, but utterances 3.3 - 3.9 tell about the results of the examination. Finally, utterances 3.10 - 3.12 tell the sequential events that follow the examination and wind down the episode. Thus we have a head and a tail organized temporally, and a middle section organized in quite a different manner.

The middle section itself breaks into three parts. First, in 3.3 - 3.4 Jack gives a broad characterization of the contents. In 3.5, he makes a remark about his feelings; this is discussed below. In 3.6 - 3.9, he gives a more detailed inventory of the contents. Thus, an elaborative relation obtains between the first and third segments. It is moreover a type of elaboration that, as pointed out in Hobbs (1979), is very common; the first segment describes the contents from a "top-down" perspective, in terms of the purpose they are supposed to serve for Jack; the third segment describes the contents from a "bottom-up" point of view, in terms of the actual objects. The first reinforces a recurrent theme in the first half of the narrative -- Jack as down and out. The third provides necessary details to get Jack to the fence, where he first encounters Johnny. At the same time, it reinforces the recurrent theme of Jack as pennyante thief.

Further knowledge enriches our understanding of the episode and points to some themes involved in other areas of the interviews. In the kind of hit and run hustling Jack is reporting, he is liable to be noticed by police or other hustlers running around with a piece of luggage, especially as by this point in his life he is a known Times Square area hustler. His first move is to go into the doorway of a building. This at the same time removes him from public view so he can examine the contents and protects him from the winter cold. His next

move is to search the bag for goods that are small -- easy to conceal, carry and transfer to a fence -- but also of some value. The only items that fit this description are the gloves and the camera. This theme, unlike the time and place themes discussed previously, suggests features of the sequence of actions characterizing hit and run hustling. It requires further analysis of the corpus for a more thorough discussion.

The two segments 3.3 - 3.4 and 3.6 - 3.9 are interrupted by utterance 3.5.

and I began to feel worse all the time.

The interpretation of this utterance poses an interesting problem for our method. In isolation, the natural interpretation would be that Jack is running out of junk. Here however we must look for an interpretation that coheres with the surrounding text. The previous segment gives an evaluation of the contents. Utterances 3.6 - 3.9 elaborate on the contents. Utterance 3.5 could be interpreted as drawing a consequence from the evaluation. He is disappointed at the results of the rip off and this contributes to the general down-and-out tone of his life at the time. A third plausible interpretation is that he began to feel worse because what he had stolen, although of almost no value to him, was of great value to the owner, leading him to regret the rip off. This interpretation, while plausible in its local context, is somewhat less plausible in view of what we know about street rules, which make regret unlikely. But we know from elsewhere in the corpus, e.g. from Episode One, that Jack moves comfortably between the street and straight moralities, and frequently comes down on the side of the straight. This is consistent with the reports of others that Jack is a "true gentleman". Moreover, as mentioned in the analysis of Episode One, the interview situation itself could lead Jack to highlight his commitment to straight morality.

We thus have three plausible interpretations -- "running out of junk", "disappointment", and "regret". So far the last two seem to cohere most with the surrounding text. But in analyzing Episode Four we

will see some support for the first in both its local and global coherence. It is reasonable to ask whether more than one of these interpretations could be true at once. It is our feeling that the first two, since they are both examples of the more general "down and out" theme, could coexist quite comfortably. In fact, running out of junk lends some urgency to the disappointment. "Regret", on the other hand, is a subtheme of straight morality, and seems to clash with the other two interpretations.

The structure of Episode Three is thus as in Figure 5.

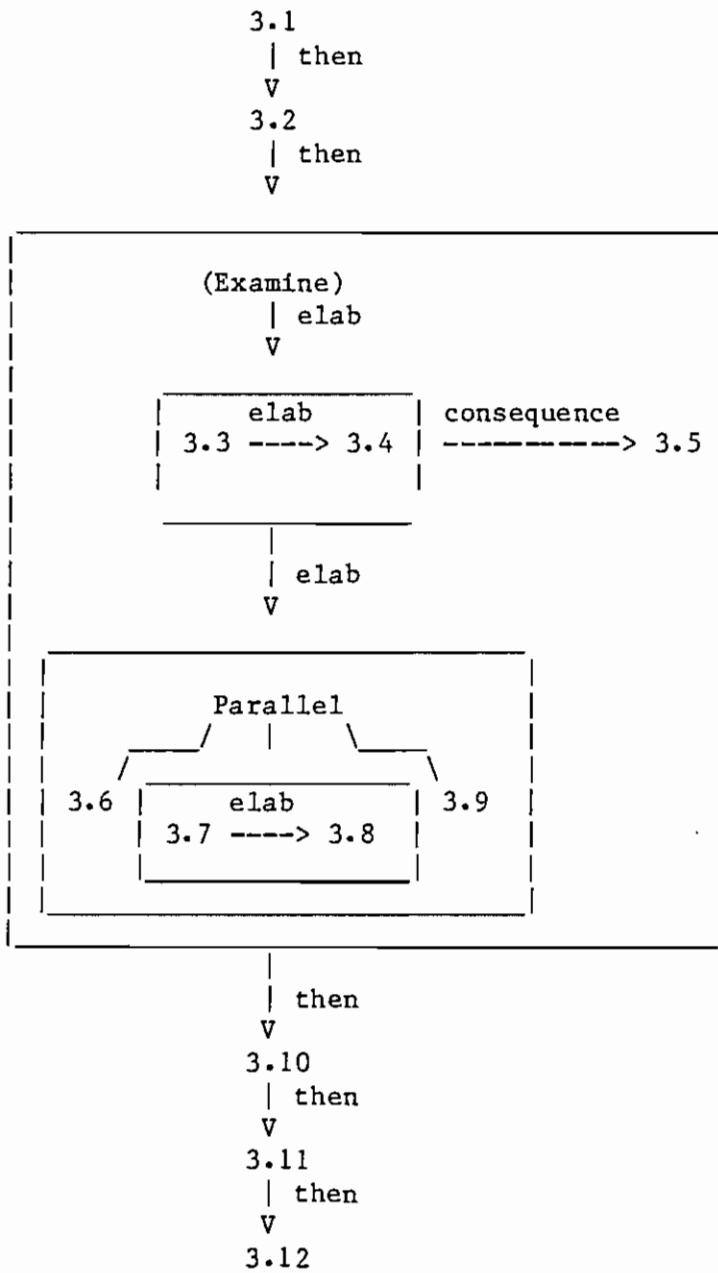


Figure 5. Structure of Episode Three

#### 6.4. Microanalysis: Episode Four

The first two utterances of Episode Four can be seen as operating at two levels. They describe conditions within the story, but they also relate fairly directly to Jack's global narrative goals. Utterance 4.1,

(4.1) J: and time was passing,

does just what it says is happening -- it serves to pass the time while Jack tries to work his way into the next significant event in his story. Utterance 4.2,

(4.2) J: I thought well, maybe I can bum enough to get a cup of coffee and get into a movie,

ostensibly describes his thoughts at the time of the events, but it also describes the next two pending high-level goals in the telling of the events. Jack must get us to the coffee shop where he first sees Johnny, then he must get us to the movie theatre where he meets him.

Utterance 4.3,

(4.3) J: 'cause I was exhausted, I mean exhausted,

coheres locally with 4.2 if, as seems plausible, it is an explanation of why the coffee and movie were desirable. It is interesting to note the cultural background we must assume to see this as an explanation -- when one is exhausted, one needs rest, and one can spend a long time resting very cheaply over coffee and in a movie theatre. The form of the text forces on us an assumption about the function of these activities in Jack's life.

Utterance 4.4,

(4.4) J: my junk was running out,

is rather curious. It introduces a problem that would be very serious for Jack. But then utterances 4.5 and 4.6 immediately back away from the problem. Utterance 4.5,

(4.5) J: but it was too early in the morning to do anything about that,

says that the opportunity for obtaining junk didn't exist. Utterance 4.6,

(4.6) J: and there wasn't anything in the suitcase or the duffel bag that was going to help me,

says the means didn't exist. So the force of 4.4 is cancelled. The problem isn't taken up again until much later, and then it is disposed of quickly.

A possible interpretation is that in 4.4, Jack is trying to elaborate on sentence 4.3. As his primary concern, this is a very natural elaboration. In satisfying the requirements of local coherence, Jack has fallen into a kind of associative slide and brought up material that is highly salient for him. But in the process he has taken himself away from the main thrust of the narrative, which he uses 4.5 - 4.6 to get back to.

But recall that "running out of junk" was one of the possible readings of 3.5. This leads us to another interpretation that links together quite a few utterances in the text. Jack has to get himself from the doorway to the all-night cafeteria, Horn and Hardart's, where he will encounter Johnny. There are two ways he might do it. The first is causal: "X, so I went to Horn and Hardart's." The second, and the one he ultimately uses, is spatial: describe the trip. But much of Episodes Three and Four can be interpreted as an attempt to accomplish it causally, in terms of his need for junk. The problematic utterance 3.5, "I began to feel worse all the time," has as one possible interpretation that junk is running out. Utterance 4.1, "Time was passing," can then be seen as more than just a filler. While precise points in time are not important in Jack's world, the passage of time is very significant. It brings him closer to the central problem in this life -- finding junk. Utterances 4.3 - 4.4 then begin a more explicit development of this theme. Our need to interpret utterances 3.5 and 4.1



in a way that can be related to the surrounding text thus raises to the surface one of the dominant themes in Jack's life.

We cannot come to a definite conclusion yet about the interpretation of utterance 3.5. But the fact that the problem arises and the analysis produces evidence that bears on the problem should be regarded as a strength of the approach.

Utterance 4.6 is particularly interesting. One of its functions is to cancel the "running out of junk" development. It also reinforces the disappointment of Episode Three and, for that reason, is probably salient to Jack at this point in the telling of the story. Like Episode Three, it echoes the theme of Jack as a pennyante thief, that threads through the first half of the narrative. But it does not lead into the next episode, and in fact almost renders inexplicable the actions that follow. A better lead-in would have been something like

There wasn't much in the suitcase or the duffel bag, but I  
thought I'd see what I could get for it.

So we have to assume that the local coherence function of 4.6 is to join with 4.5 in cancelling the "junk running out" development. There is a break in the narrative immediately after 4.6 -- the "so" that initiates Episode Five does not indicate causal consequence from the content of 4.6, but picks up on 4.2 and gets the narrative back on track.

The structure of Episode Four can be illustrated as below:

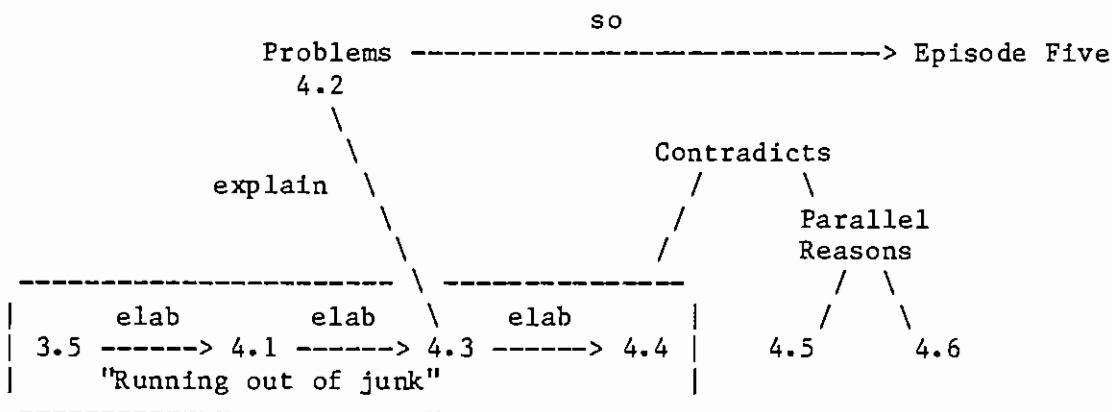


Figure 6. Structure of Episode Four

Note that only 4.3 functions as an explanation of 4.2, and not the composite sequence from 3.5 to 4.4. By contrast, the composite formed by the parallel reasons 4.5 and 4.6 together is what functions to cancel the "running out of junk" development.

#### 6.5. Microanalysis: Episode Five

Episode Five is as follows:

- (5.1) J: So I split up the street,  
(5.2) now remember, snow and ice,  
(5.3) I split up the street,  
(5.4) and at that time there used to be a Chase's cafeteria,  
(5.5) I don't know what it's called now,  
(5.6) but you know where the Selwyn Theatre is on 42nd Street?  
. .  
(5.7) You know where Grant's is,  
M: Yeah.  
(5.8) J: you've heard of Grant's,  
M: Oh yeah.  
(5.9) J: Well just about three doors down from Grant's,  
(5.10) Chase's cafeteria.  
(5.11) It was open all night long,  
(5.12) and strictly a hangout after certain hours for hustlers.  
M: Uh huh.  
(5.13) J: Across the street midway down the block was Bickford's,  
(5.14) I guess it's even still there,  
(5.15) maybe it isn't, I don't know,  
(5.16) but at any rate there was a Bickford's.  
(5.17) That was another hangout.  
(5.18) Then on-- going back to the other side of the street, down--  
(5.19) you know where there-- there's an arcade, a flea circus, an  
arcade?  
(5.20) Well that used to be a bus station at one time,  
(5.21) and you could go through there all the way to 41st Street.  
(5.22) And there were pinball games and all sorts of you know  
amusements,  
(5.23) and of course lots of hustlers hung out in there too.  
(5.24) And right next door to it was a Horn and Hardart's,  
(5.25) and of course you could go in there  
(5.26) for a nickel cup of coffee you could sit for hours.  
(5.27) Well I went to Horn and Hardart's that morning.

On first reading this seems rambling. Jack is just trying to get us from the doorway to Horn and Hardart's. He has failed in Episode Four to do it causally, so he does it spatially, by giving us a tour of the places he passed. But the fine structure of the tour is quite revealing. An analysis in terms of the formal theory of coherence yields the structure shown in Figure 7.

First in utterances 5.1 - 5.3 we get an abstract of what we are about to get in detail; 5.2 reinforces a theme that runs through the entire first half of the narration, the down-and-out, desperate cast to the story that serves to explain Jack's ultimate decisions, and lends urgency to the tour that immediately follows.

The middle section consists of four parallel instances of descriptive passages. From 5.4 to 5.26 there are no descriptions of actions taken by Jack. But the descriptions of places are temporally ordered (cf. Linde & Labov 1975), with the implication that Jack is passing these places while looking for a fence. So the descriptive passages in fact advance the story, as he first passes Chase's cafeteria, then Bickford's, then a bus station, and finally Horn and Hardart's. Within each descriptive passage he tells us two things that are important to him for different reasons. First he names the place and tries to relate it to what is there now. This is another example of the "then-now" theme that is an accommodation to the interviewer, and it exhibits again Jack's spatiotemporal uncertainty. Then he says of the place that it was a hangout, the "hangout theme". This is very important information in Jack's scheme of things. Moreover, it contributes to the narrative development; Jack is in search of a fence, and these are the places he is likely to find one.

In 5.27, we get a summary of what he has just done. The initial "well" and the global temporal reference "that morning" tell us that Jack has popped up out of his elaboration to the top level of the immediate story again. The content of the sentence tells us that it is a summary of the traversal. The temporal reference "that morning" and the conjunctive relation with what follows

... and I hadn't been sitting there very long when ...

tells us that it also functions as a setting for a new story he is about to embark upon, the story of his first encounter with Johnny while fencing the goods.

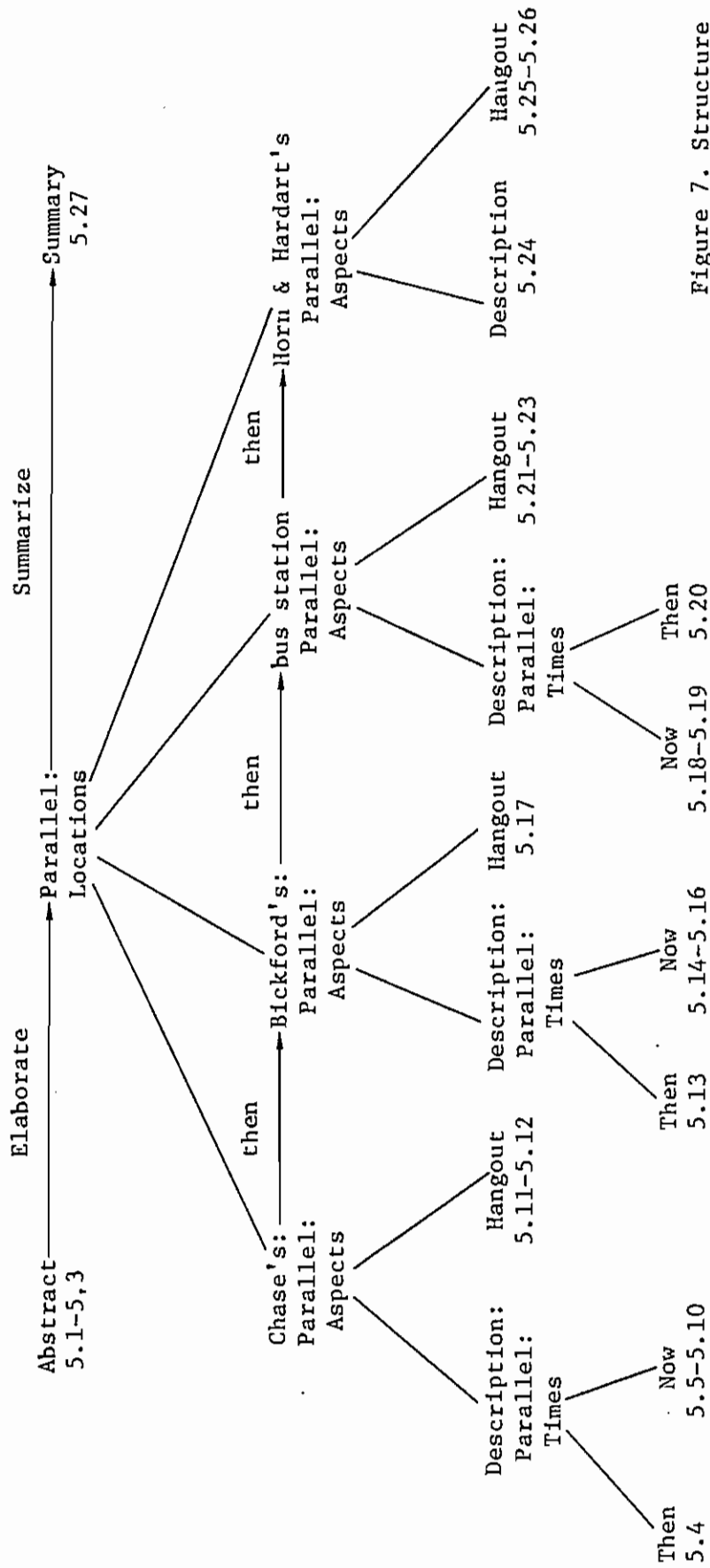


Figure 7. Structure of Episode Five

## 7. Some Dominant Themes

We have seen certain dominant themes realized in the portion analyzed. The next step is to validate our analysis by looking for realizations of the themes elsewhere in the corpus. While a thorough job of this is beyond the scope of this paper, we can indicate four of these themes and point to other places in the narrative where they occur.

1. Inexact time specification: Frequently Jack feels called upon to specify the time something occurred, and he can't do it. The most striking instance of this is at the beginning of the narrative when he spends over a page of the transcripts trying to decide what year the incidents took place. "Dates just don't mean anything to me," he says, and then, "It would be around 1946 roughly, I may be off a year, it may be 1947...."

There are really two themes here. First is the theme that exact times don't matter. This view of time accords with what we know of the junkie world. In contrast with the nine-to-five straight world, clock time impinges on his life only insofar as it determines what places are open. The second theme is his desire to fix a precise time nevertheless. It is likely that this comes more from the interview situation itself. He is talking to a straight interviewer and may feel he has to conform to the interviewer's expectations by fixing times precisely. It is also possible that Jack's sense of setting down his life history causes him to aim for an uncharacteristic precision.

In the fragment analyzed, we have a rather unusual example of the theme: it is really a violation of the theme. As he begins the story of the rip off, he specifies the time almost exactly -- "One Sunday morning about oh five o'clock in the morning...." A violation of a recurrent theme like this should be highly marked, and we should expect it to fulfill an important discourse function. This instance does. It signals the end of a general description of his life at the time and the beginning of the story of one day's events, a major change in the

narrative goals. The later place in the narration where a precise time occurs -- "About four o'clock that afternoon he says c'mon, let's go" -- similarly signals a switch from general description of preparations to the story of the first burglary. This therefore seems to be a higher order kind of theme, namely, the violation of a basic time theme to signal a transition from description to narrative.

2. Duration: While precise times are not significant in Jack's world, the passage of time is extremely significant. Jack is tied to a biological clock. As time passes, junk begins to run out and Jack is faced with the central problem of his life -- how to obtain more junk. We see this theme, in the fragment analyzed, in the sentence "And time was passing." As noted above, the context of the sentence suggests elaborative relations between it and the utterances "I began to feel worse all the time," "I was exhausted, I mean exhausted," and "My junk was running out."

This theme occurs in a few other places in the narration as well. While describing how he would spend his days, he says, "I'd get as far as the Penn Station, and I'd sit there for a couple of hours until you know I began to get uncomfortable." Later, in the movie theatre, he says, "I was worried about how I was going to score for junk, it was getting to be time for me to get fixed."

These two themes and the next theme about how Jack distributes his time among hangouts tell us a lot about how time is organized in Jack's world.

3. Places. The places Jack mentions are more than just geographical references. They are places highly charged with significance in his world. The most striking example of this is the list of places he gives in Episode Five, his trip from Penn Station to Horn and Hardart's. Every place he mentions is a hangout, a place one can spend all night at little cost and a place one might find a fence. The other places mentioned in the fragment also play a similar role in Jack's world. Grand Central Station and Penn Station were places he could sit and keep warm for several hours. The movie theatre was another such place.

The place theme also serves Jack's global narrative plan. The particular places introduced -- coffee cafeterias and the all night movies -- are just the places that Jack needs later to introduce Johnny. He first meets him while dealing with the fence in the cafeteria, and then Johnny follows him into a movie theatre and makes his first contact with Jack.

But again there is a second theme: Jack's efforts to relate places in the 1940s to places today -- then and now. We see this in Episode Two: "It's the Pennsylvania Hilton now. Used to be the old Pennsylvania Hotel."

But just as he gets mixed up in trying to specify precise times, so he gets mixed up trying to relate past and present places. He continues, "I guess that's what they call it, I think, maybe it had another name, at any rate it's a Hilton hotel now." The theme appears again in Episode Five in

(5.4-5) at the time there used to be a Chase's cafeteria, I don't know what it's called now,

and in

(5.13-7) across the street midway down the block was Bickford's, I guess it's even still there, maybe it isn't, I don't know, but anyway there was a Bickford's,

and in

(5.21-3) There's an arcade, a flea circus, an arcade, well that used to be a bus station,

Again we can understand the emphasis on hangouts as arising out of the character of Jack's world, while the recurrent efforts to relate past and present arise out of the interview world, the fact that Jack is talking to a thirty-year-old interviewer who knows the New York of today but could not be expected to know the New York of the 1940s. One of the things a speaker typically tries to do in a conversation is link what he



says to the knowledge he shares with the listener. The fact that he stumbles in these efforts indicates that the comparisons are not significant factors in his world but are artifacts of the special occasion of the interview. In fact, such stumbling may be the kind of evidence we should look for in distinguishing between the influences of the two worlds on the text that is produced.

4. Down-and-out Condition. Related to the nature of the places Jack mentions is another theme, central in the organization of this particular narration -- Jack's portrayal of his down-and-out condition. We see this not only in his accounts of hanging out in train stations, cafeterias and movies, but also in his emphasis on moving around the city through the subway tunnel system of the Times Square area so important to the down-and-out hustler. The theme is emphasized through his account of the severity of the winter. It is also repeated in the story of the low grade rip off of the "young cat's" luggage, as well as his statements about being exhausted and without junk.

Besides its occurrence in the analyzed fragment, this theme recurs throughout the first half of the interview, serving an interesting narrative goal. It sets up an image of Jack that will change dramatically after Johnny teaches him how to be a burglar. From that point on, Jack is competent, has abundant money, and lives the good life. The theme thus serves an important function in the overall story by setting up the problem that the later actions will resolve in a contrasting way.

5. Morality. The next set of recurrent themes deal with morality in Jack's world. This is frequently implicit and is revealed only when we analyze the structure of the discourse. For example, in Episode One, we see that the tension in the early part of the story is due to the street rules that anyone foolish enough to trust a stranger with his possessions, especially someone who should know better, deserves to be ripped off. A similar theme underlies the whole history of the burglaries.

Nevertheless, we again find a countertheme. Jack shows a commitment to straight morality standards, even though his actions are dictated by street morality. Thus, in Episode One, he says "For a few minutes I thought well fuck it, the guy trusts me, what's the use of trying to beat him." In Episode Three, one possible interpretation of "I began to feel worse all the time" is as another instance of this countertheme, an expression of regret.

Both the theme and the countertheme occur elsewhere in the narration. For example, near the beginning he says, "I could borrow, or I could steal, but I just couldn't beg."

On a higher level, the whole structure of the narrative reflects the theme. In the first half he paints himself as helpless, down and out, a victim of junk and the weather. This is in sharp contrast to the last half of the story where he portrays himself as very competent as a burglar. It's as though he is saying, "I couldn't help getting involved in burglary, but by the way, I was pretty good at it."

It could be that this countertheme arises out of the interview situation, from the fact that he is talking to a straight interviewer. But he is much more in command of this countertheme than the other counterthemes, suggesting that it is an important theme in his life in general, as he moves back and forth between the street and straight cultures.

We have thus isolated some of the dominant themes that occur in the fragment subjected to microanalysis. After the microanalysis, the principal evidence we had for these themes as part of Jack's beliefs, goals, and conversational resources was the structure of the text we hypothesized on the basis of our formal theory of coherence. But now we have found other instances of the same themes elsewhere in the text, and this tends to validate our original analysis.

The process, as described earlier, goes as follows. Hypotheses about the formal structure of the text lead us to hypotheses of the content of the relevant cognitive worlds, which, substantiated

elsewhere, cycle back to strengthen and perhaps modify our hypotheses of text structure, which may lead us to modify our hypotheses about the relevant cognitive worlds. And so on. It is reasonable to expect this cycle to converge to mutually supportive accounts of text and cognitive worlds.

## 8. Significance: Implications for Ethnography

Anthropologists and other practitioners of ethnography have long experienced a kind of methodological schizophrenia. On the one hand, they participate in a tradition in which the careful experimental manipulation of quantified variables sets an evaluative standard against which their research is measured. On the other hand, ethnography stresses the learning of patterns of human life whose characteristics more often than not are not known when the research begins. This drama is played out repeatedly in the literature on field methods. Recently, for example, two articles appeared in the journal Current Anthropology. One stressed the problems of "standardization and measurement" in cultural anthropology (Moles 1977); the other emphasized what the author called a "personal approach" (Honigsmann 1976).

An instance of the latter has been the reawakened interest in what many of its practitioners call "an interpretive approach" to ethnography. This seems to offer a promising philosophical foundation for ethnographic work, but it collapses in the area of methodology. Some even argue that method -- or more specifically, validation -- is simply not possible. Unfortunately, some anthropologists use this argument to abandon the important goal of documenting their ethnographic statements for the benefit of skeptical outsiders.

Interestingly enough, one of the evaluative concepts that is offered within this tradition is that of "coherence", though it is, to our knowledge, not well developed. What we have tried to do is to develop the idea of coherence -- global, local and themal -- in light of recent work in artificial intelligence and ethnographic analysis. This notion of coherence forces the analyst to make precise hypotheses about the world of the interview and the background knowledge that both participants bring into the interview, without at the same time losing sight of the richness of the text. We thus see our work as contributing towards a synthesis of the opposition between methodological demands and the personal approach.

While our initial foray into ethnographic analysis is suggestive, it introduces a host of problems in need of further work. The first of these has to do with the interrelationships of the different types of coherence. In some cases, the three are obviously related. For example, one of Jack's global goals is to tell a story about past actions. This, in turn, leads to a repeated problem at the local level -- namely relating such things as past settings to present ones. Because the local coherence problem occurs repeatedly, it suggests a thread that runs throughout the entire corpus of interviews. In this case, then, global, local and themal coherence are but different perspectives on the same discourse problem.

Yet in other cases the three types of coherence would seem to represent different kinds of concerns. Recall the analysis of Episode Four. Globally, Jack's plan is to get Johnny into the picture. To do so, he has subgoals organized around the problem of explaining how he came to have some stolen goods which he then took to a fence. At the end of the third episode, one subgoal has just been satisfied -- he has the goods. At the beginning of the fifth episode, he embarks on the description of the places he is about to traverse on his way to meet the fence -- where he first encounters Johnny. But in the fourth episode, between the two, things fall apart globally.

However, as we showed in the analysis of that episode, local and themal coherence still apply. Local coherence draws on a major story theme -- Jack's down-and-out condition -- and a central feature of his world -- he is a junkie. In this episode then, global coherence helps us understand why there is a problem with the narrative. Local coherence shows us something about how its resolution is attempted, and themal coherence teaches us something about one of the strategies used locally. Again, the three types of coherence are all helpful in the analysis, but in this case they represent different perspectives on a problem.

The problem of relations among the different types of coherence is in need of further work. Another is the separation of the relevant

cognitive worlds that have been hypothesized during the coherence analysis. The coherence analysis is not selective as a forcing function. In our analysis we routinely made assumptions about Jack as a person and as a junkie, the nature of the interview situation, and the fact that Jack was telling his story to a listener whose world was, for the most part, a straight one. Some of these assumptions contribute to the ethnographic goal of understanding another group, while other assumptions begin to address such methodological problems as specifying the effect of situation and interviewer on what happens in interviews. Other assumptions tie into other parts of other worlds. But we have to face the task of determining how ethnographically interesting hypotheses can be sorted from all the assumptions made to establish the coherence of the interview.

Another methodological problem in need of development is showing that the interpretation is something more than ad hoc. The forcing function requires us to scramble through what we know to make coherence as thick as possible. Since we deal here with only a small fragment, the results, though plausible, have not been validated. A first defense, even for the microanalysis presented here, would be to argue, as an underlying methodological principle, that if an utterance is shown to be understandable in terms of the three kinds of coherence, the interpretation is strengthened. Even in the problems created in Episode Four of the fragment, the three notions were helpful in understanding what had happened.

However, future work will address this issue directly by developing strategies to check coherencies found in microanalysis against further material in the corpus. In the spirit of Glaser and Strauss' (1967) grounded theory notion, our strategy is to move from the analysis of one fragment to another, modifying our reconstructions of the relevant cognitive worlds. At some point, we notice that our worlds are not changing as we interpret fragments of the text. We have reached what Glaser and Strauss call "theoretical saturation".

The fact that the method of analysis points to these problems is a strength rather than a weakness, since the problems are the classic ones encountered by any ethnographer faced with the task of analyzing uncontrolled data. To the extent that they can be resolved, coherence analysis will contribute towards the synthesis of the ethnographic dilemma referred to earlier. A forced choice between intuition and experimental manipulation suggests that the wrong question has been asked. Coherence analysis allows for the systematic display of the informal interviews, incorporating both the intuitive apprehension of pattern and its validation into the same process.

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