The Conversation MOP
II. Progression Through Scenes in Discourse

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Based on previous research demonstrating that a conversation MOP (memory organization packet) exists that organizes scenes (topics) in conversations, this research explores the generalizability of the MOP when faced with differing situational demands. This research tests a normative sequential progression claim of the MOP perspective by examining the degree to which the MOP permits routine progression in topical talk in initial interactions as acquaintance goals vary. As predicted, dyads having similar acquaintanceship goals were found to exhibit similar conversational structures; the conversational structures for dyads having differing acquaintanceship goals were also found to be similar; and the progression of dyads through conversations in terms of transitions between topics also exhibited structural invariance. It was therefore concluded that (a) certain topics of talk occur almost regardless of acquaintanceship desires despite idiosyncratic additions, (b) multiple topics of talk are appropriate at any given point but what is appropriate at one point is not appropriate at other points, and (c) conversational sequencing follows a normative progression. In other words, conversational behavior is both routine and adaptive, although the adaptation is in itself routine.

Conversation is one of the most basic and fundamental means that persons use to become acquainted. It is rare for persons to develop a relationship without ever conversing and even in such instances (e.g., pen pals, e-mail), a desire for conversation usually emerges. Conversations occurring in initial interactions are particularly critical for relationship development. For example, persons who disclose too much information too early during initial interactions tend to inhibit the very relationships they desire to develop (Berger, 1973). To make it easier for persons to negotiate initial interactions in relatively appropriate and efficient ways, conversational conventions and rituals are acquired and transmitted from one generation to the next. Meeting other people for the first time thus

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Human Communication Research, Vol. 17 No. 3, March 1991 385-414

becomes a process that is fairly ritualized and routinized (Coulmas, 1981; Kellermann & Lim, 1989). Rituals and routines include everything from greetings to good-byes, turn taking to topic sequencing, linguistically fixed expressions to sequentially dependent acts, and local to global coherence (see, for review, Coulmas, 1981; Craig & Tracy, 1983; Levinson, 1983; McLaughlin, 1984). Yet even in the face of what, at times, seems like mind-numbing routine, initial interactions also reflect a great deal of situationally adaptive and flexible behavior. Persons do influence the conversational behavior, verbal as well as nonverbal, of others (see, for review, Cappella, 1981; Giles, Mulac, Bradac, & Johnson, 1987; Levinson, 1983). It is this ability to be simultaneously routine and yet flexible and adaptive that poses a decided challenge to scholars attempting to describe, predict, and explain conversational interaction.

One recent perspective on conversational behavior accepts this seeming dilemma of routine but flexible behavior as being a basic truism of conversational life (Kellermann, Broetzmann, Lim, & Kitao, 1989). This perspective suggests that relatively small "chunks" of conversational behavior (i.e., what might be thought of as "small" routines) are flexibly deployed so as to adapt to situational features and demands. As a result, the conversational routines of acquaintance (or the prevention thereof) can be adjusted as a conversation progresses. In this perspective, a knowledge structure called a conversation MOP (memory organization packet) organizes these smaller routines and deploys them in any given instance for whatever goal or reason people are interacting and conversing. This perspective is based on Schank's (1982) dynamic memory theory wherein MOPs are identified as knowledge structures that organize behavioral sequences appropriate to a given situation in order to achieve one's goals; they organize scenes so that some higher level goal(s) can be accomplished.

Research has demonstrated that an informal, initial interaction MOP exists that organizes scenes in conversations for the purpose of becoming acquainted (Kellermann et al., 1989). The scenes in this conversation MOP are topic centered, each topic (scene) consisting of a set of utterances having a single overarching content objective. The scenes comprising the MOP include greeting, introduction, health (e.g., "how are you?"), present situation, reason for presence, weather, where one lives, hometowns, persons known in common, what one does, education, occupation, social relations, compliments, interests, family, sports, near future activities, evaluation of the encounter,

planning a future meeting, positive evaluation of the cointeractant, saying "until later"s, providing a reason to terminate the conversation, and good-byes. Each scene (or topic) occurs with limited linguistic variations, a finding consistent with Sorhus's (1977) claim that a fixed linguistic expression tends to occur once every five words. In the perspective of dynamic memory theory, these limited linguistic variations are "scripts" that serve to "color" the general actions of each scene. For example, in an introduction scene, one script might involve specific actions related to shaking hands while another script might involve specific actions related to revealing the relationship between oneself and a partner (e.g., saying one is a student in the other's class, saying you have met before, and so on). The general actions related to providing one's name can be "colored" by these "scripts" in any given setting where they may be appropriate (i.e., in more formal settings or when name recognition alone may be insufficient to "place" a person). As a result, the routine introduction scene can exhibit some "routine" variance dependent on the use of specific scripts to color the more general actions involved in exchanging names.

The research on the conversation MOP notes that the ordering of scenes (topics) is not strictly linear; that is, scenes (topics) are only weakly ordered (Kellermann et al., 1989). At any particular point in time, multiple scenes (topics) are likely though the nature of scenes that are appropriate at different points in time does vary. For example, when persons are meeting for the first time it is common to discuss the situation where the conversation is occurring, the reason each is present, the weather, where each lives, where each is from, and persons known in common. While these scenes tend to occur near the beginning of initial interactions, any of these six topics is appropriate at that point; no one of these topics must "come before" the others. In others words, scenes are organized into subsets of scenes such that any of the scenes in a given subset is a candidate for the next action in the conversational encounter as long as that subset is currently "where the conversation is at." The idea here is that the subsets are linearly ordered such that scenes in Subset 1 come before those in Subset 2 which come before those in Subset 3 and so on; however, no particular order exists for scenes contained in any given subset. A diagram of the informal, initial conversation MOP is provided in Figure 1 where the scenes are organized by subset.

It should be noted that Figure 1 provides a representation of a *cognitive structure* that persons use to guide their talk in informal,

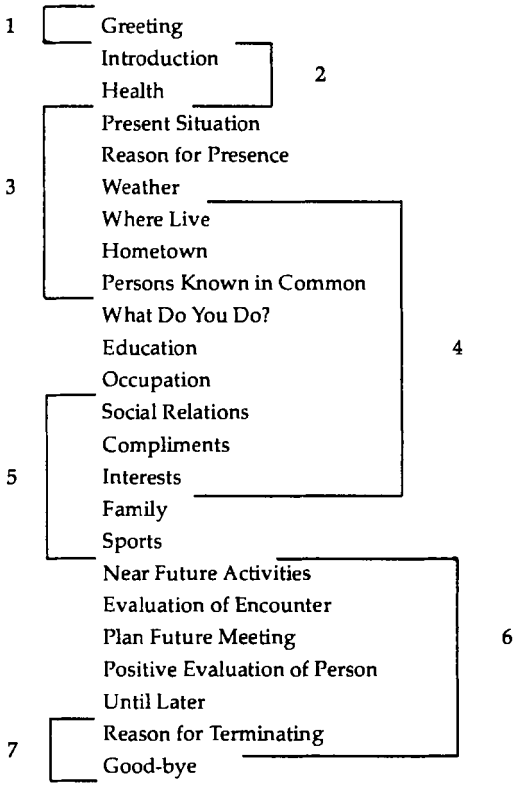

Figure 1: The Informal Initial Conversation MOP

initial encounters. Consequently, this cognitive structure should parallel actual discourse structure, and such has been found to be the case (Kellermann et al., 1989). For example, strong correspondence between the scenes in the MOP (the cognitive structure in Figure 1) and the scenes in actual discourse has been observed. Further, the subsets of scenes identified in the conversation MOP (the cognitive structure) also correspond in content and location with those identified in actual discourse structure. In other words, the MOP provides a cognitive representation of discourse by organizing scenes into subsets, with the subsets being linearly ordered.

As can be seen in Figure 1, certain scenes (topics) bridge subsets; that is, certain scenes are members of more than one subset. These bridge scenes serve a linking function to permit the conversation to

maintain at its current state (within the present subset) or progress to another state (the next subset). The implication from these findings is that flexibility exists in scene selection though the sequential progression of the conversation would still be occurring in a routine manner. For example, in this perspective, the two conversations that follow are equally "routine" and equally "ordered," as both follow the linear progression of the subsets while enacting somewhat different scenes:

Conversation 1:
Hi. (greeting)
How are you? (health)
Isn't the Bay Area expensive? (present situation)
Where do you live? (where live)
What do you do? (what do you do)
What do you like to do for fun? (interests)
Do you have any brothers and sisters? (family)
You sound like you are doing well. (compliments)
Well, I've got to go. (reason for terminating)
Bye. (good-byes)

Conversation 2:
Hi. (greeting)
My name is Kathy. (introduction)
How are you? (health)
Where are you from? (hometown)
Do you know John Doe? (persons known in common)
What are you majoring in? (education)
Do you like to play tennis? (sports)
Maybe we could get together sometime. (future activity)
It was nice to meet you. (positive evaluation)
Catch you later. (until later)
Bye. (good-byes)

While these two conversations are different in some respects, they are nevertheless quite similar in their structure, that is, in terms of the sequential progression through subsets of scenes. Both conversations move from scenes in Subset 1 to those in Subset 2 and so on; that is, both conversations exhibit sequential progression through sets of appropriate topics relative to the point each conversation is at. Both of these conversations are routinized yet adapted to a particular conversational partner and situation.

Not only can conversations exhibit flexibility in routines in terms of the scripts used to color scenes and the choice of scenes in the sequentially ordered subsets but routine flexibility can also occur through a mechanism called a "universal scene" (Kellermann et al.,

1989; Kellermann & Lim, 1989). Universal scenes are defined as generalized action sequences that are role related but context free (Schank, 1982). A universal scene must apply to some general role domain (such as "interlocutor") but can be used in any particular context related to that role. The universal scene in the conversation MOP essentially provides a means of pursuing or developing talk on any scene (topic). The universal scene contains six generalized acts: get facts, discuss facts, evaluate, explain, discuss goals/intentions, and discuss enabling conditions for the goals/intentions. For example, when applied to the hometown scene, talk might proceed as follows: "Where are you from?" (get facts), "What is there to do there?" (discuss facts), "Do you like it there?" (evaluate), "Why do you or don't you like it?" (explain), "Do you want to go back there to live?" (goals/intentions), and "Could you get a job there?" (enabling conditions). This structure (i.e., the universal scene) is capable of organizing talk on each of the topics (scenes) in the informal, initial interaction MOP.

The existence of this universal scene does not imply that persons will pursue such detailed talk on all topics that arise during initial interactions. Rather, to the extent a topic (scene) is pursued, talk tends to be structured according to this universal scene. Persons might simply "get facts" on a number of scenes (e.g., "What is your name?", "What is your major?", "Where are you from?") or they might decide, out of interest or other motivation, to elaborate on particular scenes. Even a decision to elaborate on some particular scene does not imply that the entire universal scene must be used; rather, talk on a topic can be exhausted at any stage, be it getting facts, discussing them, evaluating, explaining, or whatever. The point to be made is simply that the extent to which the universal scene is deployed for talk on some specific scene also offers flexibility in the use of routines. A routine manner of developing talk on a topic can be used to a greater or lesser degree to hold a conversation on a given topic (scene) or to move it to another topic (scene).

This perspective of conversation MOPs suggests that the structure of informal initial interactions is quite stable, that variations are no more than routine ways of flexibly adapting routines to meet particular situational needs. In other words, the relative order of scenes (by subset) is similar across informal initial conversations but variations (adaptations) arise through selection of scenes within a subset, selection of scripts to color particular scenes, and by varying the extent to

which the universal scene is used to pursue talk on particular topics. The key idea is that the progression of informal initial interactions should reflect the linear ordering of the subsets regardless of the various routine means available for adapting conversations to particular contexts or conversational partners.

The claim that the structural progression of conversations should be similar regardless of various situational adaptations is an important one that deserves further attention. The research providing support for this claim is limited to "typical" informal initial interactions, that is, interactions where persons were asked to have a "normal" conversation, much like they would when meeting others informally at a party, the neighbors, the grocery store, or the like. If this perspective of the conversation MOP is to be a useful explanatory mechanism for how conversational behavior is produced in terms of the flexible deployment of routines, then it would seem necessary to demonstrate that varying circumstances, goals, expectations, or partners do not alter the structure of the conversation, only the use of scripts to color scenes, the selection of scenes within subsets, or the degree to which the universal scene is used to pursue talk on a topic. In other words, the conversation MOP is only a feasible production mechanism for conversational behavior if the resultant sequential progression (i.e., the structure) of the discourse remains invariant, while the "routine adaptations" are what make for flexible and responsive conversational interaction.

The research reported here seeks to test one part of this claim of normative sequential progression coupled with routine adaptation. Specifically, this research investigated whether the pursuit of different acquaintanceship goals affects the sequential progression of conversations. If persons desiring to become acquainted converse in a manner that is structurally similar to persons not wishing to become acquainted, then the claim of normative sequential progression gains further support. On the other hand, if persons desiring to become acquainted exhibit a marked difference in the sequencing of their conversational routines in comparison to persons wishing not to develop relationships, then the notion that flexible deployment of routines within normative sequential progression needs revision or rejection.

Differences in conversational sequencing could occur for several reasons; or stated differently, normative sequencing hinges on a number of presumptions. These presumptions center on two major dis-

tinctions: a within-goal versus between-goal focus and a discourse structure versus cognitive structure focus. In terms of actual discourse, the normative sequencing claim presumes that a discourse structure does exist, that is, that persons getting acquainted (regardless of the degree) talk on similar topics. In the terminology of MOPs, the conversations should exhibit similar scenes. This similarity in scene composition hinges, in turn, on two facts being true. First, for each particular mix of acquaintance goals that two people could have, conversations produced by persons having the same mix of goals should evidence a similar scene composition (within-goal focus). That is, it should be possible to identify a discourse structure representing topical talk tendencies for *each* particular mix of acquaintance goals. A "discourse structure" can be said to exist if homogeneity of scene composition occurs *within* any particular mix of acquaintance goals. Second, the various discourse structures identified for the various mixes of acquaintance goals should be comparable; that is, normative sequencing presumes that scene composition of discourse structures should be similar whether people want to become acquainted or not (between-goal focus). Given that the discourse structure for typical informal, initial interactions is known and that this structure parallels the cognitive structure of the conversation MOP, the similarity evidenced across discourse structures should be in scene composition compared to *typical* interactions. If all discourse structures are found to be similar to the discourse structure for typical, get-acquainted conversations, then it can be said with some assurance that regardless of persons' acquaintance goals, their conversations evidence a similar structure in terms of scene composition.

A second presumption of the normative sequencing claim is that the scenes be ordered such that multiple topics for talk are appropriate at a given point in time, but that what is appropriate at one point is not appropriate at other points. The cognitive structure (i.e., the conversation MOP) specifies what is "appropriate" at any given point in time. Consequently, the issues here are the degree to which the scenes composing actual discourse are in a similar order to the scenes composing the cognitive structure of the conversational MOP. As already mentioned, the discourse structure parallels the cognitive structure for typical informal, initial interactions. The issue here is whether this consonance in structure occurs regardless of the extent to which persons want to become acquainted. In other words, of

interest here is the relationship between the discourse structure and the cognitive structure of the conversational MOP for persons having a variety of mixes of acquaintance goals. The normative sequencing claim of the MOP perspective suggests that conversations should follow a normative sequential progression despite fluctuations in persons' desire to become acquainted; routine adaptation occurs by varying features other than the sequential progression of initial interactions.

The final presumption of the normative sequencing claim is that people in conversations should actually transit from topic to topic as specified by the conversation MOP. Because topics are grouped into subsets, this presumption requires a focus on whether persons select scenes from the same or next subset (i.e., an "appropriate" transition) when new topics are introduced. Examining transitions between topics provides the most direct test of the normative sequencing claim, though it hinges on there being similarity in topical talk across conversations both within and between different mixes of acquaintance goals as well as some match in the composition and ordering of scenes to typical, informal, initial interactions and to the representation (i.e., the MOP) for such encounters. Each of these presumptions of the normative sequencing claim will be tested in this research.

METHODOLOGY

Persons were encouraged to become acquainted in conversation by being provided one of three goals to accomplish (find out as much as you can about your partner, reveal as much about yourself as you can to your partner, or anticipate you will be talking with your partner again in a week). Others were encouraged to reject such an acquaintanceship desire through the provision of an opposing goal to accomplish (find out as little as you can about your partner, reveal as little about yourself as you can to your partner, or anticipate not seeing or talking to this partner again). Thus three replications of the normative sequencing tests were made, one for each operationalization of becoming acquainted. Persons were paired in dyads where both, just one, or neither person wanted to become acquainted and then videotaped in conversation. These conversations were analyzed and coded for the scenes persons produced. The conversational structures for the different acquaintanceship desires were then obtained and compared to each other and to the cognitive structure of the conversational MOP.

Participants

Participants in this study were 424 undergraduate students from various communication courses at Northwestern University and the University of Wisconsin paired into 212 dyads. Of these 424 participants, 12 failed to understand the goal they were given, resulting in conversations between these persons and their partners being deleted from any further analyses. In addition, of the remaining 200 dyads, 3 were not strangers to each other. Final analyses, then, employed 394 individuals in 197 dyads.

Procedure

When individuals were asked to participate in the experiment, they were informed they would be videotaped in conversation with another student who was a stranger to them. Students were asked to sign their name next to another person's whom they had never met. When participants arrived at the research center, they were greeted by the experimenter and asked to read an instruction sheet. All instruction sheets informed the participants that they would be conversing with a stranger, that the conversation would be videotaped, and that their identity would be held in confidence. In addition, participants were informed that the conversation should be similar to one they might hold in an informal setting, such as a party. At this point, the instructions diverged in order to provide three different replications of tests of the normative sequencing claim. The first group of instructions created different levels of anticipation of future interaction. Future interaction (FI) instructions indicated that when the individual returned for a second videotaping, he or she would be conversing with the same person again. No future interaction (NFI) instructions indicated that when the individual returned for a second videotaping, he or she would be conversing with another person who would also be a stranger. The second group of instructions varied persons' information seeking desire by telling participants to find out as much (high seekers, or HS) or as little (low seekers, or LS) as they could about their partner during their conversation. The final group of instructions varied participants' desire to reveal themselves to others by instructing them to reveal as much (high revealers, or HR) or as little (low revealers, or LR) about themselves as they could to their partner during the conversation. Normal (N) instructions provided no information about how much participants should seek

information, reveal information, or anticipate future interaction. All instructions stressed that the participant should not discuss the instructions during the conversation.

Ten dyadic conditions were created by pairing persons with others having the same or different goals. The first group of instructions concerning expectations of future interaction resulted in three dyadic pairings. FI-FI dyads (n = 18) were comprised of 2 persons with future interaction expectations; FI-NFI dyads (n = 33) consisted of a person with future interaction expectations and a person with no future interaction expectations; and NFI-NFI dyads (n = 17) paired 2 persons with no future interaction expectations. The second group of instructions concerning information-seeking goals also yielded three dyadic pairings. HS-HS dyads (n = 12) consisted of 2 persons with high seeker goals; HS-LS dyads (n = 12) paired a high seeker with a low seeker; and LS-LS dyads (n = 12) consisted of 2 low seekers. The third group of instructions concerning information-revealing goals also produced three dyadic pairings. HS-HR dyads (n = 15) paired a high seeker with a high revealer; HS-N dyads (n = 17) were formed by pairing a high seeker with a person with normal instructions; and HS-LR dyads (n = 18) paired a high seeker and a low revealer. FI-FI, HS-HS, and HS-HR dyads operationalized various goal/expectations associated with elevated desires to become acquainted while NFI-NFI, LS-LS, HS-LR dyads operationalized goals/expectations associated with depressed desires to become acquainted. Dyads with incompatible or inconsistent goals (FI-NFI, HS-LS, and HS-N) were included for purposes of external validity as were N-N dyads (n = 43), representing "typical" conversations.

After participants read the instructions, they were given identification numbers, taken to a room where the conversation would take place, and asked to begin their conversation by announcing their identification numbers. Each dyad was videotaped in conversation for 5 minutes and 15 seconds, with timing starting with the first word spoken after the identification numbers had been announced. On completion of the videotaping, participants were debriefed and thanked for their participation.

Scene Coding

Three coders were trained to isolate the scenes occurring in the conversations. Scenes were defined as a set of utterances dealing with a single topic and having a single overarching content objective.

Coders were provided a list of all scenes in informal initial interactions that had been generated from previous research (see Kellermann et al., 1989). The list comprised scenes emerging at different stages of interactions and included those scenes that did not occur with high frequency. Exemplary acts or scripts for each of the scenes were also provided and discussed with coders. Coders were told that these scenes were not exhaustive; indeed, coders were informed that they would probably encounter many scenes that would not be on the supplied list.

For purposes of reliability, three conversations were coded for their scenes by each coder. Of 30 discrete scenes identified by the coders, 29 were identically defined and sequentially ordered by all three coders. One coder included a scene which the other two coders did not. In other words, three coders simultaneously agreed to the scenes and their ordering 96.7% of the time. Thus we were confident the conversations were coded reliably as to their scenes.

An index card was used to record information for each scene: the definition of the scene, the dyad producing the scene, the rank order of the scene in the conversation, and the total number of scenes produced by that dyad. The index cards were then sorted into categories using a strict categorization rule, that being that unless the scene was written exactly the same as other scenes, a new category was started. Minimal collapsing of categories was undertaken after completion of this preliminary classification. Collapsing of categories was considered appropriate only if key words in the categories represented the same overarching content objective. For example, "discussion of his cat" and "talking about dogs" were collapsed into a "discussion of pets" category because the key words of "dog" and "cat" represent the same overarching content objective, that being "pets." This procedure isolated 48 uniquely different scenes.[1]

Scene Ordering

The scenes were analyzed to determine their order for each of the 10 different dyadic conditions. The order of scenes for each dyadic condition was determined separately in order to test the presumption of equivalence of scene composition within and between acquaintance goals. Placement was determined by generating a mean rank for each scene and then ordering scenes by this mean rank. As dyads produced varying numbers of total scenes in their conversations, an

adjusted rank for each scene was computed prior to determining the mean rank for the scene. The adjusted rank converted the rank of a scene in each conversation to a 100-point scale based on a ratio of the rank of a scene in a particular conversation with the total number of scenes in that conversation. The mean rank for each scene was then computed using these adjusted ranks. However, the mean rank for each scene could only be based on those dyads whose conversations included the particular scene. As a result, the stability of a given mean rank varied as a function of the number of conversational dyads which generated the scene. Scenes were placed in rank order (1 on down) based on their adjusted mean ranks.

For each dyadic condition, a separate discourse structure was generated in order to test the equivalence of scenes across varying levels of acquaintanceship desires. As with previous research on scripts (Bower, Black, & Turner, 1979) and MOPs (Kellermann et al., 1989), these discourse structures contained only those scenes that met minimum inclusion levels. As suggested by Bower et al. (1979), this inclusion level was set at 20%; that is, at least 20% of the dyads within a particular condition needed to produce the scene for it to be included in the discourse structure for that dyadic condition. Thus individual conversations might differ from the discourse structure of which they are a part either because they *contain* scenes used in few other conversations with their particular goal mix and / or they *do not contain* scenes used by most others in the dyadic condition. Similarly, the discourse structures of the various dyadic conditions might not evidence typical scene composition (i.e., as represented in the discourse structure of normals) either because they *contain* scenes not contained in typical discourse structure or because they *fail to contain* scenes common to initial interactions.

MOP Comparisons

Any comparison of scenes between the cognitive structure of the conversation MOP and the 10 different discourse structures produced by the participants requires that some decision be made about handling low-frequency scenes. Scenes can be low-frequency in terms of the conversation MOP (i.e., they are not a normal part of the cognitive representation of initial encounters) or in terms of their occurrence in discourse (few dyads produced the scene in their conversations). Tests of scene ordering and scene transition can be affected by these low-

frequency scenes. For example, scene ordering is determined by the correspondence between the cognitive structure of the MOP and the discourse structures identified for each of the 10 pairings of acquaintance goals. If this comparison ignores low-frequency scenes, then there exists the possibility that large parts of the discourse structure may not be subject to the test for ordering. On the other hand, finding a means to assign low-frequency scenes to the cognitive structure independent of their actual production in discourse introduces inherent instability in the ordering of scenes in the MOP. The test for scene transition is even more affected by low-frequency scenes. This test examines every topic transition in every conversation and determines if it is an "appropriate" transition or not (as specified by the conversation MOP). Transitions into and out of scenes that are low-frequency relative to the cognitive structure of the MOP cannot be ignored; rather, these transitions need to be judged for their appropriateness. As the mean ranks for the low- as well as the high-frequency scenes for the cognitive structure of the conversation MOP are available from previous research (Kellermann et al., 1989), the decision was made to assign low-frequency scenes to subsets based on those mean ranks. As the ordering of these low-frequency scenes is determined by where they fall in the *cognitive* structure, their assigned "place" is independent not only of this sample of conversations but of actual conversational behavior. Consequently, the comparison for cognitive to discourse structures remains unconfounded. Using the low-frequency scenes is a statistically conservative choice (i.e., introducing random error), as assigning them to subsets requires use of basically unstable estimates. Such conservatism makes it more difficult to find support for the normative sequencing claim and was, therefore, preferred to other methods for handling this problem.

Low-frequency scenes produced in actual conversations will be assigned to subsets based on the location of these scenes in the cognitive structure and included in the analyses unless otherwise specified when doing tests comparing discourse and cognitive structures. Tests solely focused on *discourse* structure—for example, those concerned with within-goal and between-goal scene composition of the discourse structure—do not include these low-frequency scenes as part of the discourse structure because one of the goals of these tests is to determine the extent to which frequently occurring scenes are able to represent the topical talk of persons when they are meeting for the first time. It is only when these discourse structures are being

compared to the MOP or when scene transitions are being compared to what corresponds to the MOP that low-frequency scenes need to be included. Figure 2 illustrates the assignment of scenes to subsets that formed the basis of the tests comparing cognitive and discourse structures. Scenes shown in large type are part of the conversation MOP; that is, they are part of the cognitive representation that people have for informal, initial interactions. Scenes shown in small type are topics for talk that are not generally organized by the MOP.

Scenes in Figure 2 are in the order that they occur in the cognitive structure of the conversation MOP based on the findings from previous research (Kellermann et al., 1989). Consequently, it is possible to rank the scenes in Figure 1 in order from 1 to 55. As only 48 of these scenes ever appear in the conversations analyzed in this research, it is the case that some scenes in the MOP (i.e., the cognitive structure) did not occur at all in discourse. These nonoccurring scenes are all contained in the last two subsets of the MOP (i.e., those subsets that are part of a conversational termination phase). The reason for such nonoccurrence is that the conversations only lasted 5 minutes, time enough to get well into Subset 5 and begin the transition to Subset 6 but not time enough to permit strong engagement of routines of conversation termination. Other research (Albert & Kessler, 1978; Kellermann, Reynolds, & Chen, 1988; Knapp, Hart, Friedrich, & Shulman, 1973; Schegloff & Sacks, 1973; Summerfield & Lake, 1977) lends support for the existence of the scenes, their grouping into subsets, and their relative necessity of inclusion in the termination phase.

RESULTS AND DISCUSSION

Manipulation Checks

Each group of instructions was separately assessed to determine the extent to which persons enacted their goal/expectations. For the instructions related to the expectation of anticipation of future interaction, participants completed postinteraction protocols in which they reported the extent to which they anticipated future interaction with their partner on 7-point scales (1 = low, 7 = high). Seventeen of the N-N dyads also completed this protocol. The instructions differentiated individuals in terms of their anticipation of future interaction with their partners ($F = 53.23$, $df = 2/76$, $p < .001$). Participants reading

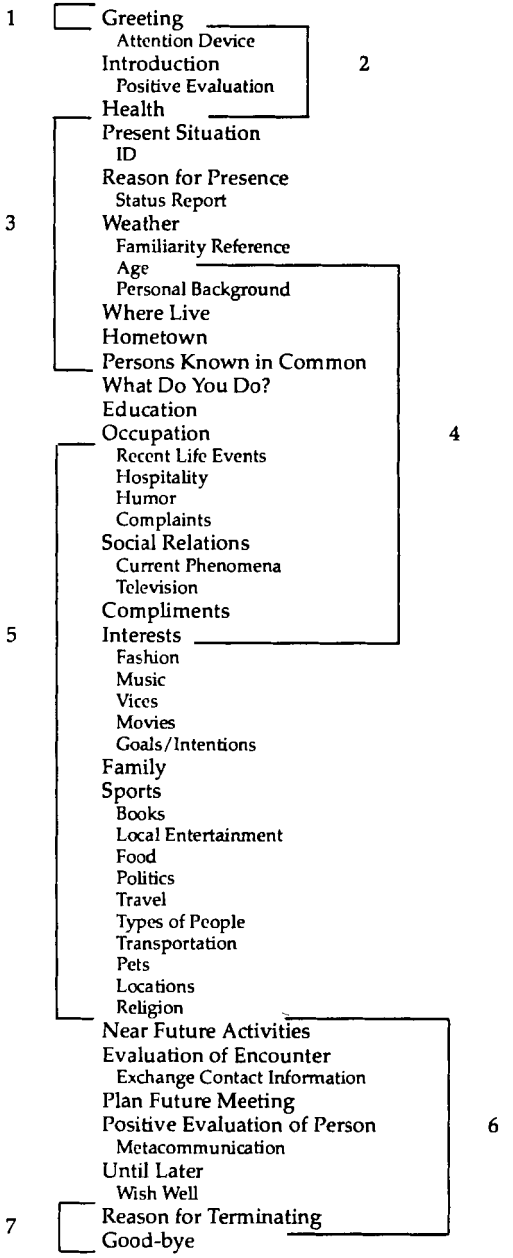

Figure 2: The Conversation MOP Including Low-Frequency Scenes

the FI instructions (M = 6.68, SD = .77) expected future interaction with their partners more than Normals (M = 3.72, SD = 1.62) or NFI participants (M = 2.49, SD = 1.63). Persons in the FI condition significantly increased their typical base rate expectation of future interaction (F = 181.97, df = 1/31, $p < .001$), although the typical base rate expectation was identical across the three dyadic conditions (FI, N, and NFI) prior to reading the instructions. All participants produced accurate verbal reports of their instruction set.

For the instructions related to the information-seeking goal (high, low), protocols and observer ratings were employed as manipulation checks. Each participant was asked to report his or her goal on the postinteraction protocols. All persons retained for analysis in this study could accurately report their goal. Two observers rated the extent to which each participant sought information from his or her partner. As these two observers produced highly reliable ratings (r = .92), the two ratings were averaged for each participant. A one-way ANOVA of the 5-point information-seeking index yielded a significant main effect for the participant's condition (F = 31.24, df = 2/93, $p < .001$). Newman-Keuls tests revealed that high seekers (M = 3.88) were rated as seeking more information than low seekers (M = 2.11).

For the instructions related to the information-revealing goal (high, normal, low), protocols, self-reports, and observer ratings were employed as manipulation checks. All participants included in the analyses and their high-seeking partners accurately identified their interaction goal in the postinteraction protocols. Furthermore, participants' self-reports on the extent to which they provided information about themselves to their partners (7-point scales, with 1 = low, 7 = high) varied as a function of their instruction set (F = 6.92, df = 2/49, $p < .001$). Newman-Keuls tests indicate that low revealers (M = 2.94, SD = .80) reported providing significantly less information about themselves than did Normals (M = 3.75, SD = 1.53) or high revealers (M = 4.33, SD = .97). Judges also reliably rated (7-point scale, with 1 = low, 7 = high) participants on the extent to which they provided intimate information about themselves (r = .79). The intimacy of information varied as a function of the participant's condition (F = 4.82, df = 2/49, $p < .001$). Newman-Keuls tests indicate that low revealers (M = 2.06, SD = .94) provided less intimate information than Normals (M = 2.81, SD = 1.11) or high revealers (M = 3.00, SD = .84). Based on these various checks on the extent to which participants understood and enacted their instructions, the experimental induc-

tions of anticipation of future interaction, information seeking, and information revealing can be considered successful.

Scene Composition of Discourse Structures

One presumption of the normative sequencing claim of the conversation MOP perspective is that persons becoming acquainted select similar scenes as they talk (i.e., they talk *on* similar topics, though perhaps not *in* similar ways). This presumption results in two interrelated requirements. The first requirement is that identifiable discourse structures be present for dyads having similarly defined interaction objectives (within-goal focus). To assess this within-goal homogeneity, each conversation in each of the dyadic conditions was compared to the discourse structure obtained for the dyad's interaction objectives. These comparisons involved two measures: hits—the number of scenes contained both in the discourse structure and in the conversation between people having those interaction objectives—and misses—the number of scenes contained in the discourse structure but not produced in the conversation between people having those interaction objectives. The first two columns of Table 1 report the mean number of hits and misses for the comparison of each conversation to its appropriate discourse structure. Given the low average number of misses (1.10) and the high average number of hits (17.24), each discourse structure seems to represent the scenes produced by dyads having those interaction objectives relatively well. In other words, the discourse structures are a good reflection of the conversations of dyads having those particular goals.

Each discourse structure was then compared to the normal-normal discourse structure to determine the degree to which conversations produced under varying goals/expectations had similar scene composition. As before, both hits and misses were examined to determine the structural similarity of scenes between "typical" conversations and conversations having differing acquaintanceship desires. As can be seen in the "hits" and "misses" columns of Table 3, of the 19 scenes comprising the N-N discourse structure, almost all of these scenes are contained in the other 9 structures. While the other 9 conversational structures do contain scenes not contained in the N-N structure, the average number of these inclusions is quite low (2.67). Scenes not included in the N-N structure but included in one of the 9 other structures are familiarity references, weather, age, local entertain-

TABLE 1
Tests of Discourse Structure

	Discourse Structure Within Dyadic Condition		*Discourse Structure Comparisons to N-N Structure*		
Dyadic Condition	*Mean Hits*	*Mean Misses*	*Hits*	*Misses*	*Inclusions*
Normal with normal	14.93	1.50	—	—	—
Future interaction with future interaction	13.17	1.70	16	3	1
Future interaction with no interaction	12.67	1.03	14	5	1
No interaction with no interaction	12.24	1.80	15	4	0
High seeker with high seeker	21.25	1.25	15	4	5
High seeker with low seeker	17.42	.67	17	2	3
Low seeker with low seeker	15.08	.92	16	3	7
High seeker with high revealer	22.27	.93	17	2	1
High seeker with normal	23.06	1.20	18	1	3
High seeker with low revealer	20.28	.94	17	2	4
Mean	17.24	1.10	15.89	3.11	2.67

ment, religion, what do you do?, reasons for presence, attention devices, current phenomena, complaints, locations, and music. All of these scenes were identified in previous research on "normal" conversations (Kellermann et al., 1989), although they did not occur with sufficient frequency to claim they were part of discourse structure. While persons with differing desires to become acquainted to a large degree talk about similar topics, there is a minor tendency to discuss topics that occur less frequently in "normal" conversations. However, there is a striking similarity in scenes used in each of these various dyadic pairings, to the point where it is not unreasonable to conclude that the strength of persons' desire to become acquainted seems to have minimal effect on the scenes used to accomplish their goals. In other words, the conversation MOP perspective seems to be a reasonable one for understanding conversational behavior.

Normative Sequencing

Testing the normative sequencing claim of the conversation MOP perspective requires that the notion of ordered subsets of scenes be accounted for in the statistical tests and that those tests use the MOP

(rather than discourse structure of "normals") as the benchmark for comparison to the actual discourse. Moreover, the previous analyses, while useful, only speak to the issue of similarity of conversational scenes and not to the issue of structural similarity for progressing through those scenes. It is difficult to devise a statistical test that captures the notion of overlapping subsets that are linearly ordered where the unit of observation is the scene. Consequently, two approaches were employed to assess the degree to which conversational behavior can be flexibly deployed and adapted to various acquaintanceship goals while progressing in a structurally similar manner—a correlational approach and a subset transition approach. Both of these approaches compare the cognitive structure of the MOP to actual discourse (including low-frequency scenes unless otherwise specified). The approaches differ in their focus: the correlational approach focuses on the scene as the unit of analysis while the subset transition approach focuses on the subset as the unit of analysis.

Correlational approach. The rank ordering of the scenes in the conversation MOP was compared to the rank ordering of the scenes for each one of the dyadic conditions by using Spearman's rho. This approach assesses the extent to which various scenes tend to come "early" or "late" in conversational structure relative to what is expected based on the cognitive structure of the MOP. However, as multiple scenes may be appropriate at any given point, the obtained correlations are not expected to be perfect, although they are expected to be positive and significant. Nonsignificant correlations would reject the idea that at any given point in conversation, a range of appropriate topics exists, although different sets of topics are appropriate at different points in time in conversation, while positive correlations would lend support to such an approach. Table 2 lists these correlations comparing the rank order of scenes in the conversation MOP (cognitive structure) to the rank order of scenes produced by each dyadic acquaintanceship objective (discourse structure). Without fail, the order of the scenes in the conversation MOP is similar to the order of scenes in the 10 dyadic acquaintanceship pairings (mean rho = .57; range = .36 to .73). The influence of low-frequency scenes on the correlations can be detected when the scenes produced by 2 or fewer dyads are removed from the analysis (mean rho = .72; range = .55 to .80). Such results lend support to the idea that multiple scenes

TABLE 2
Correlational Tests

	Spearman's Rho	
Dyadic Condition	*Unadjusted*	*Adjusted*
Normal with normal	.73***	.80***
Future interaction with future interaction	.36*	.60**
Future interaction with no interaction	.44**	.73***
No interaction with no interaction	.64***	.80***
High seeker with high seeker	.73***	.79***
High seeker with low seeker	.58**	.73***
Low seeker with low seeker	.65***	.75***
High seeker with high revealer	.37*	.55**
High seeker with normal	.57**	.71***
High seeker with low revealer	.63***	.69***

NOTE: Unadjusted correlations include low-frequency scenes while adjusted correlations removed scenes produced by two or fewer dyads.
*$p < .05$; **$p < .01$; ***$p < .001$.

may be appropriate at any given point in time though different subsets of these scenes are appropriate as the conversation progresses.

Examination of the squared distances comprising the calculation of the correlations produced some additional insights into topic organization. Of interest here are any topics with large squared distances between the rank of the topic in the MOP and the rank of that topic in conversational structure. Such large squared distances are indicative of lack of fit between the cognitive structure (i.e. the conversation MOP) and what occurred in actual discourse, suggesting that either the MOP is defined inaccurately or that some topics might have more variable placement than others. For example, the "weather" scene is a relatively early scene in the conversation MOP (i.e., the cognitive structure) as it was in the conversational structures for dyads receiving information-seeking instructions (HS-HS, HS-LS, and LS-LS). However, this scene occurred significantly later (almost at the end) of conversations involving anticipation of future interaction instructions, revealing instructions, and/or "typical" instructions. It is interesting to note that the information-seeking conversations were videotaped in winter in the heart of the Midwest during "blizzard" time, while all other conversations were videotaped in the fall or spring. The "currency" of weather may be due to the fact that it defines the "present situation," a scene almost always occurring immediately

after the first two subsets of scenes. It is possible that the "present situation" scene may be a truly important scene, allowing for situational adjustments of the flow of talk such that topics that would normally occur later in conversation would be "brought up" if they were directly related to the present situation. For example, at a political rally, it would not be at all unusual for two people to discuss politics very early on in the conversation; in such a case, the present situation scene may be importing the politics scene, as politics defines the present situation.

One other scene, the "where live" scene, also evidenced large squared distances, although in this case, the squared distances are consistently large for each of the 10 dyadic conditions. In every case, the "where live" scene was produced significantly later in the conversational structures than it is listed to occur in terms of the MOP. This scene may be a candidate for an inappropriately ordered scene in the cognitive structure of the conversation MOP. Examination of the orderings of each of the 10 conversational structures suggests that this scene belongs in Subset 5 (the subset of scenes prior to those that aid conversational termination) rather than in Subset 3, where the MOP currently places the scene.

In sum, the correlational approach provides evidence that supports the position that scenes are weakly ordered, that any one of a number of topics may be appropriate to discuss at any given moment, although different topics are appropriate at different points in time in the conversation. Moreover, the ordering of talk corresponds to the order expected by the conversation MOP.

Subset transition approach. The correlational approach looked at scene ordering and more or less ignored that scenes were grouped into subsets. The subset transition approach ignores individual scenes and explores whether scenes in Subset 1 occur before those in Subset 2 which occur before those in Subset 3 and so on. In other words, movement between scenes (in terms of which subsets of topics are presently appropriate in the conversation) is the focus of this subset transition approach.

For the first six subsets of scenes (no instances of Subset 7 occurred), an "appropriate" transition was defined as a scene in that subset being followed either by another scene in that subset or by a scene in the immediately next subset. For Subset 1, the only appropriate transition would be to scenes in Subset 2 (as only one scene exists in

Subset 1). For Subset 2, an appropriate transition would be to another scene in Subset 2 or to a scene in Subset 3. Similarly, an appropriate transition for all other subsets would be to other scenes in the same or next subset. Two other types of transitions were tracked: inappropriate jumps forward and inappropriate jumps backward. Inappropriate forward jumps were defined as transiting between scenes contained in subsets that did not immediately follow one another (e.g., from Subset 1 to Subset 3 or beyond, from Subset 2 to Subset 4 or beyond, and so on). Inappropriate backward jumps were defined as transiting between scenes contained in a particular subset to scenes contained in previous subsets (e.g., from Subset 2 to Subset 1, from Subset 3 to Subset 1 or 2, and so on).

Across all 10 dyadic conditions combined, 74% of the transitions between scenes were appropriate transitions as expected by the invariant sequencing claim of the MOP perspective; only 5% of the transitions were forward jumps, while 21% were backward jumps. When jumping forward, it was very rare (1% of the time) that the jump would skip more than one intervening subset. Similarly, backwards jumps (19%) almost always transited to the immediately preceding subset and only rarely (2%) to subsets in the more distant history of the conversation. The results for all dyadic conditions combined were virtually identical to those obtained when each dyadic condition was analyzed separately. Table 3 provides the results of the transition analysis overall and by dyadic condition.

Examination of Table 3 suggests that one very stable and robust transition is a one-subset forward jump (an appropriate transition), although one other stable transition is a one-subset backward jump (transiting back a subset); such backward transitions consistently occur about 20% of the time. Two possibilities arise in terms of the meaning of these one-subset backward jumps. First the normative sequencing claim of the MOP perspective could be wrong. The consistency of structural progression (transition and movement in the conversation) across varying dyadic acquaintanceship objectives suggests, however, that there is a stable structural progression to initial interactions independent of variations induced by flexible deployment of routines for purposes of adaptation. Three fourths of all transitions occur exactly as expected by the MOP (a surprisingly high figure given the inclusion of low-frequency scenes in the analysis), and it is very rare indeed when forward jumps or big (over one subset) backward jumps occur. Moreover, the one-subset backward jump does not vary as

TABLE 3
Subset Transition

	Backward Jumps		*Appropriate Transitions*	*Forward Jumps*	
Dyadic Condition	*More Than One Subset*	*Only One Subset*	*Same or Next Subset*	*Only One Too Many*	*More Than One Too Many*
Normal with normal	.02	.20	.73	.05	.00
Future interaction with future interaction	.02	.20	.74	.03	.01
Future interaction with no interaction	.01	.14	.80	.04	.01
No interaction with no interaction	.03	.17	.75	.03	.02
High seeker with high seeker	.01	.21	.74	.02	.02
High seeker with low seeker	.03	.23	.70	.03	.01
Low seeker with low seeker	.03	.18	.72	.06	.01
High seeker with high revealer	.01	.20	.76	.03	.01
High seeker with normal	.03	.19	.75	.02	.01
High seeker with low revealer	.01	.19	.76	.03	.01
Pooled transitions	.02	.19	.74	.04	.01

acquaintanceship goals vary, suggesting that this jump is a stable aspect of conversational structure. In other words, stable and normative sequencing seems to occur, although it appears to include not only a "same or next subset" scene selection preference but a "one-subset back" scene selection preference.

Perhaps the problem with the normative sequencing claim, then, is its assumption that all sequencing must be forward, that is, that persons have no means to regulate the progression of a conversation to "haul it back" when it goes forward too fast for their purposes or liking. Certainly, there must be times when one person initiates a scene in a new subset when the other person in the conversation wants to hold the talk at its current "place" (i.e., subset). People have been known to offer explanations of failure to seek or provide some particular bit of information because the "moment passed them by" or they had "trouble getting back to what they wanted to talk about." It is also not uncommon to hear comments that sometimes people "move too fast" in conversation. Given these occurrences of perceived timing difficulties, it would make sense that a routine tool would exist for regulating the development of the conversation, not only suggesting the nature that forward movement should take but offering a means

for cueing one's desire not to progress forward at this particular point. Studies of conversational endings make much the same point by arguing for the existence of preclosing sequences (Schegloff & Sacks, 1973) and passing turns (Levinson, 1983), which can be denied or refused by the other person. The interactive ability to refuse moves for closing may be a much broader conversational phenomenon where moves for forward progression, in general, can be denied through the one-subset backward jump transition.

It is interesting to note that this forward progression refusal hypothesis restricts the range of denial to being able to refuse only the next forward step and not some previous forward step. Backward jumps of more than one subset are very rare, which makes sense from a conversational management point of view. If a backward jump is not initiated, then the newly offered subset is "accepted" and becomes the current subset for focusing appropriate talk. A backward jump of more than one subset would be inconsistent with this previous acceptance of a subset as an appropriate focus for talk. Just as with the initiation of a preclosing sequence or the use of a passing turn where acceptance of conversational termination is difficult to later reject, acceptance of forward movement is also unlikely to be rejected at a later point. This forward progression refusal hypothesis also offers insight into the various timing difficulties that people sometimes report. If one person is consistently attempting to move the conversation forward while the other person is consistently attempting to deflect such moves, conversational management could become difficult and a perception of "moving too fast" might arise. Similarly, if a person unwittingly accepts the offering of a scene in a new subset and then realizes that the topic which he or she wants to talk about is in a previous subset, routine means for opening the desired topic of talk may simply no longer be available without direct reference—explicit conversation management—to wanting to "go back" or "return" or "focus on something that was missed."

The analysis of subset transition offers fairly strong support for the idea of normative sequential progression, although it does suggest that this forward progression is negotiated online. While 74% of all transitions are strictly forward and as predicted, 20% are consistently one-subset backward. If the forward progression refusal hypothesis is true, then the MOP perspective would be able to account for over 94% of the structural progression of ongoing conversations across a diversity of contexts; however, even accounting for 74% of transitions

(including those involving low-frequency scenes) is certainly supportive of the perspective. In other words, the MOP perspective seems to be able to account for how conversational structure can be routine, yet flexible and adaptive to partners and circumstances.

CONCLUSION

This research was undertaken to test three implications stemming from the normative sequencing claim of the conversation MOP perspective to promote understanding of how conversational behavior can be simultaneously routine, yet flexible and adaptive. Each of the three tested implications received support. First, it seems to be the case that certain topics of talk occur almost regardless of acquaintanceship desires, although idiosyncratic additions do occur. Turner and Cullingford (1988) distinguished between mandatory and optional scenes in an advice-giving MOP, suggesting there is a common core structure to advice-giving conversational interactions, although individual variation can enter in as well. This same idea appears here in the results of the scene comparisons of hits, misses, and inclusions. Variations in acquaintanceship preferences—accomplished here by varying preferences for information seeking, information revealing, and anticipation of future interaction—do not disrupt the core elements of informal, initial conversational structure. Rather, routine adaptation seems to be occurring which the MOP perspective would suggest happens via scripts used to color scenes, optional scene selection, and the extent of scene development (e.g., differential use of the universal scene). The evidence is sufficiently supportive at this point to make it desirable to explore these more specific means of routine adaptation; research on the use of the universal scene is presently underway (Kellermann, 1990).

The second implication of the MOP perspective that found support here is the idea that multiple topics for talk are appropriate at any given point but that what is appropriate at one point is not appropriate at other points. Finding support for this implication offers some insight into why wanting to talk on a topic at the "wrong" point can be, and has been, represented as an interruption of the ongoing conversational stream (Turner & Cullingford, 1989b). Perhaps such a finding explains why people fail to learn others' names in first encounters and yet feel they cannot ask; the "right moment" has passed them by.

The third implication of the MOP perspective tested and receiving support is perhaps the most critical in terms of the value of the perspective for understanding conversational behavior. Support was obtained for the idea that conversational sequencing is stable and normative, at least as tested here in the domain of varying (elevated or depressed) desires, goals, and expectations for becoming acquainted. Despite reports of behavioral differences for persons with varying expectations of future interaction, information-seeking goals and information-revealing desires (Berger & Kellermann, 1983, 1989, in press), the findings reported here suggest that these differences are ones of routine flexibility; the routines are being flexibly deployed to adapt to differing circumstances but the conversations are still routine, being structured quite similarly in their progression. This normative sequencing is most likely why MOP-based, advice-giving systems have been successfully developed on computer systems: The computer and the user share the same representation for the discourse structure (Cullingford & Kolodner, 1986; Turner & Cullingford, 1989a, 1989b), much as two persons must share similar structures for talk to progress easily. It seems to be the case that persons flexibly deploy routines within relatively invariant (and routine) sequential progression when conversing.

Two new ideas were also suggested by the results from this research. First, the present situation scene may be a pivotal scene in adapting conversational behavior to varying situations and partners. If the present situation scene is actually capable of importing other scenes for talk that represent the salient and unique features of the present situation, then it offers a means for routinely introducing what might otherwise be considered unlikely topics into the conversational stream. The importation role of the present situation scene would then predict that people meeting in grocery stores might talk about the lettuce (a low-frequency scene normally, but part of the present situation in a grocery store) or that people meeting after a church service might talk about religion (another low-frequency scene normally, but part of the present church setting). It would be worthwhile to explore whether various defining features of different situations were reflected in conversations at the point where talk on the present situation is anticipated by the MOP.

The second new idea suggested by this research is the forward progression refusal hypothesis. This hypothesis suggests that the forward progression of the conversation through sets of appropriate

topics is interactively managed and negotiated with rights of refusal of forward progression. However, the rights of refusal are limited; acceptance of a forward step inhibits further refusal choices. Work by Maynard (1980; Maynard & Zimmerman, 1984) provides additional corroboration to this forward progression refusal hypothesis. Maynard argues that topics are initiated in get-acquainted interactions as *invitations* which can then be refused and/or shaped in a variety of ways. Maynard's work provides insight into mechanisms that persons could use online to manage their normative progression through the scenes in the cognitive structure of the conversation MOP. Unlike some comments that Maynard forwarded, however, the present research found that get-acquainted dyads, regardless of their desire to become acquainted, follow a similar topical structure; however, like Maynard, the present research suggests that the exact topics selected will be handled online. This research extends the invitation/acceptance/refusal approach outlined by Maynard for a single topic by suggesting that the initiation of a new *subset* of topics can be refused by refusing the initial topic selected in that subset and returning to a topic in the previous subset. As the forward progression refusal hypothesis has also been forwarded in a more limited form in terms of conversational endings, it is intriguing as well as apt that similar procedures for managing conversations would emerge for other conversational phases. Certainly, further research would be useful for establishing this hypothesis.

Conversational behavior is both routine and adaptive, although this adaptation is in itself routine. Conversational routines are flexibly deployed and adapted to meet varying goals, situations, and constraints. The structural progression of conversation is relatively invariant, despite being managed on-line. Preference organizations appear for appropriate transitions in talk and these preferences provide this invariance in structure in the midst of flexible and adaptable behavior.

NOTE

1. This number differs from those given in Figures 1 and 2 because the 48 scenes are ones found in actual conversation, while those in the figures are scenes represented in the cognitive structure for conversation. Moreover, Figure 1 shows only the common representation of initial interactions; that is, it excludes scenes that occur infrequently.

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