ABSTRACT

ACTION AND INTERACTION IN THE SOCIAL DYAD:
TEMPORAL MEASURES OF VERBAL BEHAVIOR

By

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Previous studies of process in different dyadic relations found that one way in which people affect each other is by their timing of actions and interactions. Much of this earlier work, however, occurred in clinical or interview settings. The present study investigated temporal behavior of dyads in a semi-structured acquaintance situation.

Thirty-two undergraduate students at Michigan State University formed the sixteen male-female dyads which met for fifty minutes once a week for five weeks. The dyads included four "low-dogmatic" and four "high-dogmatic" dyads (as determined by scores on Rokeach's (1960) Dogmatism Scale) as well as four dyads composed of "high-dogmatic" men and "low-dogmatic" women and four dyads composed of "low-dogmatic" men and "high-dogmatic" women.

Tape recordings of sessions one, three, and five were coded for Units and Duration of Speech, Initiative I (initiation of a new topic) and Initiative II (initiation of a second topic by a subject following his own last

utterance and silence by his partner), Check (interruption of a subject by his partner) and Counter-Check (interruption of a subject by his partner whom he had previously interrupted).

Also scored for were Individual Participation per Session ($\frac{\Sigma \text{ duration of speech for } S_1}{\Sigma \text{ duration of speech for } S_1 \text{ and } S_2}$) and Activity per Session (Σ duration of speech for S_1 and S_2).

The hypothesis that Speech Duration would increase over sessions was not supported by the analysis of variance performed on the collected data. The hypothesis that Initiative II scores would decrease over the sessions was supported; however, the Initiative I scores did not significantly decrease over the sessions. Contrary to expectation, the Activity score decreased over sessions. Also contrary to expectation, "low-dogmatic" subjects scored higher on Check and Counter-Check than did "high-dogmatic" subjects.

Significant second and third order interactions were further analyzed for simple effects. The general trend of results seemed to indicate that a process of adjustment occurred, with measures being more stable at sessions three and five. However, although the data also appear to lend support to Chapple's (1940) hypothesis of stable individual patterns of interaction, whether or not individuals have characteristic patterns of interaction which are "upset" and then "readjusted" during an

acquaintance relationship could not be ascertained with the present research design.

The clearest personality differences in the present study indicated that "low-dogmatic" persons, especially females, were more likely to accept being interrupted by their partner and that "high-dogmatic" individuals counter-checked or "talked down" their partner more often if the other were a "low-dogmatic" individual.

Results were discussed in terms of a process of adjustment and also in terms of both personality and the social situation.

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ACTION AND INTERACTION IN THE SOCIAL DYAD: TEMPORAL MEASURES OF VERBAL BEHAVIOR

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INTRODUCTION

Acquaintance studies have typically dealt with predicting the outcome of the acquaintance process, i.e., attraction, like-dislike, rather than with studying the process itself. Such variables as similarity of attitudes and perception of being liked by the other have been used to predict attraction; questions such as "What occurs during the acquaintance process?" and "What are the specific ways in which people affect each other during the acquaintance process?" are only recently being asked.

However, from studies of process in other dyadic relationships it would appear that one way in which people affect each other is by their timing of actions and interactions (Chapple, 1940, 1949; Kendon, 1967; Matarazzo and Saslow, 1961). Results of these studies lead to such questions as: Are there basic temporal interaction patterns which describe the acquaintance process? Do interaction patterns change over time? If so, how? If there is a basic acquaintance process (in terms of temporal interaction measures), is it affected by personality differences? If so, how? The present study explores questions such as these in terms of male-female dyads, mixed or matched on dogmatism (Rokeach, 1960), who met

for fifty minutes once a week for five weeks. Before further details of this study are presented, however, a summary of previous studies of temporal interaction is presented to provide the framework in which the present experiment was undertaken.

Past Research

In 1940, Chapple, an anthropologist, published a monograph in which he presented a framework for the systematic description of human relations. He believed that personality could be assessed without recourse to intrapsychic or psychodynamic formulations and, further, that this assessment involved merely the process of observing time relations in the interaction patterns of people. His observations of duration and frequency of contact indicated that both specific relationships and specific individuals could be characterized and differentiated in terms of the quantitative aspects of their contacts. In studying dyads who knew each other well, he found that those who subjectively stated that they got on well and saw each other frequently were characterized by high adjustment. That is, the number of interruptions and failures to respond for such dyads was relatively low whereas the reverse was true for those who reported that they did not get along.

Chapple's search for a precise method of analyzing human interaction led eventually to the development of

the Interaction Chronograph, a recording device and computer designed to evaluate personality and temperament by measuring the temporal interaction pattern of an interview. Although in his early work Chapple found no differences in what interviewers said, he did find differences in interviewer behavior and in the results which the interviewers obtained from their subjects. To control the temporal behavior of the interviewer and, thus, to increase the reliability of the measures obtained, a standardized interview was developed. Chapple's standardized interview is divided into five periods, three free periods separated from each other by two stress periods. During the first stress period the interviewer fails to respond to the interviewee; during the second stress period the interviewer continues to interrupt the interviewee.

In using this interview Chapple noted that the behavior of patients during the two stress periods could yield important information about the individual's personality make-up. Accordingly, he developed the initiative and dominance measures. A partial set of the fourteen variables computed and recorded by the Interaction Chronograph is presented below; an act or action is defined as any overt muscular activity of the organism which involves a change from his immediately preceding activity.

Patient's Units: the number of times the patient acted.

Patient's Action: the mean duration of the patient's actions.

Patient's Adjustment: the duration of the patient's interruptions minus the durations of his failures to respond, divided by Patient's Units.

Patient's Initiative: the per cent of times out of the available number of opportunities (usually twelve) in Period 2 in which the patient acted again (within a 15-second limit) following his own last action.

Patient's Dominance: the number of times (out of twelve) in Period 4 that the patient "talked down" the interviewer minus the number of times the interviewer "talked down" the patient, divided by the number of Patient's Units in the period.

Patient's Synchronization: the number of times the patient either interrupted or failed to respond to the interviewer, divided by the number of Patient's Units.

The process by which and the rationale for deriving measures such as the adjustment measure are not clearly stated by Chapple. Salsow, Matarazzo, and Guze (1955, p. 418) state:

> Some of these variables may seem unusually arbitrary since they represent algebraic sums of two variables rather than individual measures of each of these variables. Apparently Chapple, in developing his interaction theory of personality, has found these derived variables more useful than the first order variables from which they were obtained.

A factor analysis of twelve of the Interaction Chronograph variables revealed two stable and independent factors for the interview: silence behavior and action behavior. Two weaker factors were initiative behavior and adjustment behavior (Matarazzo, Saslow, and Hare, 1958).

Reliability and validity tests of the Interaction Chronograph measures indicate that these measures are relatively stable characteristics of an individual's personality. Saslow et al. (1955) and Matarazzo, Saslow, and Guze (1956) found good interviewer reliability. Chapple (1940) and Saslow et al. (1955) found good subject reliability which could not be attributed to the patients' repeating their stories to the different therapists (Pearson rs ranged from .726 to .956). Saslow and Matarazzo (1959) found test-retest reliability values after periods of seven days, five weeks, and eight months; rs ranged from .423 to .910; rho from .485 to .919. For scorer reliability, Saslow et al. (1955) found perfect agreement on 96 per cent of 600 individual scores; on the remaining 4 per cent, the magnitude of the errors was not greater than 1 unit. Finally, Chapple (1940), studying observer reliability, found no differences in the mean or number of units obtained by two observers and their six records.

Chapple (1949) also reported that his variables have differentiated normals from neurotics, factory

workers from foremen, and good from poor sales people. Goldman-Eisler (1952) found that rank order correlations between the objective values of the Interaction Chronograph measures and opinions obtained independently from seven psychiatrist colleagues regarding three psychiatrists were in "complete conformity."

Matarazzo and Saslow (1961) studied the differences in behavior of five groups (outpatient and neurotics, a mixed group of outpatient and inpatient neurotics and psychotics, chronic patients, and two groups of normals). Although there were considerable individual differences within each group for all of the twelve variables studied, the differences among the means of the three patient groups and the means of each patient group with each of the two normal groups reached high degrees of significance.

That the Interaction Chronograph measures are relatively stable characteristics of an individual's personality is further indicated by Goldman-Eisler's (1951) finding of stable interaction patterns for seven psychology department members in free conversation. She also found, in studying three senior psychiatrists and their ten patients, that each psychiatrist had his own individual interaction pattern regardless of which type of patient (depressed or active) he was interviewing. These patterns could be adjusted to the patient, but only within the limits of the interviewer's own pattern.

Furthermore, each doctor influenced the interaction patterns of the same ten patients in different ways (Goldman-Eisler, 1952). So, while an individual's interaction pattern is relatively stable, it may also be influenced, within limits, by the patterns of others.

Experimenters have also found that certain patterns of interaction are correlated with other personality variables. Matarazzo, Matarazzo, Saslow, and Guze (1958a) found that subjects with shorter utterances in a group discussion task were less intelligent and more stereotyped in responding to projective tests while those with longer utterances were more intelligent and gave unconventional Rorschach responses.

Phillips, Matarazzo, Matarazzo, Saslow, and Kanfer (1961) studied the relationships between the Interaction Chronograph's temporal variables and the content of interviews with new referrals to a psychiatric outpatient clinic. The data suggested that patients who spoke less often, who were faster to respond, and who were more dominant in the interview spoke of being relatively more oriented toward other people and toward interpersonal interaction. They also more frequently described their social roles as dominant, either paternalistically- or hostilely-dominant. On the other hand, patients who lost or submitted to interruptions, who were hesitant in speaking and who were less active verbally tended to emphasize noninterpersonal concerns rather than

interaction with others. They described their role with other people as being submissively hostile.

Finally, Kendon (1967), in a study of gaze-direction in interaction provided further evidence that such temporal measures indicate stable individual differences. In discussing his findings he also attempted to place them in a more general theory of human behavior. Thus he stated that individual differences in looking styles have been linked to individual differences in interaction styles and these differences in turn have been linked to individual differences in input sampling. Kendon suggested that perhaps people with highly persistent sets sample less frequently than do people with less persistent sets. A person may define a situation on the basis of information he has gathered about the situation. To keep this definition in line with those definitions of others present and to keep his own performance in line, the individual must sample the situation from time to time. Kendon found that those who produced long utterances looked at the other less frequently than those whose utterances were short. If one presumes that the length of an utterance is governed partly by the person's image of the situation (e.g. how long it is appropriate to talk), then it might be expected that people who have persistent images and sample relatively rarely will, in an encounter, talk at length and look infrequently.

One measure of personality which appears to be related to the content and personality variables of the Matarazzo et al. (1958a), Phillips et al. (1961) and Kendon (1967) studies is the Dogmatism Scale (Rokeach, 1960). This scale was developed by Rokeach to measure: (a) the openness-closedness of cognitive systems, (b) general authoritarianism, and (c) general intolerance. Although the present experimenter is unaware of any studies relating the Dogmatism Scale to temporal measures of interaction and personality such as used by Chapple, Matarazzo, Phillips, and Kendon, the content and personality measures used by these previous researchers may be related in the following way to the three factors measured by the Dogmatism Scale. It does not seem unreasonable to assume that the closed-minded, or high-dogmatic, individual, with his inability to or difficulty in incorporating new information at odds with his currently held beliefs and attitudes, would be expected to have more persistent images and to give more stereotyped responses to a projective test than would the open-minded, or low-dogmatic, individual. The high-dogmatic, as compared to the low-dogmatic, person would also be expected to be more dominant and less likely to submit to being interrupted by others.

THE PROBLEM

Much of the earlier work on temporal relations in interpersonal interaction has used the structured interview and/or has looked at patient-therapist or interviewee-interviewer interactions. The acquaintance relationship presents a different situation; the present study explores the acquaintance process in male-female dyads in a semi-structured situation in terms of the following temporal interaction measures:

1. Units of Speech
2. Duration of Speech
3. Individual Participation per Session:

$$\left(\frac{\Sigma \text{ duration of speech for } \underline{S}_1}{\Sigma \text{ duration of speech for } \underline{S}_1 \text{ and } \underline{S}_2}\right)$$

4. Activity per Session:

   (Σ duration of speech for $\underline{S}_1$ and $\underline{S}_2$).

In addition, the units of speech were coded according to the following categories to further explore possible process and personality differences:

5. Initiative I ($\underline{S}$ begins interaction or introduces another topic)
6. Initiative II ($\underline{S}_1$ introduces a second topic following his own last utterance and silence by $\underline{S}_2$)

7. Check ($\underline{S}_1$ interrupts or cuts short $\underline{S}_2$)
8. Counter-Check ($\underline{S}$ regains the floor, i.e., $\underline{S}_1$ interrupts $\underline{S}_2$ who had previously interrupted $\underline{S}_1$).

The temporal measures used are first-order or simple second-order measures based on, but not equivalent with, Chapple's measures. The differences between the two sets of measures reflect the present experimenter's desire for greater simplicity and an inability to comprehend fully several of Chapple's second-order variables. Furthermore, the temporal measures in the present study are based entirely on the subjects' verbal behavior; although Chapple defined his variables in terms of acts, i.e., overt muscular activities, in practice his coders depended largely on the verbal aspects of interaction.

The dependent variables (temporal interaction measures) listed above were analyzed in terms of their relationship to the following independent variables:

1. Dogmatism of Subject (high or low)
2. Dogmatism of Partner (high or low)
3. Sex of Subject
4. Session (first, third, or fifth).

The first two independent variables were included for several reasons: it was thought that both an individual's personality and the personality of his partner affect their acquaintance relationship and their pattern of temporal interaction; the Dogmatism Scale appears to

be related to several of the content and personality variables studied by previous researchers of temporal interaction in dyads; the Dogmatism Scale was both easily available and easily administered.

The effects of Sex were studied both because the dyads were male-female dyads and because it was thought that the traditionally different social roles for men and women may be reflected in differences in their respective patterns of interaction.

Finally, the last independent variable in the present study, Session, was included to provide information on the acquaintance process per se; to explore possible changes in the temporal interaction scores as the sessions progressed.

HYPOTHESES

On the bases of informal observation and intuition it was hypothesized that as $\underline{S}$s interact over several sessions:

1. Their pattern of interaction will change from one of shorter durations of speech to one of longer speech durations.
2. The I and II scores will decrease over sessions.
3. The Activity score will increase over sessions.

These three hypotheses were generated by the following reasoning. When strangers first meet they are unaware of each other's interests and activities. It is thought that initial meetings between strangers are used to ascertain such interests and, further, to ascertain which interests are held in common by both $\underline{S}_1$ and $\underline{S}_2$. One way of finding out another's interests is by simply asking questions. In a college setting, for example, initial meetings with strangers often consist of a brief introduction and/or of soliciting the following kinds of information: name, year in school, major, current courses, mutual acquaintances. This pattern of interaction would thus be one of brief utterances with several different topics of conversation. As acquaintances

develop, however, both S_1 and S_2 should become aware of each other's interests and of those which they hold in common; interaction should increase as they discuss common topics of interest--and such topics should hold their attention for a longer period of time.

4. In comparison with open-minded Ss, closed-minded Ss will score higher on Check and Counter-Check.

The fourth hypothesis was formulated because it is thought that the closed-minded person is more likely than the open-minded person to interrupt another, either to simply present his own thoughts or to disagree with the opinions of the other. Similarly, it is thought that once interrupted by the other the closed-minded individual would be more likely to interrupt the other or to simply continue speaking.

Further hypotheses on possible relationships between open- and closed-mindedness and the other temporal interaction measures were not made. On the basis of Kendon's (1967) findings one might postulate that high-dogmatic persons more than low-dogmatic persons would tend to dominate the conversations and thus have longer speech durations. On the other hand, Phillips et al. (1961), in correlating temporal and content measures found that the patient who spoke relatively infrequently, but with longer durations per utterance described himself as relatively more oriented to interactions with

other people, less concerned with his own solitary experiences, interested in a wider variety of events in daily living, and was less prone, in general, to evade descriptions of himself. To the extent, then, that open-minded people are also other-directed and less guarded, we would expect them, and not the close-minded, to have longer speech durations.

Because there is no specific, well-formulated theory in this area, and because the present study is an attempt to provide data from which additional questions may be generated, no other hypotheses were formulated. But, intra-dyad measures were obtained and examined for possible relationships of individual and process measures to dogmatism and/or the composition of the dyads: Is, for example, dogmatism related to speech duration? Does process differ for the pairs with mixed dogmatism levels as compared to those pairs with similar dogmatism scores?

METHODOLOGY

Subjects and Design

Subjects for the present study were sixteen male and sixteen female juniors and seniors at Michigan State University. These subjects had participated in a study conducted by Conway (1968) who then made available to the present experimenter tape recordings which she had collected for an acquaintance process study of content variables. The subjects had been selected in the following manner: respondents to an advertisement in the school paper and to notices posted in Olds Hall, a building of the university housing the psychology department, were given the Rokeach Dogmatism Scale (Rokeach, 1960). The eight men and eight women scoring highest on dogmatism and the eight men and eight women scoring lowest on dogmatism were selected and the following dyads formed: four pairs in which both members were high-dogmatic individuals, four pairs in which both members were low-dogmatic individuals, four pairs composed of low-dogmatic men and high-dogmatic women, and four pairs of high-dogmatic men and low-dogmatic women.

Procedure

Each couple met for fifty minutes once a week for five weeks and were given no restrictions as to topics of conversation. Tape recordings were made of each session. All sessions were conducted in a basement room of Olds Hall, furnished with a table and sofa.

Scoring

Undergraduate coders were trained on tapes of sessions two and four.

With the aid of a stopwatch, coders scored the first thirty minutes of sessions one, three, and five. The tapes were scored every second in the following manner (see scoring sheets, Appendix B):

1. Coders for units and duration of speech simply marked the appropriate blocks whenever S spoke.
2. Coders for Initiative (I) and Initiative (II) marked the appropriate space as each S spoke and further indicated I or II if a new topic were introduced.
3. Coders for Check (✓) and Counter-Check (✓✓) also marked the appropriate space for each S and further indicated a ✓ or ✓✓ whenever one S interrupted the other.

This method of coding required the coders' constant attention and also informed them when the thirty minutes

were over. In addition, it allowed for a cross-check on the units of speech among the three sets of data available for each dyad. This last reason for selecting this particular coding scheme was important because it is basically from the units of speech data that many of the other measures were obtained (i.e., Duration of Speech, Individual Participation per Session, and Activity per Session).

While coding the tapes it was noted that often an interruption would consist of an "um-hmm" or other brief, socially reinforcing comment. The scoring sheets recorded this as a one-second interruption on the part of $\underline{S}_1$ while $\underline{S}_2$ continued to talk. $\underline{S}_2$ in turn was indicated as having counter-checked $\underline{S}_1$. The distinction was thus made between a Check and a Socially Reinforcing Check of one-second or less duration, and the Check and Counter-Check scores corrected by subtracting the Socially Reinforcing Checks and their related Counter-Checks, respectively. The resultant scores were then subjected to the analyses described below.

Analyses

Data for all dependent variables except Activity were analyzed using a four-way analysis of variance with repeated measures on the last two factors (Winer, 1962). The factors were Dogmatism of Subject (high or low), Dogmatism of Partner (high or low), Sex, and Session.

Significant interactions were further analyzed for simple effects and when these results were significant for the last factor, Session, the Newman-Kuhls procedure was used to test the differences between values.

Activity per Session, a measure obtained from pairs of subjects and not individual subjects, was analyzed in a similar fashion, but with a three-way analysis of variance with repeated measures on the last factor. The factors were Dogmatism of Male, Dogmatism of Female, and Session.

RESULTS

Coder Reliability

Reliability was tested in the following manner. As coding proceeded, the experimenter made random selections of tapes and coded them. In addition, a few tapes were coded by two different coders for the same dependent variables. For Speech Duration, coder agreement ranged from 93 per cent to 99 per cent. Scoring sheets were highly similar, with some differences probably due to a difference in beginning the timer. Number of Units was somewhat less reliable with agreement ranging from 80 per cent to 82 per cent. Such differences were probably due to the raters' differences in noting brief pauses in a subject's speech. However, these differences were also related to the differences in duration scores and thus tended to correct themselves in the Mean Duration scores.

Scoring for Initiative I and Initiative II indicated no differences among coders.

Scoring for Check and Counter-Check indicated the following agreement among coders: 67 per cent to 87 per cent for Check and 67 per cent to 75 per cent for Counter-Check. As was mentioned earlier, the method of coding also allowed for a cross verification of several scores.

Counter-Check scores, because generally few in number and easily cross validated, were always tested in this manner. Thus a subject's Counter-Check score was obtained only after his particular Check/Counter-Check scoring sheet had been compared with its matching Duration and I/II sheets.

Analysis of Variance Results

Of the ten analyses of variance completed on the present data, three resulted in no significant findings. Summary tables for these three analyses of variance are presented as Appendix A; results of the remaining seven analyses of variance are presented below.

Hypotheses

1. Analysis of variance indicated no differences in the Mean Duration of Speech over sessions (Table A-1 in Appendix A).
2. Analysis of variance indicated no differences in Initiative I scores over sessions (Table A-2 in Appendix A). As Table 1, below, indicates, however, Session did have a significant effect on the number of Initiative II scores recorded. And, as further indicated by Table 2, below, these differences were in the direction hypothesized. That is, Initiative II scores decreased from sessions one and three to session five.

TABLE 1.--Summary of the analysis of variance for Initiative II.

Source	df	MS	F
Dogmatism	1	.375	.772
Dogmatism of partner	1	.041	.084
Dogmatism X Dogmatism of partner	1	.042	.086
Error	12	.486	
Sex	1	1.041	1.470
Dogmatism X Sex	1	1.042	1.472
Dogmatism of partner X Sex	1	1.043	1.473
Dogmatism X Dogmatism of partner X Sex	1	.374	.528
Error	12	.708	
Session	2	.760	4.368*
Dogmatism X Session	2	.406	2.336
Dogmatism of partner X Session	2	.511	2.937
Dogmatism X Dogmatism of partner X Session	2	.072	.417
Error	24	.174	
Sex X Session	2	.324	1.037
Dogmatism X Sex X Session	2	.010	.032
Dogmatism of partner X Sex X Session	2	.197	.631
Dogmatism X Dogmatism of partner X Sex X Session	2	.220	.704
Error	24	.312	

*$p < .05$

TABLE 2.--Total number of Initiative II recorded for each session.

Session		
1	3	5
12	11	3

3. Table 3 presents the results of the analysis of variance for the Activity scores. Contrary to expectation the Activity scores decreased, with dyads being significantly more active in session one than in sessions three and five (Table 4).
4. The results of the analyses of variance for Check and for Counter-Check are presented in Tables 5 and 6, respectively.

The significant four-way interactions for Check and the significant three-way interactions for Counter-Check were further analyzed for simple effects. There were no significant main effects for Dogmatism, and the analyses for simple effects indicated that, contrary to expectation, low-dogmatic individuals checked and counter-checked more than did high-dogmatic individuals. More specifically, the analyses for simple effects provided the following picture of the relationship between dogmatism and the tendency to interrupt another.

TABLE 3.--Summary of the analysis of variance for Activity.

Source	df	MS	F
Dogmatism of Male	1	14630.084	.147
Dogmatism of Female	1	65564.084	.660
Dogmatism of Male X Dogmatism of Female	1	11346.749	.114
Error	12	99341.806	
Session	2	153991.896	3.648*
Dogmatism of Male X Session	2	60903.770	1.443
Dogmatism of Female X Session	2	59238.146	1.403
Dogmatism of Male X Dogmatism of Female X Session	2	26566.188	.629
Error	24	42210.222	

*p < .05

TABLE 4.--Mean dyadic activity (in seconds) per session.

Session		
1	3	5
1666	1537	1474

Note: Newman-Kuhls analysis, p < .01 for session 1 as compared to sessions 3 and 5.

TABLE 5.--Summary of the analysis of variance for Check.

Source	df	MS	F
Dogmatism	1	98.011	2.298
Dogmatism of partner	1	3.761	.088
Dogmatism X Dogmatism of partner	1	4.593	.108
Error	12	42.656	
Sex	1	55.511	2.986
Dogmatism X Sex	1	114.843	6.179*
Dogmatism of partner X Sex	1	.260	.014
Dogmatism X Dogmatism of partner X Sex	1	31.511	1.695
Error	12	18.587	
Session	2	338.719	7.175**
Dogmatism X Session	2	22.822	.483
Dogmatism of partner X Session	2	71.448	1.514
Dogmatism X Dogmatism of partner X Session	2	6.844	.014
Error	24	47.208	
Sex X Session	2	2.510	.349
Dogmatism X Sex X Session	2	43.157	5.993**
Dogmatism of partner X Sex X Session	2	25.823	3.586*
Dogmatism X Dogmatism of partner X Sex X Session	2	75.760	10.521**
Error	24	7.201	

*p < .05
**p < .01

TABLE 6.--Summary of the analysis of variance for Counter-Check.

Source	df	MS	F
Dogmatism	1	.666	.012
Dogmatism of partner	1	22.041	.382
Dogmatism X Dogmatism of partner	1	121.501	2.108
Error	12	57.646	
Sex	1	13.500	7.623*
Dogmatism X Sex	1	40.042	22.610**
Dogmatism of partner X Sex	1	73.500	41.502**
Dogmatism X Dogmatism of partner X Sex	1	9.375	5.294*
Error	12	1.771	
Session	2	290.198	18.486**
Dogmatism X Session	2	17.323	1.104
Dogmatism of partner X Session	2	33.448	2.131
Dogmatism X Dogmatism of partner X Session	2	56.656	3.609*
Error	24	15.698	
Sex X Session	2	.968	.290
Dogmatism X Sex X Session	2	3.636	1.087
Dogmatism of partner X Sex X Session	2	6.969	2.084
Dogmatism X Dogmatism of partner X Sex X Session	2	3.968	1.187
Error	24	3.344	

*$p < .05$
**$p < .01$

At session one, with low-dogmatic partners, females who scored high on dogmatism checked less often than did females who scored low on dogmatism (Table 7, cells (j) and (v); $F = 7.056$, $p < .05$).

Also at session one, with high-dogmatic partners, low-dogmatic subjects counter-checked more often than did high-dogmatic subjects (Table 8, cells (g) and (a); $F = 6.370$, $p < .05$).

In addition, the analyses for simple effects for the Check and Counter-Check scores indicated the following significant relationships:

Check

Dogmatism of Partner.--There were two significant findings for Dogmatism of Partner:

1. At session one, high-dogmatic males checked more often if their partners were low-dogmatic females than if their partners were high-dogmatic females (Table 7, cells (g) and (a); $F = 4.516$, $p < .05$).
2. At session one, low-dogmatic females checked more often if their partners were low-dogmatic males than if their partners were high-dogmatic males (Table 7, cells (v) and (p); $F = 5.098$, $p < .05$).

TABLE 7.--Dogmatism X Dogmatism of Partner X Sex X Session for mean Check.

Dogmatism	Dogmatism of Partner	Sex	Session		
			1	3	5
High	High	Male	7.50 (a)	5.75 (b)	10.75 (c)
		Female	10.25 (d)	6.00 (e)	9.50 (f)
	Low	Male	15.50 (g)	5.75 (h)	9.00 (i)
		Female	11.50 (j)	7.75 (k)	5.25 (l)
Low	High	Male	14.75 (m)	7.25 (n)	6.25 (o)
		Female	13.00 (p)	7.75 (q)	15.50 (r)
	Low	Male	11.25 (s)	6.25 (t)	7.50 (u)
		Female	21.50 (v)	7.00 (w)	10.75 (x)

TABLE 8.--Dogmatism X Dogmatism of Partner X Session for Counter-Check.

Dogmatism	Dogmatism of Partner	Session		
		1	3	5
High	High	2.75 (a)	1.50 (b)	3.88 (c)
	Low	11.25 (d)	3.00 (e)	3.50 (f)
Low	High	9.62 (g)	3.12 (h)	2.62 (i)
	Low	7.75 (j)	1.50 (k)	2.25 (l)

Sex.--There were two significant findings for Sex:

1. At session five, with high-dogmatic partners, low-dogmatic females checked more often than did low-dogmatic males (Table 7, cells (r) and (o); $F = 15.562$, $p < .05$).
2. At session one, with low-dogmatic partners, low-dogmatic females checked more often than did low-dogmatic males (Table 7, cells (v) and (s); $F = 19.109$, $p < .01$).

Session.--There were two significant findings for Session:

1. With low-dogmatic partners, high-dogmatic males checked more often at session one than at session three (Table 7, cells (g) and (h); $F = 3.624$, $p < .05$).

2. With low-dogmatic partners, low-dogmatic females checked more often at session one than at sessions three and five (Table 7, cells (v), (w) and (x); $F = 8.329$, $p < .01$).

Counter-Check

Dogmatism of Partner.--The only significant finding for Dogmatism of Partner was that, at session one, high-dogmatic subjects counter-checked more often if their partners were low-dogmatics than if their partners were high-dogmatics (Table 8, cells (d) and (a); $F = 9.737$, $p < .01$).

Session.--There were three significant findings for Session:

1. With low-dogmatic partners, high-dogmatics counter-checked more often at session one than at sessions three and five (Table 8, cells (d), (e) and (f); $F = 10.904$, $p < .01$).
2. With high-dogmatic partners, low-dogmatic subjects counter-checked more often at session one than at sessions three and five (Table 8, cells (g), (h) and (i); $F = 7.772$, $p < .01$).
3. With low-dogmatic partners, low-dogmatic subjects counter-checked more often at session one than at sessions three and five (Table 8, cells (j), (k) and (l); $F = 5.616$, $p < .01$).

Sex.--Analysis for simple effects for the significant Dogmatism X Dogmatism of Partner X Sex interaction resulted in the following three significant findings:

1. With low-dogmatic partners, high-dogmatic males counter-checked more often than did high-dogmatic females (Table 9, cells (c) and (d); $F = 33.973$, $p < .01$).

TABLE 9.--Dogmatism X Dogmatism of Partner X Sex for Counter-Check.

Dogmatism	Dogmatism of Partner	Sex	
		Male	Female
High	High	3.17 (a)	2.25 (b)
	Low	7.50 (c)	4.50 (d)
Low	High	3.67 (e)	6.58 (f)
	Low	4.75 (g)	2.92 (h)

2. With high-dogmatic partners, low-dogmatic females counter-checked more often than did low-dogmatic males (Table 9, cells (f) and (e); $F = 28.821$, $p < .01$).
3. With low-dogmatic partners, low-dogmatic males counter-checked more often than did low-dogmatic females (Table 9, cells (g) and (h); $F = 11.387$, $p < .01$).

Socially Reinforcing Interruptions

Table 10 presents the results of the analysis of variance for the Socially Reinforcing Interruptions.

Table 11 presents the mean Socially Reinforcing Check scores in a Dogmatism X Dogmatism of Partner X Sex X Session form.

Dogmatism.--Results of the analysis for simple effects for the Socially Reinforcing Check scores indicated two significant findings for Dogmatism:

1. At session one, with low-dogmatic partners, males made more socially reinforcing checks if they were high-dogmatics than if they were log-dogmatics (Table 11, cells (g) and (s); $F = 6.564$, $p < .05$).
2. At session one, with low-dogmatic partners, females made more socially reinforcing checks if they were low-dogmatic persons than if they were high-dogmatic persons (Table 11, cells (v) and (j); $F = 10.255$, $p < .01$).

Dogmatism of Partner.--There were two significant findings for Dogmatism of Partner:

1. At session one, high-dogmatic males made more socially reinforcing checks if their partners were low-dogmatic females than if their partners were high-dogmatic females (Table 11, cells (g) and (a); $F = 16.454$, $p < .01$).

TABLE 10.--Summary of the analysis of variance for Socially Reinforcing Checks.

Source	df	MS	F
Dogmatism	1	48.167	.876
Dogmatism of partner	1	187.042	3.400
Dogmatism X Dogmatism of partner	1	.042	.001
Error	12	55.007	
Sex	1	12.042	.847
Dogmatism X Sex	1	210.041	14.776**
Dogmatism of partner X Sex	1	10.667	.750
Dogmatism X Dogmatism of partner X Sex	1	150.000	10.552**
Error	12	14.215	
Session	2	273.698	12.508**
Dogmatism X Session	2	7.510	.343
Dogmatism of partner X Session	2	73.698	3.368
Dogmatism X Dogmatism of partner X Session	2	7.510	.343
Error	24	21.882	
Sex X Session	2	1.135	.076
Dogmatism X Sex X Session	2	16.698	1.116
Dogmatism of partner X Sex X Session	2	32.635	2.181
Dogmatism X Dogmatism of partner X Sex X Session	2	54.281	3.627*
Error	24	14.965	

*p < .05
**p < .01

TABLE 11.--Dogmatism X Dogmatism of Partner X Sex X Session for Socially Reinforcing Checks.

Dogmatism	Dogmatism of Partner	Sex	Session		
			1	3	5
High	High	Male	2.00 (a)	3.75 (b)	3.25 (c)
		Female	5.25 (d)	1.25 (e)	1.25 (f)
	Low	Male	16.25 (g)	5.25 (h)	1.50 (i)
		Female	5.25 (j)	4.00 (k)	1.50 (l)
Low	High	Male	6.00 (m)	2.75 (n)	3.25 (o)
		Female	7.50 (p)	3.00 (q)	3.00 (r)
	Low	Male	7.25 (s)	2.50 (t)	1.00 (u)
		Female	16.50 (v)	7.25 (w)	7.50 (x)

2. At session one, low-dogmatic females made more socially reinforcing checks if their partners were low-dogmatic males than if their partners were high-dogmatic males (Table 11, cells (v) and (p); $F = 6.564$, $p < .05$).

Sex.--There were three significant findings for Sex:

1. At session one, with low-dogmatic partners, high-dogmatic males made more socially reinforcing checks than did high-dogmatic females (Table 11, cells (g) and (j); $F = 16.446$, $p < .01$).
2. At session one, with low-dogmatic partners, low-dogmatic females made more socially reinforcing checks than did low-dogmatic males (Table 11, cells (v) and (s); $F = 11.629$, $p < .01$).
3. At session five, with low-dogmatic partners, low-dogmatic females made more socially reinforcing checks than did low-dogmatic males (Table 11, cells (x) and (u); $F = 5.742$, $p < .05$).

Session.--There were two significant findings for Session:

1. With low-dogmatic partners, high-dogmatic males made more socially reinforcing checks at session one than at sessions three and five (Table 11, cells (g), (h) and (i); $F = 12.922$, $p < .01$).

2. With low-dogmatic partners, low-dogmatic females made more socially reinforcing checks at session one than at sessions three and five (Table 11, cells (v), (w) and (x); $F = 6.030$, $p < .01$).

Speech Units

Table 12 presents the results of the analysis of variance for Speech Units.

The mean Speech Unit scores are presented in a Dogmatism X Dogmatism of Partner X Session form in Table 13.

The only significant findings indicated by the analysis for simple effects for Speech Units were the following two significant findings for Session:

1. With high-dogmatic partners, low-dogmatic subjects spoke more often at session one than at sessions three and five (Table 13, cells (g), (h) and (i); $F = 4.702$, $p < .05$).
2. With low-dogmatic partners, low-dogmatic subjects spoke more often at session five than at sessions one and three (Table 13, cells (l), (j) and (k); $F = 14.311$, $p < .01$).

TABLE 12.--Summary of the analysis of variance for Speech Units.

Source	df	MS	F
Dogmatism	1	237.511	.022
Dogmatism of partner	1	.511	.000
Dogmatism X Dogmatism of partner	1	688.010	.064
Error	12	10698.101	
Sex	1	943.761	.276
Dogmatism X Sex	1	834.260	.244
Dogmatism of partner X Sex	1	10106.510	2.960
Dogmatism X Dogmatism of partner X Sex	1	6353.760	1.861
Error	12	3414.240	
Session	2	1048.167	3.294
Dogmatism X Session	2	1089.290	3.423*
Dogmatism of partner X Session	2	2212.166	6.951**
Dogmatism X Dogmatism of partner X Session	2	2436.542	7.656**
Error	24	318.257	
Sex X Session	2	716.667	.209
Dogmatism X Sex X Session	2	2233.292	.651
Dogmatism of partner X Sex X Session	2	5583.166	1.627
Dogmatism X Dogmatism of partner X Sex X Session	2	48.042	.014
Error	24	3432.271	

*p < .05
**p < .01

TABLE 13.--Dogmatism X Dogmatism of Partner X Session for mean Speech Unit.

Dogmatism	Dogmatism of Partner	Session 1	Session 3	Session 5
High	High	142.75 (a)	154.50 (b)	154.62 (c)
	Low	136.88 (d)	150.12 (e)	147.38 (f)
Low	High	163.88 (g)	140.38 (h)	140.00 (i)
	Low	136.62 (j)	142.62 (k)	180.62 (l)

Speech Duration

Table 14 presents the results of the analysis of variance for Speech Duration.

Mean scores for each cell of a Dogmatism X Dogmatism of Partner X Sex X Session table for the Speech Duration scores are presented in Table 15.

The analysis for simple effects for Speech Duration indicated no significant findings for Dogmatism.

Dogmatism of Partner.--The significant finding for Dogmatism of Partner indicated that at session five, high-dogmatic males had longer total speech durations if their partners were low-dogmatic females than if their partners were high-dogmatic females (Table 15, cells (i) and (c); $F = 4.940$, $p < .05$).

Sex.--The significant finding for Sex indicated that at session five, with high-dogmatic partners,

TABLE 14.--Summary of the analysis of variance for Speech Duration.

Source	df	MS	F
Dogmatism	1	4959.375	.099
Dogmatism of partner	1	47082.042	.943
Dogmatism X Dogmatism of partner	1	5251.042	.105
Error	12	49914.847	
Sex	1	13490.042	.065
Dogmatism X Sex	1	213759.375	1.034
Dogmatism of partner X Sex	1	317170.042	1.535
Dogmatism X Dogmatism of partner X Sex	1	222915.374	1.079
Error	12	206626.486	
Session	2	86770.510	1.445
Dogmatism X Session	2	31365.406	.522
Dogmatism of partner X Session	2	39428.510	.657
Dogmatism X Dogmatism of partner X Session	2	13847.572	.231
Error	24	60032.701	
Sex X Session	2	20129.573	.712
Dogmatism X Sex X Session	2	11165.614	.395
Dogmatism of partner X Sex X Session	2	203604.822	7.204**
Dogmatism X Dogmatism of partner X Sex X Session	2	205224.594	7.261**
Error	24	28264.632	

**p < .01

TABLE 15.--Dogmatism X Dogmatism of Partner X Sex X Session for Speech Duration.

Dogmatism	Dogmatism of Partner	Sex	Session		
			1	3	5
High	High	Male	885.00 (a)	656.00 (b)	496.25 (c)
		Female	709.50 (d)	771.75 (e)	966.00 (f)
	Low	Male	637.75 (g)	714.00 (h)	918.50 (i)
		Female	989.75 (j)	896.50 (k)	682.50 (l)
Low	High	Male	811.25 (m)	694.00 (n)	613.50 (o)
		Female	1029.00 (p)	829.00 (q)	682.75 (r)
	Low	Male	982.50 (s)	874.75 (t)	984.00 (u)
		Female	686.50 (v)	735.25 (w)	573.50 (x)

high-dogmatic females had longer total speech durations than did high-dogmatic males (Table 15, cells (f) and (c); $F = 4.974$, $p < .05$).

Session.--There was one significant finding for Session: with high-dogmatic partners, high-dogmatic males had longer total speech durations at session one than at session five (Table 15, cells (a) and (c); $F = 3.460$, $p < .05$).

There were no significant findings from an analysis of variance of the Mean Duration of Speech scores (Table A-1 in Appendix A).

Individual Participation

Analysis of the Individual Participation scores indicated no significant relationships among the variables studied in the present experiment (Table A-3 in Appendix A).

Initiative

Analysis of variance for Initiative I resulted in no significant findings (Table A-2 in Appendix A).

Results of the analysis of variance for Initiative II are presented in Table 1. Results of the analysis for simple effects indicated that Initiative II scores were significantly less in session five than in sessions one or three (Table 2).

DISCUSSION

The pattern of results in the present acquaintance study indicates that, for the temporal aspects of verbal behavior, a process of adjustment did occur. Additionally, however, the deviations from this pattern indicate that what did occur cannot be accounted for entirely on the basis of adjustment. For example, twenty-five of the thirty-one significant differences occurred during session one or indicated that a particular score for session one was different from that of sessions three and five, while the scores for the latter two sessions did not differ significantly from each other. This suggests that, as each dyad interacted over several sessions, each individual's pattern of interaction adjusted to the other's until a somewhat stable pattern developed for each particular dyad. And it further suggests that this process of adjustment occurred fairly rapidly; most of the measures had stabilized by session three. But, Initiative, Mean Duration of Speech, and Individual Participation were not affected by any of the independent variables, including session. It would appear then, that while a process of adjustment did occur, it was also

influenced by other factors, by both individual and situational variables and possibly by social norms.

Chapple (1940) stated that each individual has a characteristic and repetitive rate of interaction which is inhibited in first interacting with a stranger. Using both a ratio of the sum of double actions (both individuals acting at the same time) to the sum of a subject's actions in intervals of two minutes and the amount of variation that occurred in the ratio as a measure of adjustment, Chapple found that with two strangers the variation increased progressively until it became stable. However, with two individuals who had known each other for some time, the index of variation remained stable from the first to the last observation. Although the double action scores are not identical with the present Check and Counter-Check scores, one notes a similar trend in the present study in the decrease of Check and Counter-Check scores over the sessions. This trend gives further support to the interpretation of a process of adjustment.

And, although contrary to expectation, the decrease in the Activity scores may also be explained in terms of adjustment if we hypothesize that the initial meetings included "nervous chatter." If, for two strangers, silence is awkward, we may expect both to attempt to keep such periods of silence to a minimum. As they become acquainted, however, there is less uneasiness

about periods of silence and, consequently, less demand for constant verbal activity. That this indeed may have been the case is also indicated by the decrease in interruptions. For, as silence becomes less awkward, we may also expect fewer instances of double-action immediately following periods of silence.

That the Mean Duration of Speech and Individual Participation scores did not change over sessions, however, indicates either the presence of social norms regarding these aspects of verbal behavior and/or that these measures reflect the more stable characteristics of an individual's verbal behavior and as such are subject to fewer and/or smaller changes over time. Both these explanations would not be inconsistent with Chapple's findings of characteristic and repetitive rates of interaction for his subjects or with the present study's finding of relatively fewer significant differences at session five as compared with session one (which, again, indicates that after an initial period of adjustment the subjects differed on very few of the measures). Similarly, the lack of any significant findings for Mean Duration of Speech and Individual Participation in the present study also present no contradiction to either explanation.

Taylor (1965) found in a thirteen-week study of male roommates that all dyads showed a significant increase in the amount of talking, with no differences between high and low self-revelation dyads. This finding appears to be

contrary to that of the present study but perhaps may be explained if comparable data were available for mean duration of speech. In the absence of such data from Taylor's study, the following is suggested. Scores for the present study are based on thirty-minute samples of interaction. And although in one case the duration scores did decrease over session, no differences in mean duration were found. Taylor's study covered thirteen weeks of interaction so that while the dyads increased their total speaking time over the thirteen weeks, their mean durations may not have changed during this same period. The dyads may have interacted more frequently (for example, five times a week rather than once a week), but with similar rates of interaction (mean duration of speech) at each meeting.

The opposite trends for Units of Speech found for low-dogmatic persons in matched as compared with mixed dyads may perhaps be explained in terms of the social situation. As the sessions progressed, low-dogmatic subjects adapted to their more dominant high-dogmatic partners by speaking less often while low-dogmatic subjects and their low-dogmatic partners became less inhibited and spoke more often. It could further be postulated that the less adaptable high-dogmatic person has a rate of speaking which he does not easily change and that he maintains this rate of speaking regardless of his partner's level of dogmatism.

Likewise, the check and counter-check findings may be explained in similar terms. The mixed dyad may have been reinforcing for the high-dogmatic subjects who found that their partners submitted to their interruptions. With high-dogmatic partners, however, high-dogmatic subjects may have experienced the reverse and come to accept interruptions rather than attempt to "talk down" the other. If, in fact, those in high-dogmatic dyads did inhibit each other's counter-checks, this would also help to explain the finding that with high-dogmatic partners, low-dogmatic subjects, especially females, counter-checked more often than did the high-dogmatic subjects.

It is also interesting to note that although males in the high-dogmatic dyads originally spoke for a longer duration than did their female partners, by session five, this finding had been reversed. For these dyads, the males decreased their total speaking time while the females increased theirs. This again can be attributed to the social situation, for with low-dogmatic females the high-dogmatic males increased (rather than decreased) their total speaking time over the sessions.

Finally, the findings of no differences in mean duration of speech and of low-dogmatic subjects speaking more often are somewhat contradictory to the Phillips et al. (1961) finding of fewer units and longer mean durations of speech for the other-directed, less guarded

patients. Although no firm resolution of the contradictions can be made at this time, it should be noted that subjects for Phillips' study were patients in a patient-therapist interview, while subjects in the present study were undergraduates meeting informally as peers in an acquaintance situation.

Summary and Implications for Future Research

The findings indicate that there does appear to be an "acquaintance process" in terms of temporal measures of dyadic interaction. This process can perhaps be best described by the term adjustment. Many of the measures indicated a difference in values from session one to sessions three and five. However, whether or not individuals have characteristic patterns of interaction which are "upset" and then "readjusted" during an acquaintance process could not be ascertained with the design of the present study. A possible design for a study to test this question may be one where base scores were first obtained for each subject. Then dyads could be formed on the basis of these base scores, on the basis of different personality characteristics, or at random, and temporal data collected for study and comparison. Such a design could also be used to test whether or not there is a norm for an individual's mean duration of speech in an informal acquaintance situation.

The clearest personality differences in the present study indicated that low-dogmatic persons of either sex were more likely to accept being interrupted by their partner and that high-dogmatic individuals counter-checked or "talked down" their partner more often if the other were a low-dogmatic individual. Although these findings also have high face validity, a replication would help to ascertain whether such a relationship does exist or whether this may have been a chance finding due to the large number of analyses completed in the present study.

Several explanations have been suggested for the results obtained in the present study. It is hoped that further research will help to clarify these issues, to specify whether all or any of these explanations are valid and to what extent they are in fact responsible for the phenomena observed.

Finally, further research on the following post hoc analysis may be of interest. Conway (1968) asked all subjects to answer the following question: To what extent would you like to or object to continuing the relationship now that the study is over? All subjects answered the question by using the following responses:

1. Would like very much to continue
2. Would like to continue
3. Don't care either way

4. Would prefer not to continue

5. Definitely don't want to continue

Dyads whose mean score was two or less were considered to have formed a rewarding or positive relationship. Dyads whose mean score was three-and-a-half or four were considered to have formed either no relationship or a non-rewarding one. On this basis there were three positive dyads and two negative dyads. The positive couples were an open-minded dyad, a closed-minded dyad and a mixed dyad composed of a high-dogmatic male and a low-dogmatic female. Both negative couples were, however, composed of low-dogmatic males and high-dogmatic females. While the N is small, it is interesting to speculate that, perhaps because of the social expectation that males be more dominant and self-assertive and females more accepting and supportive, the low-dogmatic male--high-dogmatic female couples are less likely to experience a satisfying relationship.

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APPENDICES

APPENDIX A

Analysis of Variance Tables

(Non-significant Results)

TABLE A-1.--Summary of the analysis of variance for Mean Duration of Speech.

Source	df	MS	F
Dogmatism	1	.408	.024
Dogmatism of partner	1	.430	.025
Dogmatism X Dogmatism of partner	1	3.954	.234
Error	12	16.928	
Sex	1	24.806	.928
Dogmatism X Sex	1	5.396	.202
Dogmatism of partner X Sex	1	51.190	1.914
Dogmatism X Dogmatism of partner X Sex	1	72.140	2.698
Error	12	26.738	
Session	2	18.995	1.430
Dogmatism X Session	2	4.879	.367
Dogmatism of partner X Session	2	.105	.008
Dogmatism X Dogmatism of partner X Session	2	9.056	.682
Error	24	13.284	
Sex X Session	2	5.168	.435
Dogmatism X Sex X Session	2	4.388	.369
Dogmatism of partner X Sex X Session	2	22.600	1.901
Dogmatism X Dogmatism of partner X Sex X Session	2	23.334	1.963
Error	24	11.889	

TABLE A-3.--Summary of the analysis of variance for Individual Participation.

Source	df	MS	F
Dogmatism	1	.000	.000
Dogmatism of partner	1	.000	.000
Dogmatism X Dogmatism of partner	1	.000	.000
Error	12	.000	.000
Sex	1	.006	.076
Dogmatism X Sex	1	.099	1.253
Dogmatism of partner X Sex	1	.100	2.263
Dogmatism X Dogmatism of partner X Sex	1	.037	.468
Error	12	.079	
Session	2	.000	.000
Dogmatism X Session	2	.006	3.000
Dogmatism of partner X Session	2	.006	3.000
Dogmatism X Dogmatism of partner X Session	2	.0005	.025
Error	24	.002	
Sex X Session	2	.004	.148
Dogmatism X Sex X Session	2	.036	1.333
Dogmatism of partner X Sex X Session	2	.036	1.333
Dogmatism X Dogmatism of partner X Sex X Session	2	.078	2.889
Error	24	.027	

APPENDIX B

Scoring Sheets

Coding Sheet for Speech Duration


1 2 3 4 5 6 7 8 9 10

Coding Sheet for Initiative and Check/Counter-Check