VERBAL CONTENT AND AFFECTIVE RESPONSE IN AN INTERVIEW AS A FUNCTION OF EXPERIMENTER GAZE DIRECTION

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A Thesis

Submitted to Lakehead University

In Partial Fulfilment of the Requirements for the Degree

of Master of Arts

Department of Psychology

Lakehead University

Thunder Bay, Ontario

March, 1974

ABSTRACT

This study was designed to investigate the effects of one's Looking or not Looking at another's eyes upon the content of the other's speech and his affective response to the encounter. The relationships between experimenter gaze direction and subjects' verbal content and affective response to an interview were investigated by having 20 male and 20 female subjects participate in an interview in which experimenter gaze, problems discussed, and sex of subjects were varied in a 2 x 2 x 2 factorial design. The independent variables were experimenter gaze direction (High versus Low Looking), problems discussed (Big versus Small), and sex of subjects. The dependent variables were the subjects' verbal content of speech (usage of self-references) and affective response to the interview (favourable or unfavourable).

Previous research has suggested that High Looking on the part of one member of a dyad is generally assumed to indicate increased attention/attraction in the other and that Low Looking indicates the opposite. It was assumed that High Looking on the part of the experimenter would be associated with a high usage of self-references and a more favourable affective response to the interview than Low experimenter Looking. The effects of experimenter Looking were assumed to be a function of both the nature of the problems discussed as well as the sex of the subjects. Subjects discussing Big problems were expected to make more self-references and respond more favourably than

subjects discussing Small problems. Males were expected to make more self-references than females.

Subjects tended to refer to themselves more, and refer to themselves in a positive manner, in the presence of a gazing experimenter than a nongazing experimenter. The nature of the conversation did not appear to have any mediating effect upon the variable of experimenter Looking. Males tended to refer to themselves in a more positive manner than females. Males discussing Big problems with a gazing male experimenter tended to make more positive self-references than males and females discussing Big problems with a nongazing experimenter.

High Looking on the part of the experimenter in a situation in which subjects discuss personal problems tended to be related to the degree and mode of subject self-disclosure. Generally, subjects referred to themselves more in the presence of a gazing rather than a nongazing experimenter. Affective response to the interviewer and interview did not appear to be directly related to the amount of experimenter Looking or severity of the personal problems discussed, but appeared to be mediated by the variable of sex of the subjects.

The effects of one's Looking upon the other's behaviour is not strictly a one-to-one relationship in which High Looking indicates/communicates increased attention/attraction which produces positive affective responses on the part of the other, and Low Looking indicates/communicates the opposite. Rather, the effects of one's Looking appear to be strongly mediated by the sex of the other. Inasmuch as mutual

Looking varies according to the content of an interaction and the sex of the subjects (Exline, Gray, and Schuette, 1965), the present study provides evidence that interview content and affective response vary according to the visual behaviour between an experimenter and subject, and the sex of the experimenter and subject.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Dr. A. Akram and Dr. W. T. Melnyk for their trust, Mr. F. Foldy for his ingenuity, Dr. J. F. Evans for his continued interest, and my wife Bonnie for her continued patience.

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NONVERBAL BEHAVIOUR

Ekman (1966) has drawn a distinction between two major approaches to the study of nonverbal behaviour: the indicative and the communicative. With the former approach, the focus of concern is on the relationships between a given nonverbal behaviour and some other class of events. For example, the frequency of a nonverbal behaviour such as foot-tapping may be related to the degree of stress experienced during an interview. In this approach, the nonverbal behaviour is taken to be an indicator of some other variable. However,

> studies of nonverbal indication examine only the sender within the communication system and tell us nothing directly about whether a receiver can decode any systematic information from a nonverbal indicator (Ekman, 1966, p. 392).

The communicative approach consists of the presentation of segments of nonverbal behaviour to a group of receivers who act as judges in deciding what is communicated.

> Failure to find that a nonverbal act has communicative value does not necessarily preclude the possibility that the act does have indicative value.... Determination that a nonverbal act has indicative and/or communicative value does not assume that the sender intended to communicate. What the sender intends and what the experimenter discovers through an indicative approach, or a receiver infers in a communicative study can be completely unrelated.... What the sender actually experiences ... is not only almost impossible to determine, but is in no way necessarily equivalent to the indicative and communicative value of his nonverbal act (Ekman, 1966, p. 392).

The function of nonverbal behaviour during interaction is obviously unclear. Ekman (1966) has come to the conclusion that although spontaneous interactive nonverbal behaviour may be indicative of a number of different types of information about a person, it is quite unclear as to whether such nonverbal behaviour communicates accurate information.

As well as the basic problem of delineating the functions served by nonverbal behaviours, there are related problems such as the nature of the relationships between nonverbal behaviour and verbal behaviour. Emphasis in psychological research has tended to be directed to the verbal content of interaction rather than to the nonverbal context in which the interaction takes place. Few attempts have been made to elaborate the role of nonverbal behaviour in interaction. Although a constant factor in almost every interaction, nonverbal behaviour has traditionally been considered of little consequence.

Nonverbal behaviour has been the subject of experimental investigation since the 1920's under the changing rubic of expressive behaviour, person perception, emotion, and finally the interview. Until 1960, however, investigation has been far from intensive or comprehensive. Few of the studies considered interactive behaviour. Ekman and Friesen (1968) have noted that three factors have led to a general neglect of the role and importance of nonverbal behaviour, particularly in the area of research in psychotherapy. The first factor is a long history of contradictory results in experiments in which judges determined the

communication of affect by way of nonverbal behaviour. The positive results of recent years have been attributed to a shift in focus from posed to spontaneous interactive nonverbal conversation. A second source of discouragement resulting in neglect was the finding that judges derived little or no information from silent film versions of interviews and that accurate post-dictions about patients or subjects were dependent upon the judges hearing or reading the verbal interaction. A third source of obstruction has been the problem of obtaining permanent records of nonverbal behaviour, and analysis to make it meaningful.

In spite of these factors, the origins and functions of nonverbal behaviour are gradually being revealed. Ekman and Friesen (1968) describe the following features of nonverbal behaviour:

(1) Nonverbal behaviour can be considered a relationship language, sensitive to and the primary means of signalling changes in the quality of the ongoing interpersonal relationship.

(2) Nonverbal behaviour is the primary means of expressing or communicating emotion, either because of the physiology of the organism or because of the priority of nonverbal behaviour to verbal behaviour in the formative years of personality development.

(3) Nonverbal behaviour has a special symbolic value, expressing in body language basic attitudes towards the self or body image.

(4) Nonverbal behaviour has a metacommunicative function of providing qualifiers as to how verbal discourse should be interpreted. Nonverbal signs as to the quality of the relationship provide the setting in which

verbal communications are evaluated.

(5) Nonverbal behaviour is less influenced than verbal behaviour by attempts to censor communication, in the sense that most people do not know what they are doing with their bodies when they are speaking and no one tells them.. People learn to disregard the internal feedback cues as to body movements and facial expressions. Most interactive nonverbal behaviour seems to occur with little conscious choice or registration, and efforts to inhibit what is shown fail because the information about what is occurring is not usually within awareness. It is not only difficult to inhibit nonverbal behaviour, but it is also difficult to deceive another dissimilating and expression not felt.

Mahl (1968) has stated that research in psychotherapy has so badly neglected the area of nonverbal behaviour partly because psychology in general has neglected it. Mahl offers three general reasons for this neglect: (1) Psychology has been concerned with theoretical issues rather than with behavioural description; (2) At times, psychology has been concerned with techniques of description, but only if they can be used to measure variables relevant to the investigation of theoretical issues; (3) There is a widespread lack of conviction in the claims that nonverbal behaviour has any psychological significance.

These reasons have led to a dilemma for anyone interested in studying nonverbal behaviour in interviews or nonverbal behaviour in general. As Mahl points out, one must begin by convincing himself of the soundness of his belief in the fruitfulness of such research and

must do his own exploratory work since he finds little sound research upon which to base his plans for research. Mahl concludes, however, that "worrying about ... reasons for studying nonverbal behaviour is like ruminating over ... whether one should have a baby because its future is unknown" (Mahl, 1968, p. 304).

Friedman (1967) suggested that the neglect of nonverbal behaviour was not to be restricted to the area of research in psychotherapy but was prevalent as well in general experimental psychology. He attributed this neglect to a failure to see that the psychological experiment is a social interaction. Rather than consider whether or not nonverbal aspects of social behaviour should be studied, he provides empirical evidence for the necessity of its study.

> Psychologists traditionally consider that variance in the responses of subjects in the same treatment condition is the result of individual differences among the subjects. These individual differences are conceived of as intervening variables. They are considered as the sole source of error variance within the subjects too quickly. There is enough variability in the interaction between the experimenter and subjects to account for some unknown part of it (Friedman, 1967, p. 108).

The amount of error variance due to experimenter-subject interaction is unknown simply because it has been ignored as a contributing factor. Variability in experimenter behaviour has been noted to be greatest in the area of nonverbal behaviour (glancing) during the instruction period of experiments. These variations are systematic and cannot be legitimately attributed to error variance.

Correlations among subjects' attributes and experimenter's attributes in a person perception experiment were not found to be significant, and none approached the magnitude of the correlation between exchanged glances of the experimenter and subjects during the instruction period and the subjects' ratings of the photographs (Friedman, 1967).

Experimenters who were rated as more professional by the subjects were also rated as less friendly. These experimenters exchanged fewer glances with the subjects during the instruction period and were also found to be less likely to bias the subjects than experimenters who looked more at their subjects. Males looked significantly more at female subjects, but they exchanged more glances with male subjects. This suggested that when male experimenters looked up, female subjects looked down or away, whereas when male experimenters looked up at male subjects, the latter did not evade their (experimenter) glances. Such a small aspect of experimenter behaviour would seemingly have little effect on the subjects' behaviour. However, considering the vast amount of experimental literature on sex differences which focuses upon what males and females do differently, it is questionable in terms of research on experimenter effects, whether these observed differences are attributable to the experimental treatments or to unintentional differential treatment by the experimenter. It would seem that males and females are not always exposed to the same constant experimental situation (Friedman, 1967).

Friedman (1967) hastens to add that the observed variations

between experimenters and in the same experimenter's behaviour do not represent deviations from their instructions, since there are no prescriptions or instructions as to the control or standardization of experimenter nonverbal behaviour. The experimenter's nonverbal behaviour is not against, but beyond, experimental philosophy. The neglect of the importance of nonverbal behaviour is equalled or surpassed by a general ignoring of the results of research in nonverbal behaviour which underline its significance.

Assumptions to the effect that such variations in experimenter behaviour are irrelevant to the subjects' responses are not tenable in the light of the relationships between experimenter glancing behaviour and subjects' ratings in the experiment previously described (Friedman, 1967). There is no reason to assume that other psychological experiments are exempt from such experimenter influence. Rosenthal (1966) has meticulously examined the various aspects of experimenter behaviour that mediate experimental results. In an experiment designed to investigate whether or not observers could 'read' experimenter expectations accurately, it was noticed that there was greater looking at subjects by experimenters who expected negative findings. The possibility that the same type of behaviour occurs in the experimenter's treatment of an experimental versus a control group has not been considered but would make an interesting study. Do experimenters look more or less at experimental/control groups and in this way mediate the responses of each group?

Rosenthal (1966) has also noted a similar experiment in which experimenters were noted to 'really stare' at subjects in response to unexpected data. This suggested that there is a high degree of similarity between the cues used to communicate expectancies both unintentionally and intentionally.

Considering nonverbal behaviour in the light of Friedman's standardization myth (1967) and Rosenthal's communication of experimenter expectancy (1966), it would seem that the neglect of nonverbal behaviour has not only been unwarranted but also costly, since findings appear perhaps a little more suspect.

VISUAL BEHAVIOUR

'Looking' is defined as the direction of one's gaze (individual p) to another's eyes (individual q). If q simultaneously directs his gaze to p's eyes while p is Looking, the effect is called mutual gaze or eye contact (Argyle, 1967). In this paper, 'Looking' or 'Experimenter gaze direction' will refer to the direction of the experimenter's gaze to the subjects' eyes.

The relationships between verbal and nonverbal behaviour in an individual are indeed complex. Duncan (1969) distinguishes two broad research strategies of studies dealing with the communicative functions of nonverbal behaviour. The structural approach is one in which an underlying system analogous to that of language is sought for in nonverbal behaviour. The external variable approach is one in which statistical relationships are sought between specified nonverbal behaviours and variables such as the communicative situation, the subject's personality characteristics, and other nonverbal behaviours. After an extensive review of both the structural and external variable approaches to nonverbal behaviour, Duncan (1969) concluded that "While the existence of organization is known, its extent is unknown," and that questions as to the relationships between verbal and nonverbal behaviour have been scarcely touched upon by research. He concludes his review with "much remains to be learned concerning how the verbal and nonverbal components interact or are integrated to yield an overall message

interpretation" (p. 135).

Taking only one aspect of verbal behaviour (speaking) and one aspect of nonverbal behaviour (looking), the interrelationships can be depicted in terms of a 2 x 2 table (Figure 1). The relationships between verbal and visual behaviour in one individual are relatively simple compared to the relationships occurring when two individuals interact. These relationships can be illustrated in terms of a 4 x 4 table (Figure 2).

Cells 1, 2, 3, and 4 of Figure 2 are commonly referred to as eye contact. Cells 5, 6, 7, and 8 are referred to as gaze aversion on the part of q (q is Looked at by p). Cells 9, 10, 11, and 12 are referred to as gaze aversion on the part of p (p is Looked at by q). Cells 13, 14, 15, and 16 are referred to as mutual gaze aversion (neither p nor q Look at each other). Dyadic social interaction entails a continuously changing interplay of these combinations of Looking and Speaking. A sample of interaction if analyzed in terms of frequency of occurrence of the cells of Figure 2 would most likely contain differing amounts of time spent in each of the activities of each cell. A cell such as 1 (eye contact with simultaneous speech) would most likely be quite infrequent as compared to cell 2 (eye contact, q listening to p). Kendon (1967) analyzed an interaction in such a manner and investigated the relationship of Looking to speaking.

The present study focused on the differential effects of the block of cells 3, 4, 7, and 8 (p Looking while listening to q) as

compared to the block of cells 11, 12, 15, and 16 (p not Looking while listening to q) on q's verbal content in and affective response to the interview. Experimental research into the relationships of visual to verbal behaviour has been primarily concerned with the quadrant of cells 1, 2, 3, and 4 (eye contact) and to a lesser extent on the quadrant of cells 5, 6, 7, and 8 and the quadrant of cells 9, 10, 11, and 12 (gaze aversion).

The majority of the research has considered eye contact as a dependent variable, using the procedure of manipulating independent variables and measuring the amount, frequency, and duration of eye contact. The procedure is usually one in which an experimenter gazes continually at a subject, the variables are manipulated, and the amount of eye contact is recorded by hidden observers or concealed cameras. Relatively few studies have used experimenter gaze as an independent variable in dyadic interaction.

Individual p			
	Visual Behaviour		
Verbal Behaviour		Looking	Not Looking
	Speaking	Looking While Speaking	Not Looking While Speaking
	Not Speaking	Looking While Not Speaking	Not Looking While Not Speaking

Individual q			
	Visual Behaviour		
Verbal Behaviour		Looking	Not Looking
	Speaking	Looking While Speaking	Not Looking While Speaking
	Not Speaking	Looking While Not Speaking	Not Looking While Not Speaking

FIGURE 1

The Relationship Between the Verbal and Visual Behaviour of Individuals p and q

Individual p	Individual q: Looking While Speaking	Individual q: Looking While Not Speaking	Individual q: Not Looking While Speaking	Individual q: Not Looking While Not Speaking
Looking While Speaking	1 Eye Contact Simultaneous Speech	2 Eye Contact q listens to p	5 q averts gaze Simultaneous Speech	6 q averts gaze q listens to p
Looking While Not Speaking	3 Eye Contact p listens to q	4 Eye Contact No Speech	7 q averts gaze p listens to q	8 q averts gaze No Speech
Not Looking While Speaking	9 p averts gaze Simultaneous Speech	10 p averts gaze q listens to p	13 p/q avert gaze Simultaneous Speech	14 p/q avert gaze q listens to p
Not Looking While Not Speaking	11 p averts gaze p listens to q	12 p averts gaze No Speech	15 p/q avert gaze p listens to q	16 p/q avert gaze No Speech

FIGURE 2

The Relationship Between the Verbal and Visual Behaviour of Individuals p and q During Interaction

FUNCTIONS OF EYE CONTACT

Argyle and Kendon (1967) suggest that visual orientation during social interaction functions in three different ways:

(1) To look at another is a social act in itself.

(2) To meet the gaze of another is a significant event and may be an important part of the goal sought in interaction.

(3) In seeing another, much information may be gathered about him. The process of direction of gaze appears to indicate direction of attention.

Argyle and Dean (1965) postulated that although eye contact may be sought after in interaction, too much may create anxiety for the participants. This suggested that both approach processes (need for feedback) and avoidance processes (fear of revealing inner states) are involved. They proposed that an equilibrium level of intimacy develops so that if one of the components of intimacy changes (eye contact, physical proximity) then one or more of the other components will shift in the opposite direction. An optimum level of intimacy is thus maintained during an interaction.

Gaze direction can function to establish a relationship and determine the degree of closeness, define the nature of the relationship, satisfy feedback needs as to the reaction of others, and regulate the communication process (Argyle, 1969).

Exline and Winters (1966) suggest that when the object viewed by a person is a person who is engaged in face to face interaction with

the viewer, the incidence of the exchange of mutual glances would seem to be a useful indicator of the willingness of the participants to enter into an intense personal relationship. After a series of studies, Exline has concluded that "positive and negative affects have complex but systematic effects upon the nature of visual interaction" (Exline and Winters, 1966, p. 349). Exline (1963) had groups of people high in need for affiliation and groups low in need for affiliation discuss a problem under conditions which emphasized a subdued competitive orientation towards one another. When competition was not salient, those high in need for affiliation engaged in more mutual glances than did less affiliative subjects. Those groups composed of people low in need for affiliation showed more mutual glances under competitive conditions. The greatest incidence of mutual glances was found with people high in need for affiliation in a non-competitive situation. Incidence of mutual looking would seem to reflect differences in willingness to relate to one another.

In another study, Exline and Winters (1966) found that development of positive affect for another is matched by systematic changes in the use of line of regard. Positive feelings towards another in women was predicted only for looking while speaking, and in men was predicted only for looking while listening. Women tend to seek out the eyes of those they like whereas men do not attempt to increase their contact with a preferred other so much as to avoid contact with a less preferred other.

Kendon (1967) differentiates between the monitoring and

regulatory functions of eye contact. The monitoring functions are primarily feedback in nature in that one can gather information about how he is being received and he can check on where the other is looking, how his face appears, and his type of body posture. One tends to look up at the ends of sentences and phrases to check that the other is still attending. Regulatory or expressive functions are those such as looking away as a listener to indicate that one is about to speak and looking at the other with a sustained gaze to indicate that one's speech is coming to an end and feedback is needed from the other. One can forestall a response from the other by not looking at him or can increase a demand for a response by looking at him. Averted eyes may indicate that one is embarrassed or will not challenge what is being said.

The stage of theorizing about nonverbal behaviour in general and visual behaviour in particular during social interaction does not appear to have been reached. Lack of theory, which is characteristic of research in nonverbal behaviour may be attributed to either the subject matter itself or the state of existing theories. The subject matter has long been neglected and this neglect was followed by intensive research in the last decade which produced diverse findings. Either these findings are inherently too diverse to be integrated to formulate theory or present theories of social behaviour are inadequate in terms of absorbing the findings. The neglect of the area itself would tend to make the latter possibility the most probable.

On Being Looked At

Gibson and Pick (1963) feel that the act of looking can be treated as a source of stimulation as well as a type of response. The eye not only looks but is looked at. Observers were asked to judge when they were being looked at by another. The other oriented his head while looking as well as directing his gaze to points at varying distances from the observer's eyes to either side of his head. It was found that acuity for perception of gaze was independent of head pointing. The results suggested that people do have good discrimination for the line of regard of another person, at least with respect to whether or not they are being looked at. "The ability to read the eyes seems to be as good as the ability to read fine print on an acuity chart" (Gibson and Pick, 1963, p. 394). Cline (1967) devised a situation in which subjects were presented with a mirror image of a person who looked at a number of target points scattered about the subjects' heads, including one located between the subjects' eyes. The subjects' task was to determine where the looker was looking. It was found that at four feet, displacement of the looker's line of regard to a point about 1/2 inch to the right or left of the subjects' eyes is just noticeably different than being looked at whereas a distance of about an inch above or below the subjects' eyes is required in order to be just noticeable. Generally, it was concluded that accuracy for being looked at was quite high and accuracy for all other lines of regard was much lower.

There are few studies that throw light on how being looked at is interpreted by the one being looked at, or how being looked at affects one's behaviour. Argyle and Kendon (1967) cite five unpublished studies that have attempted to explore these questions.[1]

Weisbrod (1965)[2] considered visual behaviour in a discussion group and found that who looks at whom is strongly related to power coalitions in a group. Those who looked at a speaker were rated by him to be instrumental to his goals and valuing him more than those who looked less. The more looks an individual received while speaking to a group, the more powerful he felt himself to be. Weisbrod concluded that to look at someone while he is speaking is to signal a request to be included in his discussion. To receive looks back from a speaker is seen as a signal from the speaker that he is including the other.

Winer and Mehrabian (no date)[3] found that when an experimenter interviewed two subject simultaneously, the one who was looked at more judged the experimenter as more positive towards him than the one who was looked at less. Kendon (1966)[4] found that subjects thought that an interviewer who did not look at them for part of an interview

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[1]Unpublished data. Cited in L. Berkowitz (Ed.), Recent Advances in Social Psychology. New York: McGraw-Hill, 1967.

[2]Ibid.

[3]Ibid.

[4]Ibid.

had lost interest in what they were saying. Exline and Kendon (no date)[1] found that individuals were judged as more potent when they did not look while a subject was speaking as compared to when they did look. Exline and Eldridge (no date)[2] found that subjects judged a speaker as more sincere if he looked at them while he spoke than if he did not. Exline and Winters (1966) suggest that mutual looking is both an indicator of the degree of affect shared by interactants and also the degree of positive affect has complex but systematic effects upon visual behaviour. Subjects tend to look more at a liked or preferred other. In a related experiment, subjects subjected to negative treatment by an experimenter looked less at the interviewer than subjects who received positive treatment.

Generally, increased looking at the other indicates increased interest in the other or what he is saying. Neilson (1964) suggested that looking at the other while listening indicates agreement or sheer attention, whereas looking away while listening indicates dissatisfaction with the other's speech. Thayer (1969) found that the duration of one's looking influences the reactions of the one being looked at. A confederate engaged in either extended (three 58-second periods of looking interrupted by three 2-second periods of looking away) or brief looking (three 2-second periods of looking and three 58-second

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[1]Unpublished data. Cited in L. Berkowitz (Ed.), Recent Advances in Social Psychology. New York: McGraw Hill, 1967.

[2]Ibid.

periods of looking away) at subjects. The dependent variable was the amount of subject looking at the confederate. The recipients of extended looks judged the looker as more dominant than recipients of brief looks and also felt that the looker judged them to be less dominant than the recipients of brief looks. There were no differences between the subjects' visual behaviour in the two groups as to total looking time or frequency of looks. It was concluded that looking between male strangers in the absence of verbal communication can be understood as a threat in which the person who cannot stand up to the visual challenge presented by the other feels that he has been dominated.

The above findings tend to be situation-specific and are somewhat incomparable because of the varied situations. Only four studies to date have attempted to systematically vary the degree of one person's looking and measure the effect on the behaviour of the one being looked at. Kleck and Nuessle (1968) investigated the degree of congruence between what eye contact indicates and what this cue communicates to observers. Willingness to engage in eye contact had been found to be greatest in those high in desire to establish warm interpersonal relationships and lowest in those low on this dimension (Exline, Gray, and Schuette, 1965). Kleck and Nuessle hypothesized that if there is congruence between the indicative and communicative functions of eye contact, then high eye contact was expected to result in greater interpersonal attraction than low eye contact. Because Exline and Winters (1966) suggested that greater tension in an

interpersonal relationship is reflected in less mutual looking, it was expected that high looking would be perceived as reflecting less tension than low looking. Because it has been found that females engage in more eye contact than males (Exline, 1963; Exline and Winters, 1966), it was expected that eye contact would be a more salient cue for the judging when women were the judges than when men were.

Confederates either looked at an interviewer a high percentage of the time (80%) or a low percentage of the time (15%). Silent filmed interviews were shown to groups of judges who were asked to form an impression of the confederates and answer questions as to how the confederates reacted to the interview. A positive relationship was found between the amount of eye contact and perceived interpersonal attraction. Sex of the judge had no effect on perceived attractiveness. A direct relationship was also found between amount of eye contact and perceived tension. It was concluded that eye contact not only indicates how attracted a person is to another or how he is interacting with him, but it is taken by observers as a cue which can be used as an index of attraction and tension. Thus, there is a high degree of congruence between the indicative function of visual behaviour for participants and also its communicative function for observers. This study was primarily directed to the responses of observers of an interaction rather than to the participants of an interaction. "How a recipient interprets differences in levels of mutual looking is an interesting problem in need of investigation" (Kleck and Nuessle, 1968, p. 241).

LeCompte and Rosenfeld (1971) showed that the difference between two experimenter glances versus none is sufficient to influence subjects' impressions of an experimenter. Twenty-eight male and twenty-eight female subjects were assigned to two male experimenters under two conditions of experimenter gaze (two glances versus none). The experimenters were presented reading instructions on video-tape to the subjects, either not looking up while reading or glancing up twice. The subjects rated the experimenters and it was found that those subjects who viewed the tape in which the experimenter glanced rated him less nervous and less formal than those subjects who viewed the no glance tape. LeCompte and Rosenfeld suggested that standardization of experimenter behaviour should be given serious consideration in psychological experimentation.

Kleinke and Pohlen (1971) investigated the effects of experimenter gaze (constant versus no gaze) and co-operativeness (100% co-operative, 90% co-operative, 100% competitive) on partner's ratings of liking and emotional response (heart rate). It was found that subjects' ratings on liking of the confederate were related to the latter's co-operativeness but not to his gaze. Subjects in the high gaze condition had significantly higher heart rates than subjects in the low gaze condition. After Ellsworth and Carlsmith (1968), it had been hypothesized that a co-operative confederate would be more positively rated when he gazed than when he did not gaze. It had further been hypothesized that a competitive confederate would be more positively rated when he did not

gaze than when he did gaze. The latter hypothesis was not confirmed--subjects rated the competitive confederate more positively when he gazed rather than when he did not gaze.

Ellsworth and Carlsmith (1968) were the first to consider the situation or context in which the relationships between gazing and liking could be explained. They tested the hypothesis that amount of eye engagement in dyadic interaction has a significant effect on the subjects' reaction to both the interaction and the other person, and that this effect depends on the verbal content of the interaction. The specific hypotheses tested were that when the verbal content was favourable to the subject, the subject's evaluation of the interviewer and interview would be more positive with frequent rather than infrequent eye contact. When the content was unfavourable, the subject's evaluations would be more negative with frequent eye contact. Favourable/unfavourable content was varied with high/low eye contact.

It was found that the hypotheses were confirmed but that there were some unexpected findings. It was expected that the unfavourable content/no look condition would be equal or lower than the favourable content/no look condition and that the unfavourable content/look condition would be lowest of all in terms of positive response to the interviewer and interview. The subjects rated a gazing interviewer more favourably than a nongazing interviewer when the content of the interview was favourable to the subjects. The subjects rated a gazing interviewer more negatively than a nongazing interviewer when

the content of the interview was unfavourable.

The question of the effects of one's looking or not looking at another while listening to him have not been adequately examined. Neilsen (1964) has suggested that looking away while listening indicates dissatisfaction with the other's speech. Looking at while listening indicates agreement or sheer attention. Looking away while speaking indicates uncertainty with one's speech. Looking at while speaking indicates interest in seeing the effects of one's speech and certainty with one's speech. These conclusions have not been empirically tested and it was felt that an interview situation would be appropriate for testing these hypotheses. Although these suggestions refer to the gross effects of one's looking or not looking at another, these effects must be qualified by a number of variables such as the sex of the interactants, the nature of the conversation, the role relationships between the interactants, and the emotional tone of the interaction.

Kendon (1967) has suggested one general aspect of the effects of one's looking at another:

> To be subjected to the continual gaze of another is a very unnerving experience, for to be the object of another's attention is to be vulnerable to him. The watcher can anticipate our actions, and this is to be in danger before him. If, however, we look back at a person who watches us, we thereby indicate to him that he is as much an object of our attention as we are of his: though the watcher has the advantage over the watched, if the watched can also watch the watcher, the two become equal to one another. To look into another's line of regard, then, is to meet his intentions 'head on', it is to enter into a direct relationship with him (p. 48).

Although high looking at another indicates sheer attention, it is also associated with feelings of being 'watched' and one responds appropriately. Exline and Winters (1966) have noted that

> there is a predictable relationship between affective involvement and willingness to enter into mutual glances with another ... if one person feels good or comfortable about relating to another, he will engage in mutual glances to a greater degree than if he feels bad or uncomfortable about the relationship (p. 322).

Although there is a predictable relationship in one direction, the converse has not been considered, namely, the degree to which engagement in mutual glances determines whether or not one feels good or comfortable about the relationship. It could be expected that increasing the probability of mutual glances by having one member of a dyad look at the other a great deal would be associated with more mutual glancing and consequently a feeling of satisfaction with the relationship.

Kendon (1967) found that the amount of mutual gaze in an interaction depended upon how much only <u>one</u> of the interactants was looking, and not upon how much the other was looking. One participant may look away when the level of emotionality rises above a certain level which results in a reduction of arousal of both participants. The level of emotionality in an encounter could be regulated by the amount of mutual gaze participants allow each other.

The effects of visual behaviour in an interaction should be considered in terms of the verbal content of the interaction. Tomkins

(1963) has suggested that if one is ashamed to feel embarrassed, then he will be ashamed to look at another and be seen to be embarrassed. To be ashamed of feeling is to hide the eyes lest the eyes meet and feelings stand revealed (Tomkins, 1966). This tends to be a "head in the sand" type of reaction in which one feels that if he cannot see the other, the other cannot see him.

The overall emotional tone of an interaction is also highly susceptible to the amount of visual behaviour between the interactants. Exline and Winters (1966) have suggested that

> The ease with which eye contact can be made is another factor which facilitates the speedy development of an emotional reaction to a relative stranger.... Consider also your own feelings toward one who, while talking with you in a crowded room looks only at you, as compared to your feelings toward one who lets his gaze roam the faces of the passers-by. Whether or not one shares the gaze of his co-conversationalist would seem to contribute much to the speedy build-up of emotional reactions within the dyad (p. 349).

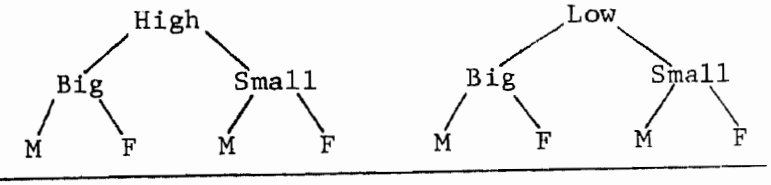
The question of the differences between talking with someone who either looks at you or does not look at you has not been considered within the context of an interview/counselling/psychotherapeutic situation.

Hypotheses

In the present study, an attempt was made to explore the relationships between an interviewer's high or low degree of looking and the interviewee's self-referent behaviour and affective response

to the interviewer and interview. In a broader context, the experimental situation was a facsimile of a counselling or psychotherapeutic situation in which one discussed his personal problems with another who assumed the role of a listener. The general question considered in this study was "What effect does an interviewer's visual behaviour (high or low looking at the other while listening) have upon the verbal behaviour (self-references) and affective response (positive or negative) of the other?"

The independent variables were the degree of experimenter looking (high or low), the nature of the problems discussed by the subjects (big or small), and the sex of the subjects. The dependent variables were the subjects' usage of self-references (positive, neutral, and negative), and the subjects' affective response (positive or negative) to the interviewer and interview. The experimental groups are identified in the following manner:

Independent Variables	Group Identification
Experimenter Looking Problems Discussed Sex of Subjects	
	HBM HBF HSM HSF LBM LBF LSM LSF

A group identified as 'HBM' would refer to males discussing big problems in the presence of an experimenter who Looked at them a great deal

while listening to them.

From the research cited previously, it is obvious that there is little in the way of experimental data upon which to base specific hypotheses. However, a number of intuitive assumptions were made. Generally, it was assumed that High Looking on the part of the experimenter would be related to a higher usage of self-references and a more favourable affective response on the part of the subjects than Low experimenter Looking. High experimenter Looking was assumed to increase the probability of eye contact between the experimenter and subjects and consequently would be related to a more favourable affective response than Low experimenter Looking. This assumption was made as per Neilsen (1964) and Exline and Winters (1966) who suggested that Looking while listening indicates interest and attention. It was expected that subjects in the High Look conditions would make more self-references and rate the interviewer and interview more favourably than subjects in the Low Look conditions. No specific predictions were made as to whether the self-references would be either positive or negative in either the High or Low Look conditions.

The general effects of experimenter Looking were expected to be mediated by the verbal content of the interview. Subjects were asked to discuss either Big or Small self-acknowledged personal problems during the interview. It was expected that subjects in the High Look groups would interpret High experimenter Looking as increased interest in what they were saying and would respond by disclosing more

of themselves and rating the interviewer and interview more favourably than subjects in the Low Look groups.

Assuming that Big personal problems were considered as more important to the subjects than Small problems, it was expected that subjects in the Big problem groups (HB and LB) would make more self-references and rate the interviewer and interview more favourably than subjects in the Small problem groups respectively (HS and LS).

The variable of sex of subjects was expected to further mediate the effects of experimenter Looking. In terms of self-references, it was expected that males would have more need to present themselves in a favourable light with a male experimenter than would females, and that males would make more positive self-references than females. No differences were expected between male and female ratings of the interviewer and interview.

Considering the sex factor and nature of the problems discussed in terms of experimenter Looking, it was expected that subjects in the High Look groups (HBM, HBF, HSM, and HSF) would make more self-references and rate the interviewer and interview more favourably than subjects in the Low Look groups respectively (LBM, LBF, LSM, and LSF). There were no expectations as to differences in usage of either positive or negative self-references between these groups.

Considering the nature of the problems discussed and experimenter Looking in terms of the sex of the subjects, it was expected that males (HBM, HSM, LBM, and LSM groups) would make more self-references and rate

the interviewer and interview more favourably than females (HBF, HSF, LBF, and LSF groups respectively).

METHOD

Subjects

Twenty male and 20 female Lakehead University undergraduates served as subjects in this study. The average age of the sample was 28 years, with an average age for males and females of 27 and 29 years respectively. All of the subjects were attending summer school and volunteered for the experiment. The subjects were invited to take part in the study entitled "A Survey of Problems of University Students". Potential subjects were told that they would be expected to complete a questionnaire and participate in a short interview. Ten males and 13 females received one credit which was added to their final course marks. The data obtained from one male subject were excluded from the total data because the tape recorded interview was of poor quality and could not be accurately transcribed. Another male subject was added to the sample to take the place of the one who was excluded.

Design

A 2 x 2 x 2 factorial design was used in which experimenter Looking (High versus Low) was varied with problems discussed (Big versus Small) and sex of subjects. The 40 subjects were assigned to eight groups consisting of five subjects each. Each group was composed of males or females only.

Independent Variables

The first independent variable was the manipulation of experimenter gaze direction (Looking). Looking consisted of the experimenter directing his gaze to the Ss' eyes. Not Looking consisted of the experimenter directing his gaze to a point on the table midway between the experimenter and the subject. Amount of experimenter Looking was varied so that High Looking was defined as the direction of experimenter gaze to the subjects' eyes throughout the interview. The experimenter attempted to Look at the subjects' eyes regardless of whether or not the subjects were speaking or directing their gaze to the experimenter's eyes. Low Looking was defined as direction of experimenter gaze to a point on the table throughout the interview. The experimenter attempted to Look at the subjects' eyes only during natural pauses in the subjects' speech (i.e., pauses between phrases and sentences).

The second independent variable was the manipulation of the nature of the problems discussed by the subjects. The problems were selected from items of the Mooney Problem Checklist (Mooney, 1950). A circled problem was considered a 'Big' problem and an underlined item was considered a 'Small' problem. Unlike ordinary scoring of the Mooney Problem Checklist, a separate record was made of the number of circled and underlined items. An area that had the most items circled and underlined was not necessarily considered the area of most concern. A Big problem area was defined as an area that had the most circled

items. Similarly, an area that had the least number of items circled and underlined was not necessarily considered an area of least concern. A Small problem area was defined as an area that had the least underlined items.

The third independent variable was the sex of the subjects. Within sex groups, subjects were randomly assigned to four different groups.

Dependent Variables

The verbal content of the subjects' speech was the first dependent variable. Specifically, the focus of concern was on the subjects' usage of self-references. A self-reference is defined as all pronoun references to the personal self, such as "I, Me, Mine, and Myself" (Stone, Dunphy, Smith, and Olgilvie, 1966). The nature of the self-references used in terms of positiveness/negativeness was also considered. A positive self-reference indicates a favourable attitude towards the self; a negative self-reference indicates an unfavourable attitude towards the self (Raimy, 1948).

The subjects' affective response to the interviewer and interview was also assessed by means of two rating scales. The scales had a face sheet which informed the subjects that the Psychology Department was interested in determining the graduate student's strengths and weaknesses in interviewing ability (Appendix, p. 86). The instruction sheet informed the subjects that their ratings of the interviewer and

interview would be used only for training purposes and that their ratings would have no influence on the students' academic standing. The format of the rating scales was adapted from Ellsworth and Carlsmith (1968). Each scale consisted of 10 evaluative adjectives which could be used to describe both the interviewer and the atmosphere of the interview. A 5-point scale of "Strongly Agree/Strongly Disagree" was used. The subjects were asked to check whether or not they agreed that the positive and negative adjectives were characteristic of the interviewer or interview.

Apparatus and Materials

A portable cassette tape recorder was used to record the interviews. In order to keep a permanent record of experimenter Looking, a sound generating device was constructed and adapted to the tape recorder (Figure 3, Appendix, p. 85). A button on the sound generator when depressed produced a 'beep' on the tape recorded interview. Release of the button resulted in the elimination of the sound from the recorded interview. Whenever the experimenter Looked at the subjects he depressed the button. The sound produced by the generator became an integral part of the recorded interview and was loud enough to be heard as part of the recording, yet not loud enough to mask the subjects' speech. The generator was labelled "Static Eliminator" in the event that the subjects became suspicious of its

function.

The tape recorder was partially visible throughout the interview as it was kept in an open desk drawer. The microphone was placed in front of the subjects. The desk itself had an overhanging ledge of approximately 10 inches on the subjects' side. This allowed the subjects to sit facing the experimenter and to lean on the desk without banging their knees in the process. An ashtray was placed on the table to one side of the subjects.

The Mooney Problem Checklist (Form C - College) was used to obtain the discussion topics of the interview. The instructions of the Checklist emphasize that it is not a test, but rather a list of problems which face college students. The subjects are instructed to read through the list and underline any item that suggests "something that is troubling as a personal problem" (Small Problem). They are then instructed to look back over the underlined items and circle those "that are of most concern to them as personal problems" (Big Problem). The 330 problem items of the Checklist are concerned with the areas as shown in the following list.

This list was presented to the subjects in order to show them in which areas their problems were located. By summing the number of problem items circled and underlined in each area, one can determine the areas of most and least concern. For each subject, two problems were selected from either the Big or Small Problem area to be discussed under the conditions of either High or Low experimenter

	Problem Area	Code
1.	Health and Physical Development	HPD
2.	Finances, Living Conditions, Employment	FLE
3.	Social and Recreational Activities	SRA
4.	Social/Psychological Relations	SPR
5.	Personal/Psychological Relations	PPR
6.	Courtship, Sex, Marriage	CSM
7.	Home and Family	HF
8.	Morals and Religion	MR
9.	Adjustment to College Work	ACW
10.	The Future: Vocational and Educational	FVE
11.	Curriculum and Teaching Procedures	CTP

Looking.

The rating scales were constructed by selecting descriptive adjectives from the favourable and unfavourable scales of the Adjective Checklist (Gough, 1952). The Adjective Checklist scales were originally formed by having 97 undergraduates choose the 75 most favourable and 75 least favourable adjectives from a total of 300 adjectives. The intercorrelation between the favourable and unfavourable scales was found to be -.31 for males, -.57 for females, and -.43 for both.

Test-retest reliability of the favourable scale was found to be .76 after 10 weeks, .31 after 6 months, and .52 after 5 1/2 years. Test-retest reliability of the unfavourable scale was found to be .84 after 10 weeks, .38 after 6 months, and .41 after 5 1/2 years.

Procedure

The subjects were met by the experimenter in a waiting room and escorted to the experimenter's office. The subjects sat directly across the table from the experimenter at a distance of approximately 4 feet. The subjects were reminded that they were asked to participate in a study of "Problems of University Students" which involved the filling out of a questionnaire and participation in a short interview.

They were given Form C (College) of the Mooney Problem Checklist and were asked to fill in their age, sex, year at College, course, and marital status. Each subject was randomly assigned to an experimental group prior to his participation in the experiment. Each checklist and rating scale had a code number placed at the top to indicate the group to which the subject belonged (i.e., HBM = High Experimenter Looking, Big Problems discussed by a Male). They were asked to read the instructions of the Checklist and begin checking the problem items. The subjects were cautioned to select the items which were problems most relevant to themselves as individuals rather than select items which they felt were problems of college students in general. They were asked to call the experimenter when they were

finished with the Checklist. The experimenter then left the room and waited a short distance down the hallway until he was called by the subject. When the Checklist was completed, the experimenter entered the office and quickly scored it. The underlined and circled items were scored separately and a composite score for each area was obtained by summing the number of underlined and circled items. The experimenter made a note of either the Big or Small problem area and randomly selected two problem items for discussion. The scored Checklists were given to the subjects along with a list of the codes of the problem areas.

The experimenter indicated to the subjects those area in which were located the most and least problems. This was done in a very informal manner and took the form of the experimenter saying "OK, of all the problem areas, it appears that most/few of your problems are located in the area called _____." The subjects were then told that although the Checklist provided valuable information in the sense of survey data, the study in which they were participating was interested in going beyond this type of information. The subjects were informed that an interview/discussion of these problems might provide more specific information. The experimenter then selected two problems for the subject to discuss "in order to supplement the information provided by the Checklist".

The subjects were told that their discussion would be tape recorded, their identities would remain anonymous, and that anything

they said would be held in strictest confidence. They were told that they could have 5 - 10 minutes to discuss each problem, which was introduced in the following manner: "OK, one of the problems you checked was _____. In what way is this a problem for you?" The experimenter started the tape recorder and held the sound generator in his lap.

If the subject has been assigned to the High Look condition, the experimenter attempted to direct his gaze to the subject's eyes throughout the entire interview. If the subject had been assigned to the Low Look condition, the experimenter attempted to direct his gaze to a point midway on the desk and Look at the subject's eyes only when the subject had reached the end of a sentence, or paused between phrases within a sentence. Whenever the experimenter directed his gaze to the subject's eyes, he depressed the button on the sound generator, thereby placing a continuous "beep" on the recorded interview. Whenever the experimenter directed his gaze to the desk, he released the button, thereby eliminating the "beep" from the recording. It is unlikely the subjects could see the experimenter press the button on the sound generator as it was held in his lap below the level of the desk.

During the manipulation of experimenter Looking, the experimenter did not speak to the subjects. His verbalizations were limited to "mm-hmmms, yeahs, etc." and his nonverbal behaviour consisted primarily of head nods. The experimenter attempted to maintain the same seated position and posture from subject to subject. He also attempted to maintain a 'straight' face throughout the interviews. The interviews

contained a range of content that did not permit the adoption of a frozen, mask-like facial expression. Between and within interviews, the content ranged from humorous to tragic (i.e., one woman broke down and cried while discussing a problem). The experimenter's "mm-hmmms" were transcribed as part of the interviews.

When the subjects had indicated that they had finished speaking, the tape recorder was stopped and the sound generator placed on top of the desk. The subjects were given the instruction sheet of the rating scales, a copy of the interviewer rating scale, and an envelope. They were asked to complete the rating scale, fold it, and place it in the unsealed envelope. The experimenter left the office while the subjects completed the scale and returned when called by the subjects. The envelope was placed to one side and the second problem was introduced in the same manner as the first. The tape recorder was started and the experimenter administered the appropriate amount of Looking. The generator was held in the experimenter's lap while amount of experimenter Looking was recorded on tape.

When the subjects indicated that they had finished speaking, the tape recorder was stopped and the generator placed on top of the table. The subjects were given the interview scale and asked to complete it according to the instructions of the first scale. They were then asked to fold it and seal it in the envelope along with the first scale. The experimenter again left the office and returned when called by the subjects. The experimenter told the subjects that he

would deliver the envelope to the Psychology Department. The subjects were thanked for their co-operation.

The experimenter was only able to explain the nature of the experiment to the last three subjects, when there was little opportunity for these subjects to inform others about the nature of the experiment. There was little deception involved in the experiment. For all intents and purposes, the experiment was what it purported to be--namely a study in the problems of university students, which consisted of filling out a questionnaire and participating in a short interview.

It is doubtful that any subject was harmed in any way by his being kept ignorant as to the actual experimental manipulations. Time simply did not permit the contacting of subjects to inform them of the purpose of the experiment. The experiment was completed on the last day of summer school and the majority of the subjects were from out of town and were preparing to return to their homes as soon as their courses were completed. The experimenter was emigrating shortly after the collection of the data.

RESULTS

Independent Variables

Experimenter Gaze Direction. Amount of experimenter Looking is defined as $\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss' Mean Speaking Time (Minutes/Seconds)}} \times 100.$ The tape recorded interviews were timed in order to determine both the amount of subject speaking time as well as amount of experimenter Looking time. Stop-watch timing began the moment the subjects began speaking and ended the moment they indicated that they were finished speaking. Experimenter Looking was calculated by stop-watch timing of the duration of 'beeps' heard on the tape recorded interviews. Table 1 shows the mean duration of subject speech as well as the corresponding mean duration of experimenter Looking.

Amount of experimenter Looking in the High Look condition was 96% of the time the subjects were speaking. Experimenter Looking in the Low Look condition amounted to 13% of the time the subjects were speaking. Table 2 shows the mean duration of subject speech as well as mean duration of experimenter Looking for the HB, HS, LB, and LS groups. Amount of experimenter Looking in the HB and HS groups was 98% and 94% respectively. Amount of experimenter Looking in the LB and LS groups was 12% and 13% respectively.

Table 3 shows the mean duration of subject speech and mean duration of experimenter Looking for the HBM, HBF, HSM, HSF, LBM, LBF,

TABLE 1

Per cent E Looking:

$$\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss; Mean Speaking Time (Minutes/Seconds)}} \times 100$$

(High and Low Look Groups)

E Looking	High	Low
E's Mean Looking Time	3'35"	0'25"
Ss' Mean Speaking Time	3'42"	3'12"
Per cent E Looking	96%	13%

TABLE 2

Per cent E Looking:

$$\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss' Mean Speaking Time (Minutes/Seconds)}} \times 100$$

(HB, HS, LB, and LS Groups)

E Looking	High		Low	
Problems	Big	Small	Big	Small
E's Mean Looking Time	4'14"	2'56"	0'25"	0'26"
Ss' Mean Speaking Time	4'18"	3'06"	3'13"	3'12"
Per cent E Looking	98%	94%	12%	13%

TABLE 3

Per cent E Looking:

$$\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss' Mean Speaking Time (Minutes/Seconds)}} \times 100$$

(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

E Looking	High				Low			
Problems	Big		Small		Big		Small	
Sex	M	F	M	F	M	F	M	F
E's Mean Looking Time	5'07"	3'22"	3'08"	2'44"	0'30"	0'21"	0'28"	0'25"
Ss' Mean Speaking Time	5'11"	3'26"	3'11"	3'01"	3'41"	2'05"	2'25"	3'20"
Per cent E Looking	98%	97%	97%	92%	13%	10%	19%	11%

LSM, and LSF groups. Amount of experimenter Looking in the HBM, HBF, HSM, and HSF groups ranged from 92% - 98% of the time the subjects were speaking. Amount of experimenter Looking in the LBM, LBF, LSM, and LSF groups ranged from 10% - 19% of the time the subjects were speaking. Tables 14 and 15 (Appendix, pp. 89 - 90) show the duration of individual subjects' speech and the duration of experimenter Looking per individual subject. The duration of subject speech ranged from 1 minute 32 seconds to 8 minutes 7 seconds in the High Look condition and from 1 minute 2 seconds to 8 minutes 10 seconds in the Low Look condition. Correspondingly, the duration of experimenter Looking ranged from 1 minute 22 seconds to 8 minutes 2 seconds in the High Look condition and from 7 seconds to 1 minute3 seconds in the Low Look condition. Experimenter Looking thus ranged from 86% - 100% in the High Look condition and from 2% - 28% in the Low Look condition. It would appear that the manipulation of experimenter Looking was successful in that two distinct conditions were formed, one in which the subjects spoke to an experimenter who Looked at them a great deal (almost continually), and another in which they spoke to an experimenter who Looked at them very infrequently (hardly at all).

Nature of Problems Discussed. For each subject a separate record was kept of the number of circled (Big Problems) and underlined (Small Problems) items. If the subject had been assigned to the Big problem group, the items for discussion were selected from the area which had the most circled items. If the subject had been assigned to

the Small problem group, the items were selected from the area which had the least underlined items.

Table 16 (Appendix, p. 91) shows the distribution of mean number of problems per problem area of the Checklist checked by the whole sample, males and females. The area of most concern to the sample as a whole was ACW (Adjustment to College Work), and the areas of least concern were FLE (Finances, Living Conditions, and Employment) and CSM (Courtship, Sex, and Marriage). The area of most concern to males and females was ACW, but for males the area of least concern was CSM, whereas for females the areas of least concern were FLE and MR (Morals and Religion). The whole sample checked an average of 34.32 items (range 7 - 77), with males checking an average of 29.70 (range 7 - 67), and females 38.95 (range 10 - 77). The number of problems checked per subject in the High and Low Look conditions are given in Tables 17 and 18 (Appendix, pp. 92 - 93). Subjects in the High and Low Look conditions checked an average of 34.80 and 33.85 problems respectively. The random assignment of subjects to the High and Low Look conditions resulted in two homogeneous groups in respect of number of problems checked. The variation in the number of problems checked by the HB, HS, LB, and LS groups was greater (Appendix, pp. 92 - 93) and considerably greater in the HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF groups (Appendix, pp. 92 - 93). Since the subjects were randomly assigned to the experimental groups prior to completing the Checklist, such variation is to be expected and is considered to be of little consequence.

Dependent Variables

Verbal Content of the Subjects' Speech. In order to assess the content of the subjects' speech, each interview was transcribed verbatim. Each tape was played and replayed until the transcript was complete. Each tape was replayed in order to record the amount and location of 'beeps' on each transcript. Each tape was again replayed in order to locate the experimenter's verbalizations (mm-hmmms, yeahs, etc.). This enabled a visual inspection of the transcripts in terms of amount and location of experimenter verbalizations and amount and location of experimenter Looking. Every self-reference in the transcript was circled and the handwritten transcript was typed for assessment by two judges. The reliability of the calculation of total number of self-references per subject per group was not calculated since it involved merely a frequency count of the number of "I's, Me's, Mine's, and Myself's" each subject used.

A sample of the typewritten interviews with the circled self-references was given to two judges. One was a post-graduate biology student and the other was a post-graduate psychology student. Neither judge knew of the purpose of the experiment. Each judge was given a definition of a self-reference and was asked to consider each reference in terms of the context of the sentence in which it was used and assign it to one of three categories: a positive, negative, or neutral self-reference. Each judge was given a tally sheet for every transcript so that each self-reference could be categorized. The

total number of self-references was obtained by summing the number of positive, negative, and neutral self-references. The reliability of the categorizations of the self-references by the two judges was established using the Spearman-Brown formula (Garrett, 1967) and was found to be .80. The judges were given one-half of the interviews each and asked to categorize all of the self-references. In the analyses of variance of self-references and affective response, there were four instances in which main effects did not quite reach the conventional .05 level of significance. These results, significant at the .10 level, were treated merely as suggestive of possible trends and were included in the interpretation of the data for that reason only.

Total Self-References. Total number of self-references (SRs) per subject in the High and Low Look groups are given in Tables 19 and 20 (Appendix, pp. 94 - 95). Total number of SRs ranged from 7 - 116 in the High Look condition and from 5 - 80 in the Low Look condition. Analysis of variance was performed on the total number of SRs per subject per group and the results appear in Table 4. There are tentative indications of a possible trend in the data in which subjects in the High Look conditions seemed to make more SRs than subjects in the Low Look conditions.

Mean number of SRs per groups is given in Table 5. The whole sample made an average of 37.65 SRs per interview, with males averaging 43.30 and females 32.00. Comparisons between the mean number of SRs for the HB, HS, LB, and LS groups were made using Duncan's Multiple Range Test (Edwards, 1968) and appear in Table 21 (Appendix, p. 96). There are no

TABLE 4

Analysis of Variance:
Total Self-References per Subject per Group

Source	Sum of Squares	df	Mean Square	F	
Look	2,160.90	1	2,160.90	3.93	p<.10
Problems	167.90	1	167.90		
Sex	1,276.90	1	1,276.90	2.32	
Look x Problems	22.50	1	22.50		
Look x Sex	372.10	1	372.10		
Problems x Sex	1,232.10	1	1,232.10	2.24	
Look x Problems x Sex	36.30	1	36.30		
Error: Within Treatments	17,556.40	32	548.63		
Total	22,825.10	39			

TABLE 5

Mean Self-References per Group

Whole Sample	Males	Females
37.65	43.30	32.00

H	L
45.00	30.30

H		L	
B	S	B	S
47.80	42.20	31.60	29.00

H				L			
B		S		B		S	
M	F	M	F	M	F	M	F
63.00	32.60	44.40	40.00	38.80	24.40	27.00	31.00

significant differences between these groups in terms of usage of SRs. Comparisons between the mean number of SRs for the HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF groups were made and appear in Table 22 (Appendix, p. 97). Subjects in the HBM group made more SRs than subjects in the LSM and LBF groups ($p<.05$).

Positive Self-References. Total number of positive self-references (+SRs) per subject in the High and Low Look groups are given in Tables 23 and 24 (Appendix, pp. 98-99). Total number of +SRs ranged from 0 - 42 in the High Look condition and from 1 - 22 in the Low Look condition. Analysis of variance was performed on the total number of +SRs per subject per group and the results are given in Table 6. A possible trend in the data was noted in which subjects in the High Look condition seemed to make more +SRs than subjects in the Low Look condition. Males made more +SRs than females ($p<.05$). Mean number of +SRs per groups are given in Table 7. The whole sample made an average of 12.50 +SRs per interview, with males averaging 16.10 and females 8.90. Comparisons between the mean number of +SRs for the HB, HS, LB, and LS groups were made and appear in Table 25 (Appendix, p. 100). There are no significant differences between these groups in terms of usage of +SRs. Comparisons between the mean number of +SRs for the HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF groups were made and appear in Table 26 (Appendix, p. 101). Subjects in the HBM group made more +SRs than subjects in the HBF, LBF, LSF, LSM, HSF, and LBM groups ($p<.05$).

TABLE 6

Analysis of Variance:

Positive Self-References per Subject per Group

Source	Sum of Squares	df	Mean Square	F	
Look	260.10	1	260.10	2.98	p<.10
Problems	19.60	1	19.60		
Sex	518.40	1	518.40	5.95	p<.05
Look x Problems	4.90	1	4.90		
Look x Sex	168.10	1	168.10	1.92	
Problems x Sex	160.00	1	160.00	1.83	
Look x Problems x Sex	108.90	1	108.90	1.25	
Error: Within Treatments	2,788.00	32	87.12		
Total	4,028.00	39			

TABLE 7

Mean Positive Self-References per Groups

Whole Sample	Males	Females
12.50	16.10	8.90

H	L
15.05	9.95

H		L	
B	S	B	S
16.10	14.00	10.30	9.60

H				L			
B		S		B		S	
M	F	M	F	M	F	M	F
25.40	6.80	16.00	12.00	12.20	8.40	10.80	8.40

Negative Self-References. Total number of negative self-references (-SRs) per subject in the High and Low Look conditions are given in Tables 27 and 28 (Appendix, pp. 102 - 103). Total number of -SRs ranged from 3 - 60 in the High Look condition and from 0 - 29 in the Low Look condition. Analysis of variance was performed on the total number of -SRs subject per group and the results appear in Table 8. Neither the main effects nor interactions are significant. Mean number of -SRs per groups are given in Table 9. The whole sample made an average of 14.35 -SRs, with males averaging 15.30 and females 13.40. Comparisons between the mean number of -SRs for the HB, HS, LB, and LS groups were made and appear in Table 29 (Appendix, p. 104). There are no significant differences between these groups in terms of usage of -SRs. Comparisons were made for the HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF groups and the results appear in Table 30 (Appendix, p. 105). There are no significant differences between these groups in terms of usage of -SRs.

TABLE 8

Analysis of Variance:
Negative Self-References per Subject per Group

Source	Sum of Squares	df	Mean Square	F
Look	211.60	1	211.60	1.66
Problems	40.00	1	40.00	
Sex	36.10	1	36.10	
Look x Problems	36.10	1	36.10	
Look x Sex	3.60	1	3.60	
Problems x Sex	144.40	1	144.40	1.13
Look x Problems x Sex	.90	1	.90	
Error: Within Treatments	4,076.40	32	127.38	
Total	4,549.10	39		

TABLE 9

Mean Negative Self-References per Groups

Whole Sample	Males	Females
14.35	15.30	13.40

H	L
16.65	12.05

H		L	
B	S	B	S
18.60	14.70	12.10	12.00

H				L			
B		S		B		S	
M	F	M	F	M	F	M	F
21.00	16.20	13.60	15.80	15.40	8.80	11.20	12.80

Interviewer Rating Scale. The sum of the individual ratings on each scale provided an index of affective response to the interviewer and interview. "Strongly Agree" was assigned a value of 5; "Agree" a value of 4; "Neutral a value of 3; "Disagree" a value of 2; and "Strongly Disagree" a value of 1. The greater the sum of the ratings, the higher the degree of positive affective response. Since each scale consisted of both positive and negative items, the ratings made by the subjects were transformed to provide an index of positive/ negative affective response. A "Strongly Agree" rating (value 5) of an unfavourable adjective (i.e., cold) would be transformed to a value of 1, indicating negative affective response. Conversely, a "Strongly Agree" rating (value 5) of a favourable adjective (i.e., considerate) would not be transformed but would remain a value of 5 indicating positive affective response.

The minimum possible score on either scale, indicating negative affective response, was 10 and the maximum possible score indicating positive affective response was 50. The unit of analysis was the sum of the ratings made by each subject on each scale. The reliability of the interviewer rating scale was found to be .70 using the Spearman-Brown split-half reliability formula (Garrett, 1967). The correlation between the interviewer rating scale and interview scale (see Appendix, pp. 87 - 88) was found to be .97. The ratings made by the subjects on the positive and negative items of the interview scale were used in the calculations of the split-half

reliability which was found to be .89.

Indices of affective response per subject in the High and Low Look conditions are given in Tables 31 and 32 (Appendix, pp. 106 - 107). The indices ranged from 32 - 50 in the High Look condition and from 30 - 50 in the Low Look condition. Analysis of variance was performed on the indices of affective response per subject per group and the results appear in Table 10. There was tentative evidence which raised the possibility that female subjects may have tended to rate the interviewer more favorably than male subjects. Mean ratings of the interviewer per group are given in Table 11. Comparisons between the mean ratings of the HB, HS, LB, and LS groups were made and the results appear in Table 33 (Appendix, p. 108). There were no significant differences between these groups in terms of ratings of the interviewer. Comparisons between the mean ratings of the HBM, HBF, HSM, HSF, LBF, LSM, and LSF groups were made and the result appear in Table 34 (Appendix, p. 109). There are no significant differences between these groups in terms of ratings of the interviewer.

TABLE 10

Analysis of Variance:
Interviewer Ratings per Subject per Group

Source	Sum of Squares	df	Mean Square	F
Look	.03	1	.03	
Problems	.63	1	.63	
Sex	75.63	1	75.63	3.55 p<.10
Look x Problems	70.22	1	70.22	3.30 p<.10
Look x Sex	.02	1	.02	
Problems x Sex	18.22	1	18.22	
Look x Problems x Sex	13.23	1	13.23	
Error: Within Treatments	680.00	32	21.25	
Total	857.98	39		

TABLE 11

Mean Interviewer Ratings per Groups

Whole Sample	Males	Females
43.27	41.90	44.65

H	L
43.30	43.25

H		L	
B	S	B	S
42.10	44.50	44.70	41.80

H				L			
B		S		B		S	
M	F	M	F	M	F	M	F
40.80	43.40	43.00	46.00	44.60	44.80	39.20	44.40

Atmosphere of the Interview. Indices of affective response per subject in the High and Low Look conditions are given in Tables 35 and 36 (Appendix, pp. 110 - 111). The indices ranged from 29 - 50 in the High Look condition and from 34 - 50 in the Low Look condition. Analysis of variance was performed on the indices of affective response per subject and the results appear in Table 12. There are suggestive indications that females may have rated the atmosphere of the interview more favorably than males.

Mean ratings of the interview per groups are given in Table 13. The mean rating of the whole sample was 42.50, with males rating 40.75 and females 44.25. Comparisons between the mean ratings of the HB, HS, LB, and LS groups were made and the results appear in Table 37 (Appendix, p. 112). There are no significant differences between these groups in terms of ratings of the interview. Comparisons were made between the mean ratings of the HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF groups and the results appear in Table 38 (Appendix, p. 113). Subjects in the HSF group rated the interview more favorably than subjects in the HBM group ($p<.05$).

TABLE 12

Analysis of Variance:

Interview Ratings per Subject per Group

Source	Sum of Squares	df	Mean Square	F	
Look	.40	1	.40		
Problems	25.60	1	25.60		
Sex	122.50	1	122.50	4.14	p<.10
Look x Problems	40.00	1	40.00	1.35	
Look x Sex	16.90	1	16.90		
Problems x Sex	4.90	1	4.90		
Look x Problems x Sex	16. 90	1	16.90		
Error: Within Treatments	946.80	32	29.58		
Total	1,173.00	39			

TABLE 13

Mean Interview Ratings per Groups

Whole Sample	Males	Females
42.50	40.75	44.25

H	L
42.40	42.60

H		L	
B	S	B	S
40.60	44.20	42.80	42.40

H				L			
B		S		B		S	
M	F	M	F	M	F	M	F
37.20	40.00	42.80	45.60	42.00	43.60	41.00	43.80

DISCUSSION

Generally, a high degree of Looking on the part of a listener is considered to be an indicator of increased interest or attention (Exline & Winters, 1966). In the present study, it was assumed that High experimenter Looking would be related to a higher usage of self-references on the part of the subjects than would Low experimenter Looking. To some extent, this hypothesis was supported. Possible trends in the data were noted in which subjects in the High Look condition seemed to make more self-references than subjects in the Low Look condition. Similarly, there were tentative suggestions that these subjects also seemed to make more +SRs than subjects in the Low Look condition. There were no significant differences between the High and Low Look groups as to usage of -SRs, mean interviewer, and mean interviewer ratings.

It appears that High Looking on the part of a listener indicated increased interest in what the subjects were saying, and the subjects responded by disclosing more of themselves in the High Look as compared to the Low Look condition. When they did refer to themselves, they did so in a positive manner more so than a negative manner. It is possible that presenting oneself in front of a gazing experimenter is more threatening than presenting oneself in front of a nongazing experimenter, and that the subjects responded by referring to themselves in a positive manner. With a nongazing experimenter, there is perhaps less of a threat to oneself and therefore less need to present oneself in

a positive manner. There were no differences between these groups in usage of -SRs. High or Low Looking on the part of a listener seems to have an effect on positive self-presentation but not negative self-presentation. There were no differences between these groups as to affective response to the interviewer and interview. The ratings of the interviewer and interview were all favourable. This may be the result of the social acquiescence, a desire on the part of the subjects not to evaluate a fellow student in a negative way, or the fact that the subjects simply enjoyed discussing their problems independently of the experimental manipulations of experimenter gaze and problems discussed.

The size of the sample was quite small (N = 40) and the effects of the variables of experimenter gaze, problems discussed, and sex of subjects were based on 20, 10, and 5 subjects respectively. This tended to result in differences between the groups in terms of self-references and affective response approaching significance at the .10 level more so than meeting the conventional .05 level. The pattern of significant differences would suggest that perhaps if a larger sample had been used, the results would perhaps be more appropriate for investigating these relationships.

Although the general effects of experimenter Looking were the major concern of the study, an attempt was made to consider the contributing factors of the nature of the conversation and the sex of the subjects. It was felt that the general effects of experimenter

Looking would be qualified by the nature of the discussion so that subjects in the Big problem group (HB) would make more SRs and rate the interviewer and interview more favourably than subjects in the Small problem group (HS). Comparisons between the HB - HS groups (subjects discussing Big and Small problems with a gazing experimenter), and LB - LS groups (subjects discussing Big and Small problems with a nongazing experimenter) indicate no significant differences as to usage of SRs or affective response to the interviewer and interview. It would appear that the general effects of experimenter Looking were independent of the nature of the conversation. Considering the results of comparisons between the High and Low Look groups, it appears that usage of SRs is a function of experimenter Looking itself and not subject to the nature of the conversation. In terms of self-presentation, it would appear that discussing close (Big) problems, or remote (Small) problems with a gazing and nongazing experimenter has no appreciable effect upon one's mode of self-presentation as to whether it is positive or negative.

The sex of the subjects played a significant part in the interpretation of the results. It was assumed that male subjects would perhaps feel more threatened by a gazing experimenter than would female subjects (Thayer, 1969), and that male subjects would respond by making more positive SRs than female subjects. There were no significant differences between male and female usage of total or -SRs; however, males made more +SRs than females ($p < .05$). It would appear

that although High Looking indicated increased interest, it also presented a threat to the male subjects who responded by presenting themselves in a more favourable light making more use of +SRs. There were suggestive indications that female subjects seemed to rate the interviewer and interview more favourably than males. It is possible that male subjects may have experienced a certain degree of dissonance about presenting themselves in a positive manner or felt uncomfortable about having to discuss their personal problems with a gazing male experimenter and responded by making a less favourable evaluation of the interviewer and interview than females. Female subjects, on the other hand, may have felt less dissonance and felt more comfortable about discussing personal problems with a gazing experimenter and responded by making fewer +SRs and rating the interviewer and interview more favourably than males. Hood and Back (1971) suggested that male volunteers tend to disclose more of themselves than female volunteers and volunteers disclose more of themselves than non-volunteers. However, all of the subjects in the present study were volunteers, so the observed differences cannot be definitely attributed to the factor of sex or volunteering.

The general effects of experimenter Looking were expected to be mediated by the nature of the problems discussed as well as the sex of the subjects. Subjects in the High Look groups (HBM, HBF, HSM, and HSF) were expected to make more SRs and rate the interviewer and interview more favourably than subjects in the Low Look groups respectively (LBM, LBF, LSM, and LSF). When comparisons were made

between these groups, no differences were found as to usage of total SRs and -SRs, or ratings of the interviewer and interview. However, subjects in the HBM group made more +SRs than subjects in the LBM group ($p < .05$). Male subjects discussing Big problems in the presence of a gazing experimenter tended to make more +SRs than male subjects discussing Big problems in the presence of a nongazing experimenter. It is possible that the subjects in the former groups were more threatened than subjects in the latter group and responded by presenting themselves in a more positive manner.

The variables of experimenter Looking and sex of subjects are considered in terms of the nature of the problems discussed. It was expected that subjects in the Big problem groups (HBM, HBF, LBM, and LBF) would make more SRs and rate the interviewer and interview more favourably than subjects in the Small problem groups respectively (HSM, HSF, LSM, and LSF). No significant differences were found between these groups as to usage of SRs or ratings of the interviewer and interview. It would appear, in the light of the previous results, that the nature of the problems discussed had no effect upon the general effects of experimenter Looking.

The variables of experimenter Looking and nature of problems discussed were considered in terms of the sex of the subjects. It was expected that male subjects (HBM, HSM, LBM, and LSM groups) would make more SRs and rate the interviewer and interview more favourably than female subjects (HBF, HSF, LBF, and LSF groups respectively). No

significant differences were found between these groups as to usage of total and -SRs, or ratings of the interviewer and interview. Subjects in the HBM group made more +SRs than subjects in the HBF group. It would appear that male subjects discussing Big problems in the presence of a gazing experimenter tend to be more threatened and respond by presenting themselves in a more positive manner than females.

CONCLUSIONS

The present study was designed to investigate the effects of Looking or not Looking at another upon the other's speech and affective response to the situation. Basically, the effects of Looking or not Looking at another while listening to him discuss his problems were the foci of concern. The expected effects were that High Looking on the part of a listener would be related to more self-disclosure and a more favourable affective response on the part of the subjects than Low Looking.

Subjects tended to refer to themselves more in the presence of a gazing experimenter than a nongazing experimenter. The subjects tended to refer to themselves in a positive manner more so than a negative manner in the presence of a gazing experimenter. High or Low Looking on the part of the experimenter appeared to have an effect upon the subjects' references to self; however, degree of experimenter Looking did not in itself appear to have an effect upon the subjects' affective response to the interviewer and interview.

The nature of the conversation was expected to mediate the effects of experimenter Looking. It was felt that subjects discussing Big personal problems would tend to refer to themselves more and rate the interviewer and interview more favourably than subjects discussing Small personal problems. The nature of the conversation did not appear to have any mediating effect upon the variable of experimenter

Looking.

The sex of the subjects was also expected to mediate the effects of experimenter Looking. It was hypothesized that males would feel more threatened in the presence of a gazing experimenter than would females and that males would tend to respond by referring to themselves in a more positive manner than females. Although no differences were expected in terms of male and female affective response to the interviewer and interview, it was found that males rated the interviewer and interview less favourably than females. It was suggested that males may have experienced more dissonance about self-disclosure with a male experimenter than females.

The effects of experimenter Looking were considered in terms of the interaction between the nature of the conversation and the sex of the subjects. It was expected that males and females discussing Big and Small personal problems with a gazing experimenter would tend to make more self-references and rate the interviewer and interview more favourably than with a nongazing experimenter. Males discussing Big problems with a gazing experimenter tended to make more positive self-references than males discussing Big problems with a nongazing experimenter. No differences were found as to usage of total and -SRs, or ratings of the interviewer and interview.

The nature of the conversations were considered in terms of the interaction between experimenter Looking and the sex of the subjects. It was expected that males and females discussing Big problems in the

presence of a gazing and nongazing experimenter would make more self-references and rate the interviewer and interview more favourably than males and females discussing Small problems. No differences were found between these groups as to usage of total, +SRs, and -SRs, or ratings of the interviewer and interview. It would seem that the nature of the conversation had no appreciable contributory effect upon the observed results.

The sex of the subjects was considered in terms of the interaction between experimenter Looking and the nature of the conversation. It was expected that males discussing Big and Small problems in the presence of a gazing and nongazing experimenter would tend to make more self-references and rate the interviewer and interview more favourably than females. There were no differences between these groups as to usage of total and -SRs, or ratings of the interviewer and interview. Males discussing Big problems in the presence of a gazing experimenter tended to make more +SRs than females.

A few general conclusions as to the effect of "being looked at" can be determined. High Looking on the part of an experimenter in a situation in which subjects discuss personal problems, tended to be related to the degree to which subjects disclose of themselves. Subjects tended to refer to themselves more in the presence of a gazing experimenter than a nongazing experimenter. In terms of the severity of the personal problems discussed, the results suggested that High experimenter Looking was not related to a higher usage of

self-references when subjects discussed either Big or Small personal problems. In terms of the sex of the subjects, High experimenter Looking was related to a higher usage of self-references for males but not females.

Affective response to the interviewer and interview did not appear to be directly related to amount of experimenter Looking and severity of problems discussed, but appeared to be mediated by the variable of sex of subjects. With a male experimenter, male subjects tended to make more +SRs than females independently of the manipulation of experimenter Looking and problems discussed. Females tended to rate the interviewer and interview more favourably than males independently of the manipulation of Looking and problems discussed. Males who discussed Big problems with a gazing experimenter tended to make more +SRs than males with a nongazing experimenter. Males in the former group tended to make more +SRs than females in the same experimental condition.

The effects of one's Looking upon the other's behaviour is not strictly a one-to-one relationship in which High Looking indicates/communicates increased attention/attraction which produces positive affective responses on the part of the other, and Low Looking indicates/communicates the opposite. Rather, the effects of one's Looking appear to be strongly mediated by the sex of the other. Inasmuch as mutual Looking varies according to the content of an interview and the sex of the subjects (Exline, Gray, and Schuette, 1965), the present study

provides evidence that interview content and affective response vary according to the visual behaviour between an experimenter and subject, and the sex of the experimenter and subject.

SUGGESTIONS FOR FURTHER RESEARCH

Although a great deal of research has been devoted to the effects of social reinforcement, relatively little has considered the nonverbal components of social reinforcement. Social reinforcement requires social interaction and social interaction involves nonverbal as well as verbal communication (Exline and Messick, 1967). Assuming that attending or not attending to the other has significant effects upon social interaction, how is this attention/inattention indicated if not by Looking or not Looking at one another? The relative importance of the verbal and nonverbal components of social reinforcement have not been investigated.

The factorial design of the present study allows for the investigation of the effects upon another's behaviour of one's Looking or not Looking. Although previous research has considered mutual Looking as a dependent variable, the present study as well as those of Ellsworth and Carlsmith (1968), Kleck and Nuessle (1968), and Kleinke and Pohlen (1971) suggest that Looking may be considered as an independent variable.

The dependent variable of verbal content (self-references) may perhaps be more adequately investigated by using a more refined content analysis. If the General Inquirer approach to content analysis were used (Stone et al, 1966), dimensions such as attitude towards self, inner directedness/outer directedness, and past/present/future

orientation may be investigated.

Affective response to the interview possibly may not be determined by way of rating scales. Perhaps a more valid measure would be a behavioural one such as speech disturbances as an index of anxiety (Cook, 1969). By using such a behavioural measure, one could possibly avoid distortions in ratings due to social desirability or social facilitation.

Manipulation of gaze direction as an independent variable may be a better alternative than the usage of visual interaction as a dependent variable. As mentioned earlier, research could be directed towards the comparison of observers' ratings of when one Looks at another with the 'Lookee's' ratings of when one Looks at him. Cline (1967) demonstrated that the person being looked at was quite accurate in determining when it was his eyes rather than some other part of his body that was being looked at. Direct comparisons between the observer's judgements and the judgements made by the one being looked at have not been made. It is possible that it is the one being looked at who is the only one in a position to accurately determine when he is being looked at. If it were found that the observed's ratings were more reliable than the "observers of the observed" then perhaps the problems involved in using hidden judges could be avoided (Stevenson and Rutter, 1970; White, Hegarty, and Beasley, 1970).

The significant sex differences found in the present study as to usage of self-references and affective response, would suggest that

the design of the present study should be modified so as to include a female experimenter. In this way, the effects due to sex could be clarified as to whether they were a function of like or unlike sex combinations of experimenter and subject.

A number of personality variables could be considered in order to determine whether some of the observed results are due to personality characteristics of the experimenter as well as the subjects. Also, different populations of subjects could be compared, such as psychiatric patients and normals, alcoholics and non-alcoholics, and neurotics and psychotics.

The general situation of the present experiment is somewhat analogous to that of a counselling or psychotherapeutic situation in which one sits and listens to another discuss his problems. If the counsellor or therapist has any effect at all upon the behaviour of the other, then these effects should be investigated in terms of nonverbal as well as verbal behaviour.

There are very few studies which have considered nonverbal (Visual) behaviour as a reinforcing agent in a therapeutic situation. Rickard, Dignam, and Horner (1960, p. 112) have noted that they "have been unable to locate ... a single study reporting verbal conditioning in an actual therapeutic treatment case." They attempted to manipulate the verbal behaviour of a 60 year old man who had been hospitalized continuously for over 20 years. The patient was quite verbose and expressed delusions of persecution and grandeur. Rational speech was

selected as the dependent variable and verbalized delusions were ignored. Reinforcement was defined as a smile, nod, and exclamation expressing interest. Non-reinforcement was defined as the experimenter turning away from the patient, gazing at the floor, or looking out the window. A high level of rational speech elicited. Rational speech had increased from a baseline of 2 minutes per 45 minute session to 30 minutes per 45 minute session. A follow-up study 2 years later (Rickard and Dinoff, 1962) showed that the results were still maintained. Although this study would seem to hold many implications for behavioural modification in a psychotherapeutic situation, there have been few studies which have followed this lead.

Ayllon and Michael (1959) applied operant conditioning techniques to the control of ward behaviour in psychotic patients. Excessive and annoying visits by a patient were eliminated by the simple procedure of complete withdrawal of attention by the office staff. Attending and ignoring may be used quite effectively in the operant conditioning of behaviour. One communicates to the other that he is being attended to or being ignored partially by meeting his gaze or ignoring it. In a psychotherapeutic or counselling situation, Looking or not Looking at another may potentially be an efficient reinforcer of quality of speech as well as volume of speech.

"Sending one to Calvary" by avoiding his gaze tends to be a cruel experience for the victim. One can tolerate praise and punishment since both indicate attention and acknowledgement of one's existence.

One cannot, on the other hand, tolerate being ignored, which has the effect of denying one's existence. Solitary confinement is generally considered to be the severest form of punishment. In ignoring another, or aspects of his behaviour, one communicates to the other that he is regarded as a non-person, and that he does not exist for the other. In a therapeutic situation, the degree of Looking or not Looking at the other must have some degree of influence upon the other's behaviour in and affective response to the encounter.

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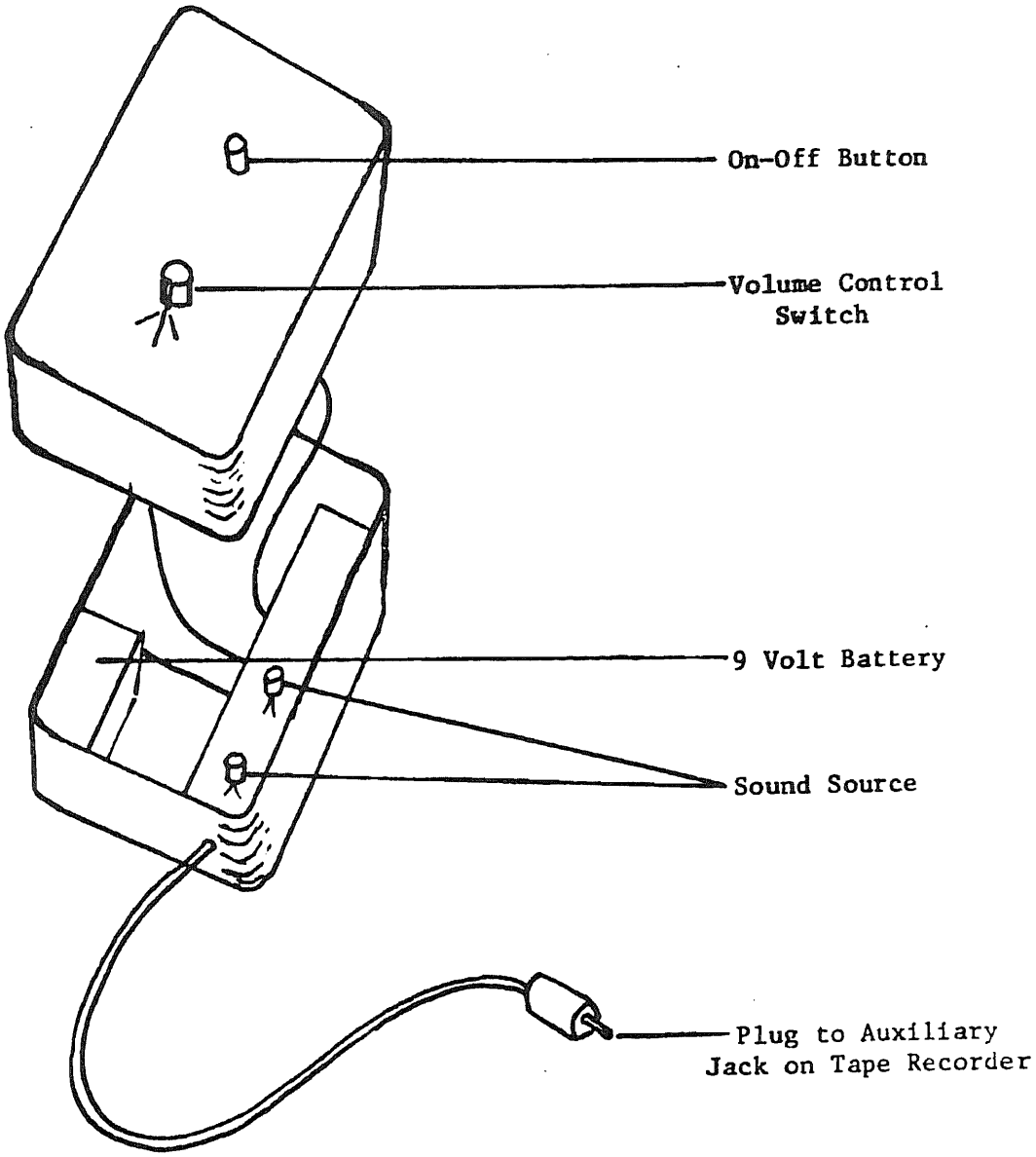
APPENDIX

FIGURE 3

Sound Generator



Face Sheet of the Rating Scales

All Undergraduate Subjects

In Interviews

Conducted by Graduate Students

One of the main problems of training graduate students to be good interviewers is providing individualized instruction geared to a student's particular strengths and weaknesses. In order to find out what these strengths and weaknesses are, it is most important that we know how people react to the student in an interview situation.

All answers provided by undergraduate students will be used to guide the Psychology Department in deciding what sort of training the student needs most. All answers provided by undergraduate students will be used only for training purposes, and will have no influence whatsoever on the student's academic standing.

Please make careful, honest answers, since carelessness or dishonest responses could result in the graduate student's receiving training in unnecessary areas at the expense of training he really needs.

Thank you,

The Department of Psychology
Lakehead University
Thunder Bay
Ontario

Interviewer Rating Scale

Instructions: Please rate the interviewer as to the following characteristics. Remember, the purpose of this rating scale is to assist the graduate student in those areas in which he needs assistance. Place a check in the appropriate box.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Deceitful					
Thoughtful					
Honest					
Impatient					
Aloof					
Understanding					
Conscientious					
Attentive					
Irritable					
Unfriendly					

Do you have any additional comments to make about the interviewer?

Interview Rating Scale

Instructions: Please rate the atmosphere of the interview as to the following characteristics. Remember, the purpose of this rating scale is to assist the graduate student in those areas in which he needs assistance. Place a check in the appropriate box.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Distrustful					
Intolerant					
Friendly					
Warm					
Considerate					
Evasive					
Indifferent					
Sympathetic					
Sincere					
Hostile					

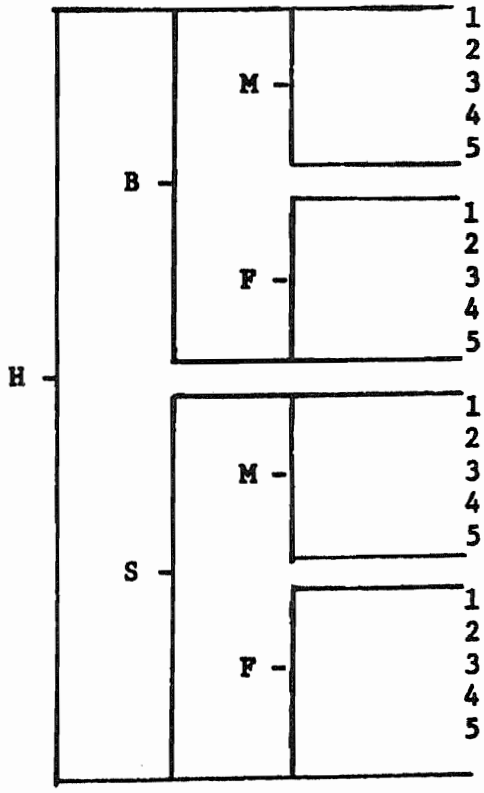
Do you have any additional comments to make about the atmosphere of the interview?

TABLE 14

Per cent E Looking:

$$\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss' Mean Speaking Time (Minutes/ Seconds)}} \times 100$$

(Individual Ss - High Look Condition)



	S	E's Mean Looking Time	Ss' Mean Speaking Time	Per cent E Looking
B-M	1	8'02"	8'07"	99%
	2	6'13"	6'21"	97%
	3	2'21"	2'21"	100%
	4	2'53"	2'56"	98%
	5	6'06"	6'14"	97%
B-F	1	3'29"	3'33"	98%
	2	1'30"	1'35"	94%
	3	3'05"	3'05"	100%
	4	3'51"	3'51"	100%
	5	2'19"	2'27"	96%
S-M	1	4'32"	4'35"	98%
	2	4'20"	4'20"	100%
	3	3'33"	3'42"	95%
	4	1'48"	1'48"	100%
	5	1'27"	1'32"	94%
S-F	1	2'26"	2'31"	96%
	2	4'02"	4'06"	98%
	3	1'52"	2'10"	86%
	4	2'42"	2'49"	95%
	5	1'22"	1'32"	89%

TABLE 15

Per cent E Looking:

$$\frac{\text{E's Mean Looking Time (Minutes/Seconds)}}{\text{Ss' Mean Speaking Time (Minutes/Seconds)}} \times 100$$

(Individual Ss - Low Look Condition)

		S	E's Mean Looking Time	Ss' Mean Speaking Time	Per cent E Looking
L	B	M	1	1'03"	8'10"	12%
			2	0'07"	4'27"	2%
			3	0'10"	2'25"	5%
			4	0'19"	1'05"	28%
			5	0'13"	1'02"	20%
		F	1	0'09"	1'43"	8%
			2	0'21"	3'49"	9%
			3	0'15"	1'57"	12%
			4	0'11"	1'37"	11%
			5	0'10"	1'20"	12%
	S	M	1	0'16"	2'40"	10%
			2	0'22"	2'18"	16%
			3	0'23"	2'14"	17%
			4	0'13"	1'57"	16%
			5	0'30"	2'18"	10%
		F	1	0'26"	4'52"	8%
			2	0'14"	4'06"	5%
			3	0'18"	2'10"	13%
			4	0'10"	3'37"	4%
			5	0'19"	1'15"	25%

TABLE 16

Distribution of Mean Number of Problems per Problem Area
of the Mooney Problem Checklist
Checked by the Whole Sample - Males and Females

Groups	Problem Areas										
	HPD	FLE	SRA	SPR	PPR	CSM	HF	MR	ACW	FVE	CTP
Whole Sample	2.9	2.1	4.6	3.4	4.1	2.1	4.2	2.3	6.1	3.2	2.7
Males	2.1	1.8	4.2	2.7	3.6	1.3	3.6	2.1	4.8	3.7	2.7
Females	3.7	2.5	5.0	4.1	4.6	3.0	4.6	2.5	7.5	2.7	2.7

TABLE 17

Number of Problems on the Mooney Problem Checklist Checked by Individual Subjects (High Look Condition)

	H			
	Mean 34.80			
	B		S	
	Mean 44.90		Mean 24.70	
	M	F	M	F
S				
1	25	35	40	20
2	28	73	41	11
3	36	60	33	22
4	29	57	14	14
5	30	76	19	33
Mean	29.60	60.20	29.40	20.00

TABLE 18

Number of Problems on the Mooney Problem Checklist Checked by Individual Subjects (Low Look Condition)

	L Mean 33.85			
	B Mean 33.00		S Mean 34.70	
	M	F	M	F
S				
1	19	15	55	28
2	10	26	13	72
3	67	10	23	73
4	24	77	7	17
5	48	34	33	26
Mean	33.60	32.40	26.20	43.20

TABLE 19

Number of Self-References
Made by Individual Subjects
(High Look Condition)

	H Mean 45.00			
	B Mean 47.80		S Mean 42.20	
	M	F	M	F
S				
1	74	35	50	34
2	69	7	83	73
3	27	37	47	38
4	29	60	30	33
5	116	24	12	22
Mean	63.00	32.60	44.40	40.00

TABLE 20

Number of Self-References
Made by Individual Subjects
(Low Look Condition)

	L			
	Mean 30.30			
	B		S	
	Mean 31.60		Mean 29.00	
	M	F	M	F
S				
1	80	18	38	53
2	29	15	19	27
3	54	28	37	5
4	12	26	24	61
5	19	35	17	9
Mean	38.80	24.40	27.00	31.00

TABLE 21

Duncan's Multiple Range Test:
Comparisons of Mean Self-References
(HB, HS, LB, and LS Groups)

Groups		LS	LB	HS	HB	Shortest Range
	Means	29.00	31.60	42.20	47.80	
LS	29.00		2.60	13.20	18.80	21.63
LB	31.60			10.60	16.20	22.74
HS	42.20				5.60	23.47

TABLE 22

Duncan's Multiple Range Test:
Comparisons of Mean Self-References
(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

Groups		LBF	LSM	LSF	HBF	LBM	HSF	HSM	HBM	Shortest Range
	Means	24.40	27.00	31.00	32.60	38.80	40.00	44.40	63.00	
LBF	24.40		2.60	6.60	8.20	14.40	15.60	20.00	38.60*	30.26
LSM	27.00			4.00	5.60	11.80	13.00	17.40	36.00*	31.80
LSF	31.00				1.60	7.80	9.00	13.40	32.00	32.81
HBF	32.60					6.20	7.40	11.80	30.40	33.52
LBM	38.80						1.20	5.60	24.20	34.08
HSF	40.00							4.40	23.00	34.50
HSM	44.40								18.60	34.83

*$p < .05$

TABLE 23

Number of Positive Self-References
Made by Individual Subjects
(High Look Condition)

	H Mean 15.05			
	B Mean 16.10		S Mean 14.00	
	M	F	M	F
S				
1	34	4	25	11
2	42	0	27	24
3	6	8	23	11
4	9	18	4	8
5	36	4	1	6
Mean	25.40	6.80	16.00	12.00

TABLE 24

Number of Positive Self-References
Made by Individual Subjects
(Low Look Condition)

	L Mean 9.95			
	B Mean 10.30		S Mean 9.60	
	M	F	M	F
S				
1	22	7	17	13
2	16	7	5	13
3	20	16	12	1
4	2	6	11	11
5	1	6	9	4
Mean	12.20	8.40	10.80	8.40

TABLE 25

Duncan's Multiple Range Test:
Comparisons of Mean Positive Self-References
(HB, HS, LB, and LS Groups)

Groups		LS	LB	HS	HB	Shortest Range
	Means	9.60	10.30	14.00	16.10	
LS	9.60		.70	4.40	6.50	9.24
LB	10.30			3.70	5.80	9.71
HS	14.00				2.10	10.02

TABLE 26

Duncan's Multiple Range Test:
Comparisons of Mean Positive Self-References
(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

Groups		HBF	LBF	LSF	LSM	HSF	LBM	HSM	HBM	Shortest Range
	Means	6.80	8.40	8.40	10.80	12.00	12.20	16.00	25.40	
HBF	6.80		1.60	1.60	4.00	5.20	5.40	9.20	18.60*	12.04
LBF	8.40			0.00	2.40	3.60	3.80	7.60	17.00*	12.66
LSF	8.40				2.40	3.60	3.80	7.60	17.00*	13.06
LSM	10.80					1.20	1.40	5.20	14.60*	13.34
HSF	12.00						.20	4.00	13.40*	13.56
LBM	12.20							3.80	13.20*	13.73
HSM	16.00								9.40	13.86

*$p < .05$

TABLE 27

Number of Negative Self-References
Made by Individual Subjects
(High Look Condition)

	H			
	Mean 16.65			
	B		S	
	Mean 18.60		Mean 14.70	
	M	F	M	F
S				
1	14	11	9	11
2	12	6	21	25
3	3	19	16	14
4	16	30	14	16
5	60	15	8	13
Mean	21.00	16.20	13.60	15.80

TABLE 28

Number of Negative Self-References
Made by Individual Subjects
(Low Look Condition)

	L			
	Mean 12.05			
	B		S	
	Mean 12.10		Mean 12.00	
	M	F	M	F
S				
1	29	7	13	24
2	4	2	9	8
3	25	0	18	2
4	5	15	11	28
5	14	20	5	2
Mean	15.40	8.80	11.20	12.80

TABLE 29

Duncan's Multiple Range Test:
Comparisons of Mean Negative Self-References
(HB, HS, LB, and LS Groups)

Groups		LS	LB	HS	HB	Shortest Range
	Means	12.00	12.10	14.70	18.60	
LS	12.00		.10	2.70	6.60	9.84
LB	12.10			2.60	6.50	10.34
HS	14.70				3.90	10.67

TABLE 30

Duncan's Multiple Range Test:
Comparisons of Mean Negative Self-References
(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

Groups		LBF	LSM	LSF	HSM	LBM	HSF	HBF	HBM	Shortest Range
	Means	8.80	11.20	12.80	13.60	15.40	15.80	16.20	21.00	
LBF	8.80		2.40	4.00	4.80	6.60	7.00	7.40	12.20	14.55
LSM	11.20			1.60	2.40	4.20	4.60	5.00	9.80	15.29
LSF	12.80				.80	2.60	3.00	3.40	8.20	15.78
HSM	13.60					1.80	2.20	2.60	7.40	16.12
LBM	15.40						.40	.80	5.60	16.39
HSF	15.80							.40	5.20	16.59
HBF	16.20								4.80	16.75

TABLE 31

Interviewer Ratings
Made by Individual Subjects
(High Look Condition)

	H			
	Mean 43.30			
	B		S	
	Mean 42.10		Mean 44.50	
	M	F	M	F
S				
1	45	46	50	45
2	44	39	41	43
3	40	46	40	49
4	32	41	44	46
5	43	45	40	47
Mean	40.80	43.40	43.00	46.00

TABLE 32

Interviewer Ratings
Made by Individual Subjects
(Low Look Condition)

	L			
	Mean 43.25			
	B		S	
	Mean 44.70		Mean 41.80	
	M	F	M	F
S				
1	45	38	37	46
2	44	43	30	43
3	46	44	49	38
4	50	50	39	45
5	38	49	41	50
Mean	44.60	44.60	39.20	44.40

TABLE 33

Duncan's Multiple Range Test:
Comparisons of Mean Interviewer Ratings
(HB, HS, LB, and LS Groups)

Groups		LS	HB	HS	LB	Shortest Range
	Means	41.80	42.10	44.50	44.70	
LS	41.80		.30	2.70	2.90	4.21
HB	42.10			2.40	2.60	4.43
HS					.20	4.57

TABLE 34

Duncan's Multiple Range Test:

Comparisons of Mean Interviewer Ratings

(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

Groups		LSM	HBM	HSM	HBF	LSF	LBM	LBF	HSF	Shortest Range
	Means	39.20	40.80	43.00	43.40	44.40	44.60	44.80	46.00	
LSM	39.20		1.60	3.80	4.20	5.20	5.40	5.60	6.80	5.93
HBM	40.80			2.20	2.60	3.60	3.80	4.00	5.20	6.23
HSM	43.00				.40	1.40	1.60	1.80	3.00	6.43
HBF	43.40					1.00	1.20	1.40	2.60	6.57
LSF	44.40						.20	.40	1.60	6.68
LBM	44.60							.20	1.40	6.76
LBF	44.80								1.20	6.83

TABLE 35

Interview Ratings
Made by Individual Subjects
(High Look Condition)

	H Mean 42.40			
	B Mean 40.60		S Mean 44.20	
	M	F	M	F
S				
1	43	46	50	43
2	42	40	38	43
3	36	43	37	45
4	29	41	47	50
5	36	50	42	47
Mean	37.20	44.00	42.80	45.60

TABLE 36

Interview Ratings
Made by Individual Subjects
(Low Look Condition)

	L			
	Mean 42.60			
	B		S	
	Mean 42.80		Mean 42.40	
	M	F	M	F
S				
1	43	37	34	48
2	41	44	47	42
3	42	39	50	36
4	50	48	40	43
5	34	50	34	50
Mean	42.00	43.60	41.00	43.80

TABLE 37

Duncan's Multiple Range Test:
Comparisons of Mean Interview Ratings
(HB, HS, LB, and LS Groups)

Groups		HB	LS	LB	HS	Shortest Range
	Means	40.60	42.40	42.80	44.20	
HB	40.60		1.80	2.20	3.60	5.02
LS	42.40			.40	1.80	5.27
LB	42.80				1.40	5.44

TABLE 38

Duncan's Multiple Range Test:
Comparisons of Mean Interview Ratings
(HBM, HBF, HSM, HSF, LBM, LBF, LSM, and LSF Groups)

Groups		HBM	LSM	LBM	HSM	LBF	LSF	HBF	HSF	Shortest Range
	Means	37.20	41.00	42.00	42.80	43.60	43.80	44.00	45.60	
HBM	37.20		3.80	4.80	5.60	6.40	6.60	6.80	8.40*	7.00
LSM	41.00			1.00	1.80	2.60	2.80	3.00	4.60	7.36
LBM	42.00				.80	1.60	1.80	2.00	3.60	7.59
HSM	42.80					.80	1.00	1.20	2.80	7.75
LBF	43.60						.20	.40	2.00	7.88
LSF	43.80							.20	1.80	7.98
HBF	44.00								1.60	8.06

*$p < .05$