

THE EFFECT OF THE LOOK-SPEAK TO LOOK-LISTEN
RATIO ON POWER DOMINANCE ATTRIBUTIONS

- M A S T E R T H E S I S -

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ON POWER DOMINANCE ATTRIBUTIONS

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B.A. Ankara University, 1981

Submitted in Partial Fulfillment of the Requirements
for the
Degree of Master of Arts
in
Social Psychology

Institute of Social Sciences

Boğaziçi University

1985

ACKNOWLEDGEMENTS

I would like to acknowledge my thesis advisor Doç.Dr. Hamit Fişek for his invaluable guidance, support and great patience in the course of this study.

I would like to express my gratitude to Doç. Dr. Ayhan Koç and Dr. Zehra Peynircioğlu for their valuable assistance in the use of the English Language .

I am particularly grateful to all students who have participated in the study and cooperated enthusiastically. I owe special thanks to all of the teachers who helped me in finding the subjects of the study.

Finally, I am grateful to my family for their precious support and tolerance.

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A B S T R A C T

The effect of visual dominance behavior defined by the ratio of the proportion of time spent looking while speaking to the proportion of time spent looking while listening (Exline, 1975) on power dominance attributions has been the subject of extensive research, especially in the United States. Results of these studies have revealed that when stimulus persons exhibited the high look-speak to look-listen ratio they were evaluated as more powerful than when they exhibited the moderate ratio, when stimulus persons exhibited the the moderate ratio they were evaluated as more powerful then when they displayed the low look-speak to look-listen ratio.

The purpose of this thesis was to find out whether different patterns of visual dominance behavior influences subjects' power dominance attributions in the Turkish culture as well.

Each subject saw three different videotape segments in which three different stimulus persons displayed three different levels of the look-speak to look-listen ratio. Subjects' power dominance attributions were measured by responses to a questionnaire of 16 items.

Finding of our study revealed the existence of the effect of visual dominance behavior in Turkish culture. The results showed that, subjects who saw different patterns of visual behavior, had a strong tendency to attribute more power to the higher levels of the look-speak to look-listen ratio.

I N T R O D U C T I O N

The development of status or social dominance orders in face - to - face interactive situations is a topic that has received considerable attention in the past and the topic is still one of the dominant issues in psychological research on interpersonal behavior (Bales et.al, 1953 ; Horvath, 1965; Lelik, 1965 ; Kadane and Lewis, 1969).

The topic of status differentiation in face - to - face groups has also a long and rich tradition in sociology (Simmel, 1908; Hughes, 1945).

This tradition has viewed status as a fundamental organizing principle of social interaction. In this sense, status differentiation refers to the observable, stable power and prestige order in small groups. This structured inequality organized the pattern and flow of interaction and influence between group members (Rosa and Mazur, 1979).

In order to formulate an explanation for the development of status differentiation in face - to - face interaction a number of studies have been conducted (Strodtbeck and Mann, 1956; Strodtbeck et.al, 1957; Moore, 1968; Berger et.al, 1974). The results of these studies have shown that external status characteristics of group members such as sex, age, race etc. are important determinants of the status structures of groups.

The effect of status characteristics, as an important determinant of the formation of power and prestige order in face to face groups, has been the subject of the theory of status characteristics.

The theory of status characteristics has been developed as an attempt to explain the operation of these characteristics especially in task-focused small groups. The concept of "expectation state" has an important explanatory function in this theory. The theory argues that dominance orders and influence in small groups are caused by cognitions about performance expectations activated by the status characteristics of group members. The status Characteristics Theory also predicts that status differences are significant independent sources of influence and dominance. For example if the members of the group are known to be differentiated with respect to one or more external status characteristics such as occupation, sex, race, age etc., then the group's measurable dominance order will be correlated with variations in social status. It follows that influence and attributions of superiority will also correlate with status variables (Strodbeck et.al 1957; Berger et.al, 1977).

Bales (1953, 1970) has conducted a parallel body of research. In these studies groups are composed of group members

who are initially undifferentiated on external status characteristics. Results have shown that these group of initially undifferentiated strangers form stable status hierarchies after a short passage of time.

Several sociological theories explain the formation of status hierarchies in task-focused small groups by focusing on the group process itself (Bales, 1953; Homans, 1961; Blav, 1964). These theories share in common two important assumptions. The first of these is that the dominance order and influence processes in small groups are believed to occur as consequences of a cognitive "sorting out" process (Rosa and Mazur, 1979). This assumption seems to imply complex thinking and conscious judgements on the part of group members in deciding which members of the group are high or low in ability, and therefore, the passage of time seems to be necessary for the formation of group structure. However, the most recent version of the expectation states theory (Berger, 1977; Berger, 1982) states that an "expectation state" (roughly similar to an idea of task relevant ability) is not always or even usually conscious. Rather the assumption is that the members behave as though they had made some judgements about one another's ability or contributions to the task. Thus, the recent version of the theory does not assu-

me conscious reasoning of actors in a task performing situation. Nor does it assume the passage of time for status differentiation to occur (Berger et.al 1977, 1982).

The important assumption underlying these theories have been called into question by two recent studies.

The findings of a study conducted by Mazur (1973) has shown that certain important features of human status behavior occur among other species of primates as well.

This finding strains the assumption that dominance order and influence in small groups are caused by cognitions about performance expectations activated by the status characteristics of members.

In another study, (Fişek and Ofshe, 1970) groups of status equals were set to work on a discussion problem in three person groups. In about half of the groups, group members participated differentially in the group's activity as early as the first minute of the discussion. Recognitions of differential competence among group members were found at the close of the session and dominance position was positively correlated with the perceived competence. The results of the above study also strains this assumption if it is thought that it implies some passage of time preceding the formation of the group status structure.

Findings of the above study suggest that initial differen-

tiation, especially differentiation achieved through self assertion may precede cognitive evaluations of differences about the contributions and abilities of group members, however, the study does not strain the assumption that dominance order in small groups are caused by cognitions about performance expectations activated by the status characteristics of members. On the other hand, the rapid structuring of status in these groups suggests that some subtle form of dominance and submission signalling may be operating and further, that such signalling may take place below the conscious awareness of the actors (Fişek and Ofshe, 1970).

A still further study made by Barchas and Fişek (1969) provides a link between the findings from the primate framework and the near immediate structuring of status in the Bales-type groups. In this study Barchas and Fişek compared the newly formed groups of rhesus monkeys with similarly constituted Bales-type groups of humans and they found that status hierarchies appeared quickly and remained stable throughout the group duration in both human and monkey groups.

Up to this point, we reviewed the studies focused on the development of status or social dominance orders in interaction. Now we will take up the variables which cause differences in the behavior of group members. Instead of considering all variables which determine status orders in small groups, we will look at those related to our interest

in this study.

In this study we are primarily concerned with variables which are called nonverbal cues. The effect of nonverbal cues on power and prestige in face-to-face groups has been the concern of many studies suggesting that nonverbal cues play an important role in the status structures of face-to-face groups. (Rosa and Mazur, 1979; Exline, Ellyson and Long, 1975; Ellyson, et.al, 1980)

As we have noted before, results of many studies have shown that in situations in which group members differ with regard to general status characteristics such as sex, race, age, social class and specific status characteristics which are limited situation, these variables determine the status order within the group. (cf. Strodbeck et.al, 1957; Strodbeck and Mann 1956; Moore, 1968, Berger et.al, 1974)

Besides this fact, we also know that, there is a parallel body of research focused on the development of status in groups of status equals, (Fişek and Ofshe, 1970; Rosa and Mazur, 1979; Willard and Strodbeck, 1972) that is, situations in which individuals are apparent equals in term of their diffuse status characteristics such as age, race, sex, and social class.

In this case we need to look for other variables which cause differences in the behaviors of individuals who are apparent status equals interm of external status characteristics.

As we have mentioned before in order to formulate an explanation for the development of dominance orders during interaction in face to face groups, a series of studies have appeared recently suggesting that nonverbal cues play an important role in the status process of face-to-face groups. For example Rosa and Mazur (1979) found that, when quality of argument is controlled, during the formation of dominance orders, subtle behavior cues such as differences in the use of eye contact were correlated with attainment of rank in the dominance order.

Before looking at the literature on nonverbal cues and status, we will first review the basic points of the expectation states theory which offers the best documented theory of status in small groups. (Berger et.al 1974, Berger et.al, 1977).

Expectation states theory argues that inequalities in task-focused small groups are due to the differentiated performance expectations members hold for themselves and one another, in other words, during early phases of interaction members form differential ability conceptions, called performance expectation states, for one another, and the power and dominance structure of groups is said to be a function of the performance expectations its member come to hold. A performance expectation state is roughly similar to the task

relevant ability, capacity to make useful contributions to the group's task. The theory, here, speaks of the group holding high expectations for an actor when the members (including the actor) act as though they have concluded that actor's performances are likely to be right, useful. Low expectations indicates the opposite conclusion. It is important to note that, the theory assumes that an expectation state is not always or even usually conscious. The theory argues that once formed, these performance expectations determine differences in the power and prestige positions that develop in the group. The expectation states theory also argues that, through their relation to performance expectations, differentiating status characteristics (diffuse or specific) determine the ordering of power-prestige positions in the task oriented group.

From the point of view of Expectation states theory, A series of studies have appeared recently noting the effect of nonverbal cues on the formation of performance expectations in task-focused small groups.

Berger, Rosenholtz and Webster (1982) have noted that the existing literature on nonverbal behavior and status actually deals with the effect of two different categories of cues. Berger et.al (1982) call these task cues and categorical cues.

Berger et.al (1982) defined the task cues as nonverbal

behaviors or signs that give information about performances taking place in the immediate interaction. Task cues include response latency, eye gaze, verbal loudness and fluency, and many aspects of body posture and gestures.

The following statement from Berger et.al underlines the relationship between task cues and performance expectations

"Since they are usually read as signs of competence, high levels of task cues not only express high performance expectations, they serve to maintain and justify them".

In the case of the categorical cues, which give information about the actor's appearance, behavior and the social class he belongs, the operation of these cues are studied in groups where individuals differ in terms of external status characteristics, either in terms of diffuse status characteristics such as race, sex or in terms of specific status characteristics such as reading ability. In this paper we are not concerned with categorical cues.

At this point, we turn to the literature, introducing several studies which illustrate the effects of task cues.

Eye Gaze has a strong effect on position in group status hierarchies. In their experimental studies, Rosa and Mazur (1979) have studied the maintenance of initial eye contact and its effect on status. They showed that subjects' posi-

on in the initial eye contact hierarchy correlated positively and significantly with the participation rank they achieved during group discussion, when other variables are controlled.

Eye contact and its effect on status is the topic of this paper, therefore we will take up this variable under the title of visual dominance behavior in more detail after reviewing other variables.

Verbal Latency has also an important effect on position in group status hierarchies. In a study, conducted by Rosa and Mazur (1979) subjects are prevented from having eye contact in their initial interaction, in this condition the first speaker in the Bales group usually emerges as the highest in the hierarchy. Mazur, et.al (1980) have also found that initial speaking order in equal status dyads is correlated with influence on a decision task.

Specific behaviors, which have culturally defined meaning such as, choosing the head of the table has a considerable effect on an individual's influence on group discussion. Nemeth and Wachtler (1974) showed that, the act of choosing a head seat before interaction begins, as compared to being assigned to sit there, has an important effect on the individual's influence on group discussion. Nemeth and Wachtler have also shown that, in terms of the minority influence of

group members on the majority, a confederate, holding a minority opinion, was influential when he was seen actively choosing a head seat before discussion, however, he was not influential when he was assigned that seat.

Rate of speech is another task cue which has great effect on individual's position in group status hierarchies. For example Smith, et.al (1975) used computers to speed up or slowdown speech without changing its tone qualities. People who speak faster were thought to be doing better at the group task, they were rated as more "competent" and "influential".

Visual behavior in human interaction has received considerable attention in terms of maintaining dominance orders.

A series of studies reported by Exline, Ellyson and Long (1975) investigated visual patterns exhibited by both high and low power interactants while they were listening and while they were speaking. Results of one study showed that, when low power males, ROTC cadets, and high status males, ROTC officers, interacted, the low status cadets looked less when they were speaking than when they were listening. However, high status officers looked at the cadets nearly equivalent amounts while speaking and listening. Ellyson et.al (1980) replicated this study on female dyads differentiated by age and educational attainment. Consistent with the above study, high status females looked while speaking nearly as much as while listening, in contrast to the low status females who looked more while listening. Dovidio and Ellyson (1982), in their "decoding" studies, investigated whether patterns of visual dominance behavior, defined by the ratio of the proportion of time spent looking while speaking to the proportion of time spent looking while listening (Exline, 1975), could be reliably perceived observers. Subjects were asked to rate confederates who displayed different patterns of visual dominance behavior. Results showed that, subjects attributed more power to confederates with higher ratios of looking while speaking compared to listening. The results of this study demonstrates that, when two people interact with one another, outside observers perceive and

differentially respond to the patterns of looking while speaking and listening that have previously been linked to visual dominance. (Dovido and Ellyson, 1982).

Although several studies have demonstrated a relationship between visual behavior and status, the effect of power hierarchy position on visual interaction in females has not received empirical attention. Ellsworth and Ludwig (1972) suggest that this is because the visual behavior of females is often more variable than the visual behavior of males, thus making conclusive findings less likely.

These studies provides empirical evidence that visual dominance behavior may be dynamically similar across sexes (Exline et.al 1975, Ellyson et.al, 1980).

As our review of the above studies indicates, the effect of visual dominance behavior, defined by the ratio of the proportion of time spent looking while speaking to the proportion of time spent looking while listening (Exline, 1975) on power dominance attributions has been the subject of extensive research, especially in the United States. Results of these studies reveal that different patterns of look-speak to look-listen ratio affects the subjects' power dominance attributions. The study conducted by Dovido and Ellyson (1982) showed that when a stimulus person exhibited the high look-speak to look-listen ratio, he/she was rated as more powerful than when he/she exhibited the moderate ratio

and when he/she displayed the moderate ratio he/she was evaluated as more powerful than when he/she displayed the low visual dominance ratio.

The purpose of the present study is to find out if different patterns of look-speak to look-listen ratio affects the subjects' power dominance attributions in our culture. Because of the fact that, all available research on visual dominance behavior has been conducted in the United States, the question of whether these results can be obtained in different cultural settings, remains open.

In line with the previous findings we predict that the higher the look-speak to look-listen ratio a person manifests the higher will be the power which is attributed to him/her.

M E T H O D

Design* In this experiment a 2x2x3 factorial design was used to test the effect of look-speak to look-listen ratio on power dominance attributions. The first independent variable was subjects' sex, the second one was target person's sex and third independent variable was the visual dominance ratio which had three levels-high, medium and low. Repeated measures were taken on this independent variable. The dependent variable was power dominance attributions which were measured by scores on a questionnaire of 16 descriptive items.

Stimulus : Silent prerecorded videotapes of male and/or female stimulus persons engaged in a conversation with another person of the same sex provided the stimulus for our subjects. The subjects viewed the stimulus person from the front with a full view of the stimulus person's head and shoulders. The other participant of the discussion was seen dimly at the corner of the screen. The stimulus persons displayed different patterns of visual behavior in each of the three videotape segments. In order to be sure that a special characteristic of a stimulus person could not account for the results, two different female and two different male stimulus persons were used. These stimulus persons were trained so that, they all showed the same amount of smiling and fa-

cial expressions, the same gestures and the same pattern of listening and speaking. Each subject saw three different stimulus persons displaying three different levels of look-speak to look-listen ratio.

Each stimulus videotape segment was 180 seconds in length and was recorded without sound in order to prevent the effects of voice qualities of the stimulus persons and the content of the conversation. Each segment displayed one of three different look-speak to look-listen ratios, that is the ratio of the proportion of time spent looking while speaking to the proportion of time spent looking while listening. In the high visual dominance segment, the stimulus person's proportions of looking while speaking and looking while listening were 55 % and 40 % respectively, In the moderate visual dominance segment, the proportions of look-speak and look-listen were 40 % - 60 %, and in the low visual dominance segments proportions were 25 % - 75 %. These patterns have been modeled on the behaviors of naive subjects used by Ellyson et.al (1980) in their "encoding" experiments.

Since each subject responded to each of the three different look-speak to look-listen ratio conditions, it was necessary to control for the order of presentation. The given order of visual dominance ratios were manipulated with

counterbalancing which allows us to spread the practice effect equally over conditions. In the counterbalancing scheme we had six sequences. These sequences are presented in table 1 below.

Table 1. Counterbalancing Scheme : the order of visual dominance ratio and the sex of the stimulus persons.

Sequences	O R D E R		
	1	2	3
1	Low(male)	Hi(female)	Mod(male)
2	Low(f)	Mod(m)	Hi(m)
3	Mod(f)	Low(m)	Hi(m)
4	Hi(f)	Mod(m)	Low(f)
5	Hi(m)	Low(f)	Mod(f)
6	Mod(f)	Hi(f)	Low(m)

Sequences were obtained considering both stimulus persons' sex and the order of visual dominance ratios.

Considering the six sequences, comprised of 18 segments, as a whole, each level of the visual dominance ratio was administered to subjects two times in the first order, two times in the second order, and two times in the third order.

Each subject was administered a sequence with either two male and one female or two female and one male target person. Overall the number of male and female target persons was equal. (Based on the counterbalancing scheme each sex of target person appeared three times in Hi, three times in Moderate and three times in low visual segments). Furthermore, each of the four individuals who acted the target person, appeared in each gaze condition an equal number of times.

Procedure*

Subjects participated in groups of 10. In the experiment room, subjects were seated so that they could not converse with one another.

Subjects were introduced to the task with the following statement :

"In this study you will be asked to watch a short videotape comprised of three segments, each one is 180 seconds in length. In each part you will see two people interacting with one another. There will be no sound, it is a silent videotape. Your task is to watch closely the person whose face you will see. After you view the first segment, we are going to ask you to fill out a questionnaire giving your impressions of the person.

Then you will be asked to watch the second segment and to fill out a questionnaire related to this segment. In the third part of the videotape the procedure will be the same".

Then the videotape was shown.

After each of the segments were shown, each subject was administered a questionnaire of 16 descriptive items. The subjects had previously been seated so that they could not see each other's rating.

They were instructed,

"You have just seen a person interacting with another person. Based on what you have seen, evaluate how the person behaved in interaction. Please answer the questions giving only your own impressions of the person".

After subjects completed the questionnaire for the first segment, they were asked to watch the second, and then to fill out the related questionnaire. Finally, they were asked to watch the third segment, and to fill out the questionnaire giving their impressions of the person presented in the last segment. Then they were given an additional questionnaire with just one open-ended question. In this questionnaire subjects were asked to answer the question "What were your criteria when you evaluated the persons you watched ?"

After subjects completed the additional questionnaire they were debriefed and any questions they had were answered. The full experimental protocol is given in the appendix B

The questionnaire*was comprised of 16 descriptive items. For the first nine items, subjects were asked to rate on 7 point bipolar dimensions. These were ; submissive-dominant, active-passive, irritated-complacent, awed-important, willing-not willing, interested-bored, despairing-hopeful, decisive-not de subordinate position superior position.

The next seven items were rated on a scale running from 1 (completely disagree) to 7 (completely agree), of these five tapped how powerful, interested, confident, happy and influential the target person was. The remaining two tapped the target persons positive attitude toward the person he was talking to, and the other persons attitude toward the target person. The questionnaire is given in the appendix A.

This 16. item questionnaire contained eight powerrelated items. These items were selected on the basis of the results of the decoding experiment conducted by Dovidio and Ellyson (1982). In their experiment, results revealed that eight reflected some aspect of power and dominance. These were; powerful, confident, influential, subordinate position-superior position, decisive not decisive, active-passive, submissive-dominant, awed-important. However , in order to gain

greater confidence that our manipulations of visual behavior primarily influenced power related attributions, the questionnaire included eight other non-power related items.

Subjects *

Subjects were 180 undergraduate students (90 male and 90 female) at Boğaziçi University in İstanbul. They were recruited from the students of the introductory psychology course and received credit in the course for participating in the experiment.

Our sample of 180 subjects were randomly assigned to each sequence so that there were 30 subjects (15 male and 15 female) per sequence.

R E S U L T S

A preliminary, three way analysis of variance was performed on subjects scores on all items. Since our counterbalancing scheme did not lead to a balanced design between target sex and gaze condition, we could not do a three way analysis of variance with repeated measures on target sex and gaze condition. Therefore, our preliminary three way analysis of variance, carried out to see if there is interaction between target person's sex and subject's sex, was performed by using each subjects responses to a single segment. We attempted to use the first segment for each subject however, this was not always possible as the first segments of each sequence did not lead to a complete design. The segments used for each sequence are given in table 2 below.

Table 2. The list of the segments taken from each sequence.

Sequences	O R D E R		
	1	2	3
1	Low(m)		
2	Low(f)		
3	Mod(f)		
4		Mod(m)	
5	Hi(m)		
6		Hi(f)	

The results of analysis of variance, performed on each subjects responses to a single segment, are presented in Table 3 below.

Table 3 : Analysis of Variance Results on the Effect of Subject Sex, Target Sex and Gaze on Subject Attributions on 16 items. F Values

		S O U R C E						
		SUB-SEX	TAR-SEX	GAZE	1x2	1x3	2x3	1x2x3
POWER DOMINANCE ATTRIBUTIONS	Dominant			4.17*				
	Active			4.52*				
	Complacent			8.03*				
	Important			5.04*				
	Willing			6.73*				
	Decisive			4.13*				
	Interested		3.35*					
	Hopeful			5.54*		4.28*		
	Superior Position			4.17*				
	Powerful			3.16*				
	Interested		4.35*					
	Confident							4.31*
	Happy			4.93*				
	Influential							3.73*
	His/Her attitude toward other person was positive							
	S/he was talking to the person whose attitude was positive					4.40*		

(*) $p < .05$

PROFESSOR DANARJATI KOTORMANESI

The result demonstrated a significant main effect of gaze on 10 items. ($P's < .05$) i.e. subjects who viewed high, moderate and low visual dominance ratios differed in their ratings of the stimulus person. However, the main purpose of performing this analysis was to find out if there was an interaction between subject sex and target person sex. As can be seen in Table 3, the only interaction was obtained for the last item that is, s/he was talking to the person whose attitude was positive. ($F(1,168)=4.40$, $p < .05$). In the present study, since we are more concerned with power related items, the interaction effect of this non-power related item was not taken into account. A significant interaction of Subject sex and gaze condition was obtained for item hopeful-despairing ($F(2,168)=4.28$, $p < .05$). Only two of the eight non-power related items showed significant main effects for target sex: interested-bored ($F(1,168)=3.35$, $p < .05$), and interested ($F(1,168)=4.35$, $p < .05$). Results of the analysis revealed significant three way interaction for two items: confident ($F(2,168)=4.31$, $p < .05$) and influential ($F(2,168)=3.73$, $p < .05$)

Thus the general result of the preliminary analysis of variance performed on each subject responses to a single segment, is that there is no significant interaction effect between subject sex and target person sex and that there is no significant main effect of target sex. Consequently, analysis of the entire data were organized into 2×3

factorial design, ignoring target sex, with repeated measures on the last factor. The first factor was the sex of the subject. The second factor was three levels of look-speak to look-listen ratios; High, Moderate, and Low

The effect of gaze condition and sex of the subjects on power dominance attributions are presented in Table 4 below. The results of the analysis revealed that gaze condition as high, moderate and low, affected subject's attributions: Dominant-submissive ($F(2,356)=4,38, p < .05$), important-awed ($F(2,356)=4,84, p < .05$), powerful ($F(2,356)=5,46, p < .05$), willing-unwilling ($F(2,356)=10.17, p < .05$) and interested-bored ($F(2,356)=5,75, p < .05$). The only interaction was obtained for the item confident ($F(2,356)=3,69, p < .05$), and a significant main effect of subject sex for item decisive-notdecisive ($F(1,178)=8,42, p < .05$) was obtained.

Table 4 : Analysis Variance Results on the Effect of Subject Sex and Gaze on Subject Attributions on 16 items.

F Values

	SUB-SEX	GAZE	INTERACTION
Dominant		4.38 * +	
Active			
Complacent			
Important		4.84 * +	
Willing		10.17 *	
Decisive	8.42 *		
Interested		5.75 *	
Hopeful			
Superior Position			
Powerful		5.46 * +	
Interested			
Confident			3.69 *
Happy			
Influential			
His/Her Attitude toward other person was positive			
S/he was talking to the person whose attitude was positive			

P < .05

Consistent with many previous studies, subjects' attributions of power were not mediated by sex (except the item 'decisive'). The analysis of variance revealed significant main effect of gaze on three power related items; 'powerful' ($p .05$), 'dominant' ($p .05$) and 'important' ($p .05$). Subjects who viewed high (55 %, 40 %) moderate (40 %, 60 %) and low (25 %, 75 %) visual ratios differed in their ratings of the target persons. Increasing proportions of look-speak to look-listen were associated with increasing ratings of "powerful", "important" and "dominant". The mean power ratings of male and female subjects are given in Table 5 below.

Table 5 The Effect of Gaze Condition and Subject Sex on Power-Related Attributions

<u>DOMINANT</u>				<u>POWERFUL</u>			
Sub-sex	GAZE CONDITION			Sub-sex	GAZE CONDITION		
	High	Mod.	Low		High	Mod.	Low
Male	4.16	4.02	3.79	Male	4.06	3.77	3.61
Female	4.16	4.03	3.47	Female	4.03	4.04	3.56

<u>IMPORTANT</u>			
Sub-Sex	High	Mod.	Low
Male	4.13	3.94	3.62
Female	4.09	4.13	3.50

Five of the eight non-power related items on the questionnaire (happy, complacent-irritated, hopeful-despaire his/her attitude toward other person was positive) revealed no significant effects associated with the visual dominance ratios, only two of these items showed a main effect for gaze; interested-bored ($p .05$) and willing-unwilling ($p .05$). These items were inversely related, decreasing proportions of look-speak to look-listen were associated with increasing ratings of interested and willing. The mean ratings of male and female subjects for these non-power related items are given in Table 6 below.

Table 6 : The Effect of Gaze and Sex of the Subjects on
Non-Power-related Items

WILLING

INTERESTED

GAZE CONDITION

GAZE CONDITION

SUB-SEX	High	Mod.	Low
Male	3.64	3.59	4.38
Female	3.80	3.86	4.32

SUB-SEX	High	Mod.	Low
Male	4.27	4.53	4.89
Female	4.39	4.41	4.82

Since we had six different sequences in which subjects were administered the different look-speak to look-listen levels, data were organized into a 6x3 factorial design to see if there is a significant effect of sequence. Results of the analysis revealed significant main effect of sequence for eight items; dominant-submissive ($F(5,174)=4,51, p<.05$); active-passive ($F(5,174)=3,84, p<.05$); willing-unwilling ($F(5,174)=6,00, p<.05$); decisive-not decisive ($F(5,174)=3,38, p<.05$); interested-bored ($F(5,174)=3,56, p<.05$), confident ($F(5,174)=2,32, p<.05$); influential ($F(5,174)=2,45, p<.05$) and his/her attitude toward the other person was positive ($F(5,174)=2,31, p<.05$). Significant interaction effect were, also obtained for 14 items (p 's $<.05$). The significance of main effects and of interaction effects is shown as F ratios in Table 7 below.

Table 7 : Analysis of Variance Results on the Effect of Sequence and Gaze on Subject's Attributions on 16 items. F Values

	SOURCE		
	SEQUENCE	GAZE	INTERACTION
Dominant	4,51*	5,59*	10,81*
Active	3,84*		4,81*
Complacent		3,26*	4,33*
Important		5,09*	2,84*
Willing	6,00*	11,09*	4,13*
Decisive	3,38*		2,73*
Interested	3,56*	6,28*	4,14*
Hopeful			
Superior Position			
Powerfull		5,63*	1,99*
Interested			3,21*
Confident	2,32		3,12*
Happy			3,09*
Influential	2,45*		3,66*
His&her attitude toward other person was positive	2,31*		3,35*
S&He was talking to the person whose attitude was positive			3,30

Since these results reveal significant interaction effects between gaze condition and testing order the data were plotted to see the particular form of the relationship between the independent variables. The mean scores for the eight significant items are given in Table 8 and plotted in Figure 1 below.

Interactions are revealed by the non-parallel lines in each condition. By plotting the data, the sequence effect showed rather different path patterns from item to item at different levels of gaze condition. Therefore, it is not possible to make a general statement about the form of the sequence effect.

Table 8 : The Effect of Testing Order and Gaze on Subjects Attributions

DOMINANT

GAZE	TESTING ORDER		
	1	2	3
High	3.7	4.0	4.8
Mod.	3.4	4.5	4.3
Low	3.2	3.8	3.9

ACTIVE

GAZE	TESTING ORDER		
	1	2	3
High	3.5	4.2	4.1
Mod.	3.4	4	4.1
Low	3.2	3.7	4

WILLING

GAZE	TESTING ORDER		
	1	2	3
High	3.8	4.2	3.2
Mod.	3.7	3.4	4.0
Low	4.2	4.3	4.6

DECISIVE

GAZE	TESTING ORDER		
	1	2	3
High	3.6	4.4	4
Mod.	4	4	4.1
Low	3.7	3.7	4.1

INTERESTED

GAZE	TESTING ORDER		
	1	2	3
High	4.5	4.7	4
Mod.	5	4	4.6
Low	4.8	4.9	4.8

CONFIDENT

GAZE	TESTING ORDER		
	1	2	3
High	4.0	4.3	4.2
Mod.	3.8	4.2	4.5
Low	4.0	3.6	3.9

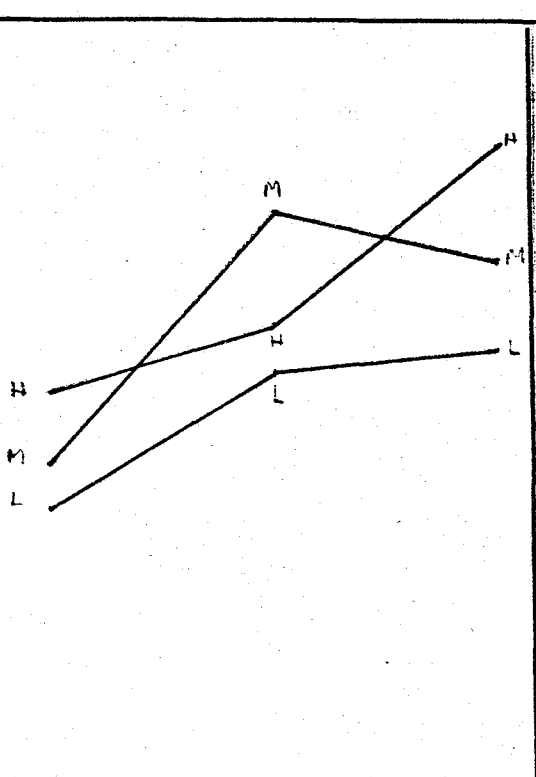
INFLUENTIAL

GAZE	TESTING ORDER		
	1	2	3
High	3.1	4.1	3.7
Mod.	3.4	3.5	4.1
Low	3.0	3.2	4.2

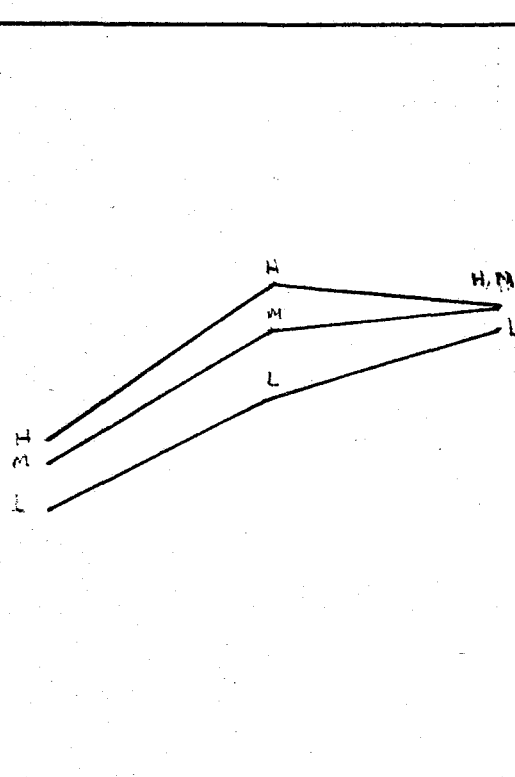
HIS/HER ATTITUDE WAS POSIT

GAZE	TESTING ORDER		
	1	2	3
High	5.1	4.7	4.1
Mod.	5.1	4.4	4.8
Low	5.0	4.5	5.2

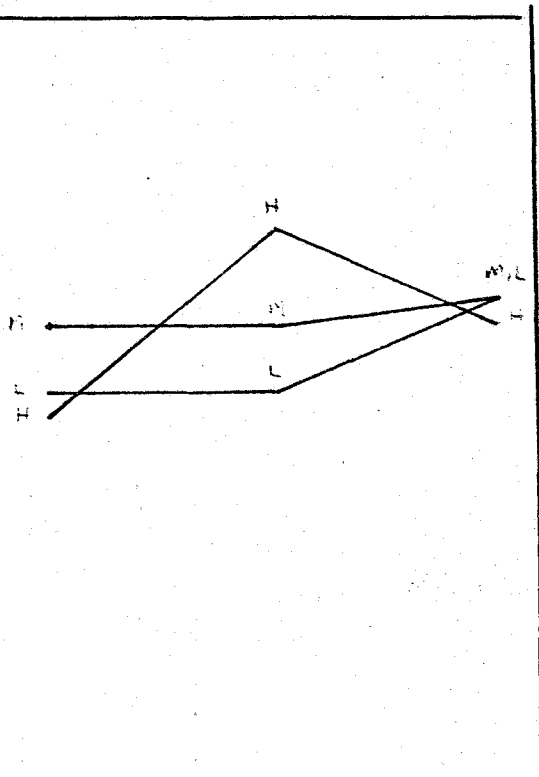
DOMINANT



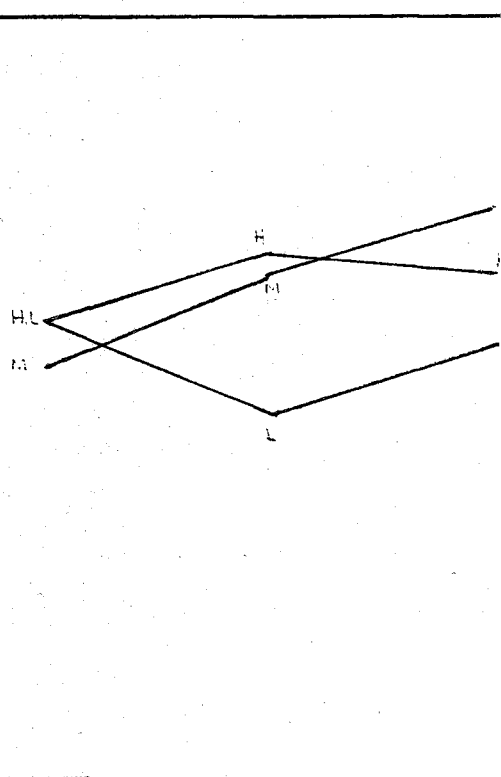
ACTIVE



DECISIVE



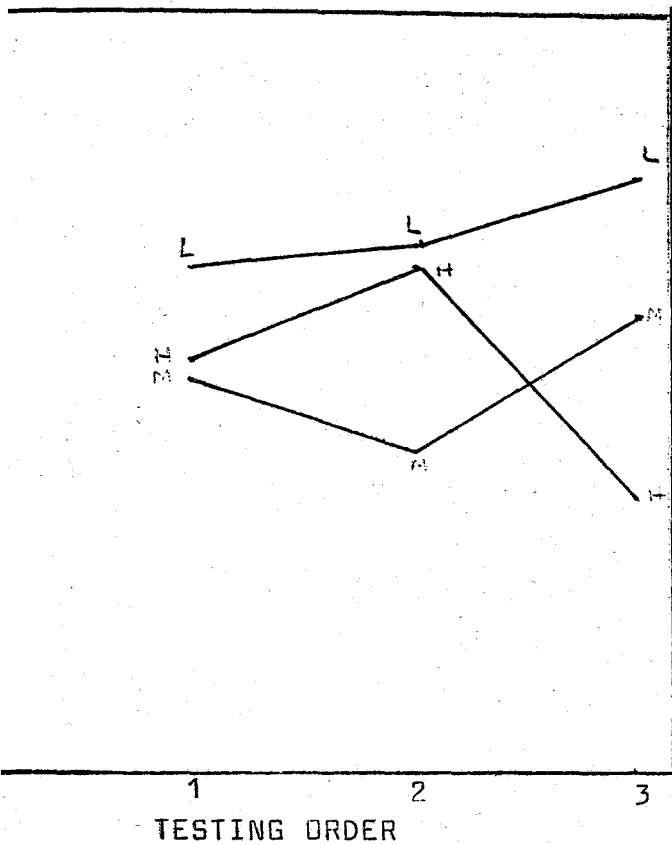
CONFIDENT



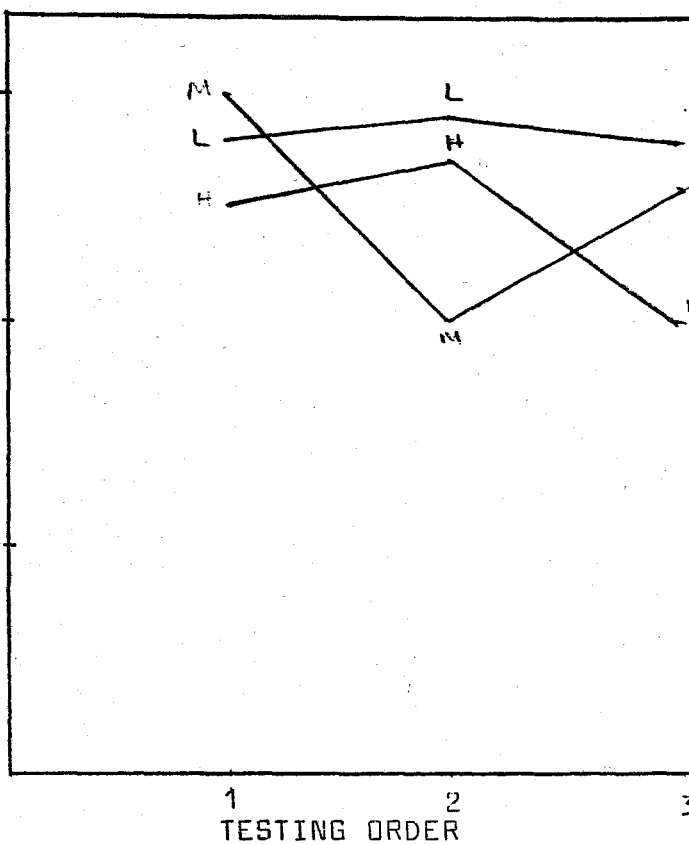
TESTING ORDER

TESTING ORDER

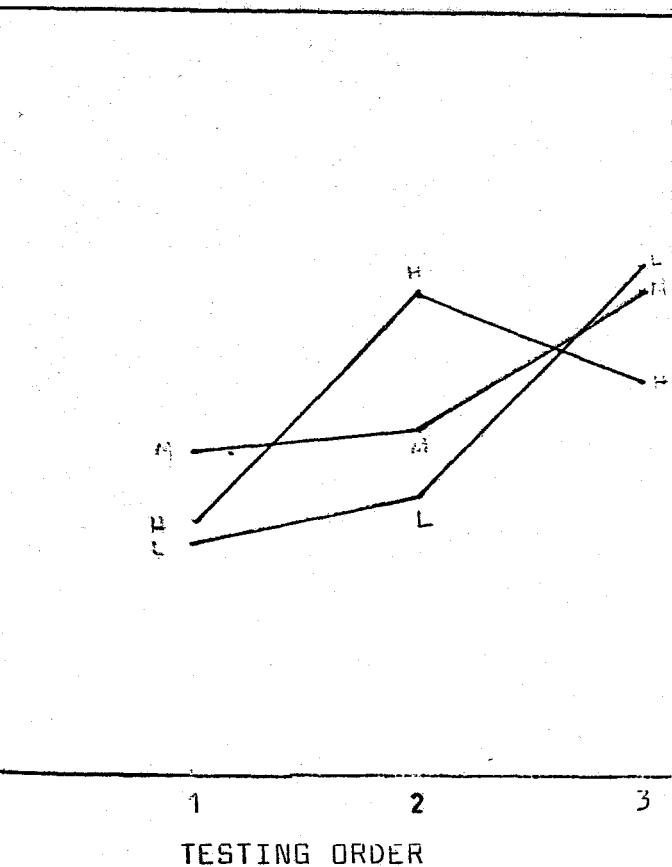
W I L L I N G



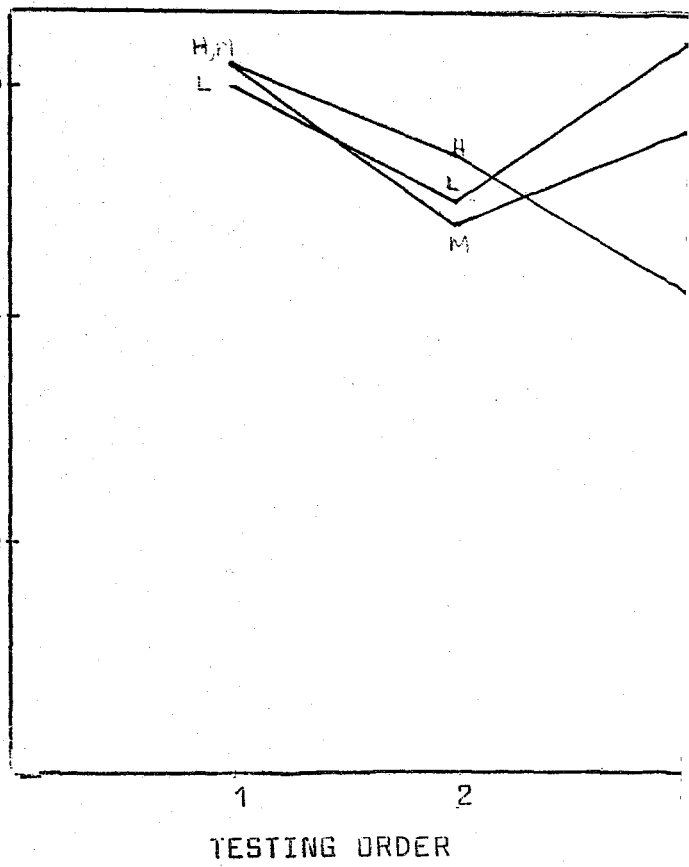
I N T E R E S T E D



I N F L U E N T I A L



H I S / H E R A T T I T U D E W A S P O S I T I V E



DISCUSSION

The effect of visual dominance behavior defined by the ratio of the proportion of time spent looking while speaking to the proportion of time spent looking while listening (Exline, 1975) on power dominance attributions has been an important subject of research, especially in the United States.

Dovido and Ellyson (1982) examined whether different patterns of visual dominance behavior could be reliably "decoded". Decoding involves the process by which individuals infer others' feelings or attitudes from their behaviors. Results of this study have revealed that different patterns of look-speak to look-listen ratio affects the subjects' power dominance attributions; when stimulus persons exhibited the high look-speak to look-listen ratio they were rated as more powerful than when they exhibited the moderate ratio ($p < .01$). When they displayed the moderate ratio they were evaluated as more powerful than they displayed the low visual dominance ratio ($p < .01$)

Our hypothesis which states that the higher the look-speak to look-listen ratio a person manifests, the higher will be the power which is attributed to him, is based on the findings of the above study. Because of the fact that, all available research on visual dominance behavior has been conducted in the United States, the present study has been particularly concerned with the question of whether similar

results could be obtained in a different cultural setting.

Although the differentiation obtained between high, moderate and low visual displays (Table 5) were not very large, findings of our study confirm the existence of the effect of visual dominance behavior.

Results of the test of the hypothesis indicate that when a person is seen interacting with another person of the same sex, both male and female subjects perceive different levels of social power for each of the three levels of look-speak to look-listen ratio.

Our findings also indicate that males and females do not differ in their ratings of the stimulus person. The findings of no sex differences in the effect of look-speak to look-listen ratio on subjects' power dominance attributions is consistent with previous research. Although, present data did not reveal significant interaction effect between subject sex and gaze condition, considering the traditional sex-role expectancies in our culture, we can still expect that sex related effects can influence the response to visual dominance displays. Therefore, it might be interesting for further research to examine the effect of visual dominance patterns in mixed-sex dyads.

It should be kept in mind that the respondents in the present study are all students from Boğaziçi University, which constitutes a limitation for the generalization of these findings to the population at large.

As far as subjects' power dominance attributions with respect to different levels of the look-speak to look-listen ratio is concerned, out of eight power related items, only three but the most important ones of them (submissive-dominant, awed-important and powerful) showed significant effects. Although the other five power-related items did not show significant effects with respect to different patterns of visual behavior, when the mean power ratings of subjects were examined, it was found that, subjects differed in their ratings of the stimulus person in the predicted direction. The findings of our study confirm the existence of the effect of visual dominance behavior, however, the results also reveal that obtained differentiation between high, moderate and low visual displays is not as large as in the data obtained in the United States. This difference may be important since it might indicate cultural differences. The difference between the United States data and ours may arise from the patterns used in this study. As we have mentioned earlier, the patterns of look-speak to look-listen ratio have been modeled on the behaviors of naive American subjects. Thus, these patterns may provide American subjects with clearer dominance cues than our subjects. It does not defy logic to assume that, patterns would attract subject attention and affect their attributions more effectively if they were "encoded" by Turkish subjects. Encoding refers to the way relations and feelings are expressed in behavior. In encoding experiments, subjects' power and

prestige positions are manipulated and the non-verbal messages they emit are studied. This may be the reason why subjects in our study did not differentiate more between high, moderate and low visual displays. However, this argument is limited by the fact that we do not know if and how power is visually expressed by both male and female subjects in Turkish culture. In order to make more meaningful and valuable comparisons with different cultural settings, further research should focus on encoding in order to find out how power is visually expressed by subjects in our culture. At the same time without data on encoding we can not be sure if visual dominance behavior can "communicate" social power in Turkish culture. The following quotation from Wiener et-al seems to explicate the communicative value of the visual dominance behavior.

"....a review of the extensive literature in non-verbal communication indicates that most investigations seem to be concerned with the significance which some observer can attribute to a particular behavior; that is, the emphasis seems to be primarily on decoding....."

Whatever the conceptual approach (e.g., transactional, psychoanalytic) or the concerns of the investigators (e.g., behaviours of individuals or groups) most if not all investigators seem to take a decoding perspective. Investigators who take this perspective share an assumption that if the

observer can make an inference about an individual from his behavior, then the behavior can be considered to be a communication. Unfortunately, this kind of implicit assumption seems to fuse the notion of 'communication'. (1972, pp 186)"

For Wiener et-al (1972) "sign" implies only an observer making an inference from an event or behavior, while "communication" implies (a) a socially shared signal system that is, a code, (b) an encoder which makes something public via that code and (c) a decoder who responds systematically to that code.

Wiener et-al (1972) note that if for a non-verbal behavior it can not be clearly shown that both "encoding" and "decoding" processes occur then this behavior can not be considered to be a communication. Therefore, we are not able to make comparisons with different cultural settings in terms of the "communicative" value of the visual behavior related to power dominance attributions.

Lee and Ofshe (1981) state that people are not consciously aware of which demeanor mediates their ^{responses} especially under conditions of uncertainty. Consistent with Lee and Ofshe's theory, evaluations of the open-ended questionnaire revealed that, our subjects not only responded to each of the three levels of look-speak to look-listen displayed by the target person (submissive-dominant, awed-important, powerful) but

they also made some systematic inferences about the stimulus person's relationship with his/her unseen partner. Some answers referred to the subjects as follows;

"Asking for an explanation from the person s/he is face to face was a sign of dependency"

"Turning away his eyes while listening to the person he is face to face, showed his lack of interest."

Considering that this study to be an initial test of the effect of look-speak to look-listen ratio on power dominance attributions in our culture, it naturally has a number of limitations. Based on the fact that encoding studies should precede decoding studies as a normal course of investigation (Wiener, 1972), the most important limitation of the present study is the lack of previously obtained data that visual dominance behavior is reliably "encoded" by both male and female subjects in Turkish culture. As a result of this situation we can not reach certain conclusions. Without data on encoding we are also having difficulty in making comparisons between data obtained in different cultural settings. However, it is still important to note that the results of the present study, although certainly not conclusive, reveal that the differences in interpretations of visual dominance behavior in our country are similar to those in the United States.

Despite its limitations the present study can be considered as an important attempt in terms of revealing the existence of visual dominance behavior in our culture.

We hope this study will pave the way for other more detailed future studies on this subject which we believe has many aspects worthy of study.

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A P P E N D I C E SAPPENDIX AQUESTIONNAIRE

Bu anket Psikoloji Bölümü Lisansüstü program içinde, bir tez uygulamasında kullanılmak üzere hazırlanmıştır.

Sizden aşağıdaki soruları mümkün olduğu kadar ciddiyetle ve içtenlikle yanıtlamanızı, her bölümün sorularını yanıtlamadan önce ilgili yönergeyi dikkatle okumanızı rica eder, yardımlarınız için teşekkür ederiz.

1- CİNSİYET

2- YAŞ

3- BÖLÜM

APPENDIX BEXPERIMENTAL PROTOCOL

Denekler 10 ar kişilik gruplar halinde deney odasına alınır. Denekler, video-bandı izlerken ve anketlerin doldurulması sırasında kendi aralarında konuşmalarına izin verilmeyecek şekilde önceden düzenlenen sandalyelere oturtulur.

Araştırmacı bir bütün olarak deneyin nasıl yapılacağı hakkında genel bir açıklama yapar.

"Bu çalışmada 3er dakikalık, 3 bölümden oluşan bir video-bant izleyeceksiniz. Her bölümde iki kişi arasında geçen konuşmaları sessiz olarak izleyeceksiniz ve her bir bölümün sonunda sizlere birer anket verilecek."

Yukarıda yapılan genel açıklamadan sonra araştırmacı birinci bölümün gösterilmesine başlamadan evvel deneklere ikinci bir açıklama yapar.

"Şimdi sessiz olarak izleyeceğimiz üç dakikalık ilk bölümde, sizlerden istenen, bant yayına girdikten sonra ekranda yüzü size dönük olarak oturan kişiyi dikkatle izlememiz."

Yapılan kısa açıklamadan sonra araştırmacı bandı yayına sokar, ilk bölüm izlendikten sonra bandı durdurur.

Anketler dağıtılmadan evvel deneklere, anketin doldurulması hakkında bir açıklama yapar.

"Biraz önce, iki kişiyi belli bir ilişki içined izlediniz. Şimdi dağıtılacak olan anketteki soruları sadece gördüklerinize dayanarak ve izlediğiniz kişinin sizde bıraktığı izlenimler doğrultusunda yanıtlamanızı rica ediyorum."

Anketler dağıtılır, deneklerin değerlendirmeleri bittikten sonra anketler toplanır.

Araştırmacı, ikinci bölüm yayına girmeden evvel deneklere kısa bir hatırlatma yapar.

"Bu bölümde aynen birinci bölümde olduğu gibi iki kişilik bir ilişkiyi sessiz olarak izleyeceksiniz ve bu bölümde de, sizlerden ekranda yüzü size dönük olarak oturan kişiyi dikkatle izlemeniz isteniyor. Bu bölümü izledikten sonra diğer bölüm sonunda olduğu gibi sizlere izlediğiniz kişiyi değerlendirmeniz için birer anket dağıtılacak."

İkinci bölüm yayına girdikten ve deneklerce izlendikten sonra anketler dağıtılır. Değerlendirmelerin yapılması ile bu bölümün anketleri toplanır.

Üçüncü bölümdeki işlemler birinci ve ikinci bölümlerin

aynı olduđu için arařtırmacı kısa hatırlatmalarla bu bölümü izlettirir ve anketleri toplar.

Toplam dokuz dakika süren video-bandın gösterilmesinden ve ilgili anketlerin toplanmasından sonra deneklere, deđerlendirmelerinde neleri kriter olarak aldıklarını içeren birer anket dağıtılır. Anketlerin toplanmasından sonra arařtırmacı deneklerin kendisine sormak istedikleri herhangi bir şey olup olmadığını sorar ve deneyin içeriđi hakkında genel bir açıklama yapar.

"Katıldığınız bu çalışma S. psikolojide gruplar ve gruplar arası ilişkiler ve özellikle grup içi kişiler arası ilişkileri inceleyen çalışmaların sadece küçük bir bölümü ile ilgili olarak ele alındı. Grup içindeki farklı statülerin oluşumu ve nedenleri konusunda yapılan birçok arařtırmada farklı etkenler ele alınmış ve bunların etkileri incelenmiştir. Bu etkenlerden bazıları, sözsüz iletişim adı altında toplanmış ve temelde kişilerin davranış ipuçlarını incelemeye buradan hareket ederek cevap vermeye yönelik arařtırmalarda incelenmiştir. Sizlerin katıldığı bu arařtırmada da yapılmak istenen, sözsüz iletişim ortamında kişilerin davranışlarının nasıl algılandığını incelemek ve soruna bu açıdan bir açıklama getirebilmek çabasıdır."