

An extrapolation of the physical attractiveness and sex variables within the Byrne attraction paradigm

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Twenty male and 20 female volunteer general psychology students were assigned to one of four treatment conditions in a totally randomized 2 by 2 ANOVA to test the hypothesis that subjects would perceive attractive strangers of the opposite sex as possessing attitudes similar to their own. Physical attractiveness was defined in terms of independent ratings via a Q sort of 74 male and 74 female yearbook pictures. The ANOVA yielded a significant main effect for attractiveness. These results were interpreted as supporting both the Byrne attraction paradigm and Newcomb's cognitive symmetry hypothesis. A follow-up experiment, using a population of adult apartment residents who were allowed to choose the stimulus photograph they felt to be most or least attractive, replicated the results obtained in Experiment I and revealed an even more pronounced attractiveness effect.

It has been demonstrated repeatedly that individuals are attracted to others with similar attitudes (Byrne, 1961, 1969, 1971; Byrne, London, & Reeves, 1968; Ettinger, Nowicki, & Nelson, 1970; Jackson & Mascaro, 1971). This has been shown to be true for several different populations and to remain constant regardless of the stimulus mode employed (Byrne, 1969, 1971).

Several studies have indicated that subjects may be attracted to others with similar attitudes because having one's attitudes validated may be reinforcing (Byrne, 1961, 1969, 1971; Griffitt, 1968a, b). Thus, similar and dissimilar attitude statements may influence attraction because they function as positive and negative reinforcers. Byrne (1969) states that the consensual validation offered by others with similar attitudes is reinforcing because it satisfies a "learned drive to be logical and to interpret correctly one's stimulus world." This is similar to the concept of interpersonal congruency (Secord & Backman, 1964). Interpersonal congruency occurs when Person A perceives Person B as behaving in a way that confirms Person A's self-concept.

It has also been shown that subjects are attracted to physically attractive individuals to a significantly greater degree than to unattractive individuals (Brislin & Lewis, 1968; Byrne, Ervin, & Lamberth, 1970; Byrne, London, & Reeves, 1968; Murstein, 1972; Sigall & Aronson, 1969; Stoebe, Insko, Thompson, & Layton, 1971; Walster, Aronson, Abrahams, & Rottman, 1966). Brislin and Lewis (1968) suggest that associating with physically attractive people is a rewarding (and, therefore, reinforcing) experience.

In addition to being attracted to individuals with similar attitudes and physically attractive individuals, subjects tend to attribute these people with qualities which they may not possess. For example, in addition to judging strangers with similar attitudes as likable, subjects believed them to be more intelligent, more knowledgeable about current events, more moral, and

better adjusted than strangers with dissimilar attitudes (Byrne, 1969, 1971). Physically attractive strangers have also been credited with more positive traits (Miller, 1970), greater personality similarity to the subjects judging them (Sappenfield & Balogh, 1970), and greater happiness and success along several dimensions (Dion, Berscheid, & Walster, 1972) than unattractive strangers. A study by Dion (1972) revealed that, in their judgments of children's misbehavior, adults perceived identical acts to be less serious when committed by physically attractive children.

There may also be sexual differences in the importance placed on attitude similarity and physical attractiveness in interpersonal attraction. Several studies have indicated that attitude similarity may have greater importance in the attraction of females to males, while physical attractiveness may be more important in the attraction of males to females (Curran, 1973; Miller & Rivenbark, 1970; Stoebe et al., 1971). Findings in this area have not always yielded consistent results. In a computer dating study by Byrne et al. (1970), subjects were questioned as to their reasons for liking or disliking their dates. A greater number of male subjects indicated that they had responded to their date's appearance, while more female subjects stated that attitudes had determined their responses. These verbal sentiments expressed by subjects were, however, inconsistent with their actual responses. Also, some studies have found no sex differences (Byrne et al., 1968; Walster et al., 1966), while conflicting results were obtained by Touhey (1972) in a study of religious and sexual attitudes. In the Touhey study, there was a slight but significant tendency for males to be more attracted to partners with similar attitudes.

If individuals possessing similar attitudes and physically attractive individuals serve as positive reinforcers and are perceived by subjects as having other positive traits, it seems possible that subjects perceive

Table 1
Means and Standard Deviations for the Absolute Difference Scores of Males and Females Viewing Attractive and Unattractive Photographs

	Attractive		Unattractive	
	Mean	SD	Mean	SD
Experiment I				
Male	21.10	4.35	25.00	10.37
Female	16.80	7.98	22.90	4.87
Experiment II				
Male	18.20	7.03	31.10	7.57
Female	18.20	4.87	34.10	8.88

attractive people as having attitudes similar to their own. It would seem reasonable to suggest, then, that the subject anticipates positive reinforcement from individuals who have been found to be reinforcing. Thus, if a subject receives positive reinforcement (physical attractiveness) from another person, he may expect further reinforcement and this expectation may generalize to other forms of reinforcement (attitude similarity). In a like manner, physical unattractiveness may result in the continued expectation of nonreinforcement. It is, therefore, hypothesized that subjects should perceive physically attractive strangers of the opposite sex as possessing attitudes similar to their own. Such a prediction would be derived from Byrne's (1971) attraction paradigm.

A similar prediction could be made by employing a cognitive consistency theory. In a study of racial prejudice and attitude dissimilarity, for example, Byrne and Wong (1962) used Newcomb's (1953) strain toward symmetry formulations to derive the following prediction: "If A (prejudice subject) has negative feelings for B (negro) and positive feelings towards X, symmetry can be obtained by A if he assumes that B dislikes X." This prediction was confirmed. Newcomb's formulations may also be applied to the study of physical attractiveness and attitude similarity. Subjects would be expected to achieve symmetry by assuming that an attractive individual possesses attitudes similar to their own and that an unattractive individual holds dissimilar attitudes.

Two sequential experiments were conducted to investigate the influence of physical attractiveness on perceived attitude similarity.

EXPERIMENT I

Method

Subjects. Subjects were 20 male and 20 female students enrolled in general psychology at Central State University. The students were given five extra points in that class to be applied toward their cumulative point total for their participation in the experiment.

Materials. A short 15-item form of Byrne's (1971) attitude survey was chosen for the experiment. From the relevant attraction research (Anderson, 1967; Byrne & Nelson, 1965;

Gouaux & Lamberth, 1970), the number of attitude items or set size variable used has been observed to affect attraction only under relatively special circumstances. In reviewing these data, Byrne (1971) concludes, "It is conceivable that set size would affect attraction when only a small number of attitudes are involved but that past four or five items, number of attitudes becomes irrelevant as a variable [p. 83]." It would seem unlikely, therefore, that the absolute number of items employed for the attitude judgment task in the present experiment is a relevant variable.

Four photographs, an attractive male, an attractive female, an unattractive male, and an unattractive female were identified. The attractiveness of these photographs was determined on the basis of a Q sort of 74 male and 74 female yearbook-type photographs by a group of 18 male and 18 female general psychology students not used in the experiment proper. The male and female photographs with the highest and lowest mean ranks were operationally defined as representing attractive and unattractive stimulus pictures.

Procedure. Subjects were asked by the instructor of their introductory psychology class to fill out a copy of the 15-item attitude scale in class. Approximately 3 weeks later, each subject who volunteered for the research was individually shown a photograph of either the attractive or the unattractive individual of the opposite sex and instructed to fill out the attitude scale as they felt the pictured person would have filled it out.

Each subject's own response pattern on the attitude scale was then compared to the perceived response pattern for the pictured individual. The choices for each of the 15 items on the attitude scale were numbered from one to six. The subject's perception of the other individual's response was subtracted from his own response and the absolute difference value was recorded for that item. The absolute difference values for the 15 items were then summed to obtain a cumulative difference score for each subject. Thus, scores could range from 0, complete attitude agreement, to 75, maximum disagreement.¹

Results

A 2 by 2 totally randomized analysis of variance was applied to the data. The 40 subjects were randomly assigned to one of the four treatment combinations, resulting in four groups of 10 subjects each. The four treatment combinations of the two factors, sex of subject and attractiveness of photograph, yielded mean difference scores of 21.2, 25.0, 16.8, and 22.9 for high attractive male, low attractive male, high attractive female, and low attractive female, respectively. Both means and standard deviations are presented in Table 1. The mean cumulative absolute difference score for the 20 subjects, regardless of sex, shown the unattractive photograph was 23.95, as contrasted with a mean of 19.00 for the 20 subjects shown the attractive photograph. The ANOVA revealed that the attractiveness variable was significant ($F = 4.12$, $df = 1/36$, $p < .05$). Although there was a slight tendency for females to assume greater attitude similarity with the pictured males regardless of appearance, both the main effect for sex differences and the interaction between the attractiveness and sex variables were nonsignificant ($p > .10$).

EXPERIMENT II

The fact that each subject in the first experiment was

presented with only a single stimulus photograph may have imposed a needless restriction on the generalizability of the results. Allowing subjects to choose the photograph that they felt was most or least attractive from a number of photographs would assure that the results were not a consequence of any particular photograph. This procedure should also assure that each subject viewed a stimulus photograph that he personally felt to be attractive or unattractive rather than one that had been prejudged by another group.

Also, if the attractiveness effect found in the first experiment occurs with some degree of regularity in interpersonal relations, it should be evident in populations other than college students. A replication of the results obtained in the first experiment with a different population should greatly enhance the generalizability of the effect.

Method

Subjects. Subjects were 20 male and 20 female residents of an adults-only apartment complex in Oklahoma City, Oklahoma. The age range for female subjects was 20 to 36 years, with a mean age of 24.7 years, whereas the age range for male subjects was 23 to 39 years, with a mean age of 26.9 years. Male subjects had a mean education level of 4 years of college, while female subjects averaged 3 years of college.

Materials. A different 15-item form of Byrne's (1971) attitude scale was used for the second experiment. The attitude scale used in the first study contained several items which concerned topics particularly relevant for college students and, therefore, seemed inappropriate for use with a different population. The second attitude scale consisted of a random sample of the original 56-item scale exclusive of those items which were of special interest to college students.

Stimulus photographs for the second study consisted of 25 male and 25 female yearbook-type photographs selected at random from a different group of 329 male and 318 female pictures than used in the first study. Because race has been shown to influence one's perceptions of others in some instances (Byrne & Wong, 1962), all photographs were of white subjects.

Procedure. Each subject was shown the 25 photographs of members of the opposite sex and asked to choose the one considered most or least attractive, depending on which treatment combination they were assigned. Subjects were instructed to fill out the attitude scale as they felt the pictured individual would have filled it out and then were asked to fill out the attitude scale for themselves. The order of this procedure was counterbalanced within each of the four treatment groups. Thus, half of the subjects filled out the attitude scale themselves before viewing the stimulus photographs.

Each subject's own response pattern to the items on the attitude scale was then compared to the perceived responses pattern for the pictured individual. The scale was scored in an identical manner to the summated absolute difference scores used in the first experiment.

Results

Again a 2 by 2 totally randomized analysis of variance was applied to the data. The four treatment combinations of the two factors, sex of subjects and attractiveness of photograph, yielded mean absolute difference scores of 18.2, 31.1, 18.2, and 34.1 for high attractive male, low attractive male, high attractive

female, and low attractive female, respectively. These means, together with the appropriate standard deviation, are presented in Table 1. The mean cumulative absolute difference score for the 20 subjects, regardless of sex, for the unattractive photograph they selected was 32.6, as contrasted with a mean of 18.2 for the 20 subjects selecting the attractive photograph. Once again, the ANOVA revealed that the attractiveness variable was significant ($F = 35.66$, $df = 1/36$, $p < .001$). As in the first experiment, both the main effect for sex differences and the interaction between attractiveness and sex were nonsignificant ($p > .10$).

DISCUSSION

The finding that subjects tend to perceive attractive individuals as similar to themselves in attitudes and unattractive individuals as dissimilar supports both the learning and cognitive consistency explanations of the phenomenon. It also indirectly supports the idea that both attitude similarity and physical attractiveness function as positive reinforcers. The fact that no sex difference was obtained is consistent with results reported by Byrne et al. (1968) and Walster et al. (1966).

These data imply that physically attractive individuals have an added advantage in social situations where attitudes rather than appearance are presumed to be of primary importance. For example, if all other factors were equal, an attractive candidate for a political office might be expected to receive more votes because voters perceive his views as being similar to their own. Also, the attribution of similar attitudes to attractive individuals might be expected to result in their being treated preferentially, while unattractive individuals might receive negative feedback from others because they are perceived as dissimilar. While it is highly questionable that an individual's attitudes could be influenced by another's perception, feedback in social situations would be expected to influence a person's feelings toward both himself and others.

The second experiment serves to verify the results obtained in the first experiment. The attractiveness effect was, however, much more pronounced in the second study. Although there was little variation in the mean difference scores for subjects viewing attractive photographs in the two studies, subjects viewing unattractive photographs of their own choice seemed to evidence greater dissimilarity between their own attitudes and those of the pictured individual than did subjects judging an individual whose unattractiveness had been prejudged by another group. This may be interpreted as a consequence of allowing subjects to choose their own stimulus photographs and suggests that subjects assume greater attitude dissimilarity with unattractive individuals as their perception of the individual's unattractiveness increases. It is not clear why

an increase in assumed attitude similarity was not apparent when subjects viewed attractive photographs of their own choice. However, several male and female subjects remarked that none of the photographs were particularly attractive to them.

The fact that no significant sex difference was found in the second study replicates the results obtained in the first experiment. Again, this is consistent with results reported by Byrne et al. (1968) and Walster et al. (1966).

A replication of the effect found in the first experiment with a different population, using different attitude items and photographs, suggests that the attractiveness effect may be a regular occurrence in forming impressions of strangers. Thus, individuals might be expected to assume attitude similarity with attractive strangers and attitude dissimilarity with unattractive ones in a variety of social encounters.

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NOTE

1. In order to assure that the results were not a consequence of the scoring method, the data in both experiments were also scored using a different method. In this method the disagreement scores were 0 = same side of neutral and 1 = opposite side. This second method of scoring had no effect on the results.

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