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The Self-Evaluation Maintenance Model as a Moderator of Similarity-Attraction Vs Dissimilarity-Repulsion

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THE SELF-EVALUATION MAINTENANCE MODEL AS A MODERATOR OF

SIMILARITY-ATTRACTION VS. DISSIMILARITY-REPULSION

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Presented to

The Faculty of the Department of Psychology

The College of William & Mary in Virginia

In Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

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by

John A. Nimpfer

1997
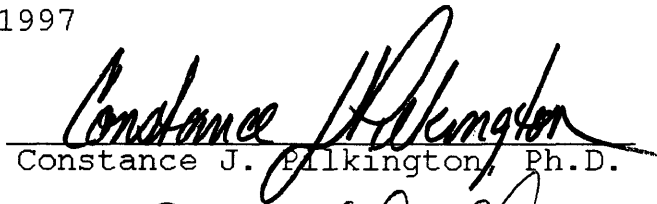
APPROVAL SHEET

This thesis is submitted in partial fulfillment of

the requirements for the degree of

Master of Arts

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Approved, May 1997

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I wish to thank Professor Constance Pilkington for her guidance, patience, encouragement, and support over the course of this project. She went above and beyond the call of duty.

I am also indebted to Professors Lee Kirkpatrick and John Nezlek for their insightful suggestions and positive criticism of this study.

Finally, I wish to thank my family and classmates for making me laugh, feeding me, and giving me rides.

LIST OF TABLES

Abstract

The present study was designed to determine if the Self-Evaluation Maintenance (SEM) Model could help settle the similarity-attraction versus dissimilarity repulsion debate. Through the SEM model, a set of hypotheses emerge for each side of the debate. Participants were given positive or negative SEM feedback as well as similiar or dissimilar attitudinal information about a partner they had just met. They were asked to indicate how similar they felt to the partner as well as how well they would like working with the partner (measures of attraction/liking). Although the study did not result in either hypothesized interaction, signigicant main effects were found for similarity/dissimilarity. Those who received similar information about their partners were more willing to work with their partners in the future. Possible explanations for lack of significant results are discussed.

THE SELF-EVALUATION MAINTENANCE MODEL AS A MODERATOR OF

SIMILARITY-ATTRACTION VS. DISSIMILARITY-REPULSION

Introduction

The general hypothesis that we are attracted to similar others has been supported several times by Byrne (1971) and his colleagues. However, with his repulsion hypothesis, Rosenbaum (1986a) contends that attitudinal similarity is of no important consequence and does not lead to liking; rather, dissimilarity does lead to repulsion. Although Rosenbaum found support for his repulsion hypothesis, the debate continued over the role of similar vs. dissimilar attitudes in attraction (Byrne, Clore, & Smeaton, 1986; Rosenbaum, 1986b; Smeaton, Byrne, & Murnen, 1989). The present study attempts to help resolve this conflict by incorporating the similarity-dissimilarity hypotheses with a different model with clear predictions about attraction. The Self-Evaluation Maintenance (SEM) model (Tesser, 1988), combined with Byrne's attraction paradigm (1971), should provide a means of critically testing these two perspectives.

The first evidence that similarity may be a causal determinant of attraction was obtained in Newcomb's (1961) study of friendship formation. Two groups of male housemates were examined over 2 years to determine the naturalistic development of interpersonal attraction. The housemates' attraction to each other was related to their preacquaintance agreement about values and attitudes. The

degree of preacquaintance attitudinal similarity was discovered to predict attraction after actual interaction.

The attraction paradigm developed by Byrne (see Byrne, 1971, for details) has been the basis of numerous studies which support the hypothesis that similarity leads to attraction. In his studies, Byrne provided participants with an attitude questionnaire supposedly filled out by a stranger that was similar or dissimilar to one the participants had previously completed. Participants were then asked to indicate their attraction to the stranger which was measured using simple rating scales; participants indicated the extent to which they would like the stranger and the extent to which they would like working with the stranger.

In the first study that utilized this paradigm (Byrne, 1961), participants were told that they were taking part in a study of interpersonal judgments; they would be given certain information about strangers and asked to make judgments about the stranger. Participants were given a 26-item attitude scale early in the semester and were randomly assigned to either a group in which they received similar attitudinal information about the stranger or a group in which they received dissimilar information about the stranger. After reading the stranger's attitudes, the participants' attraction to the stranger was measured by

asking whether the participant would like or dislike the stranger and whether the participant would like or dislike working with the stranger. It was found that the mean attraction response for the similar attitude group was significantly higher than that of the dissimilar attitude group, thereby supporting the hypothesis.

However, because the majority of the items were answered similarly by most participants, it was difficult to interpret the results. The stimulus for the attraction responses could have been due to similarity-dissimilarity, conformity-deviancy, or a combination of the two. This difficulty in interpretation was due to the fact that the similar strangers could have appeared normal, average, and conforming members of the undergraduate culture, whereas dissimilar strangers could have been considered abnormal and deviant. To correct for this, Byrne (1962) replicated the original study. However, in this second study, the 7 items from the original 26-item attitude scale for which there was the greatest diversity of opinion were arranged in a 7-item scale in an attempt to elicit more heterogeneous responses. Participants in this study were assigned to one of eight experimental groups in which the stranger could be similar on none to all seven of the attitudinal items. Again, results showed that as similarity increased, so did attraction to the stranger. These results were not ambiguous

and could be attributed to similarity-dissimilarity, with
almost 41% of the variance of attraction attributable to
attitude similarity-dissimilarity. It was also possible to
conceptualize a continuous relationship where one could
predict the specific response to the set of bogus attitudes
if the participant's own responses were known.

Still, the eight experimental conditions in the
previous study could be considered as representing the
number of similar attitudes, number of dissimilar attitudes,
and/or the relationship between the two expressed as a ratio
or proportion; that is, the attraction responses could have
been attributed to any one of the three or any combination
of the three. This was resolved experimentally by developing
eight attitude scales of different length (4 to 48 items) in
order to allow the number of similar and dissimilar
attitudes and the ratio between them to vary independently
(Byrne & Nelson, 1965a). The results indicated that the
greater the *proportion* of similar attitudes expressed by the
stranger to the participant, the greater participant's
attraction was to the stranger. This design enabled the
prediction of specific attraction responses based on
variation of the proportion of attitudes that were similar
to those of the participant. Byrne's studies have repeatedly
shown a linear relation in which similarity leads to

attraction. In effect, Byrne's paradigm supports the hypothesis that one should be attracted to a stranger with similar attitudes.

Furthermore, Byrne and Clore (1970) assert in their reinforcement-affect model that attitudinal similarity is a reinforcing event and that attitudinal dissimilarity is a punishing event. Similar attitudinal statements elicit positive affect, whereas dissimilar attitude statements elicit negative affective responses. Discovering that a stranger has similar attitudes to one's own is positively reinforcing because having one's attitudes, opinions, and beliefs validated is consistent with one's need to be "logical, consistent, and accurate in interpreting the stimulus world" (Byrne, 1971, p. 338).

A series of critical experiments using a learning paradigm in which a two-choice discrimination task was used as a reinforcer and punisher to produce learning supported the reinforcement-affect model (Golightly & Byrne, 1964; Byrne, Young, & Griffitt, 1966). Golightly and Byrne (1964) found support that similar attitudes were reinforcing and that dissimilar attitudes were punishing by showing that the similarity or dissimilarity of attitude statements to one's own attitudes could produce learning when used to designate correct or incorrect responses.

Byrne et al. (1966) attempted to see if it was

necessary to use both similar and dissimilar attitudes to produce learning or if similar or dissimilar attitudes alone could produce learning. The Golightly and Byrne (1964) results were replicated. However, the neutral-dissimilar group (i.e., those who received neutral statements for correct responses and dissimilar-attitude statements for incorrect responses) showed learning while the similar-neutral group (i.e., those who received similar-attitude statements for correct responses and neutral statements for incorrect responses) did not. This may indicate that similarity is irrelevant and that dissimilarity accounts for learning. Byrne suggested that neutral statements were probably misinterpreted in a positive fashion, leading to a failure to learn the discrimination. Thus, these studies appear to support the belief that similar attitudes are reinforcing and that dissimilar attitudes are punishing.

Although Byrne and his colleagues consistently found a linear relation between similarity and attraction and interpreted this as evidence of a causal relation, Rosenbaum (1986a) points out that the original attraction paradigm never included a control condition in which ratings of attraction were made without attitudinal information about the stranger. By comparing the ratings of attraction between people in a control condition and those in conditions in which attitudinal information is given, one can determine

the degree to which attraction is increased by similarity and/or decreased by dissimilarity.

Rosenbaum (1986a) replicated one of Byrne's studies (Byrne, London, & Reeves, 1968) in which participants were given a photograph of an attractive or unattractive person whose attitudes were either similar or dissimilar. It was found that both degree of attractiveness and attitudinal similarity were positively related to attraction. He found that there was no significant difference in the ratings of interpersonal attraction between those given attitudinally-similar information and those given no attitudinal information. Bogus strangers with dissimilar attitudes, however, received lower interpersonal attraction ratings than those with similar attitudes or those for which no attitudinal information was known.

Similarly, Rosenbaum found that people with similar political affiliations were not evaluated differently from those for whom party affiliation was not indicated, but that dissimilarity in party affiliation led to repulsion. Finally, in a third study, Rosenbaum found evidence that opposed Byrne's reinforcement model of attraction. Nonsense syllables were included to designate correct responses and blank cards indicated incorrect responses. It was found that participants presented with blank cards and nonsense syllables learned to discriminate, but those given equally

discriminative nonsense syllables did not learn. Rosenbaum took this as evidence that those in the Byrne et al. (1966) study did not learn in the similar attitudes-neutral statements condition because similar attitudes lack incentive value. Rosenbaum concluded that similar attitudes are not only *not reinforcing* but also are *not relevant* to attraction. These findings lend support to the hypothesis that whereas similarity does not increase attraction, dissimilarity leads to repulsion.

Although Rosenbaum's (1986a) studies seemed to provide consistent evidence of the repulsion hypothesis, the adequacy of his designs were criticized and suggestions were offered for appropriate empirical tests for the competing hypotheses (Byrne et al., 1986).

Byrne et al. (1986) state that Rosenbaum did not compare similar-attitude conditions with neutral mood conditions in three of the four attraction experiments he conducted. Instead, they were compared with positive trait adjective conditions. Furthermore, Byrne et al. believe that it is not possible to create a no-attitude control condition because people will assume a high level of similarity between the self and the other as a function of the false consensus effect. Therefore, comparing a similar-attitude condition with an assumed similar-attitude condition would

not provide an adequate test of the repulsion hypothesis. Byrne et al. (1986) also point out that Rosenbaum ignored a variety of other factors, including the number and proportion of similar and dissimilar attitudes, physical attractiveness of the partner, occupation, trait descriptions, and political affiliation. Despite these criticisms, Rosenbaum's hypotheses led Byrne to propose a two-stage process of relationship formation by which people first rely on negative factors such as dissimilar attitudes and physical unattractiveness to exclude others from consideration as potential friends and romantic partners. Then, people focus on the positive factors such as similar attitudes and physical attractiveness to select potential friends and romantic partners.

Rosenbaum (1986b) responded to these criticisms with some criticisms of his own. Rosenbaum points out that Byrne and his colleagues are the only researchers who provide data which relates assumed similarity and attraction. However, Rosenbaum welcomes Byrne's proposed two-stage process of relationship development.

Smeaton et al. (1989) countered Rosenbaum with two experiments in which the repulsion hypothesis was not supported. While holding the number of dissimilar attitudes constant, it was found that as the number of similar attitudes of a stranger increased, attraction toward the

stranger increased. According to the repulsion hypothesis, one would predict that holding the number of dissimilar attitudes constant and varying the number of similar attitudes would not affect level of attraction. A second study conducted by Smeaton et al. (1989) offered support for the reinforcement-affect model. In a discrimination learning task, when correct responses were followed by similar attitude statements and incorrect responses were followed by nonsense syllables, response acquisition occurred. Response acquisition also occurred when correct responses were followed by nonsense syllables and incorrect responses were followed by dissimilar attitudes.

It is clear from the above that all of those involved in this debate can interpret their findings to support their particular hypothesis and/or find design flaws in the research of their opponents. However, it should be noted that recent research comparing the two hypotheses supports the similarity-attraction hypothesis (Drigotas, 1993; Singh & Tan, 1992; Tan & Singh, 1995). Regardless of the fact that these researchers have provided some support for the attraction-similarity hypothesis, additional investigation is needed using "alternative methodologies." Although both Byrne's and Rosenbaum's hypotheses offer clear predictions, a nonbiased means of testing these predictions is needed.

The SEM model (Tesser, 1988) may provide a means to

help resolve the Byrne-Rosenbaum debate. The model assumes that people are motivated to maintain positive self-evaluations. Self-evaluation is a temporary and specific state of self-regard which fluctuates over time. This is different from chronic self-esteem which is relatively stable and global (Erber & Tesser, 1994). Positive self-evaluation is maintained through the processes of reflection and comparison.

The reflection process involves basking in another's reflected glory (Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976); reflection entails raising one's self-evaluation by affiliating oneself with another who performs well in a certain domain. In effect, simply being associated with one who succeeds or fails has an effect similar to that of personally succeeding or failing. For instance, the relatives of an Olympic gold medal winner may raise their self-evaluations by noting their association with the accomplished athlete. In contrast, the comparison process involves comparing one's own performance to another's. Self-evaluation may be raised by comparing one's own performance to another's poor performance on a task. However, comparing oneself to others when one has performed poorly could lower self-evaluation. Due to the potential damaging effects that the comparison process may have on self-evaluation, it appears that people may attempt to avoid the comparison

process and instead try to increase self-evaluation through the process of reflection (Pleban & Tesser, 1981).

Three parameters in the SEM model influence reflection and comparison. The first two parameters are relevance and performance. A personally relevant ability or dimension is one that is considered important for one's self-definition. This determines whether one will reflect or compare. The more relevant a task is to one's self-definition, the more likely performing well on the task will be important. High relevance should lead to comparison because high relevance makes superior performance more important. One will want to make sure that one's performance is still superior to others and will compare to know where one stands. The less relevant a task is to one's self-definition, the less likely that a good performance on the task will be important. This would make it easier for one to bask in the reflected glory of a well-performing other. Thus, low relevance should lead to reflection because low relevance makes superior performance less important.

Closeness is the third parameter of the model. It is the degree to which one is associated with the other person. This increases the likelihood of both reflection and comparison. It is easier for one to compare oneself to and bask in the glory of another who is psychologically close than to compare oneself to or bask in the reflected glory of

another who is psychologically distant. Therefore, one will be more likely to suffer by comparing oneself to a close other than to a distant other, or increase self-evaluation by basking in the reflected glory of a close other than to a distant other.

The model is a closed system in which change in one parameter causes changes elsewhere in the system. When one is outperformed by a close other, the relevance of the dimension to the self should be de-emphasized to prevent threats to self-evaluation (Erber & Tesser, 1994). One should decrease the relevance of a dimension if one is outperformed on that dimension by a close other. Tesser and Paulhus (1983) designed a study in which participants were told that they had outperformed or had been outperformed by a close or distant other on a bogus performance dimension called cognitive perceptual integration (CPI). Participants then rated the relevance of the CPI. The results indicated that they rated the relevance as being lower when they had been outperformed by others compared to when they outperformed others. This effect was stronger when the other was a close other. Consistent findings have been reported elsewhere (Tesser, 1980; Tesser & Campbell, 1983).

Similarly, variations in relevance and closeness should affect performance. When relevance is high, being outperformed by a close other will increase the threat to

one's self-evaluation by comparison (Erber & Tesser, 1994).
Therefore, one should be likely to inhibit the other's
performance. However when relevance is low, being
outperformed by a close other can enhance one's self-
evaluation through reflection. In this case, one should
attempt to facilitate the other's performance. When asked to
guess about another's performance, people guessed that their
friends performed better than strangers when the task was
low in self-relevance (Tesser & Campbell, 1982). However,
when the task was high in self-relevance, people guessed
that the strangers performed better than their friends.

The SEM model also predicts that people should be more
likely to help a stranger than a friend on a personally
relevant task but be more likely to help a friend than a
stranger on a task that is low in relevance. Tesser and
Smith (1980) allowed participants to give clues to friends
as well as strangers on a "password game". It was found that
people gave more difficult clues to friends than strangers
when the task was highly relevant to the self, and gave more
difficult clues to strangers than friends when the task was
low in relevance to the self. These findings were replicated
by Tesser and Cornell (1991).

Finally, variations in relevance and performance should
affect closeness. Relevance and performance can influence
our choice of those with whom we want to be close (i.e.

attraction). When a performance dimension is relevant, being outperformed by a close other will result in a threat to self-evaluation via the comparison process (Erber & Tesser, 1994). It has been found that when outperformed by another on a personally relevant task, people will physically distance themselves from the other, will be less willing to work with the other in the future, and will perceive themselves as less similar as the other than when they outperform the other on a personally relevant task(Pleban & Tesser, 1981). In other words, people reduce threats to their self-evaluation by reducing closeness with others whose performances are superior on a relevant task. Similarly, siblings close in age reported decreased identification and increased friction with their siblings when siblings outperformed them in personally relevant domains (Tesser, 1980). In fact, as siblings age, they have an increased tendency to specialize in different domains (Leventhal, 1970). These studies indicate that one will attempt to maintain a positive self-evaluation by distancing oneself from others when the performance domain is highly relevant to the self.

The above studies may also have implications for close friendships and romantic relationships. The SEM model would predict that each partner in a relationship will be the superior performer in a domain that is high in relevance for

their self-definition and low in relevance for their partner's self-definition. Therefore, success in each individual's relevant domain will permit both partners to bask in the reflected glory of the other, and boost self-evaluation for both partners in the relationship (Pilkington, Tesser, & Stephens, 1991). Indeed, Pilkington et al. (1991) found that when relevance to the self is high, people perceived themselves as outperforming their romantic partners. When relevance to the self was low, the reflection process emerged with people perceiving themselves as having been outperformed by their partners. This effect was strongest when partners' relevance ratings were complementary.

The SEM studies described may lead one to predict that people will be attracted to and want to form relationships with those who have different self-relevant domains from their own. This would enable people to bask in the reflected glory of their partner's successes as well as shine in comparison and thereby maintain a high self-evaluation. Although the similarity hypothesis predicts that people will be attracted to those with similar interests, a relationship in which partners have the same self-relevant domains could lead to comparison which could decrease self-evaluation. Therefore, if one knows that one may be outperformed in a self-relevant domain by a potential partner, one may avoid

forming a close relationship with that person (i.e., repulsion). In contrast, when one finds that one outperforms a stranger in a self-relevant domain, one should be attracted to the stranger because of the potential rewards that the comparison process may offer if a relationship develops.

The clear hypotheses that the SEM model presents regarding attraction may be useful in trying to settle the Byrne vs. Rosenbaum debate. Byrne (1971) postulates that similar attitudes lead to attraction. Rosenbaum (1986a) believes that similar attitudes have no effect on attraction, but that dissimilar attitudes do lead to repulsion. When attitudinal information is combined with the SEM model, a new set of hypotheses emerge. If Byrne is correct, the effects of attitudinal and comparison information should combine in an additive fashion (see Table 1). That is, when one learns that a stranger has similar attitudes (a positive attraction effect) and that one is superior to the stranger in a self-relevant domain (a positive attraction effect), one should be highly attracted to the stranger. Knowing that a stranger has similar attitudes (a positive attraction effect) but that the stranger outperforms one in a self-relevant domain (a negative attraction effect) should decrease attraction slightly to produce moderate attraction for the stranger.

Moderate attraction toward a stranger should also be produced when the stranger has dissimilar attitudes (a negative attraction effect) but when one outperforms the stranger in a self-relevant domain (a positive attraction effect). Finally, learning that a stranger has dissimilar attitudes (a negative attraction effect) and is superior to one in a self-relevant domain (a negative attraction effect) should lead to repulsion. Therefore, there should be a main effect for attitudinal feedback (similar > dissimilar) and a main effect for SEM feedback (positive > negative).

The repulsion hypothesis when coupled with the SEM model produces hypotheses different from that of the Byrne paradigm. According to the repulsion hypothesis, discovering that a stranger has similar attitudes to one's own should have *no effect* on attraction. However, discovering that a stranger has dissimilar attitudes to one's own should lead to repulsion. Thus, similar attitudinal information (no attraction effect) in combination with positive comparison information should produce moderate levels of liking. The liking should be attributable to the positive SEM feedback and not to the similarity feedback. Similarity combined with negative comparison information should produce low levels of liking, not the moderate levels predicted above. Again, the low

levels of liking should be attributable to the negative comparison information and not to the similarity feedback. Similarly, discovering that a stranger's attitudes are dissimilar to one's own (a negative attraction effect) should produce repulsion regardless of the nature of comparison information. That is, even when comparison information is positive, attraction to an attitudinally dissimilar other should be low, not moderate, as predicted by an additive model. According to Rosenbaum (1986a), the dissimilarity information should be so strong that additional information should not result in an additive effect. The low levels of liking in the dissimilarity condition should be due entirely to the dissimilarity and not to the SEM feedback. Therefore, the Rosenbaum model should produce an interaction with attraction being highest in the positive SEM/similar condition (see Table 2).

In sum, the Byrne model predicts an additive model in which similar attitudinal and positive comparison information should lead to high levels of liking for the other. Moderate levels of liking for the other should be found in instances where one receives similar attitudinal and negative comparison information, and where one receives dissimilar attitudinal and positive comparison feedback. Finally, receiving dissimilar attitudinal and negative comparison information should lead to low levels of liking.

In contrast, the Rosenbaum model predicts that attraction for the other will only be found when similar attitudinal and positive comparison feedback is given.

Method

Participants

Participants consisted of 32 pairs of male and 30 pairs of female undergraduates selected from the psychology research participation pool. Participants were contacted by phone so that they would not attend the study with a friend.

Procedure

When the participants arrived for the study, they were asked to introduce themselves to each other in the presence of the experimenter. After the brief introductions, the experimenter presented a summary of the experimental procedure (see Appendix A for verbatim script). Participants were told that the purpose of the experiment was to study the effects of cooperation and certain cognitive skills on a creative task. Specifically, the experimenter led participants to believe that the goal of the study was to determine whether knowing information about one's partner would have an effect on successful completion of a creative task. The experimenter explained that this was a two-part experiment involving completion of a cognitive measure followed by the creative task on which the participants would cooperate. After the participants agreed to

participate, they were asked to read over and to sign a consent form (see Appendix B). They were assured that all of their responses would remain confidential and that they could withdraw from the study if at any point they felt uncomfortable.

Participants were then told about the Cognitive Perceptual Integration (CPI) and Spatial Conceptualization (SC) constructs. CPI was described as a technical ability that requires participants to track movements and match patterns on a map. SC was described as a creative and conceptual skill that requires competence in visualizing the manipulation of shapes. A questionnaire was then given to determine if the participants found these abilities to be relevant (see Appendix C). After completing the questionnaires, participants were told that they would be separated to work on one of these tasks in different rooms.

After the participant pair was separated, each individual began the first procedure of the two phase study. Before returning to each participant, the experimenter ascertained which cognitive construct was more personally relevant to each participant by reviewing his/her responses on the relevance questionnaire. For example, if a participant indicated on the questionnaire that CPI was the more relevant construct, the participant was given the CPI task. If SC was indicated as the more relevant construct,

the SC task was given. Thus, unlike typical SEM studies relevance was not manipulated in this study. All participants completed the task more personally relevant to them. The experimenter then returned to each participant in turn and told him or her that due to time constraints, only one of the two cognitive skills could be measured and it would therefore randomly be determined which construct the participants would complete. Participants were given four mazes from Quinn's *Challenging Mazes* (1975) and told that they were a measure of CPI (or SC) abilities (see Appendix D). The experimenter demonstrated that the mazes would be scored by placing a transparent template with a path drawn on it over the participant's maze. The experimenter would be able to ascertain the participant's cognitive ability by counting the number of times the participant's path deviated from that of the template. The participants worked on the mazes alone, and the experimenter returned after a few minutes to gather the completed mazes.

Then the experimenter departed to supposedly score the mazes and returned to give each individual participant positive or negative feedback regarding his or her performance. Participants were told that they performed either extremely well on the task compared to the other participant or very poorly compared to the other

participant. It was randomly determined before the experimental session whether each participant would receive positive or negative feedback regarding his or her performance on the impending task. Those receiving positive feedback were told that they scored in the 80th percentile of all people who took the test, while their partners only scored in the 20th percentile. Those receiving negative feedback were given the opposite information.

The second procedure of the two-phase study involved providing the participants with either similar or dissimilar attitudinal information about their partners. All participants were told that they were randomly chosen to be in the condition in which they received information about their partner. They were then handed a bogus attitude scale that was supposedly completed by their partner earlier in the semester during mass testing. Participants were asked to read over their partner's bogus questionnaire. The questionnaire was based on Byrne's (1971) attitude scale and included attitude questions relevant to the student (see Appendix E). It was randomly predetermined whether the participant would receive similar or dissimilar feedback about his or her partner. Those receiving similar feedback were handed an attitude scale with 12 responses similar to the participant's own.

Likewise, those receiving dissimilar feedback were

given an attitude scale with 12 responses dissimilar to the participant's own responses. Participants originally completed this scale during mass-testing. The responses on the bogus scale were completed by the experimenter before the study by the method of constant discrepancy (Byrne, 1971). If a participant received similar information about his or her partner, the partner's bogus ratings were different from the participant's by one scale point. For example, if the participant rated an attitudinal issue as "2", the partner's score would be "1" or "3" (on a 6-point scale). However, those receiving dissimilar information found that their partner's bogus ratings were discrepant by 3 scale points from their own. If the participant gave a rating of "1", the partner's rating was "4".

The order of the two phases were counterbalanced such that half of the participants were given the SEM procedure first and half received the attitude information first. After both procedures were completed, participants were asked to complete a series of questionnaires concerning their feelings toward their partner and working with him or her (see Appendix F). These questionnaires served to assess how attractive the participants found their partner as well as to assess manipulation effectiveness. After the participants completed the attitude scales, they were brought back together and debriefed (see Appendix G for full

debriefing).

Results

Preliminary Analyses

A correlation was computed between participants' self reports of how they performed on the CPI/SC task and how satisfied they were with their performance on the CPI/SC task. These variables were found to be highly correlated (r = .83, p = .00) and were averaged into a single score measuring how well participants thought they performed on the CPI/SC task.

A factor analysis was performed on the extent to which participants felt the other participant's attitudes were similar to their own, the extent to which participants felt that the other would agree with their attitudes about prayer in schools and about affirmative action, and how much the participants felt they had in common with the other participant. The analysis revealed that these items loaded on one factor accounting for 78.4% of the variance (see Table 3). These four items were subsequently averaged into a single item measuring perceived similarity.

Similarly, a factor analysis of participants' willingness to work with the other, how much they were looking forward to working with the other during the second phase of the study, willingness to work with the other in a future experiment, and how much the participants thought

they would like working with the other yielded a single factor. All four items loaded on this factor which accounted for 78.6% of the variance (see Table 4). An average score of these items was computed as a measure of willingness to work with the other participant (i.e. closeness).

A factor analysis of the 25 bipolar traits yielded a single factor accounting for 32.3% of the variance (see Table 5). All items loaded on this factor except for "sociable," "persistent," and "honest." A subsequent factor analysis excluding these three traits resulted in a single factor accounting for 36.1% of the variance (see Table 6). These 22 trait adjectives were averaged into a single measure of closeness. The three excluded traits were correlated to see if they could be combined. However, these correlations were not significant.

Manipulation Checks

To determine whether the SEM feedback manipulation was successful, the average perceived performance on the CPI/SC task score was analyzed using a 2 (Sex) X 2 (Attitudinal feedback) X 2 (SEM feedback) X 2 (Order of presentation) ANOVA. The manipulation was successful with a significant main effect found for SEM feedback, $F(1, 46) = 249.09$, $p = .00$. Participants in the positive feedback condition ($M = 5.58$) felt that they had performed better on the task than did participants in the negative feedback condition ($M =$

2.09).

A manipulation check of similarity was also successful.
Perceived similarity was analyzed via a 2 (Sex) X 2
(Attitudinal feedback) X 2 (SEM feedback) X 2 (Order of
presentation) ANOVA yielding a significant main effect for
similarity, $\underline{F}(1,46) = 238.24$, $\underline{p} = .00$. Those receiving
similar attitudinal information about their partners
perceived themselves as being more similar to their partners
($\underline{M} = 5.50$) than did those who received negative attitudinal
information about their partners ($\underline{M} = 2.59$).

<u>Primary Analyses</u>

A 2 (Sex) X 2 (Attitudinal feedback) X 2 (SEM feedback)
X 2 (Order of presentation) ANOVA on whether one was willing
to work with one's partner (a measure of closeness or
attraction) yielded a significant main effect for
Attitudinal feedback, $\underline{F}(1, 46) = 6.42$, $\underline{p} = .02$. Those
receiving similar attitudinal information about their
partners ($\underline{M} =5.51$) were more willing to work with them than
those receiving dissimilar information about their partners
($\underline{M} = 4.48$). A SEM feedback by Attitudinal feedback
interaction was not significant, $\underline{F}(1, 46) = .52$, n.s. (see
Table 7 for cell means). Post-hoc ANOVAs comparing these
means found that for those receiving negative SEM feedback,
those receiving similar attitudinal information ($\underline{M} = 5.58$)
were significantly more willing to work with their partners

than those receiving dissimilar attitudinal information (M = 4.78), $F(1,28) = 5.67$, $p = .02$.

Similarly, the same analysis measuring the average adjective traits (a second measure of closeness/attraction) produced a significant main effect for sex, $F(1, 46) = 5.48$, $p = .02$. Females ($M = 5.00$) rated their partners as being higher on these traits than did males ($M = 4.60$). Higher scores indicated that the participants rated their partners as having more positive aspects of these traits. A marginally significant main effect was found for Attitudinal feedback, $F(1, 46) = 3.75$, $p = .06$; again, those who received similar attitudinal information about their partners rated them more highly ($M = 4.96$) than did those who received dissimilar information about their partners (M = 4.64). A SEM feedback by Attitudinal feedback interaction was not significant, $F(1, 46) = .53$, n.s. (see Table 8 for cell means). Post-hoc ANOVAs comparing these means were nonsignificant.

Willingness to work with the partner and the average adjective trait ratings were found to be significantly correlated measures of liking, $r = .52$, $p = .000$. A 2 (Attitudinal feedback) X 2 (SEM feedback) MANOVA was performed with these two measures of attraction as the dependent variables. A significant main effect was also found for Attitudinal feedback, $F(1, 58) = 6.81$, $p = .01$.

Those receiving similar attitudinal feedback (M = 7.38) liked their partners more than those receiving dissimilar attitudinal feedback (M = 6.71). A SEM feedback by Attitudinal feedback interaction was not significant, F(1, 58) = .58, n.s. (see Table 9 for cell means), nor did type of attraction measure interact significantly with any other variable.

A 2 (Sex) X 2 (Attitudinal feedback) X 2 (SEM feedback) X 2 (Order of presentation) ANOVA was computed concerning how important participants considered it to do well on the CPI/SC tasks after feedback was given. A significant main effect for SEM was found, F(1, 46) = 11.18, p = .00. Participants given positive feedback on their performance (M = 4.38) thought that it was more important to do well on these tasks than did those receiving negative feedback on their performance (M = 3.28).

A mixed design with SEM condition as the between subjects factor, and participants' feelings about the importance of performing well on the CPI/SC tasks before and after feedback as the within subjects factors yielded significant results. A significant main effect for SEM was found, F(1, 60) = 8.24, p = .01. Those receiving positive feedback (M = 6.74) rated these abilities as being more important than did those receiving negative feedback (M = 5.92). There was also a significant main effect for how

important participants thought it was to do well on the CPI/SC tasks, $F(1, 60) = 39.99$, $p = .00$. Participants rated these abilities more highly before feedback ($M = 5.11$) than after feedback ($M = 3.86$). Finally, there was a significant interaction for SEM by importance of performing well on CPI/SC tasks, $F(1, 60) = 5.98$, $p = .02$ (see Table 10). Those receiving positive feedback on performance rated these tasks the most highly before they were given feedback ($M = 5.56$) compared to those who rated importance before they were given negative feedback ($M = 5.07$), those who rated importance after they were given positive feedback ($M = 4.38$), and those who rated importance after they were given negative feedback ($M = 3.30$).

SEM feedback was also analyzed via a 2 (Sex) X 2 (Attitudinal feedback) X 2 (SEM feedback) X 2 (Order of presentation) ANOVA of how much participants felt that it was important for the other subject to perform on the CPI/SC task as the dependent variable. Analysis yielded a significant main effect for SEM, $F(1, 46) = 260.55$, $p = .00$. Manipulation was successful with those receiving negative performance feedback ($M = 6.26$) feeling that their partners considered the task to be more important than did those who received positive performance feedback ($M = 2.56$).

Discussion

The present study was designed to help resolve the

Byrne-Rosenbaum debate over the similarity-repulsion hypotheses by the inclusion of the SEM model. If Byrne is correct, the effects of attitudinal and comparison information should have combined in an additive fashion. The repulsion hypothesis when joined with the SEM model should have produced results different from those proposed by the Byrne paradigm. According to the repulsion hypothesis, discovering that a stranger has similar attitudes to one's own should have had no effect on attraction. Yet, discovering that a stranger had dissimilar attitudes to one's own should have led to repulsion.

To summarize, the Byrne model predicted an additive model in which similar attitudinal and positive comparison information should have led to high levels of liking for the other. Moderate levels of liking for the other should have been found in instances where one received similar attitudinal and negative comparison information, and where one received dissimilar attitudinal and positive comparison feedback. Finally, receiving dissimilar attitudinal and negative comparison information should have led to low levels of liking. In contrast, the Rosenbaum model predicted that attraction for the other would only be found when similar attitudinal and positive comparison feedback was given.

However, a glance at Tables 7-9 will indicate that

results did not match either of the predicted hypotheses. When measuring attraction in terms of whether one was willing to work with one's partner, only a main effect for similarity/dissimilarity was found. Those who received similar information about their partners were more willing to work with their partners than those who received dissimilar information about their partners. In other words, receiving similar attitudinal information about one's partner led one to like one's partner more than receiving dissimilar attitudinal information about one's partner. This was further supported by the manipulation check indicating that those receiving similar information about their partners perceived that they were more similar to their partners compared to those receiving dissimilar information about their partners.

When adjective traits were used as a measure of attraction, support for either hypothesis was again not found. Instead, it was discovered that females rated their partners more highly on these traits than did males. This sex effect could indicate that females are just more willing to give their partners the benefit of a doubt. Furthermore, females may be more trusting in the abilities of strangers than males. Future studies should take this finding into consideration. However, it should be noted that several participants reported that they found it difficult to rate

strangers on these traits. Rather than measuring liking for their partner, these traits may be measuring how willing participants are to assume the best in strangers.

The analysis of SEM feedback seemed to indicate that participants believed the feedback. Specifically, participants receiving positive feedback indicated that they felt they performed better on the tasks than did those who received negative performance feedback.

It was also found that those receiving negative feedback indicated that they believed their partners considered it more important to do well on the tasks than did those receiving positive feedback. Perhaps when participants discovered that the other performed better than them, they assumed that performance on the task was more important to the other. Because the task was ambiguous and the participants had already assumed that the other found it to be important, participants receiving negative performance feedback may have simply decided that the task was not important to them. Also, because they thought that they would soon be working together with the other, negative feedback participants may have thought the creative task would be easier working with someone who has good cognitive abilities. In effect, these participants may have envisioned a complimentary working relationship with the partner on the creative task.

However, participants indicated that they were suspicious. This was especially true of males and those who received positive feedback about their performance. Some participants found it hard to believe that the mazes measured anything, not to mention something as complicated as CPI/SC ability. Furthermore, participants became suspicious when they felt that they had not done well on the mazes only to discover from the experimenter that they had scored in the 80th percentile while their partner had scored in the 20th percentile. This indicates that CPI/SC tasks were not a good method of conveying SEM feedback. This may be why there was a failure to find significant main effects for SEM or a significant SEM feedback by Attitudinal feedback interaction in the primary analyses of liking. Furthermore, this may account for the unexpected finding in Tables 7-9 that those receiving negative SEM feedback and similar attitudinal feedback had the highest ratings of attraction. In addition, it may be that participants were simply reporting what the experimenter told them about their own and their partner's performance in the manipulation checks rather than indicating how they really felt about performance and importance. A more believable SEM scenario should be utilized for future studies.

However, participants receiving positive feedback indicated that they thought it was more important to perform

well on these tasks than did those receiving negative feedback. Moreover, participants rated the tasks as being more important before they were given feedback compared to after they were given feedback. This could support the above theory that some participants were frustrated with their performance on the mazes and found it hard to believe that they did well on them, or that they measured anything. Furthermore, after receiving feedback, participants given negative feedback rated the importance of the tasks lower than did the other participants. This could indicate that these participants were changing the relevance of the task after learning that they supposedly performed poorly. Then again, this interaction may indicate that all participants felt that they performed poorly on the task, hence participants rating the importance of performing well on these tasks lower than they did before they were given feedback. This may create an additive effect for those given negative feedback, indicated by them giving the lowest ratings for the importance of performance. These changes in relevance can be considered a function of the feedback.

Relevance may have been changed instead of closeness because the relevance of CPI/SC is a much more malleable variable than attitudinal similarity. Attitudinal similarity is a given fixed variable which clearly leads to main effects. Of the two parameters open for change in the face

of performance feedback, it was relevance that changed and not closeness. The strong attitudinal similarity main effect on closeness supports the belief that it is not as malleable as the relevance of CPI/SC.

Although it seems that the addition of the SEM element in the present study failed to yield results which can definitely offer support for either Byrne's or Rosenbaum's hypotheses, this may be do to an ineffective SEM scenario. Future studies utilizing a more sound method may produce the desired results. Hopefully, future research will resolve the Byrne-Rosenbaum debate.

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Table 1

Hypothesized Mean Ratings of Attraction for Byrne

	SEM Feedback	
Attitudes	Positive	Negative
Similar	High	Moderate
Dissimilar	Moderate	Low

Table 2

Hypothesized Mean Ratings of Attraction for Rosenbaum

	SEM Feedback	
Attitudes	Positive	Negative
Similar	Moderate	Low
Dissimilar	Low	Low

Table 3

Factor Analysis of Perceived Similarity

Variable	Factor Loadings
-How similar are the other's attitudes to your own?	.93
-To what extent do you think the other person will agree with your attitudes about prayer in schools?	.90
-To what extent do you think the other person will agree with your attitudes about affirmative action?	.89
-How much do you have in common with the other subject?	.81

Eigenvalue = 3.14

Table 4

Factor Analysis of Willingness to Work

Variable	Factor Loadings
-How willing are you to work with the other subject?	.91
-How much are you looking forward to working with the other subject during phase two of this experiment?	.90
-How willing would you be to work with the other subject in a future experiment?	.87
-How much do you think that you will like working with the other subject?	.86

Eigenvalue = 3.14

Table 5

Factor Analysis of Adjective Traits

Variable	Factor Loadings
Sophisticated	.70
Altruistic	.53
Capable	.79
Scientific	.36
Helpful	.71
Intelligent	.68
Sociable	
Tolerant	.45
Persistent	
Responsible	.54
Happy	.50
Strong	.59
Honest	
Wise	.76
Popular	.58
Knowledgeable	.77
Moral	.34
Adjusted	.76
Sensitive	.52
Poised	.44
Kind	.63
Likeable	.57
Skilled	.72
Modest	.43
Competent	.50

Eigenvalue = 8.06

Table 6

<u>Factor Analysis of Adjective Traits</u>

Variable	Factor Loadings
Sophisticated	.71
Altruistic	.53
Capable	.79
Scientific	.36
Helpful	.71
Intelligent	.69
Tolerant	.45
Responsible	.54
Happy	.47
Strong	.59
Wise	.76
Popular	.58
Knowledgeable	.76
Moral	.40
Adjusted	.76
Sensitive	.52
Poised	.44
Kind	.64
Likeable	.58
Skilled	.72
Modest	.43
Competent	.49

Eigenvalue = 7.95

Table 7

Mean Ratings of Willingness to Work with Other

	SEM Feedback	
Attitudes	Positive	Negative
Similar	5.39	5.58
Dissimilar	4.92	4.78

Table 8

Mean Ratings of Average Adjective Trait Score

	SEM Feedback	
Attitudes	Positive	Negative
Similar	4.82	5.09
Dissimilar	4.62	4.66

Table 9

Mean Ratings of Average Adjective Trait Score and

Willingness to Work with Other

Attitudes	SEM Feedback	
	Positive	Negative
Similar	5.11	5.33
Dissimilar	4.77	4.71

Table 10

Mean Ratings of Importance of Performance on CPI/SC Task

| | SEM Feedback | |
Time of measurement	Positive	Negative
Before feedback	5.56	5.07
After feedback	4.38	3.30

Appendix A

Verbatim Script

Hi, my name's John Nimpfer and I'll be conducting this study. The two of you will be working together on a task later on, so why don't you go ahead and introduce yourselves. <After introductions, experimenter continues...> I'm interested in the effects of cooperation and certain cognitive skills on the completion of a creative task. In particular, I'd like to see if knowing a little something in advance about the person you work with as compared to not knowing anything about the person you work with has any effect on completion of the task. This study will be completed in two parts. First, I'll ask you to fill out some questionnaires and complete a cognitive skill task by yourselves in separate rooms. Then, I'll bring you together and have you work on a bigger creative task together. When you're done, I'll fill you in on why I had you do everything that I had you do.

Would you like to participate? If so, take a few seconds to read over this consent form. <Hand out consent forms.> You can terminate your participation at any time if you feel uncomfortable answering any of the questions or doing any of the tasks I ask you to do. I must emphasize that all of your responses will remain confidential and your names won't be associated with any of your responses. Make

sure you circle the name of your intro professor.
<Experimenter collects forms when completed.>

Like I said, I'm interested in the role of cooperation and certain cognitive abilities in the successful completion of a creative task. Two cognitive abilities which may affect the way we complete creative tasks are Cognitive Perceptual Integration and Spatial Conceptualization. As I explain what these are, try to think about which one of these abilities is more important to you.

Cognitive Perceptual Integration (also known as CPI) is a technical ability which helps you do such things as track movements and match patterns on a map. Research has shown that people strong in this ability are more technically creative and go on to such careers as business management, research, and design. Spatial Conceptualization (also known as SC) is a more conceptual and creative ability which involves such activities as visualizing the manipulation of shapes in space. Again, research has shown that people strong in this ability are more artistically creative and go on to such careers as painting, sculpting, and architecture. It was also recently suggested that college students vary greatly in their ability on CPI and SC tasks.

I'd like you to fill out this questionnaire to get feedback on your feelings about CPI and SC. I know it's important to you to do well at most things. But what I'm

really interested in is your personal interest--how much <u>you</u>

think these things are personally important. Then we can

start with the study. <Experimenter hands out questionnaires

and collects them when participants are done.> Thanks. Now,

I'll have to separate the two of you so that you can work on

one of these tasks. Can I have a volunteer to sit in the

other room? <Experimenter picks volunteer.> OK, follow me.

It will take me a few minutes to get the materials for the

task ready so just relax for a few minutes. <Experimenter

separates the participants and goes to another room to

determine the relevance of the tasks for each participant.>

<Experimenter returns to one of the participants.>

<u>SEM Condition First</u>

Because we don't have much time, you can only complete

one of the tasks. I flipped a coin to see which task you

would work on and it seems that CPI (or SC) won. This task

involves completing a few mazes. Take your time on them. I'm

not interested in how fast you can do them, but I am

interested in the routes you take and the strategies you

use. You probably won't even have enough time to finish all

of the mazes, so don't worry if you don't finish and don't

rush. I can get an idea of your CPI (or SC) abilities from

just a few examples from the mazes. This is how I'll score

your maze <Experimenter takes out template and puts on a

show.> All I have to do is put this over your maze and count

the number of times your path moves off the colored area to get your CPI (or SC) score. It's really easy for me to determine your ability because there are different templates for each skill level.> You can get started and I'll go get the other person started. I'll be back in a few minutes to collect your mazes so I can get a score on CPI (or SC) ability. <Experimenter leaves and completes same interaction with other participant.>

<After a few minutes, experimenter returns to each individual participant to collect mazes.> You can let me have those now. It'll take me a few minutes to score yours and your partner's mazes. I'll be back as soon as I'm done to let you know how you did. <Experimenter leaves to pretend that he's scoring and then returns to each individual participant.>

<u>Positive Feedback</u>

Well, it seems that you're pretty good at CPI (or SC). You did extremely well on it. You scored in the 80th percentile compared to other college students who have taken this test. This means that you did better than 80% of all people who take this test. Good job. I thought you might like to know that you did a lot better than the other subject. He/she only scored in the 20th percentile. OK, on to the next part of the study. The two of you have been randomly chosen to be in the condition where you actually know some information

about each other before working together. Here's a copy of a
questionnaire that your partner filled out at the beginning
of the semester in mass testing. You may remember filling
one out yourself. Read over it for a few minutes while I go
break the news to him/her about his/her score on the CPI (or
SC) task. <Experimenter hands attitude info to participant
and leaves to inform other participant.>

<u>Negative Feedback</u>

Well, it seems that you didn't do too well at CPI (or SC).
You did extremely poorly on this task. You scored in the
20th percentile compared to other college students who have
taken this test. I'm sorry. This means that 80% of all the
people who take this test do better than you. For instance,
the other subject scored in the 80th percentile. I just
thought you should know that the other subject did a lot
better than you on this. He/she must be much better on CPI
(SC) tasks.

OK, on to the next part of the study. The two of you
have been randomly chosen to be in the condition where you
actually know some information about each other before
working together. Here's a copy of a questionnaire that
your partner filled out at the beginning of the semester in
mass testing. You may remember filling one out yourself.
Read over it for about five minutes while I go give the news
to him/her about his/her score on the CPI (or SC) task.

<Experimenter hands attitude info to participant and leaves to inform other participant.>

<Experimenter returns to each individual participant after a few minutes.> Now that you know a little about your partner, I'd like you to fill out a few questionnaires concerning how you feel about working with him/her before you actually do. Please take your time on these and try to be as open and honest as possible in your responses. Again, I must emphasize that no one besides me--not even the other participant--will see your responses. When you're done, come meet me in the hall and I'll bring the two of you together to start work on the task. I'll be back in a few minutes. <Experimenter leaves and when participants have completed their questionnaires, they are brought together for debriefing.>

Similarity/Dissimilarity Condition First

Before we start, the two of you have been randomly chosen to be in the condition where you actually know some information about each other before working together. Here's a copy of a questionnaire that your partner filled out at the beginning of the semester in mass testing. You may remember filling one out yourself. Read over it for about five minutes while I go get your partner started. I'll be back in a few minutes to get you started on the cognitive task. <Experimenter departs room and does the same for other

participant. Experimenter returns after a few minutes and completes the SEM procedure described above, except that participants are handed the attraction measures immediately after receiving feedback about their task performance.>

Appendix B

College of William & Mary

Psychology Department Consent Form

In this study conducted by John A. Nimpfer (under the direction of Dr. C. Pilkington), I understand that I will be asked to complete a cognitive measure and a creative task. I will also fill out a few questionnaires concerning these measures. Furthermore, I understand that my responses will remain confidential and my name will not be associated with any aspect of this study. I am aware that I am able to decline answering any question and that I am also permitted to terminate my participation at any time. Any credit I receive for participation will not be affected by my responses or my decision to withdraw from the study. I know that when my participation in this study is complete, I will be given a complete and comprehensive explanation of this study and will still have the right to withdraw the use of my data. I understand that I may report any displeasure with this study to the Psychology Department Chair, Dr. R. Johnston. Finally, I understand that I must be at least 18 years of age to participate. My signature below indicates my voluntary participation in this study.

_____   _____   _____
    Print Name   Signature   Date

Please circle the name of your PSY 201/202 professor:
Nezlek   Pilkington   Refinetti

Appendix C

Many perceptual abilities are of interest in the field of psychology. Two of these perceptual abilities are Cognitive Perceptual Integration and Spatial Conceptualization. Proficiency at tasks reflective of Cognitive Perceptual Integration and Spatial Conceptualization abilities varies greatly among individuals.

Cognitive Perceptual Integration (CPI) is the ability to track movements and match patterns on a map. CPI is a very technical ability. Persons who are proficient at CPI tasks tend to be good pilots, skilled craftsmen, or successful business managers.

Spatial Conceptualization (SC) is a more conceptual and creative ability. It involves proficiency in visualizing and manipulating shapes and objects in your head. Persons who are skillful at SC tasks are often interested in creative design and may pursue careers as artists, sculptors, or in the field of architecture.

Please answer each of the following questions below. Circle the most appropriate number on the scale to show how you feel.

1. To what extent do you think of yourself as a person with good Cognitive Perceptual Integration?

    not at all 1   2   3   4   5   6   7 very much

2. How important is it to you to have good Cognitive Perceptual Integration?

    not at all 1   2   3   4   5   6   7 very
    important   important

3. Compared to the "average" person, how well do you think that you perform on Cognitive Perceptual Integration tasks?

    worse than 1   2   3   4   5   6   7 better than
    average   average

4. Last time you engaged in a task that required Cognitive Perceptual Integration ability, how well do you think you performed?

    very poorly 1   2   3   4   5   6   7 very well

5. To what extent do you think of yourself as a person with good Spatial Conceptualization abilities?

      not at all 1   2   3   4   5   6   7 very much

6. How important is it to you to have good Spatial Conceptualization abilities?

      not at all 1   2   3   4   5   6   7 very
      important   important

7. Compared to the "average" person, how well do you think that you perform on Spatial Conceptualization tasks?

      worse than 1   2   3   4   5   6   7 better than
      average   average

8. Last time you engaged in a task that required Spatial Conceptualization ability, how well do you think you performed?
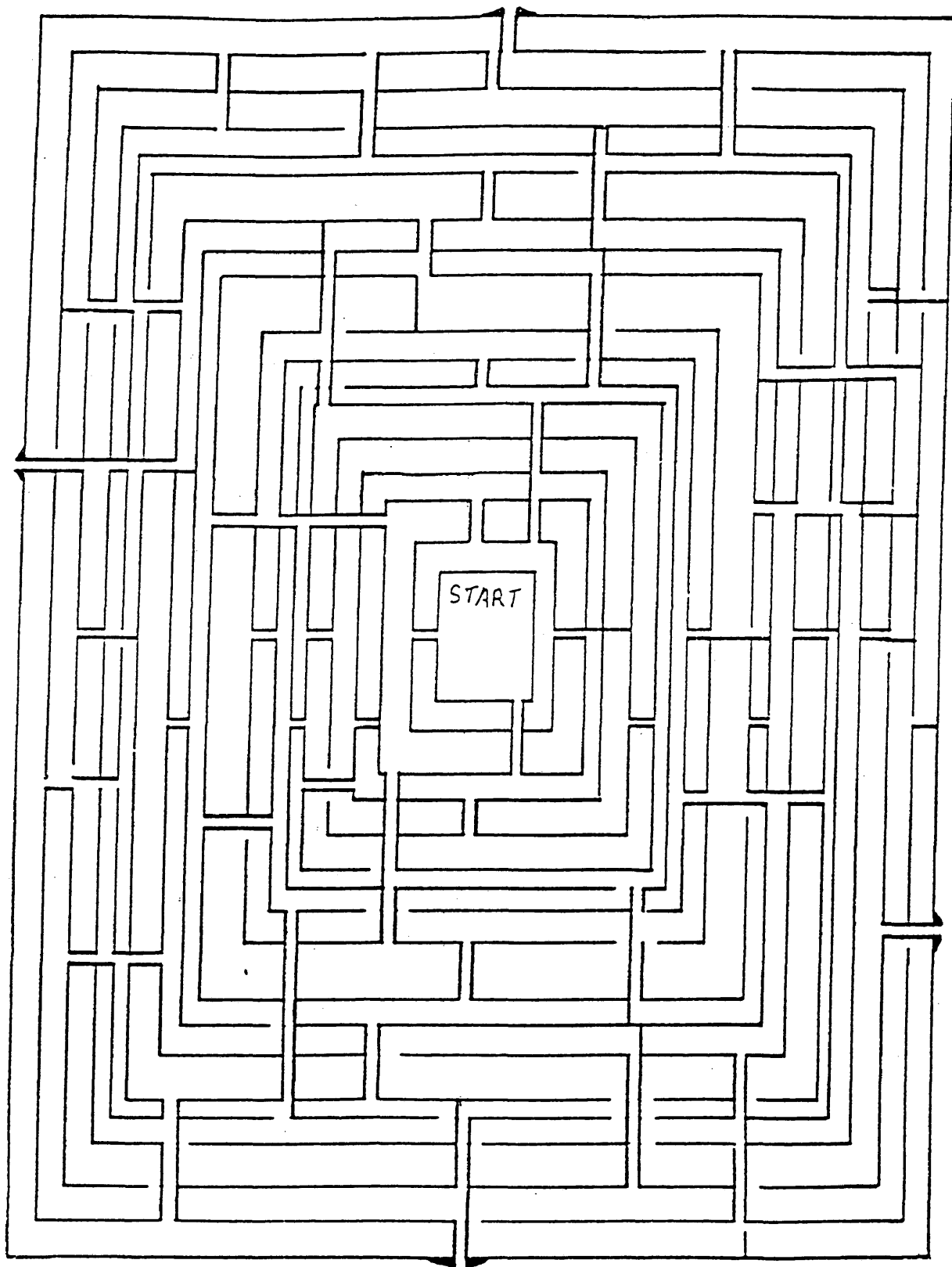
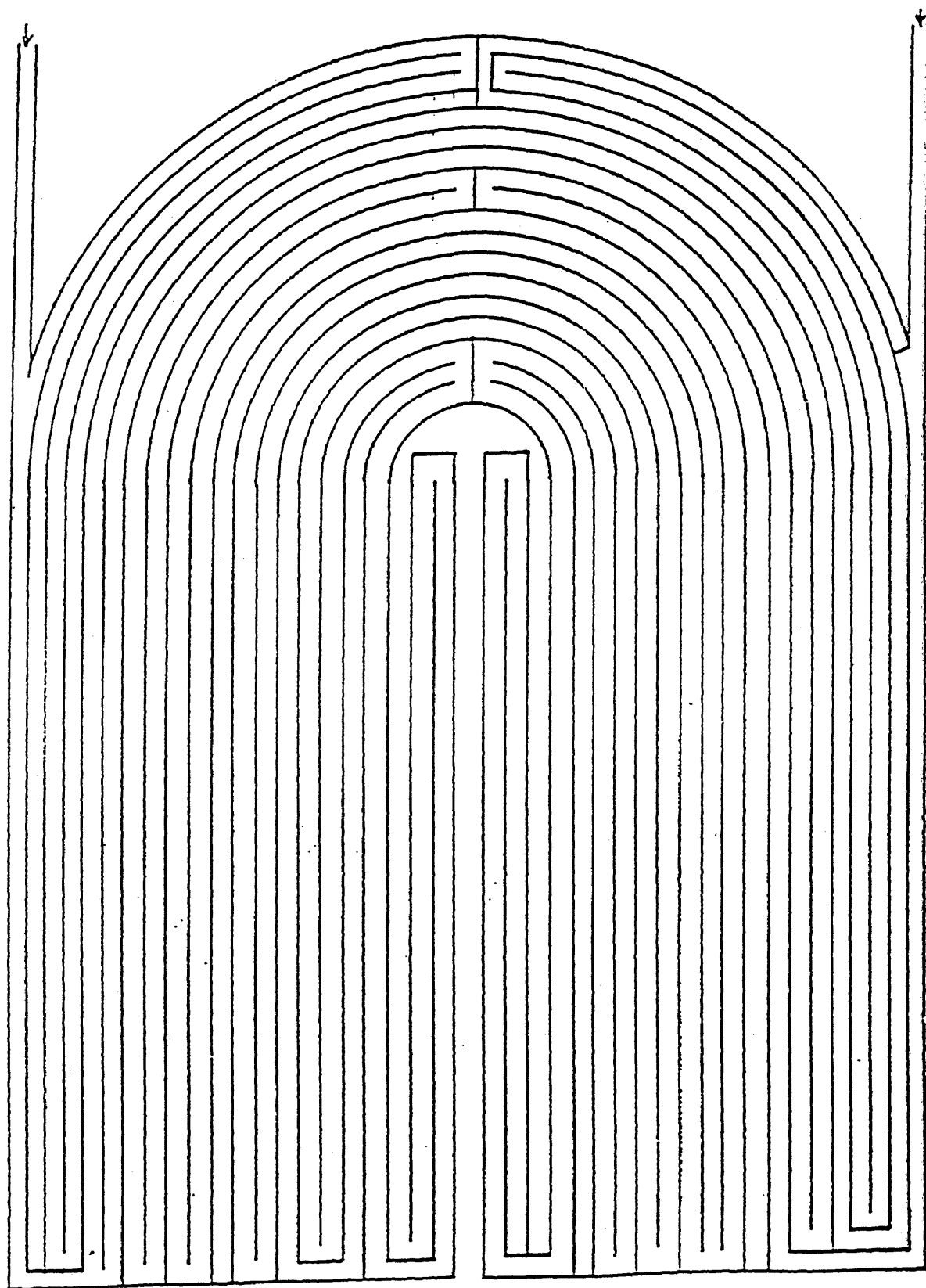   very poorly 1   2   3   4   5   6   7 very well

9. Of the two abilities, Cognitive Perceptual Integration and Spatial Conceptualization, which is more important to you personally?_____
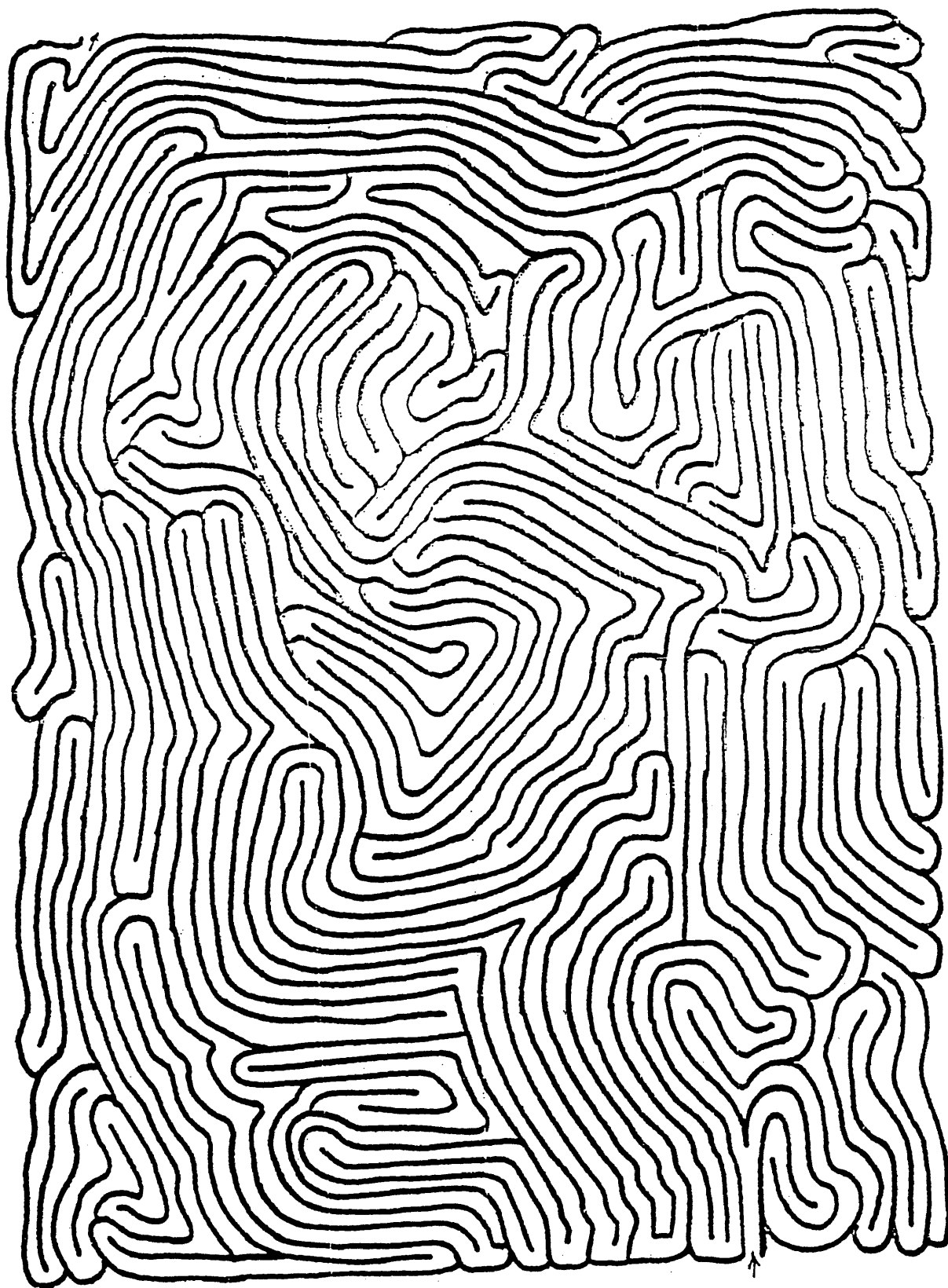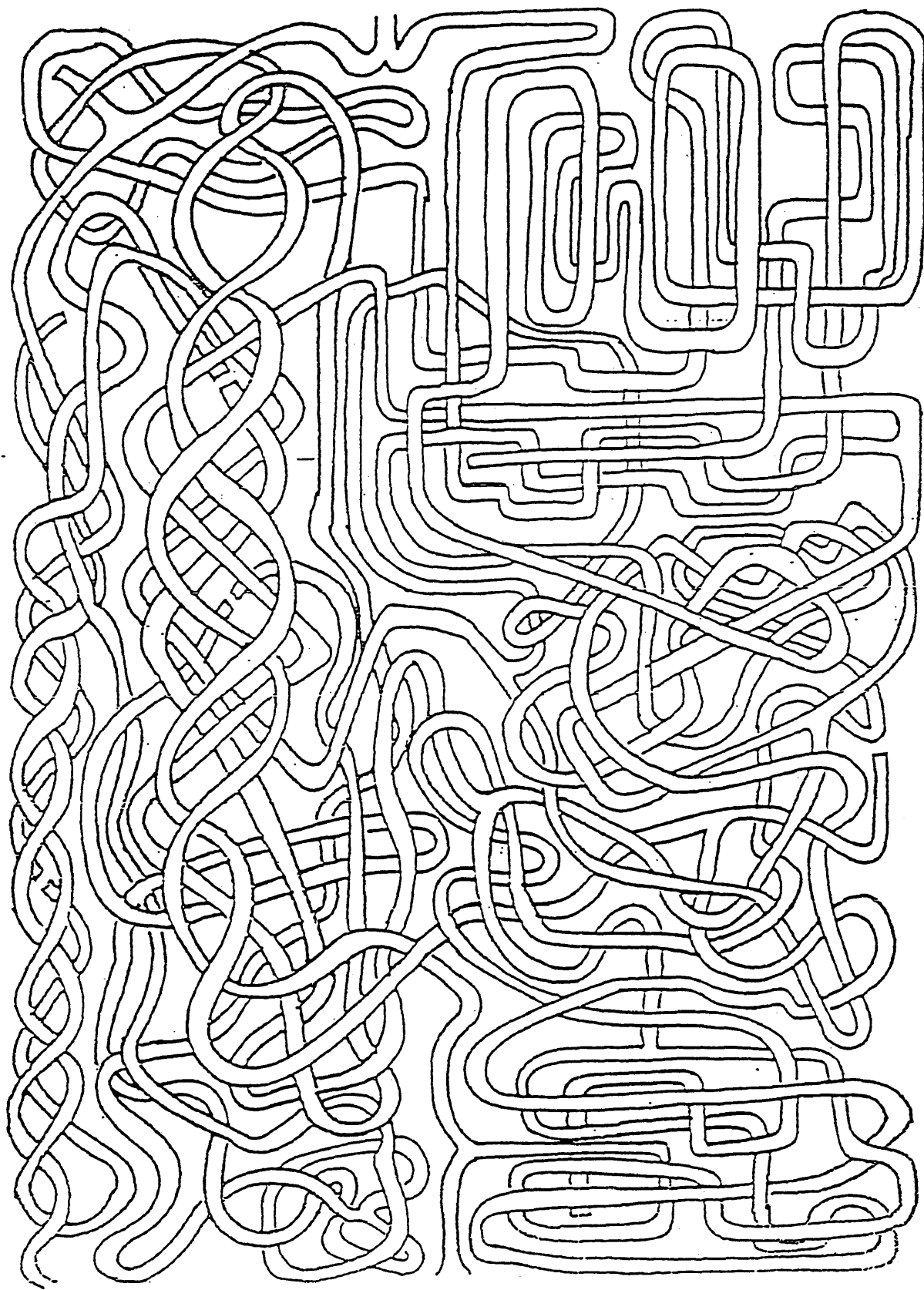
Appendix D

Mazes

Please complete the following mazes. Remember, I am
interested in the routes and strategies that you utilize.

START

Appendix E

Attitudes

Please consider each of the following issues, and for each, check the <u>one</u> statement that most closely describes the way you feel. We are interested in the way you personally feel, not the way you might think others would want you to feel, or the way other people might feel themselves. There are no right or wrong answers.

1. Belief in God (check one)
__ I strongly believe that there is a God.
__ I believe that there is a God.
__ I feel that perhaps there is a God.
__ I feel that perhaps there is no God.
__ I believe that there is no God.
__ I strongly believe that there is no God.

2. Nuclear Disarmament (check one)
__ I am very much opposed to nuclear disarmament.
__ I am opposed to nuclear disarmament.
__ I am mildly opposed to nuclear disarmament.
__ I am mildly in favor of nuclear disarmament.
__ I am in favor of nuclear disarmament.
__ I am very much in favor of nuclear disarmament.

3. Mandatory Drug Testing (check one)
__ I am very much in favor of mandatory drug testing in the workplace.
__ I am in favor of mandatory drug testing in the workplace.
__ I am mildly in favor of mandatory drug testing in the workplace.
__ I am mildly opposed to mandatory drug testing in the workplace.
__ I am opposed to mandatory drug testing in the workplace.
__ I am very much opposed to mandatory drug testing in the workplace.

4. English as the Official Language (check one)
__ I am very much opposed to English as the official language.
__ I am opposed to English as the official language.
__ I am mildly opposed to English as the official language.
__ I am mildly in favor of English as the official language.
__ I am in favor of English as the official language.
__ I am very much in favor of English as the official language.

5. The Legalization of Marijuana (check one)
___ I am very much in favor of legalizing marijuana.
___ I am in favor of legalizing marijuana.
___ I am mildly in favor of legalizing marijuana.
___ I am mildly opposed to legalizing marijuana.
___ I am opposed to legalizing marijuana.
___ I am very much opposed to legalizing marijuana.

6. Term Limits for Politicians (check one)
___ I am very much opposed to term limits for politicians.
___ I am opposed to term limits for politicians.
___ I am mildly opposed to term limits for politicians.
___ I am mildly in favor of term limits for politicians.
___ I am in favor of term limits for politicians.
___ I am very much in favor of term limits for politicians.

7. Prayer in Schools (check one)
___ I am very much in favor of prayer in schools.
___ I am in favor of prayer in schools.
___ I am mildly in favor of prayer in schools.
___ I am mildly opposed to prayer in schools.
___ I am opposed to prayer in schools.
___ I am very much opposed to prayer in schools.

8. Affirmative Action (check one)
___ I am very much opposed to affirmative action.
___ I am opposed to affirmative action.
___ I am mildly opposed to affirmative action.
___ I am mildly in favor of affirmative action.
___ I am in favor of affirmative action.
___ I am very much in favor of affirmative action.

9. Money (check one)
___ I strongly believe that money is not one of the most important goals in life.
___ I believe that money is not one of the most important goals in life.
___ I feel that perhaps money is not one of the most important goals in life.
___ I feel that perhaps money is one of the most important goals in life.
___ I believe that money is one of the most important goals in life.
___ I strongly believe that money is one of the most important goals in life.

10. Premarital Sex Relations (check one)
___ In general, I am very much opposed to premarital sex relations.

___ In general, I am opposed to premarital sex relations.
___ In general, I am mildly opposed to premarital sex relations.
___ In general, I am mildly in favor of premarital sex relations.
___ In general, I am in favor of premarital sex relations.
___ In general, I am very much in favor of premarital sex relations.

11. Mandatory HIV Testing (check one)
___ I am very much opposed to mandatory HIV testing.
___ I am opposed to mandatory HIV Testing.
___ I am mildly opposed to mandatory HIV testing.
___ I am mildly in favor of mandatory HIV testing.
___ I am in favor of mandatory HIV testing.
___ I am very much in favor of mandatory HIV testing.

12. Mandatory Prison Sentences (check one)
___ I am very much opposed to mandatory prison sentences.
___ I am opposed to mandatory prison sentences.
___ I am mildly opposed to mandatory prison sentences.
___ I am mildly in favor of mandatory prison sentences.
___ I am in favor of mandatory prison sentences.
___ I am very much in favor of mandatory prison sentences.

Appendix F

Attraction Measures

Please rate the other participant on the following scales by circling the most appropriate number on each scale to show what your impression of him/her is.

Sophisticated 1	2	3	4	5	6	7	Naive
Weak 1	2	3	4	5	6	7	Strong
Insensitive 1	2	3	4	5	6	7	Sensitive
Awkward 1	2	3	4	5	6	7	Poised
Cruel 1	2	3	4	5	6	7	Kind
Likeable 1	2	3	4	5	6	7	Unlikeable
Unskilled 1	2	3	4	5	6	7	Skilled
Vain 1	2	3	4	5	6	7	Modest
Competent 1	2	3	4	5	6	7	Incompetent
Altruistic 1	2	3	4	5	6	7	Egoistic
Incapable 1	2	3	4	5	6	7	Capable
Unscientific 1	2	3	4	5	6	7	Scientific
Unhelpful 1	2	3	4	5	6	7	Helpful
Unintelligent 1	2	3	4	5	6	7	Intelligent
Sociable 1	2	3	4	5	6	7	Unsociable
Tolerant 1	2	3	4	5	6	7	Intolerant
Persistent 1	2	3	4	5	6	7	Irresolute
Irresponsible 1	2	3	4	5	6	7	Responsible
Happy 1	2	3	4	5	6	7	Unhappy
Honest 1	2	3	4	5	6	7	Dishonest
Foolish 1	2	3	4	5	6	7	Wise

Unpopular 1   2   3   4   5   6   7 Popular

Knowledgeable 1   2   3   4   5   6   7 Uninformed

Moral 1   2   3   4   5   6   7 Immoral

Maladjusted 1   2   3   4   5   6   7 Adjusted

Please answer each of the questions below. Circle the appropriate number on each scale to show how you feel.

1. How willing are you to work with the other subject?

not at all   1   2   3   4   5   6   7 very willing
willing

2. How much are you looking forward to working with the other subject during phase two of this experiment?

not at all   1   2   3   4   5   6   7 very much

3. How willing would you be to work with the other subject in a future experiment?

not at all   1   2   3   4   5   6   7 very willing
willing

4. How much do you have in common with the other subject?

nothing at   1   2   3   4   5   6   7 very much
all

5. How much do you think that you will like working with the other subject?

not at all   1   2   3   4   5   6   7 very much

Post-experimental questionnaire

Please answer each of the following questions below. Circle the most appropriate number on the scale to show how you feel.

1. How well did you perform on the Cognitive Perceptual Integration task?

very poorly 1   2   3   4   5   6   7 very well

2. How satisfied were you with your performance on the Cognitive Perceptual Integration task?

not at all 1   2   3   4   5   6   7 very satisfied
satisfied

3. How well do you believe the Cognitive Perceptual Integration task actually shows whether a person has good or poor Cognitive Perceptual Integration abilities?

very poorly 1   2   3   4   5   6   7 very well

4. How important was it to you to do well on the Cognitive Perceptual Integration task?

not at all 1   2   3   4   5   6   7 very important
important

5. How well did the other subject perform on the Cognitive Perceptual Integration task?

very poorly 1   2   3   4   5   6   7 very well

6. How important do you think it was for the other person to do well on the Cognitive Perceptual Integration task?

not at all 1   2   3   4   5   6   7 very important
important

7. How similar are the other person's attitudes to your own?

not at all 1   2   3   4   5   6   7 very similar
similar

8. To what extent do you think the other person will agree with your attitudes about prayer in schools?

not at all 1   2   3   4   5   6   7 very much

9. To what extent do you think the other person will agree with your attitudes about affirmative action?

not at all 1   2   3   4   5   6   7 very much

Post-experimental questionnaire

Please answer each of the following questions below. Circle the most appropriate number on the scale to show how you feel.

1. How well did you perform on the Spatial Conceptualization task?

very poorly 1   2   3   4   5   6   7 very well

2. How satisfied were you with your performance on the Spatial Conceptualization task?

not at all 1   2   3   4   5   6   7 very satisfied
satisfied

3. How well do you believe the Spatial Conceptualization task actually shows whether a person has good or poor Spatial Conceptualization abilities?

very poorly 1   2   3   4   5   6   7 very well

4. How important was it to you to do well on the Spatial Conceptualization task?

not at all 1   2   3   4   5   6   7 very important
important

5. How well did the other subject perform on the Spatial Conceptualization task?

very poorly 1   2   3   4   5   6·   7 very well

6. How important do you think it was for the other person to do well on the Spatial Conceptualization task?

not at all 1   2   3   4   5   6   7 very important
important

7. How similar are the other person's attitudes to your own?

not at all 1   2   3   4   5   6   7 very similar
similar

8. To what extent do you think the other person will agree with your attitudes about prayer in schools?

not at all 1   2   3   4   5   6   7 very much

9. To what extent do you think the other person will agree
with your attitudes about affirmative action?

not at all 1   2   3   4   5   6   7   very much

Appendix G

Debriefing

-Do you have any questions about anything at all?

-What did you think about the CPI (SC) task I had you do and the questionnaires I had you fill out?

-Did you think that at any point in the study there was more to it than what I was telling you? If so, what?

Actually, there was more to this than what I was telling you. What I was really looking at was if similarity leads to attraction or dissimilarity leads to repulsion. Some researchers believe that if you know that a stranger has similar attitudes to you, you will like that person better or be attracted to that person. You would want to know this person and be friends with him or her. However, other researchers believe that knowing one has similar attitudes to you has nothing to do with attraction. They believe that it is dissimilarity that leads to repulsion. If you discover that someone has different attitudes from your own, you don't want to know that person and are repulsed by them. I'm trying to find evidence that supports either the attraction or the repulsion hypotheses.

To test this, before the study I decided whether you'd get similar or dissimilar attitudinal information about your partner and then gave you a questionnaire which they supposedly filled out. The other questionnaires measured

whether you found your partner attractive after finding out that he or she was similar or dissimilar to you.

Furthermore, the CPI (SC) task I gave you is fake. I had to use this because I needed a task that you had never heard of and also had no idea how you'd perform. Do you think that you did as well (poorly) on the test as I said you did?

Actually, I randomly made up your performance score before the start of the study. The reason I did this is because according to the self-evaluation maintenance model, you want to think of yourself as a competent person. People either compare their performance to others or reflect in the performance of others. Reflection is when one "basks in the reflected glory" of others. By doing this, you feel good about yourself by just being associated with a successful person. For instance, if your brother is an Olympic athlete, you might always find a way to bring up "your brother, the Olympic athlete" in conversations with others.

Whether you'll compare or reflect depends on closeness, performance and personal relevance. For example, consider that being an Olympic athlete is important to you. If your friend makes the U.S. Olympic team and you don't, you'd probably compare your performance to him or her. You'd also probably decide that being an Olympic athlete is no longer that important to you. If being an Olympic athlete wasn't important to you, you'd probably go around telling everyone

how your friend made the U.S. Olympic team. That would be an example of reflection. Do you have any questions about the SEM model?

This is why I had to give you bogus feedback on your performance. If you compare yourself to someone and they did better than you on something that's important to you, you might not be particularly attracted to that person.

So, what I'm expecting to find is that if you found out your partner has similar attitudes to you and you also did better than your partner on a relevant task, you'd have high liking for your partner. On the other hand, if you found out your partner had dissimilar attitudes to you and your partner did better than you on a relevant task, you'd have low liking for your partner. So, if you get two pieces of positive information, you'll have more liking for your partner and if you get two pieces of negative information, you'll have lower liking for your partner. However, I'm not sure what will happen in the middle if you know your partner has similar attitudes to yours, but he or she outperforms you on a relevant task. Or, if your partner has dissimilar attitudes to yours, but you outperform him or her on a relevant task. Hopefully, this study will shed some light on that uncertain middle area.

Do you have any questions at all about anything in this study?

If you want the final results of the study, just put your name and address on one of these labels. Thanks again for participating.

VITA

John Adam Nimpfer

Born on April 13, 1973 in McDonald, Pennsylvania. Graduated from Canon-McMillan High School in Canonsburg, Pennsylvania in June, 1991. Received Bachelor of Science with a major in Psychology from Carnegie Mellon University in May, 1995. Entered the Master of Arts program in Psychology at the College of William & Mary in August, 1995.