

FACTORS DETERMINING THE PERCEPTION OF A HELPER

by

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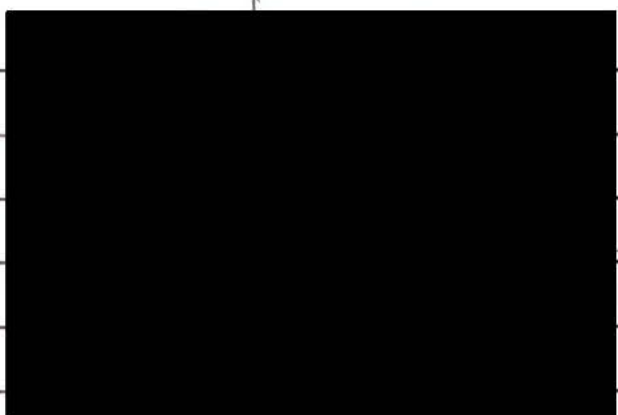
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To my parents

Supervisor: Dr. Ronald A. Hoppe

Abstract

The purpose of this study was to show that a recipient of help liked the helper better a) when the perceived motive of the helper was altruistic than when it was ulterior, b) when help given did not imply incompetence than when it did, and c) when the recipient perceived himself as being able to reciprocate than when he perceived himself as being unable to do so. A 2 x 2 x 2 design was employed to test these three hypotheses. 96 female and 96 male university students were used in Experiment 1 and Experiment 2 respectively. Subjects, run individually, were told that he and another subject (the confederate) were to work on different tasks, and were also told that their score on their task was dependent (ulterior motive condition) or not dependent (altruistic motive condition) on the other subject's score, and that they could (capable to reciprocate condition) or could not (incapable to reciprocate condition) help the other subject in the second task. Then subjects were given help by the other subject, either with the implication that the subjects were incompetent (incompetence condition) or without such an implication (competence condition). Subjects were asked to rate the other subject on a series of attraction scales. The results showed that subjects rated the confederate favourably regardless of which experimental condition they were in. Implications of these results are discussed.



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Table of Contents

	Page
Abstract.....	i
Acknowledgment	ii
List of Tables	v
1. Review of Literature	1
Relevant Studies	1
Statement of the Problem and Hypotheses	4
Relevant Theories and their Predictions	5
Re-statement of the Problem and Hypotheses	23
2. Experiment One	25
Method	25
Results	29
Discussion	40
3. Experiment Two	52
Method	53
Results	60
Discussion	66
4. Discussion	74
5. Theoretical Considerations	89
6. Suggestions for Future Research	97
Bibliography	101
Appendices	
1. Tasks for Experiment 1	105
2. Instructions for the Confederates	106
(Experiment 1)	

Table of Contents (contd.)

	Page
3. Dependent Measures for Experiment	107
4. Measures testing effectiveness of the	108
Independent Variables - Experiment 1	
5. Analysis of Variance Tables for Experiment 1	109
6. Attitude-Interest Analysis Test	113
(Masculinity-femininity test)	
7. Tasks for Experiment 2	118
8. Instructions for the Confederates- Experiment 2 ...	120
9. Instructions for Subjects - Experiment 2	121
10. Dependent Measures for Experiment 2	125
11. Measures testing effectiveness of the	126
Independent Variables - Experiment 2	
12. Analysis of Variance Tables for Experiment 2	128
13. Analysis of Variance Tables for Experiment 2	147

List of Tables

		Page
Table I	Mean ratings of subjects' responses to the three questions testing the effectiveness of the manipulations of the independent variables	30
Table II	F Values of Four Way Analysis of Variance of four Favourability ratings of the Confederate	32
Table III	Summary of Analysis of Variance of Combined Attraction scores for the Confederate	34
Table IV	Summary of Analysis of Variance of Liking scores for the Confederate	35
Table V	Summary of Analysis of Variance of Friendliness scores for the Confederate	36
Table VI	Summary of Analysis of Variance of Desirability as a Partner scores for the Confederate	37
Table VII	Mean favourability ratings for the Confederate and F Values for the main effects and interactions	39
Table VIII	Analysis of Covariance of Combined Attraction scores for the Confederate with Masculinity-feminity scores as the covariate	45

List of Tables (contd.)

	Page
Table IX	46
Analysis of Covariance of Liking scores for the Confederate with Masculinity-feminity scores as the covariate	
Table X	47
Analysis of Covariance of Friendliness scores for the Confederate with the Masculinity-feminity scores as the covariate	
Table XI	48
Analysis of Covariance of the Desirability as a Partner scores for the Confederate with Masculinity-feminity scores as the covariate	
Table XII	61
Mean ratings of subjects' responses to the three questions testing the effectiveness of the manipulations of the independent variables	
Table XIII	67
A Summary of Results - Experiment 2	
Table XIV	68
Mean favourability ratings for the Confederate and F Values for the main effects	

It is generally acknowledged and believed that people like those who have been nice to them and who have helped them. However, this is not always true. Help is not always appreciated, and the helper liked. It is not uncommon for us to witness both, help and the helper, being resented by the recipient of the help. A typical and well-known example of such incidences is the apparent failure of the foreign aid policy of the American Government to elicit positive responses. The American Government budgets between two to four billions a year for foreign aid. However, in many instances, the aid does not seem to have been appreciated as one would expect it to be. Rather than positive regard, the aid seems to have produced hostility and resentment towards Americans. This kind of negative behaviour towards the helper leads to the examination of the different variables that are involved in help receiving situations, and how these variables affect the behaviour or reactions of the recipient and his perception of the helper. Such an examination might help in the identification of the more important variables affecting such behaviour, and the alleged effect of these variables may be tested in a controlled experimental setting. It is hoped that such an attempt would result in a better understanding of and an explanation for negative behaviour toward a helper.

Relevant Studies

Identification of Variables to be Examined

Situations in which help is received are so varied and complicated that it is very difficult, if not impossible, to enumerate and examine all the possible variables that are involved in these various situations.

But there are a few which have been examined in previous studies. One is the perceived cost of the help to the helper (Pruitt, 1968; Schopler and Bateson, 1965) and results of these studies showed that subjects were more willing to reciprocate help when they perceived that the help was costly to the helper than when they perceived that the help was not costly. Another variable is the value of the help to the recipient (Pruitt, 1968), and it was found that the willingness to reciprocate help was proportional to the value of the help to the recipient. Then there is the variable of the locus of causality, meaning whether the help needed is beyond the control of the person needing the help or whether it is due to the fault of the person (Schopler and Matthews, 1965, Horowitz, 1968). These studies found that when the locus of causality of the person needing help was perceived to be internal, other people were less willing to help him than when the locus of causality was external. Another variable that has been examined quite often is whether the help given was voluntary or compulsory (Thibaut and Riechen, 1955; Frisch and Greenberg, 1968; Goranson and Berkowitz, 1966), and results showed that when help received was given on a voluntary basis, the recipient was more willing to reciprocate than when it was given on a compulsory basis.

Among the variables that have been studied and investigated, the most important and the most relevant variables appear to be 1) the motive of the helper, 2) the possible implication of incompetence, and 3) the recipient's perceived capability to reciprocate help.

Motive of the helper. Previous research has shown that the perceived motive of the helper affects the recipient's liking for him.

Lerner and Lichtman's (1968) results indicated that subjects who perceived help as an altruistic act were attracted to a partner, but this was not true for those who perceived help as having an ulterior motive. This finding suggests that the perceived motive of the helper affects the recipient's attitude toward him. Similar results were found by Tesser, Gatewood and Driver (1968). They showed that gratitude felt for the helper was greater when the help was done to benefit the recipient than when the help was done to benefit both the helper and the recipient. All of these indicate that if the helper is perceived by the recipient as having an ulterior motive for the action, he will be resented and disliked by the recipient, while if the helper is not perceived as having an ulterior motive for his action, the recipient will be attracted to him instead.

Implication of incompetence. Berkowitz and Connor (1966) found that subjects who had been given a failure experience, as compared to subjects who had been given success, were less willing to help the other person who was greatly in need of their assistance. Also, the former subjects expressed a reliably greater dislike for the experiment and the person who needed their assistance. Berkowitz concluded that the general pattern of the findings seem to suggest that the frustrated subjects, as compared to successful subjects, were more resentful of the felt obligations, and were also resentful of the help and the people giving the help. In a situation where help implies incompetence on the part of the recipient, the recipient feels as if he has failed on the task. Therefore, similarly, the recipient feels frustrated and resents both the help and the person who helped. In a situation where there is

no such implication in the help given, the recipient does not feel as frustrated, and is thus not as resentful of the help and the person giving the help. This also corresponds to the general belief that we are resentful of people who make us feel incompetent.

Capability to reciprocate. The recipient's capability to reciprocate help was studied by Greenberg (1968), who found that a person was more willing to ask for needed help, and subsequently became indebted, when he anticipated that he could reciprocate the help than when he did not anticipate so. Greenberg conceptualizes indebtedness as a state of tension having motivational qualities, and a special case of cognitive dissonance which can be reduced by various means; and reciprocity behavior is one. He sees indebtedness as an aversive state. Therefore, a person who knows that he will not be able to reciprocate, i.e., to reduce indebtedness, will not be willing to get into the state of indebtedness, whereas one who knows he can reduce indebtedness by reciprocating is not reluctant to do so. This suggests that if a person is already in a state of indebtedness and knows that he is unable to reduce indebtedness through reciprocity behaviour, he will resort to other means of reducing this tension, such as attributing negative dispositions to the helper, and become unattracted to him. But, a person who is already in a state of indebtedness and knows that he is able to reciprocate, will not resent the helper, and will be attracted to the helper.

Statement of the Problem and Hypotheses

The above discussion of the various studies and their findings pertinent to the problem in question, i.e., what are the factors determining attraction of a recipient of help to the helper, suggests, these

hypotheses for the three variables: the motive of the helper, the implication of incompetence, and the capability to reciprocate help.

1) A person is more attracted to the helper or the donor of a favour when he perceives the act as being without an ulterior motive than when he perceives the act as being with an ulterior motive.

2) A person is more attracted to the helper or the donor of a favour when the help or favour does not imply incompetence on the part of the recipient than when it does.

3) A person is more attracted to the helper or the donor of a favour when he is able to return the help or favour than when he is not able to do so.

The interaction effects of the above variables, in particular, the interaction between the factors of the motive of the helper and the recipient's capability to reciprocate is a further concern of the present research.

Relevant Theories and Their Predictions

An examination of current relevant theories of social psychology may yield differential hypotheses about the effects of these three variables and their interaction effects. The theories that will be discussed here are exchange theories, in particular, Homan's theory of distributive justice, Gouldner's theory of 'norm of reciprocity', Festinger's theory of cognitive dissonance, Brehm's 'reactance' theory, and Davis and Jones's theory of correspondent inference. The content of these theories will be discussed first, and we will then concentrate on how each of these theories can be used to explain and predict the effect of each of the three variables on help receiving behaviour.

Social Exchange Theory

Social interactions have been viewed by social theorists as a social exchange analogous to economic exchanges in which people are affected by the ratio of rewards and costs. This viewpoint basically contends that men form social associations because of the rewards they think these social associations will bring. Blau (1964) for example, views social associations as an exchange of activity, rewarding or costly, between at least two persons. To him, social exchange is an intermediate case between economic transactions of pure calculation of advantage and love relations of pure expression of love and mutual attraction. Social exchange involves unspecified obligations, the fulfillment of which depends on trust. He also believes that a person who obtains benefits from his associates is obligated to repay them in some way. Another social exchange theorist Homans (1958) stated, interaction between persons is an exchange of goods, material and non-material. According to him, persons who give a great deal to others try to get as much from the others as they have given, and persons who get much from others are under pressure to return much to them. This process tends to balance the exchanges. In support of the theory, Homans offers Gerard's study (1954) where it was found that more of the subjects who believed that the members of the group could give them much, in this case, liking, shifted their opinion toward the group's opinion than those who believed that they could not get much from the members of the group. Homans interpreted this change in opinion in accordance with the group's opinion as the subjects' means of balancing the exchange.

Homans also introduced a familiar concept from economics, namely profit equals reward less cost. He holds that a person will try to change his behaviour when profit is least, and tend to stabilize his behaviour when profit is greatest. However, Homans suggests that, getting the greatest profit is not the only and most important condition that governs social interactions. He feels that striving for equity with other people is more important. He believes that many interactions between people are governed by the desire for 'distributive justice'. Justice is obtained when each person in the interactions gets rewards proportional to his costs. Influenced by this desire for distributive justice, each individual, instead of just exploiting the other person, wants to get what he thinks is fair for him, and wants the other person also to get what is right and proper. This concept of social interactions, as a form of social exchange governed by the desire for 'distributive justice', is very useful in explaining individuals' reactions to help received under different conditions.

Norm of Reciprocity

Instead of explaining social interactions in terms of 'social exchange' of 'distributive justice', Gouldner (1960) invoked the notion of 'the norm of reciprocity'. He postulated that there is a 'universal' norm of reciprocity which demands that people should help those who have helped them and should not injure those who have helped them. This norm inhibits exploitative relations and obliges the person who has received a benefit to repay it. However, Gouldner holds that the norm of reciprocity is not unconditional. The reciprocity norm imposes obligations only contingently, i.e., in response to the benefits conferred by others,

and moreover, the obligations are contingent upon the imputed value of the benefits received. According to Gouldner, the value of the benefit is proportional to and varies with factors such as the intensity of the recipient's need, the resources of the helper, the motive of the helper, and the nature of the constraints which are perceived to exist or to be absent. Such 'reciprocity' behaviour was shown in a study by Goranson and Berkowitz (1966). It was found that subjects who had received prior help worked harder for the person who had helped them than for another person. This was especially true when the prior help received had been voluntary as compared to compulsory help.

These two theories are very similar. Both theories emphasize the obligation to reciprocate help. But the exchange theory, in particular that of Homans, stresses that the amount of return to be roughly equivalent to what has been received, while Gouldner's norm of reciprocity only stresses reciprocity without specifying what the 'return' should be.

Theory of Cognitive Dissonance

Festinger's theory of cognitive dissonance (1957) has been used by many to explain social interactions. Festinger holds that cognition can be decomposed into elements or clusters of elements, and pairs of elements can exist in irrelevant, consonant, and dissonant relations. Basically, his theory of cognitive dissonance holds that the existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance. The strength of the pressures to reduce dissonance is a function of the magnitude of the dissonance. Festinger states that there are three ways of reducing dissonance: 1) by changing one or more of the elements involved

in dissonant relations, 2) by adding new cognitive elements that are consonant with the already existing cognitions, and 3) by decreasing the importance of the elements involved in the dissonant relations. Therefore the operation of these pressures to reduce dissonance manifests itself in behaviour changes, changes of cognition, and circumspect exposures to new information and new opinions.

The cognitive dissonance theory has been applied to a wide range of phenomenon, one of which is social interactions. Adams (1965), for example, discusses the desire for distributive justice in terms of cognitive dissonance. He postulates that inequity exists for a person when he perceives that the ratio of his outcomes to inputs and the ratio to another person's outcomes to inputs are unequal. When a person perceives that inequity exists, tension is created in him. The tension is proportional to the magnitude of inequity present. This tension motivates the person to reduce or eliminate it, and the strength of the motivation is proportional to the tension created. In short, the presence of inequity motivates a person to reduce inequity and achieve equity.

The operation of the theory of cognitive dissonance in social interactions can be witnessed in various studies (Goranson and Berkowitz, 1966; Berkowitz and Friedman, 1967; Berkowitz, 1968; Tesser, Gatewood, and Driver, 1968; Lerner and Lichtman, 1968; and Greenberg, 1968) where subjects who were in a state of dissonance resulting from inequity would be motivated to reduce dissonance by reciprocating help or cognitive restructuring, while subjects who were not in a state of dissonance would not be motivated to do so.

All these theories we have discussed so far are based on the idea

equilibrium. The notion of 'distributive justice' stresses that people give as much as they have received or expect to receive as much as they have given. The 'norm of reciprocity', also stresses the importance of helping those who have helped us and not hurting those who have helped us. Again, the idea of equilibrium is used. The theory of cognitive dissonance is obviously based on the same concept. It holds that when two or more cognitions are in dissonance, i.e., not in equilibrium, a psychological stress is created which motivates the person to reduce dissonance and re-establish consonance, a form of equilibrium. Although, as we have just seen, these three theories are based on the same notion, that of equilibrium, they approach equilibrium from two different angles. The first two theories, i.e., Homans' 'distributive justice' and Gouldner's 'norm of reciprocity' stress equilibrium in the relationship between the helper and the recipient, while Festinger's theory of cognitive dissonance stresses equilibrium within the individual himself. With the first two theories, the emphasis is on equating what is given with what is taken. Even when it is not possible to return something that is identical to what has been received, the recipient has to give something, maybe in a different form, to the helper in order to attain equilibrium. But, with the theory of cognitive dissonance, as long as equilibrium is attained within the individual himself, i.e., as long as he feels that his action is justified, regardless of whether he reciprocates help or does not reciprocate help, it does not matter whether or not inequilibrium exists between himself and the person who helped him.

In short, the theory of cognitive dissonance focuses more on the individual's cognitions whereas the other two emphasize more interactions

among individuals. This difference may lead these two groups of theories to make different predictions about the three variables of interest and these predictions will be discussed later in this chapter.

The rest of the theories that will be discussed here are not directly 'equilibrium' oriented. They all have different emphases. There is no one unified idea that underlies all these theories.

Reactance Theory

Rather than trying to explain why individuals return help or favour, Brehm (1966) tried to explain why individuals do not return help or favours. His theory of 'psychological reactance' is derived from Festinger's theory of cognitive dissonance. His theory was originally an attempt to test some of Festinger's predictions. It was first applied to postdecisional attitude change. His theory states that, for a given individual at a given time, there is a set of behaviours in which he believes he is free to engage. Any reduction or threat of reduction in this set of behaviours arouses a motivational state, 'reactance', which is directed toward re-establishing lost or threatened freedom. For example, if a person thinks that he is free to engage in behaviours X, Y, and Z, and then behaviour X was made impossible, he would experience reactance and would be motivated to recover his freedom to engage in X. On the other hand, if he is forced to engage in X, his consequent reactance will motivate him to avoid X and attempt Y and Z. Brehm also holds that the amount of reactance experienced is a direct function of how important it is for the individual to have that particular freedom. In other words, the more important the freedom and the threatened behaviours are, the more the individual will attempt to re-establish the

freedom. Extending this concept to interpersonal relations, Brehm and Cole (1966) state that help tends to put pressure on the help recipient to return the help. This pressure to return help is a threat to the freedom of the recipient in his relation with the helper. Therefore, the recipient will experience reactance, the amount of which is dependent on how important it is to him to be free of such pressures. To test their hypothesis, they did a study in which the importance of threatened freedom was manipulated by telling the subjects either that accurate judgments were important or that accurate judgments were not important. Evidence showed that when the threatened freedom was important, a greater percentage of subjects who had not received any help gave help than subjects who had received help. But when the threatened freedom was not important, the reverse was true. More subjects who had received help helped than subjects who had not received help. This lends support to the proposition of the theory.

Although the 'reactance' theory does not emphasize the attainment of equilibrium as the motivating factor behind social interactions, since it is derived from the theory of cognitive dissonance, it is basically derived from an 'equilibrium' oriented theory. In saying that when a person's freedom to engage in whatever behaviour he wishes is threatened, a motivational state, 'reactance', is aroused which results in an attempt to re-establish the lost or threatened freedom, Brehm and Cole are recognizing the notion of equilibrium. They are, in fact, saying that when a person's freedom to act is disturbed, an imbalance is created, i.e., a motivational state which Brehm calls 'reactance', which results in an effort to re-establish the equilibrium.

Theory of Correspondent Inference

Another approach to social interactions is Davis and Jones' (1965) theory of correspondent inference. They try to explain actions by saying that in any interactions, a person (i.e., the perceiver as Davis and Jones call him) assigns intentions and make inferences about another person's (i.e., the actor) actions. In other words, they attempt to explain a person's inferences about what another person was trying to achieve by a particular action. They hold that when a person infers personal characteristics of the other person as a way of accounting for his action, these personal characteristics may correspond in various degrees to the behaviour they intended to explain. Davis and Jones state that all actions have 'effects' in the environment, and any effect of a person's action can be considered a potential reason for this person to have engaged in that action. To infer that the action occurred for X reason is to specify the intention of the person who acted, and indirectly an underlying disposition. Both intentions and dispositions are attributes of the person responsible for the action. Davis and Jones also extend the concept of correspondence to cases where the choice of action of a person has significant rewarding or punishing implications for another person. A person's choice is hedonically relevant for another person if it thwarts or promotes the latter's purposes, and an action is personalistic to this other person if he believes that he is the intended consumer of the effects produced by the action. When the action is negative, the person to whom this action is directed avoids the person who acted, and when the action is positive, the former displays approach behaviour, personal openness and reciprocation.

Since in this study the interest lies in positive actions only, discussion will be concentrated on positive actions. Davis and Jones hold that positive actions have two classes of effects. Positive actions such as compliments, agreements, and favours may validate another person's self-concept, reduce his uncertainties, and offer support against antagonists. Alternatively, or in addition, such actions may have the effect of obligating that other person to benefit the person who acted positively in return. If the first class of effects is most salient, the other person will attribute to this person the intention of expressing his true feelings, and will thus draw inferences to dispositions such as candor, friendliness, likeability and generosity. In short, the other person's evaluation of this person who acted will be positive. If, on the other hand, the second effect is salient, this person may be seen as manipulative, self-seeking, conforming, lacking in candor, etc. If the other person does not control any resources which are important to the person who acted, then effects such as 'validating the self-concept' will be salient rather than the effect of 'obligating the perceiver to benefit the actor in return'. However, if the other person does control resources important to this person, it will be hard for the other person to decide whether he is the target of honest compliments or is merely the target of an ingratiation attempt. Depending on the circumstances, the other person may infer flattering or manipulative intent and assign unfavourable dispositions, or he may infer benevolent intentions reflecting favourable dispositions.

Offering as one of the few illustrations of how their theory might account for findings of similar situations, Davis and Jones quoted a

study by Jones, Gergen, and Jones (1963) which showed that subjects who had received written compliments either from their upper-classmen or their lower-classmen, attributed greater sincerity to the former than the latter. Upper classmen were presumably perceived as less ingratiating than lower classmen.

Results of various studies on help receiving behaviour (Lerner and Lichtman, 1968; Schopler and Thompson, 1968; Goranson and Berkowitz, 1966) can be explained by this theory. When subjects perceived the helper as intending to obligate them to return, they disliked the helper or became less willing to return help. But when subjects did not have such a perception of the helper, they were more willing to return help, and they found the helper more attractive.

Predictions based on Theories

We will now turn to examine each of the three variables in the context of these theories. Most of these theories do not make direct predictions about these variables, and predictions that will be made about them are based on interpretations of these theories.

Motive of the helper. All of the five theories, Homans' theory of 'distributive justice', Gouldner's theory of the 'norm of reciprocity', Festinger's theory of cognitive dissonance, Brehm's 'reactance' theory, and Davis and Jones' theory of correspondent inference, would make the same prediction concerning the variable of the motive of the helper. They would all predict that a person is more attracted to the helper or the donor of a favour when he perceives the act as being without an ulterior motive than when he perceives the act as being with an ulterior motive.

Although the prediction is the same, the reasoning based on the theory that is used to arrive at the prediction is different for each theory.

In the case Homans' theory of 'distributive justice', we would expect that when the motive of the helper is perceived as being altruistic, the recipient feels that the helper has given and has not received anything in return. In order to attain 'distributive justice', the recipient feels that the helper should also get something in return, and thus he feels pressured to return help, and become attracted to the helper. But, if the motive is perceived as being ulterior, the recipient feels that the helper has already been rewarded through the act of helping, and 'distributive justice' has already been attained. Thus, the recipient does not deem it necessary to reciprocate the help in any form.

The reasoning used in Gouldner's 'reciprocity norm' is very similar to that of Homans' theory of 'distributive justice'. As Gouldner stressed, reciprocity is not unconditional, and the obligation of repayment is contingent upon the imputed value of the benefit received. The value of the benefit, and hence the debt, is in proportion to and varies with certain other factors. One of these factors that was mentioned was the motive imputed to the helper. Gouldner did not make any actual prediction concerning this factor, but on the basis of his theory we would expect that when the helper is perceived to be without the thought of gain, the value of the benefit and hence the debt is greater than when the helper is perceived to be with thought of gain. Therefore, the obligation to reciprocate is greater in the former case than in the latter case, and so is the liking for the helper.

On the basis of the theory of cognitive dissonance, we would predict that when a person receives help from another person and no ulterior

motive is perceived, the recipient feels grateful and attracted to the helper, and wants to reciprocate the help since the cognition of having received help and the cognition of being attracted to the helper are in consonance. But, if the act of help is perceived as having an ulterior motive, the cognition of being grateful and attracted to the helper becomes dissonant with the cognition of having received help with an ulterior motive. This motivates the recipient to reduce dissonance, and the most probable way is to create a dislike for the helper. This results in a less favourable attitude toward the helper than in the former case.

Similarly, on the basis of Brehm and Cole's 'reactance' theory, we would expect that when help is done with an altruistic intention, although it arouses a certain amount of obligation or demand on the recipient, the demand is not perceived as being unwarranted, and thus the recipient does not resist it actively and not as much. In other words, under such a condition, reactance is not created and the recipient is grateful to the helper. But, when help is done with an ulterior intention, the demand imposed by the help on the recipient is perceived as being unwarranted. Consequently, the help creates 'reactance'. In order to re-establish the threatened freedom, i.e., the freedom of not being indebted to the helper, the recipient engages in the threatened behaviour, and does not feel indebted to the helper nor attracted to him.

In extending the theory of correspondent inference to the factor of the motive of the helper, we would predict that, since help is a relevant and personalistic positive action, in the condition where the motive of the helper is perceived as being altruistic, the circle con-

taining the intended effects of the action does not contain the effect of 'obligating the perceiver to benefit the actor in return', and thus the actor is perceived as intending to perform a gracious act. Consequently, correspondent inferences will be drawn to positive dispositions such as likeability and maturity. But, in the condition in which the helper is perceived to have an ulterior motive, the effect of 'obligating the perceiver to benefit the actor in return' is made salient, and the helper is seen as manipulative. Also, the correspondence of inferences to favourable dispositions will be reduced while correspondence of inferences to unfavourable dispositions will be increased.

Implication of incompetence. Again, all of the five theories would make the same prediction about the factor of the implication of incompetence that a person is more attracted to the helper or the donor of a favour when the help does not imply incompetence on the part of the recipient than when it does, though based on a different reasoning.

The theory of 'distributive justice' would predict that when help implies incompetence, although the recipient is being rewarded, the cost of being made to feel incompetent is great, resulting in very little profit, if any at all. Following the principle of 'distributive justice', since the recipient has not received much profit, he does not feel that the helper should receive any reward either. Thus, the recipient does not feel obligated to reciprocate nor to like the helper. But, when help does not imply incompetence, the recipient gains reward without having to pay the cost of feeling incompetent, and profits from the help. Consequently, in order to establish 'distributive justice', the recipient feels pressured to reciprocate the help by helping and liking the helper.

Similarly, on the basis of the norm of reciprocity, we would expect that when a person receives help, he is obligated to reciprocate. But when incompetence is implied by the help, a negative element enters the obligation to reciprocate, and thus, a less amount of obligation is to be expected than when no incompetence is implied. This smaller amount of obligation results in a less willingness to return the help, and also less attraction for the helper.

The theory of cognitive dissonance would reason that when the help received implies incompetence, dissonance is created because the cognition of having received help that implies incompetence and the cognition of being grateful to the helper are dissonant. This motivates the recipient to reduce dissonance resulting in a dislike for the helper, a cognition which is consonant with the cognition of having received help which implies incompetence. But when the help does not imply incompetence, the cognition of having received help and the cognition of being grateful to the helper are in consonance, and thus the recipient feels grateful to the helper.

On the other hand, the theory of psychological 'reactance' would predict that when help implies incompetence, the demand imposed by the help becomes unwarranted. This results in the arousal of 'reactance'. In order to re-establish the threatened freedom, the recipient becomes neither indebted nor grateful to the helper. But when help does not imply incompetence, the demand imposed is warranted, and thus only minimum 'reactance' is aroused. As a consequence, there is no necessity to re-establish the threatened freedom by being ungrateful to the helper. The recipient can remain favourable to the helper.

On the basis of the theory of correspondent inference, it would be expected that when help implies incompetence, the recipient attributes to the helper the intention to belittle him, and thus draws inferences to dispositions such as conceit, unkindness etc. In short, the receiver's evaluation of the perceiver is negative. On the other hand, when help does not imply incompetence, the receiver attributes to the helper the intention to express his true feelings, and thus draws inferences to dispositions such as friendliness, generosity. The recipient's evaluation of the helper is positive.

Capability to reciprocate. Unlike the case of the two previous factors, the theories under discussion would make different predictions concerning the factor of the capability to reciprocate. As mentioned earlier that the emphasis of Homans' theory of 'distributive justice' and Gouldner's theory of 'norm of reciprocity' on achieving balance between the recipient and the helper and the emphasis of Festinger's theory of cognitive dissonance on achieving an internal balance may lead these theories to make different predictions concerning the three variables under study. Because of this difference, contrary predictions concerning this particular factor under discussion can be made, on the basis of these two groups of theories.

The theory of 'distributive justice' and the theory of 'norm of reciprocity' would predict that a person is more attracted to the helper or the donor of a favour when he is unable to return the favour or help than when he is able to.

The reasoning of the first theory is that in receiving help from another person, the recipient feels pressured to give something in re-

turn. But, if he is not allowed to return the help, an inequilibrium will be created, and in order to restore 'distributive justice', the recipient reciprocates in another form, i.e., by giving the helper his liking. However, when returning help is possible and permissible, there is less pressure for the recipient to like the helper since 'distributive justice' can be attained by returning the help.

The reasoning of the second theory is similar. The norm of reciprocity requires a person who has been helped by another person to feel obligated to return the help. When the person is not allowed to reciprocate the help directly by returning the help, he seeks another means of reciprocating, which, in this case, takes the form of liking. When the person is allowed to reciprocate the help directly by returning the help, the help can be reciprocated by a returned help, and thus the recipient does not necessarily feel obligated to like the helper. Therefore, a greater amount of liking is expected in the case where reciprocation is not permissible than in the case where it is permissible.

In contrast, the theory of cognitive dissonance and its derivative, theory of psychological 'reactance', would predict that a person is more attracted to a helper or a donor of a favour when he is able to reciprocate than when he is unable to.

The theory of cognitive dissonance would reason that in the condition where it is not permissible for the recipient to return the help, a dissonant condition is created. The cognition of having received help and the knowledge that he is unable to reciprocate are in dissonance, i.e., assuming the reciprocity norm. In order to eliminate the dissonance, (i.e., to justify his action of accepting the help and not returning it) he can either change the elements which are in dissonance, or add con-

sonant elements. Since he cannot change the dissonant cognitions, he can only add consonant cognitions, which is, in this case, a dislike for the helper, thus justifying his action of not returning the help. In the condition where he is allowed to return the help, the cognition of having received help and that of being able to return the help are in consonance, and thus he does not have to justify his action by creating a dislike for the helper. Therefore, a greater amount of attraction is to be expected in the latter condition than in the former.

Similarly, the theory of 'reactance' would reason that when a person is not allowed to return help after having received some, the demand or obligation imposed by the help restricts his behaviour to the particular behaviour which he is not allowed to perform, i.e., to reciprocate and be grateful to the helper. Consequently, 'reactance' is aroused, and in order to re-establish his threatened freedom, i.e., to be able to feel that he is not obligated to return the help, the recipient becomes unfavourable in his attitude toward the helper. In doing so, he restores his threatened freedom. But when the person is allowed to return the help, the threatened freedom is not perceived as being very important and thus 'reactance' is minimum, if present at all. Consequently, the recipient feels grateful and attracted to the helper.

It is impossible to make any prediction about the factor of the recipient's capability to reciprocate on the basis of the theory of correspondent inference. This theory concentrates on how perceivers infer personal characteristics and intentions from perceived actions of other individuals, and what factors affect such inferences. But, this particular variable involves actions of the perceiver rather than actions

of the perceived individual. Consequently, no prediction can be made about the capability of the recipient to reciprocate.

Re-statement of the Problem and Hypotheses

The above discussion of the various relevant theories and predictions that can be made about the three variables on the basis of these theories seems to suggest that an experiment contrasting the various theoretical predictions will contribute to understanding of help receiving behaviour. Also, as mentioned before, since the methods employed and the variables manipulated in these previous studies have been diverse and numerous, an examination, in a controlled situation, of the effects of the three variables and their interaction effects is similarly useful.

In other words, the purpose of this study is two-fold. It examines the effect of three factors, as suggested by data of previous studies, namely, the motive of the helper, the possible implication of incompetence, and the capability to reciprocate, on help receiving behaviour. Also, it is an attempt to compare, in a controlled setting, various theoretical predictions concerning the three variables mentioned. In brief, it is the aim of this study to broaden our understanding of help receiving behaviour in the light of empirical data and theories.

The three hypotheses are:

1. In accordance with predictions based on the theories discussed above, it is hypothesized that a person is more attracted to the helper or the donor of a favour when he perceives the act as being without ulterior motive than when he perceives the act as being with an ulterior motive.

2. As predicted by the theories discussed, it is hypothesized that a person is more attracted to the helper or the donor of a favour when the help does not imply incompetence on the part of the recipient than when it does.
3. Similar to the prediction of Festinger's theory of cognitive dissonance and that of Brehm's 'reactance' theory and contrary to prediction based on Homans' theory of 'distributive justice' and Gouldner's theory of 'norm of reciprocity', it is hypothesized that

A person is more attracted to the helper or the donor of a favour when he is able to return the help than when he is not able to do so.

Also, the interaction effects of these three variables will be examined, in particular, the interaction effect of the variables, the motive of the helper and the recipient's capability to reciprocate the help. It is predicted that there is greater attraction in the capable to reciprocate condition than in the incapable to reciprocate condition when the perceived motive is altruistic and that the reverse is true when the perceived motive is ulterior.

In order to test the three hypotheses, one experiment was planned. But because of the apparent ineffectiveness of some of the manipulations of the independent variables and insensitivity of the dependent measures, a second experiment was conducted.

The three hypotheses mentioned in the last chapter were tested in a 2 x 2 x 2 factorial design in which the three independent variables, motive, implication of incompetence, and capability to reciprocate were manipulated. Each variable had two levels, yielding an eight cell matrix. Subjects' liking for their helper, measured by ratings scales, was used as the dependent variable.

Method

Subjects

The subjects were 96 volunteer female students attending the introductory psychology course during the Winter session at the University of Victoria. Subjects were assigned randomly to each of the eight conditions so that each condition had 12 subjects.

The Task

The task (See Appendix 1) consisted of a list of 13 anagrams. Each anagram was printed on a separate piece of paper, and the subjects were asked to solve the 13 anagrams within a limited amount of time.

The list of anagrams was adopted from the list used by Kanungo (1968) in his study. Two lists of anagrams were prepared, one for the subjects and one for the confederates.

Independent Variables

In the present study there were three independent variables, namely, the motive of the helper, implication of incompetence by the help, and the recipient's capability to return the help, and each independent variable had two levels. The three independent variables were manipulated in the following way.

1. Motive of the helper: altruistic or ulterior

a) The perception of an ulterior motive was attempted by telling the subject and the confederate, in each session, that they would be given, between the two of them, 30 minutes to finish their tasks, i.e., 15 minutes for each. If the time taken by the two of them, added together, to finish their tasks was more than 30 minutes, points would be deducted from the score of both, regardless of who was the slower. They were also told that they were allowed to help each other provided one had finished her task. The purpose of this manipulation was to make subsequent help be perceived as beneficial to the person giving help.

b) The perception of an altruistic motive was attempted by telling the subject and the confederate in each session that they would each be given 15 minutes to finish the task. They were told that points would be deducted from their score if they failed to complete the task within the time limit, and that they were scored separately. In this way, it was hoped that this manipulation would make subsequent help appear as being altruistic, i.e., not beneficial to the person giving the help.

2. Implication of incompetence:

a) The perception of help implying incompetence was manipulated in the following way. In each session, the subject and the confederate were told that they would be working on different tasks. When the confederate helped the subjects, she made this remark:

"Gee, it's not difficult. You still haven't finished. Well, I think I better help you finish it. (Pause) Your anagrams are simpler than mine." In this way, it was expected that the recipient would be made to feel incompetent.

b) The perception of a help not implying incompetence was attempted by telling the subject and the confederate that they would be working on different tasks. When the confederate helped the subject, she made this remark.

"I'm really lucky. I've worked on similar types of anagrams before. (Pause) Gee, your anagrams are much more complicated than mine." It was expected that the subject would not feel incompetent.

3. Capability to reciprocate help: Capable or incapable

a) The perception of being capable to return the help was manipulated by telling the subject and the confederate in each session that since in the second part of the experiment the confederate was going to work on a task in which she could only use one hand, she would need help during this part to carry task material from the other room, meaning that the subject would be given an opportunity to return help.

b) The perception of being incapable to reciprocate help was manipulated by telling the subject and the confederate in each session that in the second part of the experiment they would not be permitted to help each other, thus creating the perception of not being able to reciprocate the help received.

Confederates

Each of the three female confederates participated in all eight conditions with four subjects for each condition, making a total of 32 subjects for each confederate, and a total of 96 subjects for the whole experiment. For each confederate, the order of running the eight conditions four times each was determined by the table of random number. They were each given an identical set of instructions (See Appendix 2)

which described what was said to the subjects in each condition.

The reason for using more than one confederate, in this case three, was to ensure that any effect would not be due to one particular confederate.

Procedure

One subject and one confederate, posing as a subject, were present at each session. Care was taken to ensure that the subject and the confederate were unacquainted. They were told that the experiment consisted of two parts. Then, the manipulation of the motive factor was introduced, creating two experimental conditions, the altruistic motive condition and the ulterior motive condition.

Then, the subject and the confederate were told that in the second part of the experiment, two different tasks would be used. With one task, the use of only one hand would be permitted, and with the other task, the use of both hands would be allowed. The experimenter then asked the subject and the confederate to draw lots so as to decide on the assignment of the two tasks. The confederate always got the assignment of the one hand task. This was followed by the manipulation of the capability to reciprocate factor. One half of the subjects were told they could help in the second task and one half were told they could not help.

The subject and the confederate were then allowed to work on the first task. The experimenter left the room with the excuse that she had to make arrangements for the second task. The confederate always finished before the subject, and helped the subject with either the remark that her own task was more difficult than the subject's (incompetence condition) or the remark that her task was easier (competence condition). The ex-

perimeter came back into the room after the confederate had finished helping the subject. The experimenter then asked the subject and the confederate to fill in a questionnaire. After this, the experimenter explained the experiment to the subject.

Dependent Variable

The dependent variable was the amount of like or dislike each subject expressed for the confederate, who had helped him. The dependent variable was measured by a questionnaire (Appendix 3) in which the subjects were asked to rate on 7-point scales four questions 1) how much they liked the confederate, 2) how likeable the confederate was, 3) how friendly the confederate was, and 4) how much they would like to have the confederate as a partner in an experiment.

Check on Manipulations

Included in the questionnaire for the measure of the dependent variable were three questions concerning the manipulation of each of the independent variables. Subjects were asked to rate on 7-point scales 1) how much the other person benefited from helping, 2) how less competent they felt they were compared to the other person, and 3) how much did they feel they had the opportunity to help the other person.

(See Appendix 4)

Results

Effectiveness of Experimental Manipulations

Responses to the three questions concerning the manipulations of the independent variables (See Table 1) were analyzed by t tests for independent groups. The analyses indicated that the motive manipulation and the manipulation of the implication of incompetence were unsuccess-

Table 1

mean ratings of Subjects' responses to the three questions testing the effectiveness of the manipulations of the Independent Variables

(N = 96)

<u>Motive</u>		<u>Incompetence</u>		<u>Capability</u>	
To what extent did the other person benefit from helping you?		Did you feel you were less competent on the first task than the other person?		Do you feel you would have the opportunity to help the other person in the second task?	
very much....very little		very much....very little		very much....very little	
Altruistic	Ulterior	Incompetence	Competence	Capable	Incapable
2.69	2.63	5.48	4.97	5.02	3.52

ful, but the capability manipulation was successful.

Motive. Analysis of responses to the question on the motive manipulation revealed no significant mean difference ($t = 1.00$, $df = 94$) between subjects in the altruistic condition ($\bar{X}_1 = 2.69$) and those in the ulterior condition ($\bar{X} = 2.63$). In other words, the manipulation was not successful.

Implication of incompetence. In response to the question on the incompetence manipulation, subjects in the incompetence condition did not indicate that they felt on the average more incompetent than subjects in the competence condition ($t = 1.365$, $df = 94$, $p < 0.10$, $\bar{X}_1 = 5.48$, $\bar{X}_2 = 4.97$). Again, the manipulation did not appear to be successful.

Capability to reciprocate. Analysis of the subjects' responses to the question on this manipulation showed that subjects in the capable condition ($\bar{X}_1 = 5.02$) said that they were more capable to reciprocate than subjects in the incapable condition ($\bar{X}_2 = 4.91$) ($t = 4.91$, $df = 94$, $p < 0.0001$). This manipulation seemed to have been successful.

We can see from the above data that though only the third manipulation, that of capability to reciprocate, was successful, the difference between the other two manipulated groups was, however, in the expected direction.

Dependent Measures

The factor of confederate. The data were analyzed as a $2 \times 2 \times 2 \times 3$ factorial design, and as shown in Table 2, the main effect of the confederate factor as measured by all four dependent measures was not significant and there were no significant interactions with the other factors. (For a more detailed analysis of the data, see Appendix 5). Thus, the data were collapsed and analyzed as a $2 \times 2 \times 2$ factorial design.

Table 2

F Values of Four-Way Analyses of Variance of Four Favourability Ratings

of the Confederate

<u>Source</u>		<u>Liking</u>	<u>Friendliness</u>	<u>Partner</u>	<u>Combined</u>
Confederate	(A)	1.72	< 1	2.20	1.15
Capability	(B)	< 1	2.25	< 1	< 1
Competence	(C)	< 1	1.25	< 1	< 1
Motive	(D)	1.53	5.17*	5.00*	4.84
A x B		1.04	< 1	< 1	< 1
A x C		< 1	1.25	1.53	< 1
A x D		< 1	< 1	< 1	< 1
B x C		1.12	< 1	2.71	1.84
B x D		3.13	1.25	2.20	2.71
C x D		< 1	< 1	< 1	< 1
A x B x C		1.17	1.51	< 1	< 1
A x B x D		< 1	1.25	< 1	1.22
A x C x D		< 1	1.26	< 1	< 1
B x C x D		< 1	< 1	< 1	< 1
A x B x C x D		1.10	1.60	< 1	1.31

Attitudes toward the confederate. Four sets of measures of liking for the confederate was used. (See Appendix 3). They consisted of five favourability items on a 7-point scale format ranging from 'very much' to 'not at all': a rating of liking for the confederate and a rating of the confederate's likeability combined as the liking score, an estimate of how friendly the subjects found the confederates, a rating of the confederate's desirability as a partner, and a general attraction score which was a total combined score consisting of the subjects' scores on all five items. The expectations were to obtain main effects such that altruistic motive would produce more liking than ulterior motive, competence than incompetence, and capable than incapable.

1. Analysis of the combined score. The analysis of Variance Table for the combined attraction score is presented Table 3. Here, only one of the expected effects was obtained, the motive main effect. Subjects rated the confederate more attractively in the altruistic condition than in the ulterior motive condition.

2. Analyses of the individual items. The individual attraction items were analyzed separately with the following results:

The data of the rating of the subjects' liking for the confederate are presented in Table 4. The motive main effect, as in the case of the analysis of the combined scores, was significant giving support to hypothesis 1. None of the other main effects or interactions was significant.

The analysis of variance of the second measure, i.e., the perceived friendliness of the confederate, is presented in Table 5. It can be seen from the table that, as in the first analysis, i.e., the analysis

Table 3

Summary of Analysis of Variance of Combined Attraction
 Scores for the Confederate (Female Subjects)

Source	df	MS	F
Capability (A)	1	0.56	< 1
Competence (B)	1	0.52	< 1
Motive (C)	1	4.12	4.99 *
A x B	1	1.57	1.90
A x C	1	2.31	2.80
B x C	1	0.21	< 1
A x B x C	1	0.01	< 1
Within	88	0.82	
Total	95		

* $p < 0.05$

Table 4

Summary of Analysis of Variance of Liking Scores for
The Confederate (Female Subjects)

Source	df	MS	F
Capability (A)	1	0.26	< 1
Competence (B)	1	0.09	< 1
Motive (C)	1	5.51	5.22 *
A x B	1	3.01	2.85
A x C	1	2.34	2.22
B x C	1	0.26	< 1
A x B x C	1	0.84	< 1
Within	88	1.05	
Total	95		

* $p < 0.025$

Table 5

Summary of Analysis of Variance of Friendliness Scores
for the Confederate (Female Subjects)

Source	df	MS	F
Capability (A)	1	2.34	2.04
Competence (B)	1	1.76	1.53
Motive (C)	1	6.51	5.69 *
A x B	1	0.84	< 1
A x C	1	1.26	1.11
B x C	1	0.26	< 1
A x B x C	1	0.01	< 1
Within	88	1.14	
Total	95		

* $p < 0.025$

Table 6

Summary of Analysis of Variance of Desirability as a
 Partner Scores for the Confederate (Female Subjects)

Source	df	MS	F
Capability (A)	1	0.09	< 1
Competence (B)	1	0.51	< 1
Motive (C)	1	1.76	1.33
A x B	1	1.26	< 1
A x C	1	3.76	2.85
B x C	1	0.09	< 1
A x B x C	1	0.09	< 1
Within	88	1.31	
Total	95		

of the combined score, the only expected main effect which was obtained is the motive of the helper. The only hypothesis that was supported was hypothesis 1.

The analysis of the subjects' rating of the confederate's desirability as a partner is summarized in Table 6. Unlike the analysis of the combined scores, the motive main effect was not significant. Here, none of the hypotheses was supported.

Although some of the expected main effects were not obtained at the significance level, the differences obtained were in the right direction. Table 7 shows the mean favourability rating and F values for the main effects. It can be seen from the table that subjects in the altruistic condition rated the confederate more favourable than subjects in the ulterior motive condition; subjects in the competence condition more favourable than subjects in the incompetence condition, and subjects in the capable condition more favourably than subjects in the incapable condition. Also, the interaction effect of motive and capability, which is of particular interest, is in the right direction. In fact, the interaction effect was approaching significance in the analysis of the combined scores and that of the desirability score. Subjects in the altruistic motive condition were more attracted to the confederate when they were able to reciprocate than when they were not, while the reverse was true with subjects in the ulterior motive condition.

Discussion

The results obtained in this study do not support the majority of the initial hypotheses and expectations.

Table 7

Mean Favourability Ratings for the Confederate and F Values for the
Main Effects: Capability, Competence, and Motive

	<u>Capability</u>			<u>Competence</u>			<u>Motive</u>		
	Cap	Incap	F	Comp	Incomp	F	Alt	Ult	F
Liking	5.65	5.54	1	5.62	5.56	1	5.83	5.35	5.22**
Friendliness	6.04	5.72	2.04	6.02	5.75	1.53	6.14	5.62	5.68**
Partner	5.79	5.72	1	5.83	5.68	1	5.89	5.62	1.33
Combined	5.81	5.66	1	5.81	5.66	1	5.94	5.53	4.99*

Mean "Liking" Ratings and F Values for the Interaction Effect of 3 Variables

	Comp		Incomp		Alt		Ult		
	Comp	Incomp	Alt	Ult	Comp	Alt	Ult		
Incap	5.75	5.33	Incap	5.62	5.46	Comp	5.90	5.33	
Cap	6.48	5.79	Cap	6.03	5.75	Incomp	5.75	5.37	
	F = 2.85			F = 2.22			F < 1		

Mean "Friendliness" Ratings and F Values for the Interaction Effects of

	Comp		Incomp		Three Variables		Alt		Ult	
	Comp	Incomp	Alt	Ult	Alt	Ult	Comp	Alt	Ult	
Incap	5.95	5.50	Incap	5.85	5.63	Comp	6.31	5.71		
Cap	6.08	6.00	Cap	6.41	5.67	Incomp	5.95	5.54		
	F < 1			F = 1.10			F < 1			

Mean "Partner" Ratings and F Values for the Interaction Effects of 3 Variables

	Comp		Incomp		Alt		Ult		
	Comp	Incomp	Alt	Ult	Comp	Alt	Ult		
Incap	5.92	5.54	Incap	5.67	5.79	Comp	6.00	5.62	
Cap	5.75	5.81	Cap	6.12	5.46	Incomp	5.79	5.58	
	F < 1			F = 2.85			F < 1		

Mean "Combined" Ratings and F Values for the Interaction Effects of 3 Variables

	Comp		Incomp		Alt		Ult		
	Comp	Incomp	Alt	Ult	Comp	Alt	Ult		
Incap	5.86	5.46	Incap	5.76	5.60	Comp	6.06	5.55	
Cap	5.76	5.87	Cap	6.17	5.45	Incomp	5.82	5.50	
	F = 1.91			F = 2.81			F < 1		

** p < 0.025

* p < 0.05

Hypothesis One

The major finding was that subjects in the altruistic condition seemed to be more attracted to the confederate than subjects in the ulterior condition. However, the findings suggested that the manipulation of the motive of the helper was not successful. This arouses a certain amount of doubt as to the validity of the finding just mentioned. Can we confidently say that subjects in the altruistic motive condition were more attracted to the confederate than subjects in the ulterior motive condition because subjects in these two conditions had different perceptions of the motive of the confederate, when data have shown that subject's reports of their perceptions of the motive was not in fact different in the two conditions? This discrepancy can be explained and interpreted in two ways. On the one hand, the difference in attraction for the confederate between the subjects in the two conditions might be attributable to some unknown factor or factors which were influencing the subjects' attraction for the confederate. On the one hand, it might be said that while the subjects were not consciously aware of the motive of the helper as being either altruistic or ulterior, they were responding to the general impression they had of the confederate as being either nice or not nice. Therefore, the subjects could not specify that the confederate benefited from helping them, although they were in fact affected by the perception of the motive of the confederate.

The second interpretation seems more plausible because the only systematic difference between the altruistic motive condition and the ulterior motive condition was that in the former condition, the confed-

erate benefited from helping while in the latter condition, the confederate did not.

However, the examination of the analyses of the data treated either as a combined score or as individual items or scores, casts a doubt as to the significance of the motive main effect. Four analyses were done with the subjects' attraction ratings of the confederate and in three out of the four analyses a significant motive main effect was obtained. We cannot help but question whether or not this is a chance occurrence. Why did the same effect not show up in the other two analyses? This is, unfortunately, a purely empirical question which can only be answered through further empirical testing.

Hypothesis 2.

Also, the results showed that whether the confederate's help implied incompetence or did not imply incompetence had no significant influence on the subjects' attraction for the confederate; the expected main effect of the factor of implication of incompetence was not obtained. The manipulation of this factor was also found to be unsuccessful. Subjects in the incompetence condition did not feel significantly more incompetent than subjects in the competent condition. Although the difference in the favourability rating between subjects in the competence condition and subjects in the incompetence condition was not significant, it was in the right direction. Subjects in the competence condition had higher favourability ratings for the confederate than subjects in the incompetence condition. Since subjects in the incompetence condition did not feel significantly more incompetent than subjects in the competence condition, it is reasonable to suppose that the lack of significant diff-

erence in favourability ratings reflects the fact that the competence - incompetence manipulation was not effective or strong enough to effect a great difference in the subjects' ratings of the confederate. Therefore, we cannot conclude that the hypothesis that a person is more attracted to the helper when the help does not imply incompetence than when it does, had not been supported. We can only suspend judgment until more data are available. In fact, with the present evidence, it is very possible that if the competence - incompetence manipulation is made stronger and more effective, the expected main effect will be obtained.

The failure of the incompetence - competence manipulation might be attributed to the insufficient impact of the variable, or to the lack of competitiveness in females.

Impact of the variable. The confederate was instructed in both the competence and the incompetence conditions to help the subject 5 or 7 minutes after they had started working. This created a problem because of the great variability in the subjects' ability to do anagrams. Some of the subjects could finish almost all 13 anagrams within 5 or 7 minutes while other could only finish a few in the same amount of time. The absolute number of anagrams the subject could finish before the confederate started to help determined, to a large extent, whether the subject felt incompetent or competent, regardless of which condition she was supposedly in. A subject, who had finished say, 11 anagrams, when the confederate went to help her, might not have felt incompetent even if she was given the incompetence condition manipulation. On the other hand, a subject who had only finished 5 anagrams would likely have felt in-

competent even if the confederate tried to make her feel competent. This variability was unforeseen, and therefore the manipulation of competence and incompetence conditions was not well carried out which may have led to the lack of significant differences.

Sex roles. The failure of the manipulation might also be explained by the lack of competitiveness in females. Studies by Vinacke and co-workers (Vinacke and Arkoff, 1959; Bond and Vinacke, 1961) found that females are less concerned with winning and more concerned with arriving at a fair and friendly solution to the problem so that no one suffers at the expense of anyone else. In other words, females are oriented towards the social relationships of the game, towards the end of arriving at an equitable or fair outcome of maximum satisfaction (or at least justice) to all concerned. Vinacke described this female strategy as "accomodative". Also, Horner (1970) pointed out that in her attempt to unravel the relationship between need achievement and achievement behaviour in women, she found evidence of what she called a motive to avoid success in women. This finding corroborates the findings of Vinacke and co-workers. The lack of competitiveness in females could have lessened the impact of the competence - incompetence manipulation on the female subjects of this study. They may not have been concerned with winning or competing with the confederate. They were more concerned with the act of help itself. They looked upon the helping act as a proper means of arriving at a fair solution, regardless of the implication of the help. Consequently, the manipulation had no impact on the subjects, and thus the expected difference was not obtained.

Based on this reasoning that females are less competitive than males,

it is highly possible that the degree of femininity or masculinity of the subjects affected their reactions to the competence - incompetence manipulation. Therefore, in a post hoc analysis, the subjects' responses using their masculinity-femininity scores as a covariate were analyzed, thus taking away the effect of the degree of masculinity of femininity of the subjects on their responses.

The masculinity-femininity scale (Terman and Miles, 1936) (See Appendix 6) was sent to each subject after the experiment, and a masculinity-femininity score was obtained for each of the subjects who returned the questionnaire. At least eight out of the 12 subjects in each condition returned the questionnaire, and thus analyses of covariance were run on the data having a cell 'n' of eight and ten.

The analyses of covariance of the data are presented in tables 8, 9, 10 and 11. It can be seen from the tables that the general trend obtained is very similar to that of the analysis of variance discussed above. Again, the only hypothesis that was seemingly supported was hypothesis 1 that a person likes the helper more when the help is perceived as being with an altruistic motive than when it is perceived as being done with an ulterior motive.

Hypothesis Three

Going back to the original data of this study, we have seen from the analyses that evidence did not show support for the third expected main effect. Subjects in the capable to reciprocate condition did not rate the confederate significantly more favourably than subjects in the incapable condition, but the difference was in the right direction. Subjects in the capable condition were more favourable toward the confederate than

Table 8

Analysis of Covariance of Combined Attraction Scores for the Confederate
with Masculinity-Feminity scores as the Covariate (Female Subj

Source	df	MS	F
Capability ^a (A)	1	2.46	2.89
Competence ^b (B)	1	0.46	< 1
Motive ^c (C)	1	7.65	9.00 *
A x B	1	1.10	1.28
A x C	1	0.45	< 1
B x C	1	2.07	2.42
A x B x C	1	3.69	4.34 **
Within	63	0.85	
Total	70		

* $p < 0.01$

** $p < 0.05$

a $X_1 = 5.56, X_2 = 5.36, X_1' = 5.54, X_2' = 5.38$

b $X_1 = 5.28, X_2 = 5.64, X_1' = 5.27, X_2' = 5.64$

c $X_1 = 5.78, X_2 = 5.14, X_1' = 5.79, X_2 = 5.13$

Table 9

Summary of Analysis of Covariance of Liking Scores for the Confederate
with Masculinity-Feminity Scores as the Covariate
(Female Subjects)

Source	df	MS	F
Capability ^a (A)	1	1.28	1.66
Competence ^b (B)	1	0.65	< 1
Motive ^c (C)	1	7.76	9.95 *
A x B	1	1.07	1.37
A x C	1	0.72	< 1
B x C	1	0.50	< 1
A x B x C	1	4.06	5.20
Within	63	0.77	
Total	70		

* $p < 0.01$

a $X_1 = 5.72, X_2 = 5.49, X_1' = 5.70, X_2' = 5.51$

b $X_1 = 5.47, X_2 = 5.74, X_1' = 5.47, X_2' = 5.74$

c $X_1 = 5.92, X_2 = 5.29, X_1' = 5.94, X_2' = 5.29$

Table 10

Summary of Analysis Covariance of Friendliness Scores for the Confederate
with the Masculinity-Feminity Scores as the Covariate
(Female Subjects)

Source	df	MS	F
Capability ^a (A)	1	3.97	3.42
Competence ^b (B)	1	3.05	2.63
Motive ^c (C)	1	5.80	5.00 *
A x B	1	0.96	< 1
A x C	1	0.39	< 1
B x C	1	0.34	< 1
A x B x C	1	0.00	
Within	63	1.16	
Total	70		

* $p < 0.05$

a $X_1 = 6.06, X_2 = 5.59, X_1' = 6.06, X_2' = 5.62$

b $X_1 = 5.59, X_2 = 6.06, X_1' = 5.59, X_2' = 6.06$

c $X_1 = 6.09, X_2 = 5.56, X_1' = 6.11, X_2' = 5.54$

Table 11

Summary of Analysis of Covariance of The Desirability as a Partner Score
 For the Confederate with Masculinity-Feminity Scores as the Covariate
 (Female Subjects)

Source	df	MS	F
Capability ^a (A)	1	0.03	< 1
Competence ^b (B)	1	0.61	< 1
Motive ^c (C)	1	2.98	2.60
A x B	1	0.04	< 1
A x C	1	0.43	< 1
B x C	1	0.19	< 1
A x B x C	1	1.43	1.24
Within	63	1.15	
Total	70		

a $X_1 = 5.96, X_2 = 5.72, X_1' = 5.94, X_2' = 5.75$

b $X_1 = 5.82, X_2 = 5.86, X_1' = 5.82, X_2' = 5.87$

c $X_1 = 6.03, X_2 = 5.66, X_1' = 6.05, X_2' = 5.64$

subjects in the incapable condition. Hence, since the manipulation of the capability factor was found to be effective, the data showed no support for the third hypothesis that a person is more attracted to the helper when he is able to return the favour or help than when he is not able to do so.

The Dependent Measure

Another problem worth considering is that mean ratings on the favourability measures seem to suggest that most of the subjects' ratings tend to fall in the middle and on the favourability end of the scale. This might be due to the reluctance of people, in general, to rate other people unfavourably, especially overtly on a questionnaire. Even when they did not like an individual, they might not rate the person unfavourably, i.e., they would not check a rating on the unfavourable end of the scale, but rather rate the individual less favourably, i.e., check a lower rating on the favourable end of the scale. However, since the scales were 7-point scales with three points on the favourable and three points on the unfavourable section of the scale, they might not be sensitive enough to detect differences along the three or four points on the scale which most of the subjects used. This insufficient sensitivity of the measures of the dependent variable can be used to explain the lack of differences in the favourability ratings of the subjects in the various conditions. It could be that the differences were present but the questionnaire used was not sensitive enough to detect them.

Interaction effects

As was mentioned earlier in the last chapter, that in addition to the three hypotheses to be tested, all the interaction effects, in particular

that of motive and capability to reciprocate, are of interest to the study.

None of the interaction effects was shown to be significant though a few of them were approaching the generally accepted level of significance of 0.05. In both, the analysis of combined attraction scores, and that of desirability scores, the interaction effect of motive and capability was significant at the 0.10 level. In the analysis of likeability score, the interaction effect of motive and competence was also significant at the same level. Since the level of significance reached by these interaction effects was not quite acceptable, and also, since these barely significant interaction effects only occurred, at most, on 50% of the occasions, we cannot say that the data collected seem to suggest that there were significant interaction effects among the three variables of interest. But, because of the inadequate manipulations of the independent variables, as discussed in earlier sessions, it seems advisable not to make any conclusive statement concerning these interaction effects until more data are available.

In summary, data collected in this study showed some preliminary support for the hypothesis that a person is more attracted to the helper when he perceives the help as altruistic than when he perceives the help as being ulteriorly motivated. Although the data did not lend support to the other hypotheses, (hypothesis 2 and hypothesis 3) they were in the right direction, in spite of the insufficient control of some of the variables and the ineffectiveness of some of the manipulations. Also, the data seemed to suggest some interaction tendencies. All these can be

viewed to indicate that, with a better and more rigid and stringent control of the variables, and a more sensitive measure for the dependent variable, findings might be obtained which support the three hypotheses.

The results of Experiment one, as discussed earlier, suggest that the manipulation of the independent variables may not have been strong enough, resulting in the apparent ineffectiveness of some of the experimental conditions. Also, the measures of the dependent variable may have lacked sensitivity in the detection of differences in the favourability ratings of the subjects in the different conditions. In order to remedy some of these inadequacies, changes were introduced in both the procedures of the experiment and the measures of the dependent variable, and experiment two was carried out.

The same three hypotheses were tested in this experiment, namely,

1) A person is more attracted to the helper or the donor of a favour when he perceives the act as being without an ulterior motive than when he perceives the act as being with an ulterior motive.

2) A person is more attracted to the helper or the donor of a favour when the help does not imply incompetence on the part of the recipient than when it does.

3) A person is more attracted to the helper or the donor of a favour when he is able to return the help or favour than when he is not able to do so.

Again, the three hypotheses were tested in a 2 x 2 x 2 factorial design in which the three independent variables, motive of the helper, implication of incompetence, and capability to reciprocate were manipulated. Also, each variable had two levels, yielding an eight cell matrix identical to that of experiment one. Subjects' liking

for the confederate, measured by 10-point rating scales, was used as the dependent variable.

Method

Subjects

The subjects were 96 volunteer male students attending summer session at the University of Victoria. They were randomly assigned to each of the eight conditions.

The Task

The task (See Appendix 7) consisted of 20 and 24 patterns in the incompetence conditions and in the competence conditions respectively. The first set consisted of the more difficult problems than the second set. Two different sets of the task were prepared for the confederate, again 24 easy problems and 20 more difficult ones for the competence and the incompetence conditions respectively.

Independent Variables

In this experiment there were again three independent variables, namely, the motive of the helper, implication of incompetence by the helper, and the recipient's capability to reciprocate the help. Each independent variable was manipulated on two levels in the following ways.

In order to give the subjects an incentive, they were told that the two subjects who score the highest in the entire experiment would each be awarded with a prize.

1. Motive of the helper: altruistic or ulterior

a) The perception of an ulterior motive was attempted by telling the subject and the confederate, posing as another subject, that their score would be dependent on both the amount of time they

took to finish the task and the number of correct answers they had. They were also told that the number of points scored by them would be added together , and each of them would get, as his score, half of the total. This meant that the subject who finished his task in a short time and scored a great number of points would be penalized if the other subject took a long time to finish that task and scored only a few points. They were further informed that they were allowed to help each other, provided one of them had finished his task. This manipulation would supposedly make subsequent help be perceived as beneficial to the person who helped, and thus would introduce an ulterior in the helping act. Half of the subjects were given this manipulation.

b) The perception of an altruistic motive was manipulated by giving the subject and the confederate the same instructions as above, except that they were told that they would be scored separately, i.e., the score of one subject would be independent of the score of the other. The purpose of this manipulation was to make subsequent help be perceived as beneficial only to the person receiving the help and not the person giving the help, thus making the helping act altruistic. The other half of the subjects received this manipulation.

2. Implication of incompetence:

a) The perception of help implying incompetence was attempted in the following way. The task for this experiment was different from the task of experiment one. It had 20 patterns to be matched by the subjects, and they were comparatively simple so that, unlike anagrams, the variability among subjects was much smaller. (See

Appendix 7) When the subject finished each pattern, he had to put the solution on one of the answer sheets provided, and drop it in a box set between him and the other subject. When the subject had finished 12 patterns, the confederate finished his last one and got up and helped the subject finish his task, i.e., the remaining eight patterns. (Unlike in experiment one, the experimenter had better control over the apparent competence of the subjects, as established by their performance in comparison to the confederate's performance). Also, the confederate said something like

"It's easy. You still haven't finished? (Pause) yours are easier than mine."

In order to strengthen this manipulation, when the experimenter returned to the room after the confederate had finished helping the subject, she said "Have you finished? Just finished?" (The answer was, of course, affirmative.) The experimenter then looked at the watch and said, " _____ minutes. The average time taken is _____ minutes." (Always five minutes less.) Half of the subjects were given this manipulation. It was expected that in this way, the subjects would feel incompetent.

b) The perception of help not implying incompetence was introduced in the following way. The task had 24 problems, and when the subject finished each problem, he had to put the solution on one of the answer sheets provided, and drop the answer sheet in a box set between him and the other subject. When the subject had finished 16 out of the 24 problems, the confederate finished his last one and got up and helped the subject finish his task, i.e., the remaining eight problems. The confederate then said something like,

"I am lucky. I have done this type of tasks before. (Pause)

Yours are more difficult than mine."

In order to make this manipulation even more effective, the following manipulation was added. After the confederate had finished helping the subject, the experimenter walked in the room and said, "Have you finished? Just finished?" (The answer was, of course, affirmative) Then the experimenter looked at the watch and said, " _____ minutes. The average time taken is _____ minutes (always five minutes more)" Again, half of the subjects were given this manipulation. All these manipulations presumably would make the subjects feel competent.

3. Capability to reciprocate: capable or incapable

a) The perception of capability to reciprocate was attempted by telling half of the subjects that, since the second task which the other subject, i.e., the confederate would be given, involved a couple of boxes of wooden blocks, the confederate would need someone to help him carry them. The experimenter suggested that maybe the subject would help the confederate. In this way, the subjects were given an opportunity to return the help. To make this manipulation even more effective, the experimenter also told the subjects in each session that they could help each other in all the tasks.

b) The perception of being incapable to reciprocate was manipulated by telling the remaining half of the subjects that they were only allowed to help each other on the first task but not on the other tasks, indicating that subjects would not be given an opportunity to return the help.

Confederate

Each of the three male confederates participated in all eight conditions equally, and at random. Each confederate had 32 subjects making a total of 96 subjects for the whole experiment. They were each given an identical set of instructions to be said to the subjects in each condition. (See Appendix 8)

Procedure

One subject and one confederate, posing as a subject, were present at each session. Each subject was given written instructions to read (See Appendix 9) before the experimenter explained the instructions verbally. The subject and the confederate were told that the experiment was an attempt to study task performance under various conditions. They were further told that they would be given a number of tasks in units of two each, and for each task, they would score points, depending on how fast and how well they could finish the task. Then the manipulation of the motive variable was introduced producing two conditions, the altruistic motive condition and the ulterior motive condition.

Then, the subject and the confederate were told that the second task of the same unit had two sets of tasks, A and B, and they had to draw lots to see who would get which set. The experimenter arranged to have the subject select task B and the confederate, task A. This was followed by the manipulation of the capability to reciprocate creating two conditions, the capable to reciprocate condition and the incapable to reciprocate condition. Half of the subjects were told that they could help the other person in the second task and half were told that they could not.

The subject and the confederate were then allowed to work on the first task. The experimenter explained the task to them and then left the room with the excuse that she had to make arrangements for the second task. The confederate always finished before the subject and then got up and helped the subject. The manipulation of the implication of incompetence variable was introduced resulting in two conditions, the competence condition and the incompetence condition. The experimenter then repeated whether the subject and the confederate were allowed to help each other with the other tasks. The experimenter continued and said that since they might not finish their tasks at the same time, she would like them to fill in a questionnaire right then instead of later. The experimenter distributed the questionnaire, and then found an excuse to leave the room so as to give the subject and the confederate a chance to be alone. The experimenter returned into the room about five minutes after both the subject and the confederate had finished the questionnaire. The experimenter then explained the whole experiment to the subject.

Dependent Variable

The dependent variable was the amount of like or dislike each subject expressed for the confederate who had helped him. In this second experiment a somewhat different measure of the dependent variable was adopted. Instead of a 7-point scale format, as used in experiment 1, a 10-point scale format was introduced because results of the experiment 1 seemed to indicate that 7-point scales were not sensitive enough in the detection of differences in the subjects' favourability ratings of the confederate. In addition,

10-point bipolar scales were introduced for the purpose of supplementing the first measure mentioned. The dependent variable was measured by a questionnaire consisting of two parts, (See Appendix 10) one in which subjects were asked to rate on three 10-point scales, how much they liked the confederate, how much they wanted to mix with the confederate socially, and how much they wanted to have the confederate as their partner in a future experiment, and the other part in which subjects were asked to indicate on fifteen 10-point bipolar scales their perception of the confederate. The bipolar scales included pairs of adjectives such as friendly-unfriendly, mature-immature, and unkind-kind.

An additional measure of the amount of liking the subjects had for the confederate was used. The subject and the confederate were left alone in the room for about five minutes after they had finished filling the questionnaire, and whether the subject initiated conversation was used as a measure of the subject's attraction to the confederate. The assumption was that if the subject felt hostile toward the confederate he would not talk to the latter, at least would not start a conversation. The conversation was taped because the content of the conversation might indicate whether initiating a conversation indicated a positive attitude toward the confederate.

Check on manipulations

Again, in the questionnaire, a few questions testing the **effectiveness** of the manipulations of the independent variables were included. Subjects were asked to rate on 10-point scales 1) how much the other person benefit from helping, 2) how much

they felt they were less competent than the other person, and
3) how much they felt they had the opportunity to help the other
person. (See Appendix 11)

Results

Effectiveness of Experimental Manipulations

Part three of the questionnaire consisted of three questions testing the manipulation of the three independent variables, motive of the helper, implication of incompetence, and capability to reciprocate. Responses to these three questions were analyzed separately by t tests for independent groups. For the question testing the motive manipulation, responses of subjects in the altruistic motive condition were compared with those of subjects in the ulterior motive condition, for the question concerning the competence manipulation, responses of subjects in the competence condition were compared with those of subjects in the incompetence condition, and lastly for the question pertaining to the capability manipulation, responses of subjects in the capable condition were compared with those of subjects in the incapable condition. The analyses showed that the motive manipulation was not successful, but both the competence manipulation and the capability manipulation were successful. (See Table 12)

Motive. Analysis of the responses to the question " Did the other subject benefit from helping you? " showed that subjects in ulterior motive condition did not attribute significantly greater amount of benefit to the helper on the average than subjects in

Table 12

Mean ratings of Subjects' responses to the three questions testing the effectiveness of the manipulations of the Independent Variables
(N = 96)

<u>Motive</u>		<u>Incompetence</u>		<u>Capability</u>	
Did the other subject benefit from helping you? very much....very little		Did you feel you were less competent on the first task than the other subject? very much....very little		Did you feel you will have the opportunity to help the other subject? very much....very little	
Altruistic	Ulterior	Incompetence	Competence	Capable	Incapable
4.46	4.92	6.73	5.04	5.92	4.56

the altruistic motive condition. The manipulation was shown to be successful. ($t = 0.8262$, $df = 94$, $\bar{X}_1 = 4.46$, $\bar{X}_2 = 4.92$)

Competence. In response to the question "Did you feel you were less competent than the other subject in the first task?" subjects in the incompetence condition showed that they felt greater incompetence than subjects in the competence condition ($t = 3.0166$, $df = 94$, $p < 0.005$, $\bar{X}_1 = 5.04$, $\bar{X}_2 = 6.73$). The manipulation seemed to have been successful.

Capability to reciprocate. Responses to the question " Do you feel you will have the opportunity to help the other subject?" indicated that subjects in the capable condition rated that they had a greater opportunity to help the other subject than subjects in the incapable condition. ($t = 2.8640$, $df = 94$, $p < 0.005$, $\bar{X}_1 = 4.56$, $\bar{X}_2 = 5.92$) The manipulation was apparently successful.

Dependent Measures

The factor of confederate. Including the factor of confederate, the design of the study was a $2 \times 2 \times 2 \times 2$ design. The analysis of data indicated that the main effect of the confederate factor was not significant, and so were the interactions with the other factors. (See Appendix 12, Tables 1 - 19) Thus, data were collapsed and analyzed as a $2 \times 2 \times 2$ design.

Attitude toward the confederate. Twenty measures of liking for the confederate were used. They consisted of two sets of favourability items on a 10-point scale format, a general attraction score which was the combined score of the subjects' scores on the two sets of favourability items, and a score of whether the subject initiated a conversation with the confederate. The first set of

favourability items consisted of fifteen 10-point bipolar scales on which the subjects were asked to indicate their impression of the other subject, the confederate. The second set consisted of three 10-point scales, on which the subjects were asked to rate how much they liked the confederate, how much they wanted to mix with the confederate socially, and how much they wanted to have the confederate as a partner in a future experiment.

It was expected that the subjects would perceive the confederate as being more attractive, and also had a greater liking for the confederate when the perceived motive of the confederate was altruistic than when it was ulterior, when the confederate's help did not imply incompetence than when it did, and when the subject was capable to reciprocate than when he was incapable.

The analyses of the subjects' ratings of the confederate showed the following results. (See Appendix 13, Tables 1 - 20)

1. Motive. Of all the possible significant main effects for motive as shown on the various measures of the dependent variable, only three were significant, and they were subjects' ratings of the confederate's maturity ($F_{(1,88)} = 5.66, p < 0.025$), how interesting the confederate was ($F_{(1,88)} = 6.06, p < 0.025$) and how much the subjects wanted to mix socially with the confederate ($F_{(1,88)} = 6.41, p < 0.025$). (See Appendix 13, tables 3, 8, and 18) Subjects found the confederate more mature, more interesting, and were more willing to associate with the confederate when they were told that the confederate had no ulterior motive in helping than when they were told that the motive was ulterior. These analyses show that a subject rated the helper more favourably when told that their own

and the helper's task scores were independent than when told that their scores were interdependent. Marginal main effects were found on the subjects' ratings of the confederate's kindness and his likeability. (See Appendix 13, tables 9 and 14) Subjects who did not perceive help as being done with an ulterior motive found the confederate more kind and more likeable than subjects who did so perceive.

2. Implication of incompetence. The analysis of the subjects' ratings of how dependable the confederate was showed that subjects perceived the confederate as being more dependable when help did not imply incompetence than when it did. ($F_{(1,88)} = 5.81, p < 0.025$) (See Appendix 13, table 16) Analysis of the data on whether the subjects initiated a conversation when left alone with the confederate after filling in the questionnaire showed that when help did not imply incompetence, significantly more subjects initiated a conversation with the confederate than when help implied incompetence. ($F_{(1,88)} = 3.16, p < 0.05$) Hypothesis two had only slight support from the data. (See Appendix 13, Table 20)

3. Capability to reciprocate. Only marginal main effects for capability to reciprocate were obtained and they were subjects' ratings of the confederate's irritability and genuineness. Subjects who perceived themselves as being able to reciprocate help found the confederate more irritable and less genuine than subjects who perceived themselves as not being able to. Hypothesis 3 failed to obtain support from the data. (See Appendix 13, Tables 10 and 13)

4. Interactions. Analysis of the subjects' ratings of the maturity of the confederate showed that when they were told that the confederate would gain points in helping, subjects rated the confederate as being more mature if the help implied incompetence than if the help did not so imply, but the reverse was true when the subjects were told that the confederate would not gain points in helping. ($F_{(1,88)} = 4.20, p < 0.05$) (See Appendix 13, Table 3)

Subjects' ratings of the confederate's social competence showed an interaction effect between capability to reciprocate and implication of incompetence. Under the incapable to reciprocate condition, subjects attributed greater social competence to the confederate when the help did not imply incompetence than when it did. But under the capable to reciprocate condition, the opposite effect was found true. Subjects attributed greater social competence to the confederate when help implied incompetence than when it did not. ($F_{(1,88)} = 5.25, p < 0.025$) (See Appendix 13, Table 12)

A marginal interaction effect between implication of incompetence and motive was found on subjects' ratings of the confederate's irritability. When help implied incompetence, subjects found the confederate more irritable when the perceived motive was altruistic than when it was ulterior, but the reverse was true when help did not imply incompetence. (See Appendix 13, Table 13).

Although some of the measures of the subjects' liking for the confederate lend support to the three hypotheses, 15 out of the 20 measures do not support any one of the three hypotheses. In other words, only five of the measures give support to the three hypotheses, three supporting hypothesis 1, and two supporting hypothesis 2. But

since so many analyses were run, there is the possibility that the few high F's obtained may be due to chance.

From the above presentation of the results, the following can be summarized. (See Tables 13 and 14)

a) Out of the 20 measures of the subjects' attraction toward the confederate, 15 did not give support to any of the three hypotheses.

b) Three measures of the subjects' liking for the confederate supported hypothesis 1. These three measures were the subjects' ratings of how interesting and how mature the confederate was, and how much the subjects wanted to mix socially with the confederate.

c) The measure of the subjects' liking for the confederate expressed in terms of the subjects' perception of the dependability of the confederate shows support for hypothesis two. Also, data on whether subjects initiated conversation with the confederate showed support for this hypothesis.

Discussion

The results obtained in this study give very little support, if any at all, to the three hypotheses.

Data of the study seem to suggest that neither the motive factor nor the implication of incompetence factor nor the capability to reciprocate factor has any major impact on the subjects' attitude toward the confederate. In other words, results obtained do not offer much support for the three initial hypotheses.

Results of this study suggest that the motive factor did not have any effect on the subjects' favourability ratings of the confederate. It was only on three out of the twenty scales used

Table 14

Mean Favourability Ratings for the Confederate and F Values for the
Main Effects: Capability, Competence, and Motive

	<u>Capability</u>			<u>Competence</u>			<u>Motive</u>		
	Cap	Incap	F	Comp	Incomp	F	Alt	Ult	F
Friendly	8.27	8.25	< 1	8.48	8.04	< 1	8.50	8.02	< 1
Mature	8.43	8.67	< 1	8.62	8.48	< 1	8.85	8.25	5.65**
Intelligent	8.70	8.69	< 1	8.62	8.77	< 1	8.81	8.53	< 1
Considerate	6.56	7.02	< 1	6.54	7.04	< 1	6.56	7.02	< 1
Deep	6.22	6.83	< 1	6.31	6.75	< 1	6.70	6.35	< 1
Straightfor- ward	7.39	7.83	< 1	7.83	7.50	< 1	7.68	7.64	< 1
Interesting	7.16	7.31	< 1	7.12	7.35	< 1	7.70	6.77	6.06**
Kind	7.96	8.20	< 1	8.29	7.87	< 1	8.35	7.81	< 1
Genuine	6.95	7.87	< 1	7.43	7.39	< 1	7.54	7.29	< 1
Unannoying	8.06	8.29	< 1	8.25	8.10	< 1	8.31	8.04	< 1
Socially Competent	7.39	7.77	< 1	7.75	7.41	< 1	7.64	7.52	< 1
Good-natured	7.58	8.28	< 1	7.96	7.89	< 1	8.02	7.83	< 1
Likeable	7.83	7.81	< 1	8.17	7.48	< 1	8.18	7.45	< 1
Modest	7.25	7.02	< 1	7.10	7.17	< 1	7.25	7.02	< 1
Dependable	7.66	7.89	< 1	8.22	7.33	5.81**	7.83	7.73	< 1
Liking	7.29	7.50	< 1	7.42	7.37	< 1	7.50	7.30	< 1
Mix socially	7.08	7.50	< 1	7.46	7.12	< 1	7.70	6.87	6.41**
Partner	7.29	7.67	< 1	7.56	7.39	< 1	7.48	7.48	< 1

**p 0.025

as measures of the subjects' attraction for the confederate that the subjects were shown to rate the confederate more favourably in the altruistic motive condition than in the ulterior motive condition. This may very well have been due to chance. Therefore, we can only conclude that the results did not show that subjects in the altruistic motive condition were more attracted to the confederate than subjects in the ulterior motive condition. Again as in the case of experiment 1, the manipulation of the motive of the helper might have been unsuccessful. We can again attribute this ineffective manipulation to the subjects' failure to respond to the specific condition under which the help was given. Since again, though the subjects in the ulterior motive condition did not attribute a significantly greater amount of benefit to the helper than subjects in the altruistic condition, they did attribute a greater amount than the latter. The subjects were not consciously aware of the motive of the helper as being altruistic or ulterior, but were rather responding to the general impression they had of the confederate as being nice or not so nice. Therefore, when confronted with the question asking whether the confederate benefited from helping them, the subjects could not verbalize or articulate specifically the condition, though they were in fact affected by the perception of the motive of the confederate.

Also, the data obtained indicated that the competence factor had no effect on the subjects' attitude toward the confederate. The subjects showed, on only one scale, a more favourable attitude toward the confederate when incompetence was not implied than when it was. This again may, as in the former case and even more so,

be due to chance. Also, subjects were more willing to initiate a conversation with the confederate when incompetence was not implied than when it was. But this might have been because when help implied incompetence, subjects felt that the confederate was more competent and were thus intimidated and would not initiate a conversation, whereas when help did not imply incompetence, subjects felt at ease with the confederate and thus initiated conversation, and not because subjects had a more favourable attitude toward the confederate when help did not imply incompetence than when it did so imply. However, in either case, we can say that subjects found the confederate more approachable when help did not imply incompetence than when it did. Even so, we cannot say that data obtained give support to hypothesis two. Here, the manipulation of the competence factor appeared to have been successful. Subjects in the incompetence condition said that they felt significantly more incompetent than subjects in the competence condition. Since the manipulation was successful and subjects did not show greater liking for the confederate in the competence condition than in the incompetence condition, it can be concluded that data did not give support to hypothesis two that a person is more attracted to the helper or the donor of a favour when the help does not imply incompetence than when it does.

The same was true with the capability factor. Subjects in the capable condition did not rate the confederate more favourably than subjects in the incapable to reciprocate condition. In fact, data on a couple of the dependent measures seemed to indicate a main effect in the opposite direction. Subjects seemed to have rated the confederate more favourably when they were unable to

reciprocate than when they were able to reciprocate. Also, the manipulation of the capable factor was successful. These again seem to suggest that the capability factor had no effect on the subjects' attitude toward the confederate. In brief, hypothesis 3 that a person is more attracted to the helper or the donor of a favour when he perceives himself as being capable of returning help than when he does not perceive himself as being capable, did not obtain support from the data.

A phenomenon similar to experiment 1 occurred in experiment 2. Again, subjects' mean ratings on the favourability measures tend to fall in the middle and the favourable end of the scales. Less than twenty percent of the total ratings fall in the unfavourable end of the scales. This again seems to show a general reluctance of people to rate other people unfavourably, especially overtly on a questionnaire, and especially after such a short encounter. But on the other hand, this may be a reflection of people's tendency to be favourably inclined toward someone who had helped him regardless of the condition under which help was given. The recipient of help may be less favourable in his attitude toward the confederate when, for example, the confederate was perceived to have helped with an ulterior motive, but is never unfavourable in his attitude toward the confederate. In other words, the subjects might have liked the confederate less but never disliked the confederate. Of course, we can again attribute this phenomenon to the insensitivity of the instrument used for the purpose of measuring subjects' liking for the confederate. However, since the same phenomenon was detected in the first experiment, and this present instrument when used in

other experiments had been successful in detecting unfavourable attitude, this insensitivity explanation does not seem plausible.

A striking point of the results of this experiment is the similarity with the results of the first experiment. Except for the motive main effect which was shown on three of the dependent measures, none of the expected effects was obtained.

One major difference between this experiment and the former is the sex of the subjects used. In experiment 1, female subjects participated while in the second experiment, male subjects participated. In spite of this difference in the sex of the subjects, there was no major difference between the results of the two experiments. The only slight difference in the results is that in experiment 1 female subjects in the capable to reciprocate condition seemed to like the confederate better than female subjects in the incapable to reciprocate condition, though the difference is not significant, while the reverse was true for male subjects in experiment 2. Male subjects in the incapable condition seemed to like the confederate more than subjects in the capable to reciprocate condition. This difference may be interpreted as being consistent with Vinacke's hypothesis that there is a lack of competitiveness in females and Horner's postulation of a fear of success in females. However, data supporting this difference are only marginal differences and thus can only be interpreted as indicating a trend rather than giving support to any hypothesis.

In summary, data collected in this study do not lend support to the three hypotheses under study. Out of the 20 measures of the subjects' liking for the confederate, i.e., the dependent variable,

only three supported hypothesis 1 and two supported hypothesis 2. This support may very well be due to chance. However, since the results are consistent with those of the last experiment, and the manipulation of the independent variables have no effect on people's liking for a helper, we can doubt whether subjects will dislike a person under the conditions of the present study.

Also, out of the 20 measures, only two measures showed significant interactions, one measure showed significant interaction between the factors motive of the helper and the implication of incompetence, and another measure showed significant interaction between the factors capability to reciprocate and the implication of incompetence. Again, these may be due to chance **alone**. In short, none of the interaction effects was shown to be significant. Again, these findings are consistent with those of experiment 1. Therefore, we **have to** suspend judgment until further data are available.

To conclude, the results of these two studies seem to indicate that under the conditions of this experiment, people do not dislike helpers who have ulterior motive, whose help implies incompetence, and in a situation when they are incapable of returning the help.

Two studies were conducted to examine the attitudes of recipients of help toward the helper under the influence of three variables, namely, motive of the helper, implication of incompetence, and capability to reciprocate help. The purpose of these two studies was to test three hypotheses pertinent to these three variables, and thereby to have a better understanding of negative behaviour and attitudes toward the helper.

In the first experiment, the manipulation of the capability factor appeared to be successful. Subjects in the capable to reciprocate condition indicated that they felt they could reciprocate and subjects in the incapable to reciprocate condition felt that they could not. But the manipulation of the motive factor and the competence factor appeared to be unsuccessful as indicated by subjects' responses to questions testing effectiveness of the manipulations. Because of the unsuccessful manipulations of two of the three factors, changes in the procedures were introduced in experiment two so as to attain a more rigid and stringent control of the independent variables. In addition, for the purpose of having a greater sensitivity in the various measures of the dependent variable, a different set of measures on a 10-point scale format was introduced. In the second experiment, the manipulation of the motive variable was still unsuccessful, but that of the other two variables, capability to reciprocate factor and implication of incompetence factor, seemed to have been successful.

In the first experiment, data on subjects' rating of the confederate's friendliness, and subjects' combined attraction rating

of the confederate lent support to the hypothesis that a person is more attracted to the helper or the donor of a favour when he perceives the act as having an altruistic motive than when he perceives the act as having an ulterior motive. The other two hypotheses, one that a person is more attracted to the helper or the donor of a favour when the help does not imply incompetence on the part of the recipient than when it does, and another that a person is more attracted to the helper or the donor of a favour when he is able to return help or favour than when he is not able to so, were not supported by the data.

In the second experiment, only data on three out of the 20 measures of the dependent variable supported hypothesis 1 and two out of the 20 measures supported hypothesis 2.

Though procedures differing in the strength of the experimental manipulations of the independent variables were used, results of the two experiments did not lend support to the three hypotheses. In both experiments, the data showed differences in the hypothesized directions but most of these differences were not significant. This seems to suggest that regardless of whether help was given with an ulterior motive or an altruistic motive, or whether help given implied incompetence or did not imply incompetence or whether help could be reciprocated or not reciprocated, the recipient's liking or attraction for the helper did not differ accordingly. Also, since subjects' ratings of the confederate on the various measures were on the positive end of the scale, it could be argued that the subjects were attracted to the confederate regardless of the condition in which help was given.

That is, a help recipient is attracted to the helper regardless of the condition in which help has been given. However, such a conclusion cannot be made so readily before other alternative explanations have been examined. As an attempt to examine other alternative explanations of the results of this study, these following factors operating in the experimental situation and other rationals can be considered.

1. The manipulation of the motive factor created a cooperative game situation instead of an ulterior motive condition.
2. Generally, subjects are unwilling to rate a stranger unfavourably after a brief encounter.
3. Face-to-face interaction caused more favourable ratings.
4. Help given to the subjects was not important enough.
5. Manipulation of the factor of implication of incompetence.
6. A lack of distinction between willingness to reciprocate and attraction for the confederate.
7. Main effects of the three variables might have been dampened by examining all three together instead of **separately**.
8. Help may not necessarily be perceived as a 'favour' entailing indebtedness and gratitude.
9. Cultural differences between Americans and Canadians.

Cooperative game situation

The motive variable was manipulated by having the subjects believe that their partner's score was either dependent or independent of their score, i.e., the subjects' scores. In doing so, it was hoped that subsequent help would be perceived as either having an ulterior motive or an altruistic motive accordingly. But, by telling the subjects that their own and their partner's scores were interdependent

and that cooperation was allowed, the situation could have become a game situation in which cooperation was perceived as part of the game. In other words, when help was given in the dependent score condition the helper might not have been perceived as having an ulterior motive but as playing the role of a participant of the game. Of course, when help was given in independent score condition, help would have been perceived as having an altruistic motive. Consequently, a comparison of the scores of the subjects in these two conditions is not, in fact, a comparison of the scores of the subjects who had received help under the ulterior motive condition and those who had received help under the altruistic motive condition, but rather a comparison of scores of the altruistic motive condition and scores of the game situation. This may account for the lack of significant differences in the scores of the subjects in these conditions. Results of a study by Kiesler (1966) showed that when help was given in a situation where help was expected, the helper was more liked by the recipient than when help was given in a situation where it was not expected. Therefore, since help given in a cooperative game situation was expected, it would not be resented.

Favourable Ratings of the Confederate

In both experiments, it was found that subjects tended to rate the confederate favourably regardless of the experimental condition in which they were. The most unfavourable mean rating of subjects was 4.59 and 5.58 on the 7-point scales and the 10-point scales respectively. This means that even the most unfavourable mean rating of the subjects was still on the positive or favourable side of the scale. Two factors may be contributing to this phenomenon, subjects'

positive reaction to a helper in a brief encounter regardless of the condition of help, and subjects' reluctance to rate others unfavourably.

People who have brief interactions with other people may like these people as long as no great harm is done to them. They do not feel justified in having negative feelings about these people with whom they have only interacted briefly, even if the contact has not been altogether pleasant. This reluctance of doing injustice may have been intensified in this particular experiment where the subject had received help from the confederate prior to the rating. Consequently, subjects' ratings of the confederate were mostly favourable.

Then, there may have been reluctance to rate others unfavourably, i.e., their reluctance to give their true feelings on the rating scales. Even if the subject felt annoyed or irritated by the other person, he did not necessarily want to commit himself by rating the other person unfavourably. This is especially true when the subject was conscious that he was in a social setting where he had to conform to certain rules of social interactions. An illustration of people's reluctance to rate others unfavourably can be witnessed from Kiesler's study (1966) where favourability ratings of the partner were made before and after experimental manipulation. In the condition, where the subjects were told that they would be working separately but cooperatively with the confederate on a gambling game, i.e., they, the confederate and the subjects, would be helping each other, but did not receive help from the confederate as expected, there was still an increase in the mean attraction rating of the partner, i.e., the confederate. In fact, under such a situation where expected cooperation from the confederate was not obtained, one would expect a

decrease in the subjects' attraction for the confederate. When we take into consideration this factor of the subjects' reluctance to rate others unfavourably, results of this present study may be interpreted in a different light. With this reluctance in operation, subjects who liked the confederate would rate the confederate favourably, and subjects who disliked the confederate would rate the confederate favourably also, thus dampening the difference between the ratings of these two groups of subjects. Consequently, the difference between their ratings would be small, the magnitude of which might not truly reflect the difference in the subjects' liking for the confederate. In short, the difference between the subjects' liking for the confederate as manifested in their ratings of the confederate might have been considerably smaller than the real difference which existed in the subjects' liking for the confederate.

Face-to-face Interactions

But then, why in other studies did subjects give unfavourable ratings to the confederate? There are, in general, two different kinds of studies on helping behaviour, one in which subjects' favourability ratings of the helper under different conditions were compared, and one in which subjects' favourability ratings of the helper and their ratings of someone who did not help were compared. In spite of this difference, all these studies yield similar results. However, a close examination of the procedures of the various studies on helping behaviour brings out a very interesting point. Where the subjects and the confederate had face-to-face interactions (Brehm and Cole, 1966; Berkowitz and Daniels, 1964), there was no difference in the favourability ratings of the confederate between subjects who had

received help from the confederate and those who had not, whereas where there was no face-to-face interactions between the subjects and the confederate, (Berkowitz and Friedman, 1967; Kiesler, 1966; Gergen, Diebold, Seipel, and Gresser, in preparation in Gergen, 1969; Schopler and Thompson, 1968) there was a difference in the favourability ratings. In the first group of studies, subjects rated the confederate favourably regardless, while in the second group of studies, subjects rated the confederate unfavourably when they did not receive help or when help was given under certain conditions. There was one exception to this, and that was the study by Goranson and Berkowitz (1966). In this study, there was face-to-face interaction between the subjects and the confederate, and yet there was a difference in the favourability ratings. But, subjects in this study were refused help instead of just not receiving help as in the case of other studies in which there was face-to-face interactions. Thus, it seems that face-to-face interactions might have an effect on the subjects' willingness to rate the confederate unfavourably.

Willingness to rate unfavourably. Various studies (Darley and Berscheid, 1967; Mirels and Mills, 1964; Lerner, Dillehay, and Sherer, 1967; and Stotland, Cottrell, and Laing, 1960) have shown that anticipation of interaction or actual interaction with others increase one's liking for these others. Therefore, with everything equal, in studies where there was actual interaction between the subjects and the confederate, subjects' ratings of the confederate would be more favourable than in studies where there was no actual interaction nor anticipation of interaction between the subjects and the confederate. Thus, it is not surprising to find that a difference in the favourability ratings

existed where there were no face-to-face interactions and did not exist where there were face-to-face interactions. In the studies where there were face-to-face interactions, the difference might have been lessened by the subjects' overall tendency to rate the confederate favourably.

Also, as Argyle (1969) stated, one of the goals of interaction is self-presentation, i.e., to create a positive impressions for others. For this reason, we learn to interact following the rules governing social interactions in our society. In any kind of social situations, there are defined rules and role relationships between interactors, and we learn these rules and follow them. In a face-to-face interaction situation, social conventions and rules are made salient, and the interactors feel more pressured to behave according to these social conventions. Argyle rightfully pointed out that in creating a non face-to-face interaction situation, one is really getting 'minimal social interaction'. Many of the components of social behaviour, such as, verbal and most non-verbal communications, the arousal of the usual social drives, perception of the other person, role relationship, are being excluded. He and his co-workers (Argyle, Lalljee, and Cook, 1968) found that by varying the amount that one interactor could see of another, they could get different degrees of interaction. Also, Loomis (1959) found that greater trust and cooperation were developed between players of a game if communication was allowed. In line with these studies, we can say that a subject who received help in a face-to-face interaction situation was more conscious of being in a social setting than one who received help in a non face-to-face interaction situation, and consequently more affected by social rules. He, thus, became reluctant to rate the confederate unfavourably even if he felt negatively disposed toward the confederate.

Therefore, in a face-to-face situation, the subject who received help would rate the confederate favourably, and the subject who did not receive help, would still rate the confederate favourably, leading to an absence of difference in the favourability ratings of the confederate. When there was no face-to-face interaction, the subject who did not receive help would be less dictated by the social rule, and would be more able and willing to express dislike for the confederate who did not give him help, thus leading to considerably different favourability ratings of the confederate, in comparison to favourability ratings given by subjects who had received help from the confederate.

Greater commitment to help received. In addition, when a person was face-to-face with the helper when he received help, there would be a greater commitment to the help received than when he was not facing the helper. Consequently, he became more committed to reciprocating the help and feeling grateful than otherwise. Reciprocating help and feeling grateful were made salient while the conditions under which help had been given became less important. For this reason, the majority of the subjects might have rated the confederate favourably regardless of the condition in which help had been given.

Capability to reciprocate. In the study, half of the subjects were told that they would be allowed to help the confederate on the second task, while half of the subjects were told that they could not do so. Though the latter half of the subjects were made to feel that they could not return help per se, since they were interacting with the confederate face-to-face, they might not have really felt that they could not reciprocate in other ways. They might feel that they could reciprocate even by a simple 'thank you', particularly, when the help

received was not very important to the recipient, nor costly to the helper. This might have been a factor contributing to the absence of the effect of the capability factor on subjects' evaluation of the confederate.

Importance of Help

The tasks used in both experiments were simple tasks requiring the subjects to either work on anagrams as in experiment one or match patterns as in experiment two. Also, they were not told that performance on the task was any kind of a reflection on the subjects' personality or intelligence or ability or so forth. In other words, the ego involvement of the subjects in the task might have been minimal. It was not important for the subjects to do well in the task, and they might not have seen themselves as benefiting from doing well on the task either. Consequently, help from the confederate to complete the task faster was not perceived as being of great value to the subjects. To put it in a slightly different way, the impact of the help on the subjects was not big. The subjects were not necessarily made to feel obligated to reciprocate help. They might feel that a mere expression of thanks would be suffice for the help received. This implies that the norm of reciprocity does not become salient whenever help is given but only when important help or help of value to the recipient is given. This lack of impact of the help received may account for the absence of the effect of the various variables.

Manipulation of the incompetence factor

In one of the conditions of the experiment, help was given in such a way that the subjects were made to feel that it implied incompetence, i.e., subjects were made to feel incompetent. The confederate tried to make the subjects feel incompetent by saying that the subjects' task was easier than his, and then he helped the subjects finish the task quickly.

The confederate in helping the subjects displayed competence. If the subjects perceived the confederate, i.e., the helper as being much more competent than they were, they would not resent the helper for implying incompetence as much as if they had perceived the confederate as being not as competent. In testing the manipulation of this variable, results showed that subjects in the incompetence conditions felt that the confederate was more competent than they were, and this feeling was stronger in this condition than in the condition where incompetence was not implied by the help received. Also, as mentioned earlier, the task that had to be completed might not have been perceived by subjects as being important, and therefore, an implication of incompetence in performing the task might not have been looked upon as a 'blow' to the ego. It did not matter to the subjects that they were incompetent in matching patterns or working on anagrams. Thus, they would not have resented the help nor the helper for implying incompetence. All these seem to suggest that the implication of incompetence alone was not sufficient to create resentment toward the helper; perhaps the helper must be incompetent himself before he can create any resentment toward him, and also the implied incompetence must be in an area which is important to the recipient.

Confusion between attraction and willingness to reciprocate

In addition, the absence of supporting data for the various hypotheses might be attributed to the confusion between liking for the helper and willingness to reciprocate help. In deducing the three hypotheses under study from the various theories, and data of previous studies, it was assumed that liking for the helper and willingness to reciprocate help are identical. For example, in making predictions on

the basis of the reciprocity theory, it was assumed that in order to reciprocate help, the recipient also liked the helper. But this may not be always true because factors operating to affect liking for the helper may often be different from those operating to affect willingness to help. In the studies discussed above where there were face-to-face interactions, though subjects who had received help and those who had not received help expressed similar degree of liking for the confederate, they differed in their willingness to help the confederate. Subjects who had received help were more willing to help the confederate than those who had not received help. The face-to-face interaction gave the subjects a stronger commitment to help received, and consequently a stronger commitment to reciprocate help. However, in the face-to-face interaction situation where no help was given to the subjects, the subjects could refrain from helping the confederate without violating a social rule, but they could not express dislike without violating the rule. It is thus important to differentiate the two in making any predictions.

Examination of the Three Variables Together

Another alternative explanation of why the hypothesized effects were not obtained in the data can be that the hypothesized effects could have been obtained if each of these effects had been studied separately instead of together. In previous studies on these three hypothesized effects, none of these were studied together in one study.

"Help" may not be a "Favour"

On a purely speculative level, it may be possible for us to say that results of this study are reflecting what is happening in the world of university students on this continent. Among the younger

generation now, brotherhood, love, and sharing are very much emphasized and stressed. It may be true that young people no longer feel that 'helping' is necessarily a 'favour'. They may look upon help as what one human being should do to another. It is normal to help others, or it is nothing 'extraordinary', particularly when 'help' is not very important or valuable. Consequently, help does not necessarily elicit a sense of indebtedness or gratitude or obligation. All the theories discussed assume that receiving help is normally perceived as a favour and that it entails a sense of gratitude. All our hypotheses are based on this assumption. Therefore, if the assumption is not true, then all the hypotheses will be meaningless. It is thus not surprising that data from this study do not lend support to the three hypotheses made on the basis of these theories and this assumption.

Cultural Differences

In all the previous studies on helping behaviour, American students have been employed as subjects while in this particular study, Canadian students have been used instead. This may have been contributing to the differences in the results of this study and other previous ones, where subjects were shown to have given unfavourable ratings of the confederate and where the hypothesized effects were shown to have been supported. It may be possible that American students are more aggressive and less reluctant to rate others unfavourably, whereas Canadian students, particularly, those who attend University of Victoria, are more polite and more reluctant to rate others unfavourably. Of course, there is not enough work done on American-Canadian differences to support this contention. This, however, seems to point to a whole field of cross-cultural research along this line. It would be interesting, for example, to study the willingness to rate others unfavourably among

Oriental people who are known for their politeness, their unwillingness to offend people, and their lack of aggressiveness, and make a comparison with Americans and Canadians.

Summary

The above discussion of the various factors operating in the experimental situation of this study seems to suggest that the three factors of interest, namely, motive of the helper, implication of incompetence, and capability to reciprocate, do not affect the recipient's liking for the helper indiscriminately, but rather depending on the nature of the help, the perceived value of the help to the recipient, the competence of the helper, and the situation in which help is given, i.e., whether there is face-to-face interaction. It seems that in order for the factors to be affecting the recipient's liking for the helper, the help must be valuable and important to the recipient, the area in which incompetence is implied must be relevant and significant to the recipient, the helper must not be very competent himself, and the interaction between the helper and the recipient must be a face-to-face interaction. All these considerations can be examined in future research and this will be discussed in a later section.

Although results from these two experiments did not lend support to the three hypotheses, they provide us with information which enables us to further specify the variables which should be controlled in a study of the effects of the three factors under study, and also enables us to have a better understanding of the different factors which operate in a help receiving situation. Also, these results help us realize that help receiving behaviour and attitudes are very complex

behaviours which are dependent on the operation of numerous factors. A simple statement like a person is attracted to someone who helped him is almost meaningless unless it is qualified by a specification of the various conditions under which help is given. Therefore, in an attempt to understand help receiving behaviour and attitudes, it is essential to keep in mind the complexity of this kind of behaviour.

In the previous section, an attempt was made to explain results of the study by examining the various factors operating in the experimental situation, and it was found that the three factors under study did not affect help recipients' liking for the helper indiscriminately but dependent on other factors present. In this section, post-hoc explanations of the results of this study will be made on the basis of theories discussed above, namely, Homans' theory of 'distributive justice', Gouldner's theory of the 'norm of reciprocity', Festinger's theory of cognitive dissonance, Brehm's theory of psychological 'reactance', and Davis and Jones' theory of correspondent inference.

Homans' theory of 'distributive justice'

Motive. In receiving help from the confederate, the subject was gaining something from the helper, and thus felt pressured to give something in return. When the motive was perceived to be altruistic, the subject perceived that the confederate was not rewarded for helping, but he himself received reward at a cost to the confederate. He therefore felt pressured to give in return. In the condition where help was perceived as being a part of a cooperative game, the subject felt that both he and the confederate gained, but again at a cost to the helper. Therefore, the recipient again felt pressured to give the confederate something in return, and felt favourably disposed toward the confederate.

Implication of incompetence. When there are no implications of incompetence in help received, the subject profited from the help and thus felt pressured to return something and subsequently also felt favourably disposed toward the helper. When there was implication of

incompetence in help received, the subject would normally resent the confederate, but in the situation of this experiment where the confederate was shown to be competent, and where the area of implied incompetence was not perceived as being important, the subject would have less resentment toward the confederate. In view of having received help from the confederate, the subject would still feel pressured to return help, and be attracted to the confederate.

Capability to reciprocate. In receiving help from the confederate, the subject felt pressured to reciprocate and also felt attracted to the confederate. The knowledge that he was given the chance to return the help only reinforced his feeling to reciprocate. But in the condition where the subject was told that he could not reciprocate help directly, the subject would want to achieve equity by other means, and the face-to-face interactions of this experiment provided such possibilities. Consequently, the subject would still find the situation satisfactory, i.e., he could achieve equity, and would not feel any resentment toward the helper, i.e., the confederate.

Gouldner's Theory of the "Norm of Reciprocity"

Motive. In the altruistic condition, the cost incurred by the help for the confederate was minimal and so was the reward, and there was gain for the subject and no cost incurred. Therefore, the subject felt that he should reciprocate, and also felt attracted to the confederate. In the ulterior condition or the cooperation game condition, the subject saw that both he and the confederate profited from the act of help. In short, there was mutual gain in this condition, and thus the relation was satisfactory to both parties. Consequently,

the subject liked the confederate. Therefore, in both conditions, the subject rated the confederate favourably.

Implication of incompetence. In the condition where incompetence was implied, the subject received help, i.e., gain from the confederate at a cost to himself. Under this condition, the subject should have felt resentment toward the confederate. But in this experiment, the confederate was shown to be competent and he could have been perceived by the subject as being an expert. As a result of this perception, together with the perception that the area of implied incompetence was unimportant, resentment toward the confederate resulting from such an implication became minimal, if any at all. The subject still felt willing to reciprocate, and also liked the confederate. In the condition where there was no implication of incompetence, the subject received help, felt grateful to the confederate, and liked him. Again, since in both conditions the subject was attracted to the confederate, there was no difference in the favourability ratings of the confederate.

Capability to reciprocate. In the capable condition, the subject received help and saw himself as being able to reciprocate. In short, he saw the relation with the confederate a reciprocal one and thus a satisfactory one. He, therefore, liked the confederate. In the incapable to reciprocate condition, the subject could not reciprocate with another help, but being in the face-to-face interaction situation he perceived himself as being able to reciprocate by other means. Thus, the relation would still be perceived as a reciprocal one, and consequently, the subject would find the relation satisfactory, and the confederate attractive.

Festinger's Theory of Cognitive Dissonance

Motive. In the condition where the helper's motive was perceived to be altruistic, the cognition of having received help and the cognition of being grateful, and willing to reciprocate were in consonance. Thus, the subject would rate the confederate favourably. Also, in the condition where help was perceived as part of a cooperative game, the cognition of having received help from a game partner and the cognition of being grateful and willing to reciprocate were again in consonance. The subject would, therefore, rate the confederate favourably.

Implication of incompetence. When help did not imply incompetence, no dissonance was created, since the cognition of having received help and of being grateful and willing to reciprocate were in consonance. In the condition where help implied incompetence, dissonance was created because the cognition of having received help which implied incompetence and the cognition of being grateful to the helper were dissonant. But in this experiment where the helper was shown to be competent, and the area of implied incompetence was perceived to be unimportant to the helper, the cognition of being grateful to the helper would not be perceived as being dissonant with the cognition of having received help which implied incompetence. Thus, the subject would still be grateful to the helper and rated the helper favourably.

Capability to reciprocate. In the condition where the subject saw himself as being able to reciprocate, the cognition of having received help and the cognition of being able to reciprocate and being grateful to the helper were in consonance. Therefore, the subject rated the helper, i.e., the confederate, favourably. In the condition where the subject

perceived himself as not being able to reciprocate help, this cognition would be in dissonance with the cognition of being grateful to the helper and willing to reciprocate, resulting in the need to justify the action of not reciprocating by attributing negative dispositions to the helper. But in this experiment where face-to-face interaction was possible, the subject could see himself as being able to return help in other ways, and thus did not have to justify his action by attributing negative dispositions. Instead, he could attribute positive dispositions to the helper as in the former case.

Brehm's "Reactance" Theory

Motive. When help was given with an altruistic intention, though it aroused a certain amount of obligation or demand on the subject to reciprocate, the demand imposed was not perceived as being unwarranted, and thus the subject would not resist it actively and not as much as if the demand were unwarranted. Also, 'reactance' would not be created, and the subject would become grateful and attracted to the confederate. Again, when help was given in the situation where help was perceived as part of a cooperative game, demand imposed by the help received was not perceived as being unwarranted. Consequently, the subject did not resent any loss of freedom, and reactance was subsequently not created. There would be no significant differences in the amount of liking the subject had for the confederate in the first and the second conditions.

Implication of incompetence. When help did not imply incompetence, the demand imposed on the subject was perceived as being warranted, and thus minimal reactance, if any at all, was aroused. Therefore, the subject felt indebted to the helper and liked the confederate. When help implied incompetence, the demand imposed would be perceived as being

unwarranted. However, in the case where the helper was shown to be competent, the subject would not resent the confederate as much, and the demand imposed would be perceived as more warranted than otherwise, particularly when the area of implied incompetence was not perceived as being important. Consequently, very little 'reactance', would be aroused, and no resentment felt. Again, there would be no difference in the amount of liking for the confederate in both conditions.

Capability to reciprocate. When the recipient was allowed to return help directly, the threatened freedom was not perceived as being very important, and thus 'reactance' was minimal. Thus, the subject felt grateful and attracted to the confederate. When a subject was not allowed to return help after having received some, the demand or obligation imposed by the help restricted his behaviour to the particular behaviour which he was not allowed to perform, i.e., to reciprocate and be grateful to the confederate. Reactance would result, and in order to re-establish his threatened freedom, the subject's attitude toward the confederate would become unfavourable. But, in this experiment, where there was face-to-face interaction, the subject might not have perceived himself as being allowed to reciprocate help directly, but he could see himself as being able to return help by friendly gestures. Thus, again the threatened freedom would not be perceived as being very important, and minimal 'reactance' would be aroused, resulting in a similar amount of 'reactance' as in the former condition. Therefore, there would not be any difference in the amount of liking for the confederate in the first and the second conditions.

Davis and Jones' Theory of Correspondent Inference

Motive. A favour or help is a relevant and personalistic positive action. In the condition where the motive of the confederate was perceived as being altruistic, the circle containing the intended effects of the action would not contain the effect of 'obligating the perceiver to benefit the actor in return', and thus the confederate would be seen as intending to perform a gracious act, and correspondent inferences would be drawn to positive dispositions such as likeability and maturity. In the condition where help was perceived as part of a cooperative game, again the effect of 'obligating the perceiver to benefit the actor in return' would not be in the circle of intended effects of the action, and the helper would then also be seen as likeable and mature and so forth. Therefore, there was very little difference in the favourability ratings of the confederate between subjects in the two conditions.

Implication of incompetence. In the condition where help given did not imply incompetence, the subject would attribute to the confederate the intention of expressing his true feelings, and would thus draw inferences to favourable dispositions, such as friendliness, generosity, and so forth. When help implied incompetence, the subject would attribute to the confederate the intention to belittle him, but since the confederate was shown to be competent himself, and the area of implied incompetence was not important, it was likely that the subject would not attribute this intention to the confederate. Again, there would not be any significant differences in the favourability ratings of the confederate between subjects in the two conditions.

Summary

From the above discussion of the post-hoc explanations of the various theories, it can be seen that most of the data of this study can be explained by these theories.

Chapter Six Suggestions For Future Research

In addition to providing information which broadens understanding of the different factors which operate in a help receiving situation, results of this study have numerous suggestions for future research.

Cross-Cultural Studies

One kind of research which may prove very fruitful for the understanding of help receiving behaviour is cross-cultural studies. As has been suggested earlier in the discussion of the possible difference between Americans and Canadians in their willingness to rate people unfavourably, it would be interesting to make a comparison of the different cultural groups' reluctance to rate others unfavourably. If it should be true that some cultural groups are more reluctant to rate others unfavourably than other cultural groups, then research on interpersonal attraction might have to employ, for certain cultural groups, different measures of attraction rather than the commonly used direct ratings of attraction.

Also, besides differences in willingness to rate others unfavourably, it is conceivable that there are cultural differences in people's reaction to help and their means of returning help and restoring equity. Different cultural groups may have different concepts of help and reciprocating help. For example, for the orientals, receiving help or favour is a serious matter which a person should always remember to repay. The emphasis on repaying this debt or "on" as they call it, is so great that if one should fail to repay it, one's children and/or grandchildren have to repay it. Also, having received help from another person does not only obligate the person to return help once or twice but puts him in debt to the other person indefinitely. He feels

obligated to help this other person as many times as the occasions arise, and when possible. This strong emphasis on being in debt to a helper may affect orientals' reaction to help. In the first place, if possible, they would not ask for help, and also would not put themselves in debt to others through receiving help. A study examining the degree of urgency of the help needed before an oriental would ask for help as compared to, for example, a Canadian, should add to insight into such behaviour. Also, it would be interesting to examine the extent to which orientals, once accepting help or put in debt to a person, would tolerate unpleasant experiences from the helper before they would get irritated and stop reciprocating. These are only a few suggestions and there are numerous possibilities which can be done.

Face-to-face Interactions

The discussion of the different results yielded by face-to-face interactions and non face-to-face interactions points to a series of studies comparing people's social behaviour in these two conditions. Previous studies examining the effect of face-to-face interaction have been mainly on conformity behaviour. They should be extended to other kinds of social behaviour, of which help receiving behaviour is, of course, one kind. Theories with a social orientation should be more salient for face-to-face interactions than non face-to-face interactions. In the context of help receiving behaviour, the norm of reciprocity, norm of responsibility, and exchange theory should be the guiding principles in face-to-face interactions, whereas the cognitive dissonance theory and its derivative theories should be those in non face-to-face situations. A person in face-to-face interactions is more concerned about striking and achieving a balance between himself and the helper, whereas in non

face-to-face interactions, he is more concerned with achieving balance within himself, or in his psychological state. It would be an useful exercise to set up a crucial experiment in which predictions based on these various theories can be tested against each other. Also, though it is rarely in daily life that a person receives help without having face-to-face interaction with the helper, it would be interesting to compare, for example, receiving monetary help through the mail, i.e., a draft, and receiving monetary help from the helper directly, and to see whether the recipient is less committed to the help and the helper in the former case than in the latter case.

Other Factors

Other research along the line of different factors discussed above which affect the operation of the three variables under study can be pursued. The effect of the motive factor can be examined in the conditions where help is important, and where help is unimportant to the recipient; the effect of the implication of incompetence can be examined under the conditions where the helper is competent and where the helper is incompetent, and under the conditions where the area of implied incompetence is important and where it is unimportant to the recipient; the effect of capability to reciprocate can be studied in the conditions where the recipient can have other means of reciprocating, such as having face-to-face interactions and where the recipient can have no other means of reciprocating, such as not having any kind of communication with the helper after help is given.

In order to have better control in the experimental situation, it is advisable to introduce a no-help condition in the suggested studies

discussed. The no-help condition can serve as a baseline for comparing subjects' reactions to help and their perception of the helper.

All these are research possibilities which should give further insight into the question of help receiving behaviour and attitudes, in specific, and social behaviour in general.

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Appendix 1

Tasks for Experiment 1 *

Anagrams for Subjects

nltap
 refco
 nriag
 osytr
 gltih
 eonca
 oeavb
 tlmae
 nerla
 acrhi
 caend
 cweit
 dolwr

Anagrams for the Confederates

arcih
 renal
 ndeac
 eonac
 angir
 rwdol
 tmlea
 refco
 hitgl
 tlnpa
 ytrso
 ewcti
 vbeoa

* The anagrams were adopted from the list used by Kanungo (1968) in his study. He had four different patterns of letter arrangements of equal difficulty and they are : 31524, 35142, 52413, 42531. Using these four arrangement patterns, four lists of 13 anagrams of the same pattern were constructed. Then from these four lists, four new lists were selected randomly, and each list consisted of 13 anagrams with at least three examples of each arrangement pattern.

Appendix 2

Instructions for the Confederates - Experiment 1

Five to seven minutes after you and the subject have started working on the anagrams, get up and go over to her desk and say one of the following, depending on the condition.

Incompetence Condition

"Gee, it's not difficult. You still haven't finished? Well, I think I better help you finish it. (Pause) Your anagrams are simpler than mine."

Competence Condition

"I'm really lucky. I've worked on similar types of anagrams before. (Pause) Gee, your anagrams are much more complicated than mine".

Appendix 3

Dependent Measures for Experiment 1

Please rate your answers on the scale provided:

1. How much do you like the other person?

very much ----- very little

2. How likeable is the other person?

very much ----- very little

3. How friendly is the other person?

very much ----- very little

4. How much would you like to work with her in another experiment?

very much ----- very little

Appendix 4

Measures testing effectiveness of the Independent Variables

Experiment 1

Please rate your answers on the scale provided:

1. To what extent did the other person benefit from helping you?

very much ----- very little

2. Did you feel you were less competent on the first task than the other person?

very much ----- very little

3. Do you feel you would have the opportunity to help the other person in the second task?

very much ----- very little

Appendix 5

Table 1
 Analysis of Variance of Combined Attraction Scores for the Confederate
 (Female Subjects)

Source	df	MS	F
Confederate (A)	2	0.98	1.15
Capability (B)	1	0.58	< 1
Competence (C)	1	0.52	< 1
Motive (D)	1	4.12	4.84 *
A x B	2	0.41	< 1
A x C	2	0.60	< 1
A x D	2	0.17	< 1
B x C	1	1.58	1.84
B x D	1	2.31	2.71
C x D	1	0.21	< 1
A x B x C	2	0.80	< 1
A x B x D	2	1.04	1.19
A x C x D	2	0.54	< 1
B x C x D	1	0.01	< 1
A x B x C x D	2	1.11	1.30
Within	72	0.85	
Total	95		

* $p < 0.05$

Appendix 5 (contd.)Table 2

Analysis of Variance of ratings of the amount of liking for the Confederate
(Female Subjects)

Source	df	MS	F
Confederate (A)	2	2.28	1.72
Capability (B)	1	0.04	< 1
Competence (C)	1	0.37	< 1
Motiva (D)	1	2.04	1.52
A x B	2	1.38	1.04
A x C	2	0.09	< 1
A x D	2	1.32	< 1
B x C	1	1.50	1.12
B x D	1	4.17	3.13
C x D	1	0.17	< 1
A x B x C	2	1.53	1.17
A x B x D	2	1.26	< 1
A x C x D	2	0.63	< 1
B x C x D	1	0.04	< 1
A x B x C x D	2	1.57	1.17
Within	72	1.32	
Total	95		

Appendix 5 (contd.)

Table 3

Analysis of Variance of ratings of the Confederate's Friendliness
(Female Subjects)

Source	df	MS	F
Confederate (A)	2	0.09	< 1
Capability (B)	1	2.67	2.25
Competence (C)	1	1.50	1.25
Motiva (D)	1	6.00	5.17 *
A x B	2	0.69	< 1
A x C	2	1.53	1.25
A x D	2	0.09	< 1
B x C	1	0.67	< 1
B x D	1	1.50	1.25
C x D	1	0.17	< 1
A x B x C	2	1.76	1.51
A x B x D	2	1.53	1.25
A x C x D	2	1.57	1.26
B x C x D	1	0.00	
A x B x C x D	2	1.97	1.69
Within	72	1.16	
Total	95		

* p 0.05

Appendix 5 (contd.)

Table 4

Analysis of Variance of ratings of the Confederate's Desirability as
A Partner (Female Subjects)

Source	df	MS	F
Confederate (A)	2	2.44	2.20
Capability (B)	1	0.26	< 1
Competence (C)	1	0.09	< 1
Motive (D)	1	5.51	5.00 *
A x B	2	0.02	< 1
A x C	2	1.70	1.53
A x D	2	0.13	< 1
B x C	1	3.01	2.71
B x D	1	2.34	2.10
C x D	1	0.26	< 1
A x B x C	2	0.45	< 1
A x B x D	2	0.71	< 1
A x C x D	2	0.35	< 1
B x C x D	1	0.84	< 1
A x B x C x D	2	0.62	< 1
Within	72	1.11	< 1
Total	95		

* $p < 0.05$

Mark all answers on the answer sheet!

ATTITUDE-INTEREST ANALYSIS TEST

READ THIS FIRST

You are asked to co-operate seriously and carefully. This is not an intelligence test. We want to find out something about the attitudes and interests of people in relation to their occupations, their home situations, and their hobbies. The items have been selected by actual trial out of several thousand. More than 4,000 persons of different ages, occupations, and schooling have taken tests like this one. We are trying to accumulate sufficient returns to discover what the actual standards of response are. Your answers are needed to help do this. Please do not omit any of the items. All of the information is important.

Do not look at other parts of the booklet until you are ready to begin the test. When you are ready, turn at once to Part 1. Read the instructions carefully. Then go right on. Work as rapidly as you can. As soon as you have finished Part 1, go right on to Part 2., then Part 3., and so on until you have finished the booklet. In each case read the directions with care, and work the part as rapidly as you can. It should take about 20 minutes to finish the booklet.

Mark all the answers on the answer sheet.

PART 1.

Directions: Look at the word in capital letters, then look at each of the four words which follow it.

For example: HORSE (a) cow (b) hay (c) race (d) swim

On the answer sheet, mark the letter which stands for the word that seems to you to go best or most naturally with HORSE; that is, the word that HORSE tends most to make you think of. If "Horse" makes you think of "race", mark (c) on the answer sheet.

Look at each of the words in the list below. In each case, mark the letter on the answer sheet which stands for the word that goes best or most naturally with the one in capitals; the word it tends most to make you think of. Work rapidly; do not think long over any one.

1. POLE (a) barber (b) cat (c) North (d) telephone
2. DATE (a) appointment (b) dance (c) fruit (d) history
3. BAR (a) drink (b) prisoner (c) sand (d) stop
4. SHARP (a) bright (b) flat (c) knife (d) pin
5. TRUNK (a) baggage (b) elephant (c) travel (d) tree

6. ORDER (a) buy (b) command (c) neat (d) quiet
7. CASE (a) bottles (b) container (c) doctor (d) grammar
8. POST (a) fence (b) gate (c) letter (d) mail
9. TENDER (a) kind (b) loving (c) meat (d) sore
10. JACK (a) cards (b) money (c) tool (d) toy

11. TRAIN (a) engine (b) gown (c) travel (d) whistle
12. DRAW (a) blood (b) bridge (c) pencil (d) picture
13. BRACE (a) bit (b) pair (c) strap (d) support
14. FLY (a) airplane (b) bird (c) nasty (d) travel
15. BOND (a) love (b) paper (c) security (d) tie

16. PASS (a) car (b) mountain (c) over (d) subject
17. RAIN (a) clouds (b) umbrella (c) weather (d) wet
18. BOOK (a) cover (b) paper (c) print (d) read
19. PURE (a) good (b) milk (c) water (d) white
20. MOON (a) light (b) month (c) night (d) round

21. FLESH (a) blood (b) color (c) meat (d) soft
22. DANGER (a) accident (b) caution (c) death (d) escape
23. MODEST (a) bashful (b) good (c) nice (d) shy
24. FRESH (a) cool (b) flirt (c) meat (d) stale
25. COLOR (a) black (b) blind (c) blue (d) shade

26. PICNIC (a) fun (b) hike (c) sandwich (d) Sunday
27. WEDDING (a) bride (b) happiness (c) marriage (d) ring
28. DUTY (a) God (b) honor (c) soldier (d) work
29. GARDEN (a) flower (b) fruit (c) vegetable (d) weeds
30. EMBRACE (a) arms (b) lover (c) mother (d) sin

31. HOME (a) expenses (b) happiness (c) marriage (d) sleep
32. BLUSH (a) red (b) rose (c) shame (d) smile
33. BABY (a) cry (b) darling (c) infant (d) mother
34. FELLOW (a) boy (b) friend (c) good (d) pal
35. CHEAT (a) cards (b) clerk (c) crook (d) unfair

36. ENJOY (a) food (b) happiness (c) jolly (d) laugh
37. DEVIL (a) dare (b) evil (c) hell (d) tempt
38. JEALOUS (a) angry (b) green (c) lover (d) women
39. DIMPLE (a) baby (b) cheek (c) hole (d) knee
40. KNIGHT (a) armor (b) brave (c) Ivanhoe (d) man

41. LETTER (a) love (b) news (c) paper (d) stamp
42. CELLAR (a) basement (b) dark (c) furnace (d) vegetables
43. TRUE (a) edge (b) good (c) soldiers (d) story
44. DESPISE (a) coward (b) flirt (c) dislike (d) flirt
45. TWILIGHT (a) dark (b) dusk (c) morning (d) sunset

46. FACE (a) enemy (b) powder (c) pretty (d) wash
 47. SPOON (a) fork (b) pet (c) silver (d) soup
 48. CHEEK (a) blush (b) girl (c) nerve (d) pink
 49. WORSHIP (a) church (b) God (c) hero (d) Sunday
 50. LONGING (a) absence (b) child (c) home (d) success
-

On the answer sheet, mark the letter which stands for the words that makes the sentence true. Work as rapidly as you can. If you do not know the answer, mark (e) (E).

51. Pongee is a kind of -
 (a) cloth (b) drink (c) flower (d) game
52. Peat is used for-
 (a) fuel (b) pavement (c) plaster (d) road making
53. A stately dance of colonial days was the-
 (a) waltz (b) two-step (c) minuet (d) polka
54. Eggs are best for us when-
 (a) deviled (b) fried (c) hard-boiled (d) soft-boiled
55. Red goes best with-
 (a) black (b) lavender (c) pink (d) purple
56. The mossy side of a tree is usually on the-
 (a) east (b) north (c) south (d) west
57. Turpentine comes from-
 (a) coal (b) petroleum (c) trees (d) whales
58. The proportion of the globe covered by water is about-
 (a) 1/8 (b) 1/4 (c) 1/2 (d) 3/4
59. Blue clashes worst with-
 (a) brown (b) gray (c) pink (d) purple
60. A dinner hostess seats the guest of honor at her-
 (a) left (b) opposite (c) right
61. A buffet is used for-
 (a) books (b) clothes (c) dishes (d) food
62. When water freezes it-
 (a) contracts (b) expands (c) does neither
63. Barometers are used to measure-
 (a) air pressure (b) heat (c) humidity (d) rainfall
64. Lobo was the name of a-
 (a) bear (b) crow (c) fox (d) wolf
65. Charades is a-
 (a) running game (b) game of chance (c) guessing game
66. The number of ordinary steps in a mile is about-
 (a) 1,000 (b) 2,000 (c) 5,000 (d) 10,000
67. Babies should be weaned at about-
 (a) 3 mos. (b) 6 mos. (c) 12 mos. (d) 2 years
68. Limestone originated from-
 (a) granite (b) marble (c) sand (d) shells
69. Beam Scales illustrate the principle of-
 (a) buoyancy (b) elasticity (c) leverage (d) magnetism
70. A famous portrait painter was-
 (a) Rosa Bonheur (b) Mozart (c) Reynolds (d) Rubens

Below is a list of things that sometimes cause disgust.
On the answer sheet, mark A, B, C, or D to show how much disgust
each thing causes you.

A means VERY MUCH; B means MUCH; C means A LITTLE; D means NONE

71. Smell of decaying fish
 72. Pimples
 73. Offensive breath
 74. An unshaven man
 75. Food stains on clothing

 76. Foul language
 77. Soiled or ragged fingernails
 78. A drunken man
 79. Sight of slimy water
 80. Mushy food in your mouth
-

Below is a list of things that sometimes cause anger. On the
answer sheet, mark A, B., C, or D to show how much anger each
thing causes you.

A means VERY MUCH; B means MUCH; C means A LITTLE; D means NONE

81. Being blamed for something you have not done
82. Being called lazy
83. Being called stupid
84. Being deceived by a supposed friend

85. Being disturbed when you want to work
86. Being unexpectedly slapped on the back as a joke
87. Hearing someone make fun of your clothes
88. Hearing your political views ridiculed

89. Seeing an honest official thrown out of office by
politicians
90. Seeing someone cheat in an examination

Below is a list of things that often cause fear. On the answer sheet draw a mark A, B, C, or D to indicate how much fear each thing causes you. Be honest and admit all the fears you have. Fears are not disgraceful.

A means VERY MUCH; B means MUCH; C means A LITTLE; D means NONE

- 91. Being lost
 - 92. Being in a closed room
 - 93. Becoming deaf or blind
 - 94. Burglars
 - 95. Deep water
 - 96. Garter snakes
 - 97. Graveyards at night
 - 98. Insects
 - 99. Lightning
 - 100. Pain
-

Below is a list of things that sometimes arouse pity. On the answer sheet mark A, B, C, or D to indicate how much pity each thing arouses in you.

A means VERY MUCH; B means MUCH; C means A LITTLE; D means NONE

- 101. A bee that is drowning
 - 102. A dog that must be killed for biting people
 - 103. A man who is cowardly and can't help it
 - 104. An old person with a fatal disease
 - 105. A fly caught on sticky fly paper
 - 106. An underfed child
 - 107. Very old people
 - 108. A baby bird whose mother is dead
 - 109. A wounded soldier
 - 110. A young person totally paralyzed
-

For each occupation below, ask yourself, would I like that work or not? If you would like it, mark A on the answer sheet. If you would dislike it, mark around B on the answer sheet. If you would neither like nor dislike it, mark C on the answer sheet. In deciding on your answer, think only of the kind of work. Don't consider the pay. Imagine that you have the ability to do the work, that you are the right age for it, and that it is equally open to men and women.

Don't stop to think long; answer fairly quickly.

Occupation

Preference

Do you like or dislike these?

Do you like or dislike these?

Like=A Dislike=B Neither=C

Like=A Dislike=B Neither=C

- 111. Architect
- 112. Chef or cook
- 113. Auto racer
- 114. Librarian
- 115. Building contractor
- 116. Detective
- 117. Nurse
- 118. Private secretary
- 119. Journalist
- 120. Forest ranger
- 121. Dairyman
- 122. Dressmaker
- 123. Florist
- 124. Stock breeder
- 125. Optician
- 126. Social worker
- 127. Music teacher
- 128. Clerk in a store
- 129. Singer
- 130. Preacher
- 131. Novelist
- 132. Soldier
- 133. Draftsman
- 134. Artist
- 135. Bookkeeper

- 136. Social problem movies
- 137. Movie love scenes
- 138. Poetry
- 139. Detective stories
- 140. Stories of home life
- 141. Comics
- 142. Dramatics
- 143. Skating
- 144. Horseback riding
- 145. Hopskotch
- 146. Chess
- 147. Charades
- 148. Collecting flowers
- 149. Cooking
- 150. Parties and socials

Appendix 7

Tasks for Experiment 2 *

Subjects' TaskIncompetence Conditions

A4	B11
A6	C12
B3	C3
E9	C11
B5	D8
E10	D10
D12	D11
E7	D7
E8	E11
B12	E12

Competence Conditions

A4	C11
A6	E7
B3	D8
B12	C10
D10	B5
A12	C3
B11	C9
D11	D12
B10	D1
C12	D7
E8	E11
C4	E12

Confederates' TasksIncompetence Conditions

D5	-	D12
E1	-	E12

Competence Conditions

B1	-	B12
C1	-	C12

* The lists of patterns were adopted from Raven's Standard Progressive Matrices (Revised Order, 1956). The Matrices consisted of 60 patterns divided into five sets of 12 each, A, B, C, D, and E. In each set, the first problem is self evident, while the problems which follow become progressively more difficult. The sets also get progressively more difficult from A to E. The numbers here are original numbers of the patterns.

Appendix 8

Instructions for the Confederates - Experiment 2

Incompetence Conditions. Keep track of the number of patterns the subject has finished and when he has finished 12, finish your last one and drop the answer sheet in the box, get up and go over to the subject's desk and say,

"It's easy. You still haven't finished? (Pause) Yours are easier than mine."

Competence Condition. Keep track of the number of patterns the subject has finished and when he has finished 16, finish your last one and drop the answer sheet in the box, get up and go over to the subject's desk and say,

"I'm lucky. I have done this type of tasks before. (Pause) Yours are more difficult than mine."

Appendix 9

Instructions for Subjects - Experiment 2

Ulterior - incapable conditions. The purpose of this experiment is to examine task performance under different conditions. You will be given a number of tasks in units of two tasks each. For each task, you will score points depending on how fast and/or how well you can do the task. The two subjects who get the highest score will be given prizes.

The tasks of the first unit will be explained now and when you finish these two tasks, the tasks of the second unit will be explained, otherwise it will be too confusing.

The first task of the first unit is a paper and pencil task. The tasks you two get are different but of the same type. You will be scored according to how fast and how well you can finish the task. You will be scored together, i.e., the score you get will be added to the points the other subject, and each of you will get half of the total. This means that if one scores, say, 15 points, and the other only seven points, both will end with a score of 11, and the first person ends up losing 4 points because of the second person. But you can help each other if you want to but not before you have finished your own task.

The second task of this unit is a task on wooden blocks. There are two sets of tasks, A and B, and I will let you draw lots to see who gets which set. You cannot each other with this second task.

Ulterior - capable conditions. The purpose of this experiment is to examine task performance under different conditions. You will be given a number of tasks in units of two tasks each. For each task,

you will score points depending on how fast and/or how well you can do the task. The two subjects who get the highest score will be given prizes.

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The second task of this first unit is a task on wooden blocks. There are two sets of tasks, A and B, and I will let you draw lots to see who gets which set. Task A involves a couple of boxes of wooden blocks and whoever gets task A will need help to carry some of the blocks. Maybe the other subject can help or maybe I can help. Also, with the second task you can help each other.

Altruistic-incapable conditions. The purpose of this experiment is to examine task performance under different conditions. You will be given a number of tasks in units of two tasks each. For each task, you will score points depending on how fast and/or how well you can do the task. The subjects who get the highest score will be given prizes.

The two tasks of the first unit will be explained now and when you finish these two tasks, the tasks of the second unit will be explained, otherwise it will be too confusing.

The first task of the first unit is a paper and pencil task. The tasks you two get are different but of the same type. You will be scored according to how fast and how well you can finish the task. You will be scored separately, i.e., the score you get is independent of the scores the other subject gets. You can help each other if you want to but not before you have finished your own task.

The second task of this unit is a task on wooden blocks. There are two sets of tasks, A and B, and I will let you draw lots to see who gets which set. You cannot help each other with this second task.

Altruistic - capable condition. The purpose of this experiment is to examine task performance under different conditions. You will be given a number of tasks in units of two tasks each. For each task, you will score points depending on how fast and/or how well you do the task. The two subjects who get the highest score will be given prizes.

The two tasks of the first unit will be explained now and when you finish these two tasks, the tasks of the second unit will be explained, otherwise it will be too confusing.

The first task of the first unit is a paper and pencil task. The tasks you two get are different but of the same type. You will be scored according to how fast and how well you can finish the task. You will be scored separately, i.e., the score you get is independent of the score the other subject gets. You can help each other if you want to but not before you have finished your own task.

The second task of this first unit is a task on wooden blocks. There are two sets of tasks, A and B, and I will let you draw lots to see who gets which set. Task A involves a couple of boxes of wooden blocks and whoever gets task A will need help to carry some of the blocks. Maybe the other subject can help or maybe I can help. Also, with the second task, you can help each other.

Appendix 10 (contd.)

Dependent Measures for Experiment 2

Please answer these questions by putting a check on the scale.

1. Personally from the contact I have had with the subject, I
 liked him ----- did not like
 very much him at all

2. I would enjoy meeting the subject socially
 very much ----- not at all

3. I would enjoy having the subject as my partner in a future
 experiment
 very much ----- not at all

Appendix 11

Measures testing effectiveness of the Independent Variables

Experiment 2

Please answer these questions by putting a check on the scale.

1. Did the other subject benefit from helping you?

very much ----- not at all

2. Did you feel you were less competent on the first task than the other subject?

very much ----- not at all

3. Did you feel you will have the opportunity to help the other subject?

very much ----- not at all

Appendix 12Table 1

Analysis of Variance of Combined Attraction Score of the Confederate
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	150.04	< 1
Capability (B)	1	828.38	1.43
Competence (C)	1	112.67	< 1
Motive (D)	1	504.17	< 1
A x B	2	254.63	< 1
A x C	2	268.04	< 1
A x D	2	488.29	< 1
B x C	1	620.17	< 1
B x D	1	121.50	< 1
C x D	1	376.04	< 1
A x B x C	2	75.54	< 1
A x B x D	2	836.38	1.45
A x C x D	2	411.29	< 1
B x C x D	1	30.38	< 1
A x B x C x D	2	106.13	< 1
Within	72	578.39	
Total			

Appendix 12 (contd.)Table 2

Analysis of Variance of ratings of the Confederate's Friendliness
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	0.54	<1
Capability (B)	1	0.26	<1
Competence (C)	1	2.34	<1
Motive (D)	1	7.59	3.01
A x B	2	0.29	<1
A x C	2	2.37	<1
A x D	2	0.87	<1
B x C	1	1.26	<1
B x D	1	1.76	<1
C x D	1	0.84	<1
A x B x C	2	0.54	<1
A x B x D	2	2.04	<1
A x C x D	2	0.50	<1
B x C x D	1	0.26	<1
A x B x C x D	2	0.67	<1
Within	72	2.52	
Total	95		

Appendix 12 (contd.)

Table 3

Analysis of Variance of ratings of the Confederate's Maturity
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	1.63	< 1
Capability (B)	1	0.26	< 1
Competence (C)	1	1.76	< 1
Motive (D)	1	12.76	7.08 *
A x B	2	3.19	1.78
A x C	2	0.19	< 1
A x D	2	1.32	< 1
B x C	1	0.09	< 1
B x D	1	0.01	< 1
C x D	1	10.01	5.56 **
A x B x C	2	2.09	1.16
A x B x D	2	1.76	< 1
A x C x D	2	1.13	< 1
B x C x D	1	0.84	< 1
A x B x C x D	2	2.90	1.61
Within	72	1.80	
Total	95		

* $p < 0.01$

** $p < 0.05$

Appendix 12 (contd.)

Table 4

Analysis of Variance of ratings of the Confederate's Intelligence
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	1.38	< 1
Capability (B)	1	0.01	< 1
Competence (C)	1	0.51	< 1
Motive (D)	1	1.26	< 1
A x B	2	0.38	< 1
A x C	2	0.51	< 1
A x D	2	4.57	2.61
B x C	1	1.76	1.00
B x D	1	0.01	< 1
C x D	1	0.51	< 1
A x B x C	2	0.51	< 1
A x B x D	2	5.44	3.11
A x C x D	2	0.32	< 1
B x C x D	1	1.26	< 1
A x B x C x D	2	4.20	2.46
Within	72	1.75	
Total	95		

Appendix 12 (contd.)

Table 5

Analysis of Variance of ratings of how considerate the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	7.12	< 1
Capability (B)	1	9.37	< 1
Competence (C)	1	2.67	< 1
Motive (D)	1	9.37	< 1
A x B	2	0.87	< 1
A x C	2	1.54	< 1
A x D	2	11.62	1.23
B x C	1	9.37	< 1
B x D	1	1.50	< 1
C x D	1	7.04	< 1
A x B x C	2	3.37	< 1
A x B x D	2	0.87	< 1
A x C x D	2	0.54	< 1
B x C x D	1	0.17	< 1
A x B x C x D	2	5.29	< 1
Within	72	9.42	
Total	95		

Appendix 12 (contd.)**Table 6**

Analysis of Variance of ratings of how 'deep' the confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	1.50	< 1
Capability (B)	1	8.76	2.57
Competence (C)	1	4.59	1.34
Motive (D)	1	3.01	< 1
A x B	2	0.29	< 1
A x C	2	2.37	< 1
A x D	2	5.79	< 1
B x C	1	0.26	< 1
B x D	1	3.01	< 1
C x D	1	0.84	< 1
A x B x C	2	4.67	1.37
A x B x D	2	2.54	< 1
A x C x D	2	8.37	2.45
B x C x D	1	0.51	< 1
A x B x C x D	2	2.04	< 1
Within	72	3.41	
Total	95		

Appendix 12 (contd.)Table 7

Analysis of Variance of ratings of how straightforward the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	7.38	1.46
Capability (B)	1	7.04	1.39
Competence (C)	1	2.67	< 1
Motive (D)	1	0.04	< 1
A x B	2	2.69	< 1
A x C	2	4.45	< 1
A x D	2	0.51	< 1
B x C	1	9.37	1.85
B x D	1	0.67	< 1
C x D	1	1.04	< 1
A x B x C	2	0.97	< 1
A x B x D	2	12.82	2.53
A x C x D	2	0.32	< 1
B x C x D	1	0.67	< 1
A x B x C x D	2	5.50	1.08
Within	72	5.06	
Total	95		

Appendix 12 (contd.)Table 8

Analysis of Variance of ratings of how interesting the confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	5.76	1.81
Capability (B)	1	4.59	1.45
Competence (C)	1	8.76	2.75
Motive (D)	1	25.01	7.86 *
A x B	2	8.09	2.54
A x C	2	5.32	1.67
A x D	2	4.88	1.54
B x C	1	3.76	1.18
B x D	1	0.84	< 1
C x D	1	0.09	< 1
A x B x C	2	0.32	< 1
A x B x D	2	2.34	< 1
A x C x D	2	3.40	1.07
B x C x D	1	4.59	1.45
A x B x C x D	2	2.28	< 1
Within	72	3.18	
Total	95		

* $p < 0.01$

Appendix 12 (contd.)Table 9

Analysis of Variance of ratings of how kind the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	0.54	< 1
Capability (B)	1	1.50	< 1
Competence (C)	1	3.37	1.32
Motive (D)	1	7.04	2.75
A x B	2	0.00	
A x C	2	3.87	1.51
A x D	2	1.29	< 1
B x C	1	0.37	< 1
B x D	1	0.04	< 1
C x D	1	4.17	1.63
A x B x C	2	0.12	< 1
A x B x D	2	4.54	1.77
A x C x D	2	1.29	< 1
B x C x D	1	4.17	1.63
A x B x C x D	2	0.67	< 1
Within	72	2.56	
Total	95		

Appendix 12 (contd.)

Table 10

Analysis of Variance of ratings of how 'genuine' the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	6.50	1.15
Capability (B)	1	24.00	4.26 *
Competence (C)	1	0.04	< 1
Motive (D)	1	0.67	< 1
A x B	2	3.12	< 1
A x C	2	5.17	< 1
A x D	2	10.29	1.83
B x C	1	2.04	< 1
B x D	1	0.17	< 1
C x D	1	1.04	< 1
A x B x C	2	1.79	< 1
A x B x D	2	1.79	< 1
A x C x D	2	1.29	< 1
B x C x D	1	2.04	< 1
A x B x C x D	2	11.54	2.05
Within	72	5.63	
Total	95		

* p 0.05

Appendix 12 (contd.)Table 11

Analysis of Variance of ratings of how 'unannoying' the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	1.17	< 1
Capability (B)	1	3.37	< 1
Competence (C)	1	2.04	< 1
Motive (D)	1	0.37	< 1
A x B	2	11.37	1.98
A x C	2	7.04	1.23
A x D	2	4.87	< 1
B x C	1	2.04	< 1
B x D	1	0.37	< 1
C x D	1	0.37	< 1
A x B x C	2	1.29	< 1
A x B x D	2	14.00	2.44
A x C x D	2	1.62	< 1
B x C x D	1	0.37	< 1
A x B x C x D	2	0.87	< 1
Within	72	5.74	
Total	95		

Appendix 12 (contd.)**Table 12**

Analysis of Variance of ratings of the Confederate's social competence
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	0.94	< 1
Capability (B)	1	3.37	< 1
Competence (C)	1	2.67	< 1
Motive (D)	1	0.37	< 1
A x B	2	5.90	1.31
A x C	2	3.44	< 1
A x D	2	0.59	< 1
B x C	1	22.04	4.90 *
B x D	1	0.67	< 1
C x D	1	0.04	< 1
A x B x C	2	2.82	< 1
A x B x D	2	2.50	< 1
A x C x D	2	6.13	1.36
B x C x D	1	4.17	< 1
A x B x C x D	2	0.13	< 1
Within	72	4.48	
Total	95		

* p 0.05

Appendix 12 (contd.)Table 13

Analysis of Variance of ratings of how good natured the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	2.32	< 1
Capability (B)	1	11.34	3.54
Competence (C)	1	0.09	< 1
Motive (D)	1	0.84	< 1
A x B	2	0.21	< 1
A x C	2	1.16	< 1
A x D	2	3.03	< 1
B x C	1	3.76	< 1
B x D	1	0.01	< 1
C x D	1	11.34	3.54
A x B x C	2	1.38	< 1
A x B x D	2	5.01	1.56
A x C x D	2	2.28	< 1
B x C x D	1	3.01	< 1
A x B x C x D	2	4.51	1.40
Within	72	3.19	
Total	95		

Appendix 12 (contd.)Table 14

Analysis of Variance of the ratings of the Confederate's Likeability
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	2.70	< 1
Capability (B)	1	1.50	< 1
Competence (C)	1	4.17	< 1
Motive (D)	1	5.04	1.09
A x B	2	2.34	< 1
A x C	2	1.32	< 1
A x D	2	0.76	< 1
B x C	1	20.17	4.38
B x D	1	0.37	< 1
C x D	1	7.04	1.53
A x B x C	2	15.38	3.34
A x B x D	2	3.40	< 1
A x C x D	2	2.88	< 1
B x C x D	1	0.37	< 1
A x B x C x D	2	0.03	< 1
Within	72	4.60	
Total	95		

Appendix 12 (contd.)

Table 15Analysis of Variance of ratings of how 'modest' the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	0.94	< 1
Capability (B)	1	1.04	< 1
Competence (C)	1	0.04	< 1
Motive (D)	1	1.50	< 1
A x B	2	9.26	1.95
A x C	2	6.01	1.26
A x D	2	4.34	< 1
B x C	1	0.04	< 1
B x D	1	2.67	< 1
C x D	1	0.00	
A x B x C	2	3.20	< 1
A x B x D	2	0.70	< 1
A x C x D	2	6.28	1.32
B x C x D	1	8.17	1.72
A x B x C x D	2	0.26	< 1
Within	72	4.76	
Total	95		

Appendix 12 (contd.)

Table 16

Analysis of Variance of ratings of how dependable the Confederate was
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	1.12	< 1
Capability (B)	1	1.26	< 1
Competence (C)	1	19.26	5.07 *
Motive (D)	1	0.26	< 1
A x B	2	0.54	< 1
A x C	2	1.17	< 1
A x D	2	1.04	< 1
B x C	1	0.01	< 1
B x D	1	0.09	< 1
C x D	1	0.01	< 1
A x B x C	2	0.54	< 1
A x B x D	2	2.37	< 1
A x C x D	2	1.04	< 1
B x C x D	1	1.76	< 1
A x B x C x D	2	1.17	< 1
Within	72	3.80	
Total	95		

* p 0.05

Appendix 12 (contd.)Table 17

Analysis of Variance of ratings of the amount of liking for the Confederate
(Male Subjects)

Source	df	MS	F
Confederate (A)	2	2.20	< 1
Capability (B)	1	1.04	< 1
Competence (C)	1	0.04	< 1
Motive (D)	1	1.04	< 1
A x B	2	2.01	< 1
A x C	2	0.07	< 1
A x D	2	6.38	2.31
B x C	1	1.04	< 1
B x D	1	0.04	< 1
C x D	1	5.04	1.83
A x B x C	2	1.01	< 1
A x B x D	2	2.82	1.02
A x C x D	2	1.38	< 1
B x C x D	1	1.04	< 1
A x B x C x D	2	0.70	< 1
Within	72	2.76	
Total	95		

Appendix 12 (contd.)**Table 18**

Analysis of Variance of ratings of how enjoyable meeting the Confederate
Socially was (Male Subjects)

Source	df	MS	F
Confederate (A)	2	3.79	1.60
Capability (B)	1	4.17	1.76
Competence (C)	1	2.67	1.13
Motive (D)	1	16.67	7.03*
A x B	2	5.17	2.18
A x C	2	2.04	< 1
A x D	2	8.29	3.50
B x C	1	0.00	
B x D	1	0.00	
C x D	1	1.50	< 1
A x B x C	2	0.37	< 1
A x B x D	2	2.37	1.00
A x C x D	2	2.00	< 1
B x C x D	1	4.17	1.76
A x B x C x D	2	5.04	2.13
Within	72	2.37	
Total	95		

* $p < 0.01$

Appendix 12 (contd.)

Table 19

Analysis of Variance of ratings of the Confederate's Desirability as
A Partner (Male Subjects)

Source	df	MS	F
Confederate (A)	2	3.76	1.42
Capability (B)	1	3.37	1.28
Competence (C)	1	0.67	< 1
Motive (D)	1	0.00	
A x B	2	11.66	4.41 *
A x C	2	0.26	< 1
A x D	2	3.97	1.50
B x C	1	2.67	1.01
B x D	1	4.17	1.58
C x D	1	7.04	2.67
A x B x C	2	2.82	1.07
A x B x D	2	2.94	1.11
A x C x D	2	3.88	1.47
B x C x D	1	0.04	< 1
A x B x C x D	2	2.70	1.02
Within	72	2.63	
Total	95		

* $p < 0.05$

Appendix 13Table 1

Summary of Analysis of Variance of Combined Attraction Scores for the
Confederate (Male Subjects)

Source	df	MS	F
Capability (A)	1	887.56	< 1
Competence (B)	1	997.81	< 1
Motive (C)	1	3054.39	< 1
A x B	1	14743.60	2.71
A x C	1	3440.41	< 1
B x C	1	8.11	< 1
A x B x C	1	9050.37	1.66
Within	88	5438.50	
Total	95		

Appendix 13 (contd.)**Table 2**

Summary of Analysis of Variance of Friendliness score for the Confederate
(Male Subjects)

Source		df	MS	F
Capability	(A)	1	0.01	< 1
Competence	(B)	1	4.60	2.18
Motive	(C)	1	5.51	2.61
A x B		1	2.34	1.11
A x C		1	3.76	1.79
B x C		1	1.76	< 1
A x B x C		1	1.26	< 1
Within		88	2.10	
Total		95		

Appendix 13 (Contd.)**Table 3**

Summary of Analysis of Variance of Maturity Scores for the Confederate
(Male Subjects)

Source	df	MS	F
Capability (A)	1	1.26	< 1
Competence (B)	1	0.51	< 1
Motive (C)	1	8.76	5.65 *
A x B	1	0.09	< 1
A x C	1	0.26	< 1
B x C	1	6.51	4.20 **
A x B x C	1	0.09	< 1
Within	88	1.55	
Total	95		

* $p < 0.025$

** $p < 0.05$

Appendix 13 (contd.)**Table 4**

Summary of Analysis of Variance of ratings of how Intelligent
the Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	0.01	< 1
Competence (B)	1	0.51	< 1
Motive (C)	1	1.26	< 1
A x B	1	1.76	< 1
A x C	1	0.01	< 1
B x C	1	0.51	< 1
A x B x C	1	1.26	< 1
Within	88	1.83	
Total	95		

Appendix 13 (Contd.)**Table 5**

Summary of Analysis of Variance of ratings of how Considerate
the Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	5.04	< 1
Competence (B)	1	6.00	< 1
Motive (C)	1	5.04	< 1
A x B	1	5.04	< 1
A x C	1	0.17	< 1
B x C	1	3.37	< 1
A x B x C	1	1.50	< 1
Within	88	8.72	
Total	95		

Appendix 13 (contd.)Table 6

Summary of Analysis of Variance of ratings of how deep the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	8.76	2.56
Competence (B)	1	4.60	1.34
Motive (C)	1	3.01	< 1
A x B	1	0.26	< 1
A x C	1	3.01	< 1
B x C	1	0.84	< 1
A x B x C	1	0.51	< 1
Within	88	3.41	
Total	95		

Appendix 13 (contd.)**Table 7**

Summary of Analysis of Variance of ratings of how straightforward the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	7.04	1.43
Competence (B)	1	2.67	< 1
Motive (C)	1	0.04	< 1
A x B	1	9.37	1.90
A x C	1	0.67	< 1
B x C	1	1.04	< 1
A x B x C	1	0.67	< 1
Within	88	4.92	
Total	95		

Appendix 13 (contd.)**Table 8**

Summary of Analysis of Variance of ratings of how interesting the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	0.51	< 1
Competence (B)	1	1.26	< 1
Motive (C)	1	21.09	6.06*
A x B	1	0.84	< 1
A x C	1	0.26	< 1
B x C	1	0.51	< 1
A x B x C	1	4.59	1.32
Within	88	3.48	
Total	95		

* $p < 0.025$

Appendix I3 (contd.)Table 9

Summary of Analysis of Variance of ratings of how kind the Confederate was
(Male Subjects)

Source	df	MS	F
Capability (A)	1	1.50	< 1
Competence (B)	1	4.17	1.79
Motive (C)	1	7.04	3.04
A x B	1	0.17	< 1
A x C	1	0.04	< 1
B x C	1	5.04	2.17
A x B x C	1	3.37	1.45
Within	88	2.31	
Total	95		

Appendix 13 (contd.)Table 10

Summary of Analysis of Variance of ratings of how socially competent the
 Confederates was (Male Subjects)

Source	df	MS	F
Capability (A)	1	20.17	3.71
Competence (B)	1	0.04	< 1
Motive (C)	1	1.50	< 1
A x B	1	1.04	< 1
A x C	1	0.00	
B x C	1	2.04	< 1
A x B x C	1	3.37	< 1
Within	88	5.42	
Total	95		

Appendix 13 (contd.)**Table 11**

Summary of Analysis of Variance of ratings of how unannoying the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	1.26	< 1
Competence (B)	1	0.51	< 1
Motive (C)	1	1.76	< 1
A x B	1	4.59	< 1
A x C	1	1.76	< 1
B x C	1	1.76	< 1
A x B x C	1	1.76	< 1
Within	88	5.35	
Total	95		

Appendix 13 (contd.)**Table 12**

Summary of Analysis of Variance of ratings of how socially competent the
Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	3.37	< 1
Competence (B)	1	2.67	< 1
Motive (C)	1	0.37	< 1
A x B	1	22.04	5.27 *
A x C	1	0.67	< 1
B x C	1	0.04	< 1
A x B x C	1	4.16	< 1
Within	88	4.18	
Total	95		

* $p < 0.025$

Appendix 13 (contd.)**Table 13**

Summary of Analysis of Variance of ratings of how good natured the
Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	11.34	3.69
Competence (B)	1	0.09	< 1
Motive (C)	1	0.84	< 1
A x B	1	3.76	1.25
A x C	1	0.01	< 1
B x C	1	11.34	3.69
A x B x C	1	3.00	< 1
Within	88	3.07	
Total	95		

Appendix 13 (contd.)Table 14

Summary of Analysis of Variance of ratings of how likeable the
 Confederate Was (Male Subjects)

Source	df	MS	F
Capability (A)	1	0.01	< 1
Competence (B)	1	11.34	2.94
Motive (C)	1	12.76	3.31
A x B	1	8.76	2.27
A x C	1	0.84	< 1
B x C	1	1.26	< 1
A x B x C	1	3.76	< 1
Within	88	3.85	
Total	95		

Appendix 13 (contd.)Table 15

Summary of Analysis of Variance of ratings of how modest the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	1.26	< 1
Competence (B)	1	0.09	< 1
Motive (C)	1	1.26	< 1
A x B	1	0.09	< 1
A x C	1	3.01	< 1
B x C	1	0.01	< 1
A x B x C	1	8.76	1.84
Within	88	4.58	
Total	95		

Appendix 13 (contd.)**Table 16**

Summary of Analysis of Variance of ratings of how dependable the
 Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	1.26	< 1
Competence (B)	1	19.26	5.81 *
Motive (C)	1	0.26	< 1
A x B	1	0.01	< 1
A x C	1	0.09	< 1
B x C	1	0.01	< 1
A x B x C	1	1.76	< 1
Within	88	3.31	
Total	95		

* $p < 0.025$

Appendix 13 (contd.)**Table 17**

Summary of Analysis of Variance of ratings of the amount of liking for
the Confederate (Male Subjects)

Source	df	MS	F
Capability (A)	1	1.04	< 1
Competence (B)	1	0.04	< 1
Motive (C)	1	1.04	< 1
A x B	1	1.04	< 1
A x C	1	0.04	< 1
B x C	1	5.04	1.91
A x B x C	1	1.04	< 1
Within	88	2.63	
Total	95		

Appendix 13 (contd.)**Table 18**

Summary of Analysis of Variance of ratings of enjoyable mixing socially
with the Confederate was (Male Subjects)

Source	df	MS	F
Capability (A)	1	4.17	1.60
Competence (B)	1	2.66	1.02
Motive (C)	1	16.67	6.41 *
A x B	1	0.00	
A x C	1	0.00	
B x C	1	1.50	< 1
A x B x C	1	4.17	1.60
Within	88	2.60	
Total	95		

* $p < 0.025$

Appendix 13 (contd.)

Table 19

Summary of Analysis of Variance of ratings of the Confederate's
Desirability as a Partner (Male Subjects)

Source	df	MS	F
Capability (A)	1	3.37	1.17
Competence (B)	1	0.67	< 1
Motive (C)	1	0.00	
A x B	1	2.67	1
A x C	1	4.17	1.44
B x C	1	7.04	2.44
A x B x C	1	0.04	< 1
Within	88	2.89	
Total	95		

Appendix 13 χ^2 Table 20

Values of Subjects who Talked and those who Did Not Talk

<u>Variables</u>	<u>χ^2 Values</u>	<u>df</u>	<u>p</u>
Capability	0.79	1	n.s.
Competence	3.16	1	0.05
Motive	0.79	1	n.s.

VITA

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"Observed benevolence and hostility as determinants of interpersonal attraction." Psychon. Sc., 1969, vol. 17 (2), 82. (with Jay Hewitt)

"Costs and satisfactions of children" Paper presented at the Workshop on costs and satisfactions of children at East-West Population Institute, East-West Center, Honolulu. (April 1972)