Conditions Affecting Cooperation

Morton Deutsch
Research Center for Human Relations
New York University

Picture, if you will, the following situations:

A fire breaks out in a crowded theater where there is only one exit. If everybody tries to exit at the same time, there will be confusion and panic and many lives may be lost. Yet if they cooperate in an orderly exit everybody stands a better chance of getting out safely.

Workers in a munitions plant are being paid on a group piece-rate basis, so that the more the group produces, the higher is each individual's pay. The work is unpleasant and it is difficult to determine how much work one person is doing. Any individual may feel that he'll be better off if he shirks his work and coasts along on the efforts of the others. Yet if they all coast along, they all will be worse off than if each works effectively.

A member of a combat team knows that firing his rifle will draw the attention of the enemy to his position and increase his danger. Yet, if he does not fire frequently, the team will be less likely to survive and complete its mission successfully.

A group of naval aviators is flying on a mission. If a wingman sees an opportunity for an easy kill, he may be tempted to detach himself to engage an enemy aircraft, thus increasing his prestige. Yet the safety and success of the fliers as a group depends on their remaining in formation.

A number of men in life jackets are floating in the water after their ship has been sunk. Each one has a chance of reaching shore if he breaks away from the rest. But if each one makes for the shore, many will drown. If they stay together, the group will be more easily spotted by rescuing aircraft and more will be saved.

Two staff officers are working on the same problem; each wants to win the favor of the commanding officer. They may pool their efforts and try to work out the best solution together or each may try to outshine the other and not let the other one know what ideas and information he has.

If we carefully examine these situations we will note that although the situations differ, a crucial determinant of the fate of the individuals in each case is their ability to initiate and maintain cooperation. Owing to the great importance of these facts to the Navy, social psychological research under ONR contract at New York University (since September 1952) is principally concerned with the conditions affecting cooperation. A brief summary of the theoretical notions and of recent results follows.
THEORETICAL CONSIDERATIONS

Consider the individual who is confronted with the choice of cooperating or not (e.g., of working together with others or of working alone). The choice to be made is in many respects similar to any other choice—whether to eat a dessert or not, for example. That is, there are general psychological principles which are applicable to any choice. In general, one can assert that an individual will choose, from a set of alternatives, the alternative which has the highest “effective attractiveness.” The effective attractiveness of an alternative is a function of two sets of factors: those which influence the desirability of the alternative, and those which influence the subjective estimate of the probability that this alternative will lead to the desired result.

The following are some of the factors that are considered determinants of the desirability of cooperation: (1) The attractiveness of the activities one expects to engage in as determined by their difficulty, their meaningfulness, their interest, etc., (2) the attractiveness of the experiences that one expects to undergo as the result of the activities of others, (3) the attractiveness of the other potential cooperators, (4) the attractiveness of being identified as a member of the group, (5) the attractiveness of secondary goals whose attainment may be facilitated or hindered by engaging in cooperation, (6) the immediacy with which cooperation leads to the desired goal.

The subjective estimate of the probability that cooperation will be successful is considered to have two supporting factors: (1) The individual’s perception of the likelihood that the skills and resources existing among the potential cooperators are adequate for the performance of the cooperative task, (2) the individual’s perception of the likelihood that the necessary skills and resources would be made available for a cooperative endeavor.

With regard to each of the factors affecting the individual’s perception of the desirability and the probability of success of cooperation, three types of circumstances are relevant: (1) The objective state of affairs—e.g., what is the maximum possibility of accomplishing a given cooperative endeavor with the existing skills and resources among a given group, (2) the information received by the individual concerning the objective state of affairs, as determined by such factors as the following: the number of potential cooperators, the nature of the communication linkages among them, the incentive and ability to communicate and to be communicated to in such of the potential cooperators, the information available among the potential cooperators, the time available for communication, etc., (3) the personality of the individual, which determines the interpretation of the information received by the individual.

So far, our discussion has presented some aspects of a theory of choice, with illustrations appropriate to consideration of the individual decision to cooperate or not. This theory, in its most general form, is applicable to any choice situation. However, the decision to cooperate or not is in some respects crucially different from the decision to eat one piece of pie rather than another. When you choose a piece of pie, the pie doesn’t have to choose you to eat it in order for you to do so. However, when you choose to cooperate with another, the other person must choose to cooperate with you if cooperation is to be realized. In other words, the choice of cooperation implies some perception of “mutuality.” By “mutuality” we refer to the fact that each potential cooperator’s choice to cooperate or not is affected by his perception of the perceptions of the other potential cooperators. At least two unique problems arise as a result of the “mutuality” consideration. These are the problems of resolving differences with regard to how to cooperate among the various potential cooperators, and the problem of “mutual trust.” The latter is one of the principal objectives of our current research.

The problem of mutual trust arises from the possibility that if, during cooperation, each cooperator is out to obtain maximum gain at minimum cost for himself (without regard to the gains or costs to the others), cooperation will be unrewarding for all or for some. That is, making customary assumptions about individual motivation, it can be derived that if any individual is out to obtain the best result for himself without regard to social considerations, cooperation cannot produce the best motivational result for others. To illustrate further, consider the implications of the fact that it is rarely possible to distribute the fruits of cooperative endeavor simultaneously. Suppose five men have agreed to build five homes cooperatively, and this is their only motivation for cooperation. Then someone’s house will be finished first, and, since the house is the only reason for his contributing effort, he will have no motivation to contribute further effort. If he doesn’t contribute further effort, the houses of the others may not be built. But if this is a known possibility before cooperation is initiated, why should any potential cooperator wish to cooperate or how could the various individuals come to an agreement about the temporal distribution of the fruits of cooperation?

It is beyond the scope of this article to review the theoretical thinking we have done about the conditions affecting “trust.” However, we may note that the interrelationships among such concepts as “trust,” “risk-taking,” “hope,” “suspicion,” “fear,” “trustworthiness,” “responsibility,” “integrity,” “hostility,” “malevolence,” and “benevolence” have become clarified.

SUMMARY OF SELECTED RESEARCH RESULTS

- Time Perspective and Cooperation

Time perspective may be defined as the perceived ratio of the time available to reach a goal to the time required for all activities necessary to reach the goal. Thus the smaller the time perspective ratio, the more the individual feels the need to hurry to achieve the goal. He may feel, for example, that he has ten minutes to finish something that should require twenty minutes. One would therefore expect, within certain limits, a decrease in the perceived likelihood of reaching the goal as
the time perspective ratio decreases. Experimental study has confirmed this expectation and has demonstrated that an individual’s choice between "cooperating" or "doing it alone" can be determined by the relative time perspectives of these two alternatives. Further, an important factor influencing an individual’s perception of the time needed for successful cooperation (particularly when the total time available is small), is his perception of how long it will take to establish and get cooperation underway.

Panic by a crowd in the face of a dangerous event often reflects the feeling that it would take too long to establish an orderly means of group cooperation. Everyone, feeling an intense time pressure, rushes to escape by himself and the result is a chaotic, self-defeating mass of people who, in their individual frenzies, interfere with and turn against each other.

- The Effects of Cooperative and Competitive Relationships on the Perception of Social Relationships with Others

In this study, we were concerned with two questions: (1) How will the nature of an individual’s relationships with two others influence his perceptions of the relationships between these two others? (2) how will his perception of the relationship between two others affect his perception of one of them when he has a specified relationship to the second?

In general, the results of research indicate that an individual tends to perceive other people as cooperative or competitive according to their relationship to himself. If, for example, one of two people cooperates with him and the other seems hostile, the individual tends to perceive the two as cooperating with each other. If one of the pair competes with him and the other seems hostile, he sees the two as cooperating with each other.

Another interesting observation is that an individual’s perception of relations between himself and others is colored by his perception of competition or cooperation between these other people. If he observes a cooperative relationship between two people and knows one of these is hostile to him, he tends to see the other person as also hostile to him. If, on the other hand, he sees the relationship between the two as competitive and knows one is hostile to him, he will tend to perceive the other as cooperating with him.

- Expectations of Success and Determinants of Group Formation

This experiment was concerned with the conditions influencing an individual’s estimate of the chances of reaching the goal via group effort. It was found that individuals who previously had been in a group which experienced success were considerably more optimistic about reaching their goals through group effort than were individuals who had been in a group which had failed in a joint endeavor. On the other hand, a generally optimistic mood or a generally pessimistic mood, as influenced by reading about optimistically or pessimistically slanted incidents, had little influence upon their assessments of the group’s chances of success. In other words, the solidly grounded experience of past success is more likely to be influential in determining an individual’s perception of his chances than are pep talks.

- Cooperation and Mutual Trust

Two persons play a game in which, if each person chooses to maximize his gains and minimize his losses, both persons will lose. Both persons can consistently gain only if there is mutual trust between them. However, if one partner chooses to trust the other, it is to the other’s immediate interest to doublecross him.

The situation we are utilizing can take many different forms; an illustration of its basic features is provided in the following example. Two people have to choose, at the same time, between pressing a red button and a green one. When both press red buttons both lose $1; when both press green buttons both win $1; if one presses a green button and the other a red one, the presser of the red button wins $2 and the presser of the green button loses $2. If each person tries to maximize his gains by pressing the red button, both will lose. If there is mutual trust, both will press green buttons and consistently gain. But in such a situation of mutual trust it is to the immediate advantage of one partner to doublecross the other by pressing the red button. Each person knows exactly what the situation is but he doesn’t know, as he makes his own choice, what his partner’s choice will be. For both of them to press green buttons, each must be trustworthy and must perceive the other as trustworthy.

We have utilized experimental situations similar to the one described above to study the effects of different types of motivational orientation upon readiness to develop mutual trust. The results may be summarized as follows: When both individuals are oriented only to their own welfare (each is out to win as much as possible for himself without regard to how the other person does), both individuals end up losing because neither of them can trust the other or get the other to trust him. When both individuals are competitively oriented to outwining each other, there is even more distrust than under the individual orientation and the participants lose even more. When each individual is oriented to the other’s welfare as well as to his own, each trusts the other and each wins.

We are presently performing experiments directed at understanding what minimum social factors can be introduced to convert the situation of distrust to a situation of trust by changing individually oriented motivation to socially oriented motivation. It is our belief that this research will give considerable insight into the conditions which enable people to work together for their mutual benefit, and will contribute to our understanding of the social psychological factors which lead people to be responsible rather than irresponsible to the trust which others place in them.