Intergroup Conflict and Cooperation: The Robbers Cave Experiment


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Christopher D. Green
York University, Toronto, Ontario

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Preface to Original Release -- 1954
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In the chapters to follow the main points of a large-scale experiment on intergroup relations are reported. It was carried out as a part of the research program of the Intergroup Relations Project at the University of Oklahoma. In this first presentation, sufficient time and facilities were not available to make use of data contained in recorded tapes and half a dozen short moving picture reels. Nor was it found feasible to include introductory chapters surveying major theories on intergroup relations and elaborating on theoretical outlines of the present approach, which determined the formulation of the hypotheses advanced and the design of the study in successive stages. These are presented more fully in our *Groups in Harmony and Tension* (Harper, 1953), which constituted the initial work unit in the present intergroup relations project.

Therefore, a brief statement of the cardinal considerations that shaped the conception of this approach to the study of intergroup relations is in order. It is not unfair to say that the major existing theories fall within two broad categories in terms of the emphasis placed in formulation of the problem and methods involved.

In one broad category of theories, the problems are expressed in terms of actualities of events in group relations as they exist in everyday life. On the whole, theories advanced by many social scientists fall in this broad category. In this concern over actualities the problem is frequently not stated and discussion not developed in a way that can be tested rigorously. In the second broad category of theories, problems are stated and analysis carried out in terms of more rigorous-appearing concepts and units of analysis. Theories coming from psychologists and social scientists heavily influenced by them fall within this broad category. In this line of approach, theories are advanced without due regard to actualities, and consequently they are plagued with serious questions of validity.

The present approach starts with a serious concern over the rise and functioning of actual small groups in social life. The hypotheses advanced are formulated on the basis of recurrent events reported in sociological accounts of small groups. Testing these hypotheses under conditions that appear natural to the subjects has been a theoretical and methodological consideration of prime importance. Therefore, a great point was made of carrying on observations without the awareness of subjects that they were being observed and of giving priority to the uninterrupted and uncluttered flow of interaction under experimentally introduced stimulus conditions. The techniques of data collection were adapted to the flow of interaction, rather than cluttering or chopping off interaction for the convenience of the experimenter. This imposed the task of securing an experimental site which is isolated from outside influences so that results could not be accounted for primarily in terms of influences other than the experimentally introduced ones and the interaction on that basis.

In such a natural, life-like interaction situation, there are so many items that can be observed at a given time that it becomes impossible to observe and report all behavioral events. Therefore, there is the possibility of being selective in the choice of events to be observed. In testing vital hypotheses related to intergroup relations, restricting the number of subjects to just a few is not the proper remedy. Circumscribing the number of reactions of the subjects is no remedy. Asking the subjects to remain within optimal distance of a microphone and asking them please to speak one at a time will destroy the very properties of the interaction process in which we are interested. The dining hall adjacent to the kitchen is not the place conducive to getting the subjects to cooperate in preparing a meal of their own accord. By trying to eliminate selectivity through such resorts we would have eliminated at the same time the essential properties of the very things we set out to study.

(1) One remedy lies in unmistakable recurrences of behavioral trends so that the observer cannot help observing them even if he tried to ignore them. If these trends are independently reported by the observers of two different groups, then they serve as a check against each other. We have secured such checks time and again in this study.

(2) The danger of selectivity can be avoided (without disrupting the flow of interaction) by having outside observers in crucial problem situations and by having them make, for example, their own independent status ratings in terms of effective initiative in getting things started and
(3) The most effective way of checking selectivity is the use of a combination of techniques. This consists in introducing at a few choice points laboratory-type experiments and sociometric questions. If the trends obtained through laboratory-type and sociometric checks are in line with trends obtained through observations, then selectivity of observation need not worry us as far as the relevant hypotheses and generalizations are concerned. The actual use of observational, experimental, and sociometric techniques in a combined way, whenever feasible without cluttering the main flow of interaction, has been a major point of emphasis in our study. In our previous work, the feasibility of using judgmental indices to tap norm formation and intra- and intergroup attitudes was established in various studies. This series of experiments, whose logic and techniques were made part-and-parcel of this large-scale experiment, are summarized in a paper "Toward integrating field work and laboratory in small group research" (to appear in Small Group Research Issue, *American Sociological Review*, December, 1954).

The present study has for its background the invaluable experience of the 1949 and 1953 experiments, both carried out under my direction. In 1949 the design (in three stages) went as far as the end of Stage 2 of this 1954 study, namely in-groups were formed and intergroup friction was produced experimentally. The 1949 study was jointly sponsored by the Attitude Change Project of Yale University and the Department of Scientific Research of the American Jewish Committee, to both of whom grateful acknowledgment is extended. Without the effective help of Professor Carl I. Hovland this start could not have materialized. The second study was attempted in 1953 in four successive stages. We succeeded in completing only two stages in this attempt, which covered the experimental formation of in-groups. The experiment reported here, as well as other units during the last two years, were carried out with a grant from the Rockefeller Foundation to the University of Oklahoma, for which we are grateful.

It is a pleasure to note here the active participation of O. J. Harvey during the last four years in the development of this program of research. Especially his doctoral thesis, entitled, "An Experimental Investigation of Negative and Positive Relationships between Small Informal Groups Through Judgmental Indices," constitutes a distinct contribution in demonstrating the feasibility of using laboratory-type judgmental indices in the study of intergroup attitudes. Without the untiring and selfless participation of O. J. Harvey, Jack White, William R. Hood, and Carolyn Sherif the realization of this experiment and the writing of this report would have been impossible.

This program of research in group relations owes a special debt to the dedication of the University of Oklahoma and its administrative agencies to making development of social science one of its distinctive features. The close interest of President George L. Cross in social science has been a constant source of encouragement and effective support. Professor Lloyd E. Swearingen, Director of the Research Institute, has cleared our way for smooth sailing whenever occasion arose. We have turned again and again to the encouragement and unfailing support of Professor Laurence H. Snyder, Dean of the Graduate College.

Muzafar Sherif

chapter 1

Preface -- 1961

The report of this large-scale experiment dealing with factors conducive to conflict and cooperation between groups was first released in August, 1954 and was sent in multilithed form to colleagues active in small group research. Since then, it has appeared in condensed form in books and journals and has been presented in lecture form at various universities and professional associations.
In view of numerous requests from colleagues engaged in small group research, instructors in institutions of higher learning, and the interest expressed by colleagues in political science, economics and social work in the applicability of the concept of superordinate goals to intergroup problems in their own areas, the original report is being released now with very minor editorial changes.

Two new chapters have been added in the present volume. Chapter 1 presents a theoretical background related to small group research and to leads derived from the psychological laboratory. It was written originally at the request of Professor Fred Strodtbeck of the University of Chicago, editor for the special issue on small group research of the *American Sociological Review* (December, 1954). This chapter summarizes our research program since the mid-thirties, which was initiated in an attempt to integrate field and laboratory approaches to the study of social interaction. Chapter 8 was written especially for this release to serve as a convenient summary of the theoretical and methodological orientation, the plan and procedures of the experiment, and the main findings, with special emphasis on the reduction of intergroup conflict through the introduction of a series of superordinate goals.

We are especially indebted to Mrs. Betty Frensley for her alert help in typing and other tasks connected with the preparation of this volume. Thanks are due Nicholas Pollis and John Reich for proofreading several chapters.

The experiment could not have been realized without the utmost dedication and concentrated efforts, beyond the call of duty, of my associates whose names appear with mine on the title page. However, as the person responsible for the proposal prepared for the Rockefeller Foundation in 1951 and with final responsibility in the actual conduct of the experiment and material included in the report, I absolve them from any blame for omissions or commissions in this presentation.

On this occasion it is a pleasure to acknowledge the understanding support and encouragement extended by the Social Science Division of the Rockefeller Foundation to this project on intergroup relations, a research area notably lacking in systematic experimental studies in spite of its overriding import in the present scheme of human relations.

This preface is being written with a heavy heart. The research program of which this experiment was an important part lost a great friend by the death of Carl I. Hovland of Yale University in April, 1961. It was Carl Hovland who, from the very inception of the research project on intergroup relations in 1947, gave an understanding and insightful ear and an effective hand to its implementation. The give-and-take with his searching questions, wise counsel and steadfast friendship through thick and thin will be sorely missed in the continuation of our research program.

Muzafer Sherif

Institute of Group Relations
The University of Oklahoma
Norman, Oklahoma
June 5, 1961

**CHAPTER 1**

**Integrating Field Work and Laboratory in Small Group Research[1]**
The study of small groups has become one of the most flourishing areas of research, involving men in various social sciences and psychology. The influences responsible for the increased preoccupation with small groups spring both from developments within various academic disciplines and from agencies instituted for devising practical solutions for immediate application. Brief mention of influences contributing to the flourishing state of affairs in small group research will be helpful as orientation:

1. Theoretically and empirically, works of sociologists have historical priority in showing persistent concern with the topic of small groups (Faris, 1953). Since the early 1920's a definite research development in sociology related to small groups has been carried on, as represented by the works of men like Thrasher, Anderson, Clifford Shaw, Zorbaugh, Hiller, and Whyte. In the recurrent findings reported in this line of research, which was carried out over a period of a good many years, one cannot help finding crucial leads for a realistic approach to experimentation in this area.

2. Another of the major instigators of the extraordinary volume of small group research stems from the practical concern of business and military agencies. A series of studies initiated by Elton Mayo and his associates at the Harvard Business School in the late 1920's has proliferated in various institutions, both academic and technological. Another impetus along this line came from the concern of military agencies for establishing effective techniques for the assessment of leaders.

3. Another major influence in the development of small group studies comes from psychological research. Regardless of the theoretical treatment, the results of psychological experiments almost always showed differential effects on behavior when individuals undertook an activity in relation to other individuals or even in their presence, as can be ascertained readily by a glance at Murphy, Murphy, and Newcomb's *Experimental Social Psychology*. F. H. Allport's experiments which started around 1915 are illustrative of this point. In the 1930's, it became increasingly evident that social behavior (cooperation - competition, ascendance - submission, etc.) could not be properly studied when the individual is considered in isolation. Psychological "trait" theories or personality typologies fell far short in explaining social relations. Therefore, when Moreno's work appeared in this country in the mid-thirties presenting his sociometric technique for the study of interpersonal choices and reciprocities among individuals (i. e., role relations), it quickly found wide application. A few years later Kurt Lewin and his associates demonstrated the weighty determination of individual behavior by the properties of group atmosphere. This line of experimentation was the basis of other subsequent studies coming from the proponents of the Group Dynamics school. Some other major influences coming from psychology will be mentioned later.

II

Interdisciplinary Cooperation and the Concept of "Levels"

It becomes apparent even from a brief mention of the background that men from various disciplines contributed to make the study of small groups the going concern that it is today. As a consequence there is diversity of emphasis in formulating problems and hypotheses, and diversity in concepts used. This state of affairs has brought about considerable elbow-rubbing and interdisciplinary bickering among sociologists, psychologists, and anthropologists. In this process and through critical appraisal of each others' approaches, the interdisciplinary approach has become a necessity for achieving a rounded picture.

Faced with the task of dealing with both psychological and sociocultural factors in human relations problems, psychologists have too often yielded to the temptation of improvising their own "sociologies" in terms of their preferred concepts. Sociologists, on the other hand, have sometimes engaged in [p. 3] psychological improvisations. While sociological or psychological improvisation at times proves necessary on the frontiers of a discipline, it is difficult to justify on topics for which a substantial body of research exists in sociology or in psychology, as the case may be.
On the whole, interdisciplinary cooperation has usually turned out to mean rallying psychologists, sociologists, anthropologists, and other social scientists to toss their theories and concepts into the ring. But, mere juxtaposition of utterances made by psychologists, sociologists, etc., in the same room or between the covers of the same book does not bring interdisciplinary cooperation. Nor is interdisciplinary integration possible by laying down segments from each discipline along the same line -- one yard from psychology, one yard from sociology, then a foot each from history and economics.

The outlines of an interdisciplinary approach appear more clearly with the realization that "psychological" and "sociological" signify different levels of analysis. Men studying human relations are approaching related, similar, or even the same problems at different levels of analysis, necessitating units and concepts appropriate for dealing with events on that level. If we are working on the psychological level, our unit of analysis is the individual; hence our treatment must be in terms of his psychological functioning -- in concepts such as motives, judging, perceiving, learning, remembering, imagining, etc. If we are working on a sociological or cultural level, our concepts are in terms of social organization, institutions, value systems, language, kinship systems, art forms, technology, etc. (Note 1).

The concept of levels holds a fairly obvious but invaluable check on the validity of research findings. If it is valid, a generalization reached on a topic at one level of analysis is not contradicted and, in fact, gains support from valid generalizations reached at another level. For example, the psychologist's findings of differential behavior of an individual when participating in the activities of his group should be (and are) substantiated by findings on the sociological level, namely that collective action in a group has properties peculiar to the group. Checking and cross-checking findings obtained at one level against those obtained at another level on the same topic will make interdisciplinary cooperation the integrative meeting ground that it should be.

During the last century in the social sciences and more recently in psychology, the dependence of sub-units upon the setting or superordinate system of which they are parts has gained increased attention, especially in view of unrewarding attempts to account for the functioning system in an additive way. Understanding part processes is possible only through analysis of their relations within the functioning system, as well as by analysis of unique properties of the part process itself. Unless knowledge of the superordinate or larger functioning system is gained first, before tackling the part processes, there is the likelihood of unwarranted generalizations concerning the parts, and misinterpretation of the true functional significance of the processes observed.

In this connection, an illustration from Malinowski (1922) is instructive. Malinowski describes the complex exchange system of the Argonauts of the Western Pacific called the Kula. The Argonauts themselves "have no knowledge of the total outline of any of their social structure...Not even the most intelligent native has any clear idea of the Kula as a big, organized social construction, still less of its sociological functions and implications. If you were to ask him what the Kula is, he would answer by giving a few details, most likely by giving his personal experiences and subjective views on the Kula...Not even a partial coherent account could be obtained. For the integral picture does not exist in his mind; he is in it, and cannot see the whole from the outside."

This point can be illustrated in relation to small group studies. Since Lewin's experiments in the 1940's comparing lecture and group discussion methods in changing attitudes, various studies have shown that in the American setting skillfully conducted group discussion in which members participate is more effective than lecture presentation of the same material. On the basis of results obtained in the American setting, it would seem that the superiority of group discussion methods might be universal. That this is not the case is indicated by one of the studies in the UNESCO project in India (Murphy, 1953). In an attempt to modify caste attitudes among college students in India using various methods, the greatest changes arose as a result of a lecture method using emotional appeals. The [p. 5] experimenter wrote: "Contrary to our original expectation and hypothesis, these young boys do not seem to be in a position to exploit
fully the discussion technique, in bettering their social relationships. Does it indicate that our boys have got to be used to the democratic ways of discussion and at present prefer to be told what are the right attitudes rather than to be allowed to talk them out?" Within a social organization whose values clearly encourage dependence on authority and effectively discourage settling issues on a give-and-take basis in small sub-units, particular dependencies may become so much a part of the individual's ego system that group discussion techniques would be less effective than methods more in harmony with the social organization in which they take place.

Such comparative results illustrate the value of starting first with due consideration of the sociocultural setting with its organization and values before generalizations are made about small groups functioning as parts of that setting (cf. Whyte, 1951; Arensberg, 1951). For small groups are not closed systems, especially in highly complex and differentiated societies such as the United States.

Facts obtained concerning the group setting are in terms of concepts and units at the social or cultural level of analysis. They will not give the step-by-step analysis of the particular interaction process; they will not be adequate for the task of dealing with interpersonal relations or the behavior of particular individual members. At this point, psychological concepts are needed for a detailed analysis of reciprocal relations, for handling motives, perceptions, judgments, etc.

III

Experimental Steps toward Integration

The rest of the Chapter will be devoted to a summary statement of the prior attempts on our part toward pulling together some relevant findings in sociology and in psychology in the study of small groups. In these attempts the guiding considerations have been the following:

1. To extract some minimum generalizations from the sociological findings on small groups on the one hand; on the [p. 6] other, to extract relevant principles from the work coming from the psychological laboratory.

2. To formulate problems and hypotheses relating to one another the indications of the two sets of relevant findings, that is, from sociological and psychological research.

3. To test hypotheses thus derived with methods and techniques which are appropriate for the particular problem -- experimental, observational, sociometric, questionnaire, or combinations thereof, as the case may be.

Let us start with the term "small group" itself. The term "small group" is coming to mean all things to all people. If the concept of small groups is considered at the outset, research on small groups will gain a great deal in the way of selection of focal problems for investigation, and hence effective concentration of efforts.

"Small group" may mean simply small numbers of individuals. If this is the criterion, any small number of individuals in a togetherness situation would be considered a small group. But a conception of small groups in terms of numbers alone ignores the properties of actual small groups which have made their study such a going concern today.

One of the objectives of concentrating on small group research should be attainment of valid generalizations which can be applied, at least in their essentials, to any group and to the behavior of individual members. Accordingly, one of our first tasks was that of extracting some minimum essential features of actual small groups from sociological work. In this task there is a methodological advantage in concentrating on informally organized groups, rather than formally organized groups in which the leader or head and other positions with their respective responsibilities are appointed by a higher authority, such as a commanding officer or board. In
informally organized groups, group products and the particular individuals who occupy the various positions are determined to a much greater extent by the actual interaction of individuals. If care is taken at the beginning to refer to the general setting in which small groups form and function, their products and structure can be traced through longitudinal observation of the interaction process.

[p. 7] On the basis of an extensive survey of sociological findings, the following minimum features in the rise and functioning of small groups were abstracted:

(1) There are one or more motives shared by individuals and conducive to their interacting with one another.

(2) Differential effects on individual behavior are produced by the interaction process, that is, each individual's experience and behavior is affected in varying ways and degrees by the interaction process in the group (Note 2).

(3) If interaction continues, a group structure consisting of hierarchical status and role relationships is stabilized, and is clearly delineated as an in-group from other group structures.

(4) A set of norms regulating relations and activities within the group and with non-members and out-groups is standardized (Note 3).

Interaction is not made a separate item in these minimum features because interaction is the sine qua non of any kind of social relationships, whether interpersonal or group. Since human interaction takes place largely on a symbolic level, communication is here considered part and parcel of the interaction process.

When group structure is analyzed in terms of hierarchical status positions, the topic of power necessarily becomes an integral dimension of the hierarchy. Power relations are brought in as an afterthought only if this essential feature of group hierarchy is not made part of the conception of group. Of course, power does in many cases stem from outside of the group, and in these cases the nature of established functional relations between groups in the larger structure has to be included in the picture.

Our fourth feature relates to the standardization of a set of norms. The term "social norm" is a sociological designation referring generically to all products of group interaction which regulate members' behavior in terms of the expected or even the ideal behavior. Therefore, norm does not denote average behavior (Note 4). The existence of norms, noted by sociologists, has been experimentally tested by psychologists in terms of convergence of judgments of different individuals (Sherif, 1936), and in terms of reactions to deviation (Schachter, 1952). A norm denotes not only expected behavior but a range of acceptable behavior, the limits of which define deviate acts. The extent of the range of acceptable behavior varies inversely with the significance or consequence of the norm for the identity, integrity, and major goals of the group.

With these minimum essential features of small informally organized groups in mind, a group is defined as a social unit which consists of a number of individuals who, at a given time, stand in more or less definite interdependent status and role relationships with one another, and which explicitly or implicitly possesses a set of norms or values regulating the behavior of the individual members, at least in matters of consequence to the group.

Common group attitudes or sentiments are not included in this definition because social attitudes are formed by individuals in relation to group norms as they become functioning parts in the group structure. At the psychological level, then, the individual becomes a group member to the extent that he internalizes the major norms of the group, carries on the responsibilities, meets expectations for the position he occupies. As pointed out by various authors, his very identity and self conception, his sense of security become closely tied to his status and role in the group through the formation of attitudes relating to his membership and position. These
attitudes may be termed "ego-attitudes" which function as constituent parts of his ego system.

On the basis of findings at a sociological level, hypotheses concerning the formation of small in-groups and relations between them were derived and tested in our 1949 camp experiment (Sherif and Sherif, 1953). One of the major concerns of that study was the feasibility of experimental production of in-groups among individuals with no previous role and status relations through controlling the conditions of their interaction.

The hypotheses tested were:

(1) When individuals having no established relationships are brought together to interact in group activities with common goals, they produce a group structure with hierarchical statuses [p. 9] and roles within it.

(2) If two in-groups thus formed are brought into functional relationship under conditions of competition and group frustration, attitudes and appropriate hostile actions in relation to the out-group and its members will arise and will be standardized and shared in varying degrees by group members.

As sociologists will readily recognize, testing of these hypotheses is not so much concerned with the discovery of new facts as getting a clearer picture of the formative process under experimentally controlled conditions. It aims rather at singling out the factors involved in the rise of group structure, group code or norms, and in-group---out-group delineations which will make possible their intensive study with appropriate laboratory methods on the psychological level.

To test these hypotheses, 24 boys of about 12 years of age from similar lower middle-class, Protestant backgrounds were brought to an isolated camp site wholly available for the experiment. The early phase (Stage 1) of the study consisted of a variety of activities permitting contact between all the boys and observation of budding friendship groupings. After being divided into two groups of 12 boys each, in order to split the budding friendship groupings and at the same time constitute two similar units, the two groups lived, worked and played separately (Stage 2). All activities introduced embodied a common goal (with appeal value to all), the attainment of which necessitated cooperative participation within the group.

At the end of this stage, there developed unmistakable group structures, each with a leader and hierarchical statuses within it, and also names and appropriate group norms, including sanctions for deviate behavior. Friendship preferences were shifted and reversed away from previously budding relationships toward in-group preferences. Thus our first hypothesis concerning in-group formation was substantiated.

In the final phase (Stage 3) of the 1949 experiment, the two experimentally formed in-groups were brought together in situations which were competitive and led to some mutual frustration, as a consequence of the behavior of the groups in relation to each other. The result of intergroup contact in these conditions was [p. 10] enhancement of in-group solidarity, democratic interaction within groups, and in-group friendship, on the one hand. On the other hand, out-group hostility, name calling and even fights between the groups developed, indicating that in-group democracy need not lead to democratic relations with outsiders when intergroup relations are fraught with conditions conducive to tension. The resistance which developed to post-experimental efforts at breaking down the in-groups and encouraging friendly interaction indicates the unmistakable effect of group products on individual members. Thus the results substantiated the second hypothesis concerning determination of norms toward out-groups by the nature of relations between groups and demonstrated some effects of intergroup relations upon in-group functioning.

One of the main methodological considerations of this experiment was that subjects were kept unaware of the fact that they were participating in an experiment on group relations. The view that subjects cease to be mindful that their words and deeds are being recorded is not in harmony with what we have learned about the structuring of experience. The presence of a
personage ever observing, ever recording our words and deeds in a situation in which our status and role concerns are at stake cannot help coming in as an important factor in the total frame of reference. Therefore, in our work, the aim is to establish definite trends as they develop in natural, life-like situations and to introduce precision at choice points when this can be done without sacrificing the life-like character which gives greatest hope for validity of these trends.

The study just summarized illustrates the testing of hypotheses derived from sociological findings in experimentally designed situations. The next point relates to psychological findings, generalizations, and laboratory techniques relevant for the study of experience and behavior of individual group members. Here our task is to achieve a more refined analysis on a psychological level of individual behavior in the group setting through precise perceptual and judgmental indices. If such data obtained through precise judgmental and perceptual indices and other appropriate techniques are in line with findings concerning group relations on the sociological level, then we shall be moving toward integration of psychological and sociological approaches in the study of group relations.

[p. 11] Here only the bare essentials can be stated of the psychological principles from a major trend in experimental psychology which are utilized in designing the experiments to be reported (Note 5).

Judgments and perceptions are not merely intellectual and discrete psychological events. All judgments and perceptions take place within their appropriate frame of reference. They are jointly determined by functionally related internal and external factors operating at a given time. These interrelated factors -- external and internal -- constitute the frame of reference of the ensuing reaction. Observed behavior can be adequately understood and evaluated only when studied within its appropriate frame of reference or system of relations. The external factors are stimulus situations outside of the individual (objects, persons, groups, events, etc.). The internal factors are motives, attitudes, emotions, general state of the organism, effects of past experience, etc. The limit between the two is the skin of the individual -- the skin being on the side of the organism.

It is possible, therefore, to set up situations in which the appraisal or evaluation of a social situation will be reflected in the judgments and perceptions of the individual. In short, under appropriate and relevant conditions, the way the individual sizes up a situation in terms of the whole person he is at the time can be tapped through apparently simple perceptual and judgmental reactions.

An additional principle should be clearly stated because of certain conceptions in psychology which imply that perception is almost an altogether arbitrary, subjective affair. If external stimulus situations are well structured in definite objects, forms, persons, and groupings, perception will correspond closely to the stimulus structure on the whole. This is not to say that functionally related internal factors do not play a part in the perception of structured situations. The fact that some well-structured situations are singled out by the individual as “figure” rather than others indicates that they do. Such facts are referred to under the concept of perceptual selectivity.

If, on the other hand, the external field is vague, unstructured, in short, allows for alternatives -- to that extent the relative weight of internal factors (motives, attitudes) and social [p. 12] factors (suggestion, etc.) will increase. It is for this reason that the exhortations of the demagogue are relatively more effective in situations and circumstances of uncertainty. Since perceptions and judgments are jointly determined by external and internal factors, it is possible to vary the relative weights of these factors in differing combinations, giving rise to corresponding judgmental and perceptual variations. This has been done in various experiments. In a study carried out as part of our research program at the University of Oklahoma, James Thrasher co-varied the stimulus situation in gradations of structure and the nature of interpersonal relations of subjects (strangers and friends) to determine the reciprocal effects of these variations on judgmental reactions. It was found that as the stimulus situation becomes more unstructured,
the correspondence between stimulus values and judgment values decreases and the influence of social factors (established friendship ties in this case) increases (Thrasher, 1954).

Following the implications of the above, it is plausible to say that behavior revealing discriminations, perceptions, evaluations of individuals participating in the interaction process as group members will be determined —

- not only by whatever motivational components and unique personality characteristics each member brings with him,

- not only by the properties of external stimulus conditions (social or otherwise),

- but as influenced, modified, and even transformed by these and by the special properties of the interaction process, in which a developing or established state of reciprocities plays no small part. Interaction processes are not voids.

The starting point in our program of research was the experimental production of group norms and their effects on perception and judgment (Sherif, 1936). This stems from our concern for experimental verification of one essential feature of any group — a set of norms (feature 4 of small groups above). Groups are not transitory affairs. Regulation of behavior in them is not determined by the immediate social atmosphere alone.

Especially suggestive in the formulation of the problem [p. 13] was F. Thrasher's observation on small groups that behavior of individual members is regulated in a binding way (both through inner attachment and, in cases of deviation, through correctives applied) by a code or set of norms. Equally provocative in this formulation was Emile Durkheim's *Elementary Forms of Religion*, in which a strong point was made of the rise of representations collectives in interaction situations and their effect in regulating the experience and outlook of the individual.

After thus delineating the problem, the next step was to devise an experimental situation which lacked objective anchorages or standards (i.e., was vague or unstructured) in order to maximize the effects of the social interaction process. When individuals face such an unstructured stimulus situation they show marked variations in reaction. However, such marked individual variations will not be found if the stimulus is a definite, structured object like a circle or a human hand. There will be agreement among individuals, on the whole, when they face a circle or a normal hand even if they are five thousand miles apart and members of different cultures. The fact of objective determination of perception and judgment and the ineffectiveness of social influences (suggestion, etc.) in relation to structured stimuli was clearly noted in the original report of this experiment in several contexts. In a later publication, in order to stress cases of objective determination of psychological processes, a chapter was devoted to the effects of technology and its decisive weight in determining social norms and practices, with numerous illustrations from various parts of the world. Among them was our study conducted in the early 1940's of five Turkish villages with varying degrees of exposure to modern technology, specifically dealing with the compelling effects of such differential exposure on judgmental, perceptual, and other psychological processes (*Note 6*).

The experimental situation chosen for the study of norm formation was the autokinetic situation (the apparent movement of a point of light in a light-proof room lacking visible anchorages). The dimension chosen was the extent of movement. As this study is reported in detail in various places, I shall give only the bare essentials.

First it was established that the judgment of the extent of movement for given brief exposures varies markedly from [p. 14] individual to individual. Then individuals were brought to the situation to make their judgments together. If, during the course of their participation, their judgments converge within a certain range and toward some modal point, we can say they are converging to a common norm in their judgments of that particular situation. It is possible, however, that this convergence may be due to immediate social pressure to adjust to the judgments spoken aloud by the other participants in the situation. Therefore, going a step
further, if it is shown that this common range and modal point are maintained by the individual in a subsequent session on a different day when he is alone, then we can say that the common range and modal point have become his own.

The results substantiated these hunches. When individuals face the same unstable, unstructured situation for the first time together with other participants, a range of judgment and a norm within it are established which are peculiar to that group. After the group range and norm are established, an individual participant facing the same situation alone makes his judgments preponderantly in terms of the range and norm that he brings from the group situation. But convergence of judgments is not as marked as this when individuals first go through individual sessions and then participate in group sessions.

When the individual gives his judgments repeatedly in the alone situation, the judgments are distributed within a range and around a modal point peculiar to the individual. This finding has important theoretical implications. The underlying psychological principle, in individual and group situations, is the same, namely that there is a tendency to reach a standard in either case. Here we part company with Durkheim and other sociologists who maintained a dichotomy between individual and social psychology, restricting the appearance of emergent properties to group situations alone. In both cases, there are emergent properties. In the individual sessions they arise within the more limited frame of reference consisting of the unstructured stimulus situation and special psychological characteristics and states of the individual; whereas in togetherness situations the norm is the product of all of these within the particular interaction situation. The norm that emerges in group situations is not an average of individual norms. It is an emergent product which cannot be simply extrapolated from individual situations; the properties of the unique interaction process have to be brought into the picture. Therefore, the fact remains that group norms are the products of interaction process. In the last analysis, no interaction in groups, no standardized and shared norms.

In a subsequent unit, it was found that a characteristic mode of reaction in a given unstructured situation can be produced through the introduction of a prescribed range and norm (Sherif, 1937). When one subject is instructed to distribute his judgments within a prescribed range and around a modal point which vary for each naive subject, the preponderant number of judgments by the naive subjects come to fall within the prescribed range and around the modal point introduced for them, and this tendency continues in subsequent alone sessions. This tendency is accentuated if the cooperating subject has prestige in the eyes of the naive subject. These findings have been substantiated in a number of studies. For example, it has been shown that the tendency to maintain the prescribed range persists after several weeks (Bovard, 1948). In a recent experiment Rohrer, Baron, Hoffman, and Swander (1954) found that social norms established in the autokinetic situation revealed a rather high degree of stability even after a lapse of one year. This stability of an experimentally produced norm acquires particular significance in view of the facts in the study that (a) the subjects had first formed individual norms on the basis of actual movement prior to the establishment of divergent norms in a social situation and (b) the norms stabilized in the social situations were revealed after the lapse of one year in alone situations, i.e., without further social influence.

The actual presence of another person who makes judgments within a range prescribed by the experimenter is not essential. Norman Walter (1952) demonstrated that a prescribed norm can be produced through introduction of norms attributed to institutions with high prestige. A prescribed distribution of judgments given by tape recording is similarly effective (Blake and Brehm, 1954). A prescribed range can be established, without social influence, through prior experience in a more structured situation with light actually moving distances prescribed by the experimenter (Hoffman et al., 1953).

The advantages of a technique such as the autokinetic device for studying norm formation and other aspects of group relations are: (1) Compared with gross behavioral observations, it yields short-cut precise judgmental indices along definite dimensions reflecting an individual's own appraisal or sizing-up of the situation. (2) The judgmental or perceptual reaction is an indirect measure, that is, it is obtained in relation to performance and situations which do not
appear to the subject as directly related to his group relations, his positive or negative attitudes. The feasibility of using judgmental variations in this study constituted the basis of its use in subsequent studies dealing with various aspects of group relations.

At this point, longitudinal research will bring more concreteness to the process of norm formation. As Piaget (1932) demonstrated in his studies of rules in children's groups, the formation of new rules or norms cannot take place until the child can perceive reciprocities among individuals. Until then he abides by rules because people important in his eyes or in authority say that he shall. But when the child is able to participate in activities grasping the reciprocities involved and required of the situation, then new rules arise in the course of interaction, and these rules become his autonomous rules to which he complies with inner acceptance. Although in contrast to some still prevalent psychological theories (e.g., Freud), these longitudinal findings are in line with observations on norm formation and internalization in adolescent cliques and other informally organized groups. These are among the considerations which led us to an intensive study of ego-involvements, and to experimental units tapping ego-involvements in interpersonal relations and among members occupying differing positions in the status hierarchy of a group.

These experimental units represent extensions of the approach summarized to the assessment of positive or negative interpersonal relations, status relations prevailing among the members of in-groups, positive or negative attitudes toward given out-groups and their members.

The first units along these lines dealt with interpersonal relations. It was postulated that since estimates of future performance are one special case of judgmental activity in which motivational factors are operative, the nature of relations between individuals (positive or negative) will be a factor in determining variations in the direction of these estimates. This inference was borne out first in a study showing that estimates of future performance are significantly affected by strong positive personal ties between subjects (Note 7). In a later unit, the assessment of personal relations through judgments of future performance was carried to include negative interpersonal relations as well as positive (Harvey and Sherif, 1951). In line with the hypothesis, it was found that individuals tended to overestimate the performance of subjects with whom they had close positive ties and correspondingly to underestimate the future performance of those with whom they had an antagonistic relationship.

The study of status relations in small groups followed (Harvey, 1953). This study is related to feature 3 of the essential properties of groups discussed earlier in this chapter, namely, the rise and effects of a status structure. Observations by the sociologist, William F. Whyte, gave us valuable leads in formulating the specific problem of this study. During one period, a Street Corner clique that Whyte observed was engaged seriously in bowling. Performance in bowling became a sign of distinction in the group. At the initial stage, some low status members proved themselves on a par with high status members, including the leader. This ran counter to expectations built up in the group hierarchy. Hence, in time, level of performance was stabilized for each member in line with his relative status in the group. In the experiment, Harvey first ascertained the status positions of individual members in adolescent cliques. This was done through status ratings by adults in close contact with the subjects, through sociometric ratings from clique members, and through observations of some of the cliques by the experimenter during their natural interaction. Cliques chosen for the final experiment were those in which there was high correspondence between the status ratings obtained.

The overall finding was that the higher the status of a member, the greater his tendency and that of other group members to overestimate his future performance. The lower the status of a group member, the less is the tendency of other group members and of himself to overestimate his performance, even to the point that it is underestimated. If these results are valid, it should prove possible to predict leaders and followers in informal groups through judgmental variations exhibited in the way of over- and under-estimations of performance.

In the summer of 1953 our first attempt was made at a [p. 18] large-scale experiment starting with the experimental formation of in-groups themselves and embodying as an integral part of
the design the assessment of psychological effects of various group products (Note 8). This assessment involved laboratory-type tasks to be used in conjunction with observational and sociometric data. The overall plan of this experiment was essentially like that of the 1949 study which was summarized earlier. However, it required carrying through a stage of in-group formation, to a stage of experimentally produced intergroup tension, and finally to integration of in-groups. The scope of this experiment embodying laboratory-type procedures at crucial points in each stage proved to be too great for a single attempt. During the period of intergroup relations, the study was terminated as an experiment owing to various difficulties and unfavorable conditions, including errors of judgment in the direction of the experiment.

The work completed covered the first two stages and will be summarized here very briefly. The plan and general hypotheses for these stages are similar, on the whole, to those of the 1949 study summarized earlier.

Prior to the experiment, subjects were interviewed and given selected tests administered by a clinical psychologist. The results of these assessments are to be related to ratings made by the experimental staff along several behavioral dimensions during the experiment proper when in-group interaction had continued for some time.

At the end of the stage of group formation, two in-groups had formed as a consequence of the experimental conditions, although the rate of group formation and the degree of structure in the two groups were somewhat different.

Our hypothesis concerning experimental formation of in-groups substantiated in the 1949 study was supported. As a by-product of in-group delineation we again found shifts and reversals of friendship choices away from the spontaneous choices made prior to the division of groups and toward other members of the in-group.

At the end of this phase of in-group formation, just before the first scheduled event in a tournament between the two groups, [p. 19] psychological assessment of group members within each status structure was made through judgments obtained in a laboratory-type situations. In line with methodological concerns mentioned earlier in the chapter, the experimental situation was introduced to each group by a member of the staff with the proposal that they might like to get a little practice for the softball game scheduled later that day. When this proposal was accepted, the experimenter took each group separately and at different times to a large recreation hall where he suggested turning the practice into a game, in which everyone took turns and made estimates of each others' performance. This was accepted as a good idea. Thus each boy took a turn at throwing a ball at a target 25 times and judgments of his performance were made by all members after each trial.

It should be noted that in previous studies, judgments of future performance were used as an index. The important methodological departure here was using as the unit of measurement the difference between actual performance and judgment of that performance after it was executed. In order to do so, the stimulus situation had to be made as unstructured as possible so that the developing status relations would be the weighty factor in determining the direction of judgmental variations.

In line with our hypothesis in this experimental unit, the results indicate that variations in judgment of performance on the task were significantly related to status ranks in both groups (Sherif, White and Harvey, 1955). The performance of members of high status was overestimated by other group members; the performance of members of low status tended to be underestimated. The extent of over- or under-estimation was positively related to the status rankings. Variations in judgment of performance on this task were not significantly correlated with skill, or actual scores, of members. This should not be interpreted to mean that skill can be discarded as a factor, or that it would not be highly related to judgmental variation in a more structured task. Of the two groups, skill seemed to be of relatively greater importance in the group which achieved less stability and solidarity. This is one of several indications that the relationship between judgmental variation and status rankings is closer in the group of greater
solidarity and greater stability of structure. This finding of a relationship between degree of stability of the [p. 20] structure, on the one hand, and psychological response of members as revealed in their judgments, on the other, points to the necessity of systematic concern with the degree of group structure and solidarity as a variable in small group studies. In particular it should be brought systematically into the study of leadership and problems of conformity (Sherif, 1954).

We hope to gain greater understanding of the relationship between stability of group structure and psychological reactions as revealed by judgmental indices through a new study designed for this purpose. In this attempt the task will be held constant and the degree of established status relationships among subjects will be varied. At one extreme, subjects will be complete strangers; at the other extreme, subjects will be members of highly structured groups. The hypothesis to be tested is that judgments will be more a function of actual performance in the task in the case of strangers, and progressively more a function of existing status relations and less of skill with the increasing degrees of stability of group structure.

Following the experimental assessment of psychological effects of group structure in existing and in experimentally formed in-groups, the next step in our program of research was to extend the use of judgmental variation techniques to the level of intergroup relations among already existing groups. Such an experimental unit has recently been completed by O. J. Harvey (1954). Harvey investigated relations between existing informally organized groups and their effects on in-group functioning and on evaluations of the in-group and out-group. Organized cliques were chosen on the same basis as those in the study of status relations in existing informally organized groups already summarized. In the first experimental session, in-group members judged each others’ performance on a task. In the second session, two cliques with either positive or negative relationships with each other were brought to the situation together. Here a similar procedure was followed, with in-group members judging performance both of other in-group members and performance of members of the functionally related out-group. In addition, subjects rated in-group and out-group members on 10 adjectival descriptions presented on a graphic scale. These ratings were included to yield data relevant to our hypothesis concerning the nature of group stereotypes in the 1949 study and those of [p. 21] Avigdor's study (1952) on the rise of stereotypes among members of cooperating and rival groups.

Results obtained in this experiment bear out the hypotheses. Greater solidarity was evidenced in the in-group when negatively related out-groups were present, as revealed by an increasing relationship between judgmental variation and status ranks and by greater overestimation of performance by in-group members. In-group performance was judged significantly above that of out-group members when the groups were antagonistic, which was not the case when the groups present were positively related to each other. Finally, results clearly show a much higher frequency of favorable attributes for in-group members (e. g., "extremely considerate," "extremely cooperative") and a much higher frequency of unfavorable attributes given members of an antagonistic out-group (e. g., "extremely inconsiderate", "extremely uncooperative"). The difference between qualities attributed to in-group members and members of friendly out-groups is much smaller and not so clear-cut, as would be expected.

Thus, having demonstrated the feasibility of experimental study of norm formation, of status relations within groups, and of positive and negative attitudes between groups through laboratory-type techniques, on the one hand, and, on the other, experimental production of in-groups themselves in two previous studies, our next step is to carry through the large-scale experiment along the lines of our 1953 attempt which will pull together all of these various aspects into one design. Judgmental indices reflecting developing in-group and intergroup relations are to be obtained through laboratory-type techniques at choice points in a way that does not clutter the flow of interaction process. These judgmental indices can be checked against data obtained through more familiar observational, rating, and sociometric methods. If indications of the findings through judgmental processes are in line with the trends obtained by gross observational and other methods, then we can say the generalizations reached are valid. If this can be established, the laboratory-type experiment can be offered as a more precise and
refined method of assessing the effects of interaction processes in group relations.

This approach, which considers the behavior of individuals as an outcome of interaction processes into which factors [p. 22] enter both from the individual himself with his unique characteristics and capacities and from properties of the situation, affords a naturalistic behavioral setting against which the claims of various personality tests can be evaluated.

The successive phases of this comprehensive experimental plan are:

1. Experimental production of in-groups themselves with a hierarchical structure and set of norms (intra-group relations). In line with our 1949 and 1953 studies, this is done, not through discussion methods, but through the introduction of goals which arise in the situations, which have common appeal value, and which necessitate facing a common problem, leading to discussion, planning and execution in a mutually cooperative way.

2. Bringing into functional relations the two experimentally formed groups in situations in which the groups find themselves in competition for given goals and in conditions which imply some frustration in relation to one another (intergroup tension).

3. Introduction of goals which cannot be easily ignored by members of the two antagonistic groups, but the attainment of which is beyond the resources and efforts of one group alone. In short, superordinate goals are introduced with the aim of studying the reduction of intergroup tension to derive realistic leads for the integration of hostile groups.

* * * * *

This experimental plan was carried out during the summer of 1954 at Robbers Cave in Oklahoma. The remaining chapters of this book give an account of its planning, execution, and findings.

Footnotes

[1] This chapter was prepared for the special issue on Small Group Research of the American Sociological Review, Volume 19, December, 1954, No. 6. Grateful acknowledgment is made to the editors of the Review for permission to reproduce this paper here in substantially the same form.

[p. 23] Notes

1. “The human group is an organization of two or more individuals in a role structure adapted to the performance of a particular function. As thus defined the group is the unit of sociological analysis.” R. Freedman, A. H. Hawley, W. S. Landecker, H. M. Miner, Principles of Sociology, New York: Holt, 1952, p. 143, emphasis added.

2. This feature, long noted by sociologists, has received repeated laboratory confirmation by psychologists, as mentioned earlier.

3. It is not possible here to review sociological findings on which these features are based or to discuss them more fully. They have been elaborated in our Psychology of Ego-involvements (with H. Cantril), New York: Wiley, 1947, Chapt. 10; An Outline of Social Psychology, New York: Harper, 1948; and Groups in Harmony and Tension (with C. W. Sheriff), New York: Harper, 1953, Chapt. 8.

5. Fuller accounts of these principles from the works of psychologists and their background may be found in M. Sherif, The Psychology of Social Norms, An Outline of Social Psychology M. and C. W. Sherif, Groups in Harmony and Tension, Chapt. 6.


8. This experiment was carried out with a grant from the Rockefeller Foundation to the University of Oklahoma.

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CHAPTER 2

Approach, Hypotheses and General Design of the Study[1]

The focal concern of this study is intergroup relations. As an experiment in social psychology, it undertakes to trace over a time period the formation and functioning of negative and positive attitudes of members of one group toward another group and its members as a consequence of experimentally introduced situations. Therefore, the main hypotheses relate to attitudinal and behavioral trends predicted as a result of controlled alterations of the conditions in which experimentally formed in-groups interact.

The general trend of findings from the sociology of small in-groups and their intergroup relations and relevant findings from the work of experimental psychologists led us to the experimental study of the problem of intergroup relations in successive stages. In the present undertaking (Summer, 1954) it will be carried out in 3 successive stages. The main features of these 3 successive stages are the following:

Stage 1: Experimental production of in-groups with a hierarchical structure and set of norms (intra-group relations). In line with our 1949 and 1953 studies, this will be done, not through discussion methods or through lecture or exhortation by resource persons or experts, but through the introduction of goals which arise as integral parts in the situations, which have common appeal value, and which necessitate facing a common problem, discussion, planning and execution in a mutually cooperative way.
Stage 2: Bringing the two experimentally formed groups into functional relations in situations in which the groups find themselves in competition for given goals and in conditions which imply [p. 28] some frustration in relation to one another (intergroup tension).

Stage 3: Introduction of goals which cannot be easily ignored by members of the two antagonistic groups, but the attainment of which is beyond the resources and efforts of one group alone. Such goals will be referred to as superordinate goals throughout this report. Superordinate goals are to be introduced with the aim of studying the reduction of intergroup tension in order to derive realistic leads for the integration of hostile groups. Considerations which led to the selection of this approach rather than other possible alternatives (such as a common enemy, leadership technique or discussion techniques) are stated briefly in the discussion of Stage 3 in the last part of this chapter.

It should be emphasized at the outset that individuals brought into an experimental situation to function as small groups are already members of actual groups in their social settings and thus have internalized values or norms (i.e., attitudes) which are necessarily brought to the situation. With this consideration in mind and in order to give greater weight to experimentally introduced factors in the situation, a special effort will be made in this study not to appeal to internalized values or to prestige symbols coming from the larger setting in the formation and change of positive or negative attitudes in relation to respective in-groups and out-groups.

Background of the Above Summary

The rationale that underlies the above formulation of our approach to the study of intergroup relations stems from relevant findings in both sociology and psychology. They are stated more fully elsewhere (Note 1). Here only a summary statement of these lines of development will be given.

Empirical observations by social scientists and inferences made by psychologists without direct experimental verification present a rather confusing picture at the present time. Therefore it is necessary to state precisely the sense in which the concept "group" and the issue of relations between them (intergroup relations) are used here:

A group may be defined as a social unit (1) which consists of a number of individuals who, at a given time, stand in more or [p. 29] less definite interdependent status and role relationships to one another and (2) which explicitly or implicitly possesses a set of values or norms of its own regulating the behavior of individual members, at least in matters of consequence to the group.

In order that this definition not be unwieldy, common attitudes, common aspirations and goals are omitted. Such shared attitudes, aspirations, and goals are related to and, in fact, are implicit in the concept of common values or norms of a group. From the point of view of the members within the group, these social units may be referred to as in-groups. Again from the point of view of a member within the group, those social units of which he is not a part psychologically or to which he does not relate himself may be referred to as out-groups. It follows that the term intergroup relations refers to the relations between two or more in-groups and their respective members. Whenever individuals belonging to one in-group interact, collectively or individually, with another group or its members in terms of their group identification, we have an instance of intergroup relations.

From a survey of empirical literature it can be stated that intergroup attitudes and behavior regulated by them are produced in the form of social distances and standardized stereotypes as a consequence of functional relations between in-groups. Once these intergroup attitudes and stereotypes are standardized they take their place in the cultural repertory of the group and in many cases, through the vehicle of language, outlast the very functional relations which were responsible for their rise.

These functional relations between groups and their consequences, rather than the study of the deviate individual, constitute the central problem of intergroup relations. Of course, this does
not imply a denial of various unique influences in the life history of the individual member (such as personal frustrations, special hardships in the family or other situations). Such personal influences in the life history may have a great deal to do with the individual becoming a non-conformist or deviate in terms of the prevailing scales of attitudes of his group. But such unique or personal influences do not determine the scale themselves. Rather they come in an important way to determine the particular place the individual will occupy within these scales or, in the case of non-conformists or deviates, the acceptance of a position outside of the scale.

[p. 30] Considerations determining the approach, plan, and hypotheses: At present there are various and conflicting psychological approaches to the study of intergroup relations. It seems that no amount of argument on an abstract level will prove the advantage of one approach over another. Certain of the empirical considerations which led to the approach to be used in this study will be mentioned briefly in the pages that follow.

The consequential intergroup behavior of individuals (largely revealing friction and tension at the present time) is in terms of their membership in their respective groups. Intergroup behavior of an individual which deviates considerably from the prevailing trends is not a typical case. If the individual's intergroup behavior is too much out of line with the prevailing trend of his respective groups, it is brushed aside or dealt with as deviate by other members.

One approach to intergroup relations is through the study of leadership. Even though leadership undeniably contributes great weight in the shaping of intergroup relations, concentration of research on leadership alone leaves out functional ties to which leadership itself is organically related. Such an approach is in contradiction to the main trend in leadership studies today. These studies are increasingly pointing to the necessity of considering leadership in terms of the whole state of reciprocities within the group.

Another approach in intergroup problems concentrates efforts on in-group relations. Empirical data seem to indicate that the nature of intergroup relations need not be in line with the prevailing character of in-group relations. This approach, which concentrates on improving in-group relations in order to improve intergroup relations, ignores the demonstrated consequences attributable only to the particular character of the interaction process between groups. Solidarity within the group need not be transferred to solidarity between groups, and in fact may contribute to sharpened delineations between groups with all the attendant by-products.

In short, the conception of the present study differs markedly from existing theories which posit one factor or a few factors as sole or primary determinants of the course of intergroup relations. (1) Inherent superiority or inferiority of human groups, [p.31] (2) national character ("war-like people," "peaceful people"), (3) deep-seated innate instincts of aggression or destruction, (4) frustrations suffered individually, (5) direct economic gain, (6) the character of leadership - - - are variously advanced as sole or primary determinants of intergroup relations. Each of these theories still has its strong supporters.

The present approach does not deny that some such factors may, singly or in combination, be operative as factors in determining the course of intergroup relations (excepting specifically the first and third listed above). "National character," frustrations suffered in common and experienced as a common issue, certain economic gains which become shared goals, or the particular character of the group's leadership may variously become the more weighty determinant of intergroup relations under a given set of circumstances (Note 2).

But conflicting evidence leads us to assert that the weighty factor determining intergroup relations will not be the same for all circumstances. For example, in settled times when in-groups are in a state of greater stability, national character as formed at the time and the existing scale of social distance (or prejudice) will regulate, on the whole, the particular pattern of intergroup relations. But in times of greater flux or crises (due to the impact of technological, cultural, socioeconomic and even military events) some other factor or factors take the upperhand.
One primary point of departure in our approach then, is the principle that various factors are functionally interrelated. In this respect the present approach is opposed to theories which make this or that factor sovereign in its own right; it attempts rather to ascertain the relative weights of all the possible factors that may be operative at the time.

The functional relatedness of various factors leads us to the cardinal psychological principle of our whole plan of study:

In the study of (intra- and inter-) group relations the relative contribution of given external stimulus factors and internal factors pertaining to participating individuals (hunger, sex, status desire, complexes, etc.) have to be analyzed within the framework of the ongoing interaction process among the members in question.

[p. 32] The relative contribution of an external stimulus factor, or an attitude, a drive, or other internal factors, cannot be simply extrapolated from individual situations to interaction situations. Interaction processes are not voids. Whatever drives, motives, or attitudes the individual brings into the situation operate as deflected, modified, and, at times, transformed in the interaction process among the several individuals (who stand or come to stand in time in definite role relations toward one another).

The application of this cardinal principle to the study of group relations is derived from more basic findings in the field of judgment and perception. The judgment of a given weight is not determined solely by its absolute value, but also, within limits, by its relative position in the scale of which it is a part and by the presence or absence of other functionally related anchoring stimuli with values within and without the scale. Likewise placement of attitudinal items on a scale with categories specified by the experimenter or with categories chosen by the subject is determined not only by whatever intrinsic value these items may have when considered singly, but also by their relation to one another and their relation to the stand that the individual has taken on the issue.

Following the implications of this general psychological principle, it may be plausible to state that behavior revealing discriminations, perceptions, evaluations of individuals participating in the interaction process as group members will be determined not only by whatever motivational components and personality characteristics each member brings with him, not only by the properties of stimulus conditions specified in an unrelated way, but as influenced, modified, and even transformed interdependently by these and the special properties of the interaction process, in which a developing or established state of reciprocities (roles, statuses) plays no small part. The developing state of reciprocities between individual members can be measured in various differentiated dimensions (e. g., status, popularity, initiative, etc.).

In short, one cannot directly extrapolate from the knowledge of stimulus conditions alone, or motivational components of participating individuals alone, but one has to study behavior in the framework of the actual interaction process with its [p. 33] developing reciprocities.

Carrying this line of conceptualization to the area of inter-group relations, one should start with the recognition that the area of interaction between groups cannot be directly extrapolated from the nature of relations within groups or prevailing practices within them, even though a careful analysis of intra-group relations is an essential prerequisite in any approach to intergroup relations. Numerous instances of intergroup relations in which the pattern (positive or negative) is different from the pattern prevailing within the respective in-groups might be mentioned.

The interaction process between groups and its consequences have to be studied in their own right in addition to studying relations prevailing within the in-groups in question.

The conceptual orientation outlined above determined:

1. the formulation of specific hypotheses,
2. the design of the experiment through 3 successive stages,

3. the choice of criteria in selection of subjects and the choice of setting that will not permit the direct intrusion of influences other than those experimentally introduced,

4. the special considerations related to observational and experimental techniques to be used in the collection of data, and the specific roles staff members will occupy.

Methodological Considerations

The problem of intergroup relations has not been made the domain of experimentation. Literally, there are only a few studies specifically designed to experiment on intergroup relations. Therefore, the present study undertakes to define main functional relations involved in the problem and to point to some unmistakable trends on the basis of data obtained.

In experimental study of intergroup relations it is necessary that various conditions between groups be experimentally [p. 34] introduced and manipulated, the nature of these conditions being defined, and the consequences of their variation predicted.

Recent research in both psychology and sociology and indications of attempts by practitioners in this area are making it increasingly evident that theoretical and practical problems of group relations, including attitudes and change of attitudes regulating behavior of individuals within their respective groups (in-groups) and with out-groups, have to be studied in terms of the interaction processes within and between appropriate group settings.

The usual practice in attitude studies has been to study the effects of already existing attitudes, or to measure attitudes that are already formed. When carried out apart from particular group settings, the study of motives (drives), frustrations, past experience, etc., (which are certainly operative in the formation, functioning, and change of social attitudes pertaining to group relations) has given us items of information whose validity has not been proven in actual issues of group relations. The attempt in this study is to trace the formation, functioning, and change of attitudes towards one's own group, toward its various members, and towards out-groups and their members within the setting of group interaction processes, and as consequences thereof.

In-groups themselves and the attitudes of members towards one another and toward the in-group as a whole are to be experimentally produced. In other words, group attitudes (both intra- and intergroup) will start from scratch and will be produced as a consequence of interaction processes in intra- and intergroup relations through the introduction of specified experimental conditions. The methodological gain from the experimental production of attitudes whose effects or change are to be studied or measured needs no elaboration.

Considerations such as those briefly mentioned above determine the approach taken, the specific hypotheses formulated, and the design of the experiment in 3 successive stages in the present 1954 study. Likewise they determine the choice of particular methods and cautions to be pursued in the collection of data.

[p. 35] To approximate as much as possible the natural process of spontaneous group formation, of in-group and out-group delineation with its consequences so abundantly reported in the literature on small groups, subjects will be kept unaware of the fact that this is an experiment on intergroup relations. (See Subject Selection in the next chapter for information given to teachers and parents concerning the experiment.)

Data concerning in-group formation (Stage 1) and inter-group functioning (in Stages 2 and 3) will be obtained through participant observers who are perceived as part and parcel of the situation by the subjects. All of the staff members directly in contact with the subjects will participate in the role of usual camp personnel, or some role not out-of-ordinary in a camp situation. Moreover, the participant observers should not be detected by the subjects while
recording observations contrary to the natural functions of their announced roles. The argument that subjects cease to be mindful that their words and other behavior are being observed and recorded is not in harmony with what we have learned concerning the structuring of perception. The presence of a personage ever observing, ever recording our words and deeds in a situation in which our status and role concerns are at stake, cannot help coming in as an important anchorage in the framework of the interaction process in question. Candid recordings of conversation and moving pictures taken at choice points without the awareness of the subjects will be valuable in addition to other observational data.

All the goals in the in-group stage and in the negative and positive intergroup stages will be introduced through conditions inherent in immediate situations (such as eating, overnight camping or some activity expressly desired by the subjects), and not in the form of abstract incentives distantly related to the immediate goals of ongoing activities and situations. For example, attainment of food will be introduced, not as a hypothetical problem or discussion situation, but through arranging conditions at a time when group members are getting hungry in a place where no other food is available so that members have to cooperate with one another to prepare available ingredients with facilities in the situation. (After subjects take the initiative along some plan, all necessary help and skill can be extended to carry out their plan more effectively.)

The technique of problem solving, that is, attainment of goals introduced in the manner described above, will not be through methods introduced by the experimenter, such as discussion method or lecture method. One of the guiding principles in the present study is that an actual problem situation faced by group members, as a common goal to be attained or a common deprivation to be taken care of, will necessarily lead to various suggestions, counter-suggestions, proposals and their weighing - - - in short, to discussion by group members.

When the group is faced with a situation involving common goals or deprivations, group activity will arise. This group activity may be in the form of suggestions from various members, leading to discussion, decisions, planning and execution. When group activity in relation to common goals is initiated, effective ways of dealing with the situation may involve group discussion, or analysis of the situation by a member who is conceded to know more about the topic than others, or (especially if the group is well-structured or the situation and available means sufficiently compelling) more direct action by higher status members or by the whole group may be taken. Those familiar with sociological findings on informally organized small groups, know well that such groups, facing plans to be executed or problems to be solved, do discuss, do plan, and do execute plans. In this interaction process involving an actual problem or goal situation perceived as common to the group, discussion of alternatives has its place, at times exhortations (lectures) and skills of particular members in verbal and non-verbal ways have their places. The various activities involved in the interaction process, viz., discussion, exhortation, planning, and execution, may be carried out in sequence, or in rapid succession, or the common decision may be implicit in the action itself, if the goal and means stand out clearly. The sequence followed and methods used will be determined in part by the nature of the problem, in part by the particular character of group structure (in which leadership, as part and parcel of the hierarchical structure of the group, plays no small part), in part by the particular set of values or norms prevailing in the group, and also by the character and norms of the general sociocultural setting of which the group in question is a part.

Emphasis on studying the interaction process in a natural setting, while approximating experimental control and techniques, does not eliminate the possibility of checking the validity of observed trends by precise laboratory techniques at "choice" points. If there is any validity in the recent generalizations concerning perceptual and judgmental variations ("distortions") as a function of attitude or motive, relevant perceptual or judgmental tasks of the type used in the laboratory can very well be introduced at a few choice points. The stimulus materials used in these experimental units are of an indirect and unstructured type not involving direct questions about developing group attitudes. The procedures are perceived by the S’s as part of the camp activities, and not as experiments which clutter the flow of their interaction process.
In fact, on the methodological side, the plan of the study aims at two additional objectives:

The first involves the introduction of laboratory-type experimental procedures as supplements for obtaining data concerning the effects of group interaction with the aim of establishing short-cut methods for tapping behavioral trends to supplant laborious, gross behavior observations (see experimental units at the end of Stages 1, 2, 3 later in this chapter).

The second is to secure personal data (e.g., intelligence, personal characteristics) through available testing procedures which can be related to various dimensions of behavior manifested in the interaction process in various stages. This aspect is not to be carried out in the present 1954 study owing to lack of facilities. As this line of research develops it can be brought to the foreground as one of the important problems.

Subjects

Subjects will be 24 twelve-year-old boys from established Protestant families of middle-class socioeconomic standing, who are normal (no "problem" cases), who have not experienced any unusual degrees of frustration in their homes or other situations, who are not school or social failures (no isolates), and who have a similar educational level. (See section on subject selection, Chapter 3.)

[p. 38] A nominal fee of $25 or less will be charged. This nominal fee will give us the privilege of asking parents not to visit their boys during the experiment. Staff members will have no visitors.

Three Successive Stages and the Hypotheses

The hypotheses will be listed under their appropriate stages, since the account of these stages specifies in outline the conditions under which the particular hypothesis holds true.

Our general hypothesis in regard to intergroup relations (which is the main concern of the present study) is that intergroup attitudes and behavior are determined primarily by the nature of functional relations between groups in question (and not primarily by the pattern of relations and attitudes prevailing within groups themselves, nor primarily by the deviate or neurotic behavior of particular individual members who have suffered more than the usual degree of frustration in their personal life histories).

Both the 1949 and 1953 experiments started with a stage of spontaneous friendship choices (Note 3). This stage, to which the first days of the experiments were devoted, was introduced to rule out the possibility of attributing the experimental in-group formation to personal affinities that subjects develop for one another. This alternative explanation was ruled out on the basis of reversals of friendship choices away from interpersonal preferences and in the direction of the experimentally produced in-groups in our 1949 and 1953 experiments. The stage of interpersonal friendship choices, therefore, is eliminated from this 1954 undertaking, and the study is designed in 3 stages instead of the more complex 4 stage design of the 1953 attempt.

In the two previous studies, the assignment of the subjects to two experimental groups was done towards the end of the first stage, that of spontaneous friendship choices. The basis for this division was not only the splitting of spontaneous friendship choices but also matching the groups as much as possible in terms of observed skills, athletic ability, etc., as well as in terms of data collected during the period of subject selection. Since dropping the period of spontaneous friendship choices [p. 39] eliminates the possibility of actual observation at the camp prior to assignment of subjects to two groups, we have to rely exclusively on the data from the observations at schools, teacher evaluations, school ratings, and data from interviews in actual home situations during the subject selection period. Utmost care will be exhibited by staff members to obtain two groups matched in as many dimensions as possible relevant to the activities that will be introduced, especially those to be utilized in the intergroup stages.
Stage 1: (5-6 days) Experimental in-group formation

The chief aim of Stage 1 is the production of in-groups through manipulation of conditions in which interaction takes place. This step is necessary in order that intergroup relations may be studied between in-groups, whose formation and functioning can be specified.

With the aim of specifying the formation and structure of the experimental in-groups, the two groups will be kept apart and their activities separated as much as possible, especially during the first days of this stage. Otherwise any functional contacts between the two groups would certainly have some consequence both for in-group formation and for the later stages of intergroup relations.

Conditions conducive to bringing about in-group formation (with hierarchical statuses and roles which will be clear-cut at the upper and bottom ends of the hierarchy) will consist of a series of common and interdependent activities prompted by goals integral to the actual situations in which the subjects find themselves (e.g., getting a meal when they are hungry or water when thirsty). The attainment of the goal will necessarily require cooperation and reciprocal relations. As a result, the initial discussion and the activities that follow will be real to the subjects, unlike discussion topics introduced or hinted by experimenters (or leaders) which are not immediately inherent in the situation. (Topics used in many discussion group studies are often conducive to individual 'shining' in verbal skills or debating.)

The effects of the series of activities conducive to group formation will be studied in terms of:

[p. 40] (a) behavioral observations - verbal and non-verbal,
(b) ratings of emerging relationships by the participant observers (looking from outside),
(c) sociometric ratings in several relevant dimensions (looking from inside),
(d) experimental indices in terms of judgmental and perceptual variations reflecting the reciprocal role and status attitudes that emerge among group members toward each other. Before these indices are obtained, we can make predictions of the direction and degree of such variations.

As emphasized in the introductory theoretical and methodological considerations, the focal point is to maintain the natural flow of the interaction process within groups and, later, between groups under conditions which appear life-like to the subjects. Any observational procedure, or laboratory-type experiment or repetition of sociometric tapping which clutters the flow of interaction is antithetical to the main conception of this study. Therefore, only one judgmental experiment will be used during the stage of in-group formation. It is perfectly feasible to design an experiment primarily to study in-group formation and related problems and to devote the entire time to it. In that case, of course, it would be possible to introduce various experiments studying the progressive development of in-group structure and its effects on in-group members.

Hypothesis 1 (Stage 1)

A definite group structure consisting of differentiated status positions and reciprocal roles will be produced when a number of individuals (without previously established interpersonal relations) interact with one another under conditions (a) which situationally embody goals that have common appeal value to the individuals, and (b) which require interdependent activities for their attainment.

The hypothesis above is formulated on the basis of empirical findings by sociologists like F. Thrasher, Clifford Shaw, and William Whyte. These and other authors stated generalizations [p. 41] in line with it. Our findings in this respect will serve as experimental verification. This
hypothesis was supported by the results of both our 1949 and 1953 experiments cited previously.

The hypothesis will be considered to be verified if the individuals can be placed on a pyramidal hierarchy (the leader being at the apex) on the basis of (a) observational data, (b) status ratings of subjects in the respective groups by participant observers, and (c) sociometric indices.

(a, b) Observational data: The ratings of emerging status relations will be a part of the daily observational reports of the participant observers. Thus, the ratings will serve as a day-to-day index of the trend from mere togetherness situations (in which unstable, transitory differential effects are manifested) to various degrees of stabilization of established reciprocities which constitute the group structure at a given time. When three consecutive ratings (especially of positions at the top and bottom of the status hierarchy) by participant observers of their respective groups show a high degree of correspondence, we can say a definite in-group structure has formed. At this point the similar ratings independently made by junior counselors and other staff members who have had sufficient contact with the groups may be used as further checks. At that time, sociometric ratings and the judgmental experiment with the target board will be introduced (see c and d below).

Observational data consisting of the frequencies of suggestions for activities made by various members and the proportion of acceptance and observance of these suggestions will be obtained. The latter measure might be termed the initiative ratio.

Other observational data along various dimensions will be desirable. Observers will make their ratings of group structure along these dimensions.

Frequency of suggestions (for engaging in this or that activity, etc.) addressed to various group members is one such dimension. It is a plausible hunch that the number of suggestions for group activities which are received by various members will be proportional to the status each achieves in the group. When members are placed according to the frequencies of suggestions addressed to them, we may be getting a placement of members [p. 42] pyramidal in shape very much like the one mentioned above. It is plausible to state this tendency in the form of an auxiliary hypothesis:

Hypothesis 1a (Stage 1)

If a definite group structure develops, it will be reflected in a consistent pattern in directions of communication. The specific pattern in direction of communication will be as follows: The higher the status of a group member the greater the frequency of suggestions (for group activities) addressed to him.

It seems feasible to represent the pattern in directions of communication visually in the form of a chart. We should think that through the course of a study such as this, variations in such charts would be obtained. The chart of directions of communication at a given time will correspond closely to the chart of initiative ratios and the pattern of judgmental variations in the way of overestimations and underestimations of performance. A suggestion for activities coming from any member may be kicked around among the group. Even if it is not initially addressed to the top position (leader), but to middle position members or lieutenants, it will be kicked around until a nod expressing approval or, at least, no disapproval from the top position member (leader) is perceived.

(c) Sociometric data (Note 4): Sociometric data obtained from the subjects themselves along various dimensions (popularity, initiative, degree of service for the well being of the group, etc.) will be significant indices in terms of relations perceived by the group members themselves. The sociometric indices (looking from within) should give very much the same trend as those represented in the ratings, frequencies, and charts obtained through observational data mentioned above. We shall consider this hypothesis verified only in cases in which there is a high degree of correspondence between (a) observational, (b) sociometric, and (c)
Experimental indices.

(d) Experimental indices to be obtained through laboratory-type judgmental experiments introduced at this point: Recent findings which indicate the feasibility of measuring attitudes and other motivational components through perceptual and judgmental indices suggest that the reciprocities developing among members of a group as status and role relations will be reflected in the differential ways group members perceive and judge one another. One index of these differential judgments as a function of relative statuses or roles will be based on the tendency to expect higher or lower performance in activities engaged in by members occupying various status positions. (Differential expectations proportional to status positions occupied.) Relative over- and underestimates of performance in experimentally introduced tasks may be utilized to measure indirectly the status hierarchy of group members. If this proves to be the case, such experimental indices can be developed to check the validity of gross observational findings, and eventually to supplant them. Such an attempt will be made in this study with the following hypotheses:

If Hypothesis 1 holds, it can be predicted that:

**Hypothesis 1**

b (Stage 1)

(a) The higher the status of a member in the group, the greater his tendency to overestimate his performance in an activity the group engages in.

(b) The higher the status of a member in the group, the greater the tendency of other group members to overestimate his performance.

(c) The lower the status of a member in the group, the less his tendency to overestimate his performance in an activity the group engages in.

(d) The lower the status of a member in the group, the less the tendency of other members to overestimate his performance, even to the point of underestimating it.

This psychological tendency was demonstrated in established informal cliques in an experiment at the University of Oklahoma carried out as one unit of a research project supported by the Office of Naval Research (Note 5). However, in that study indices used were estimates of future performance, whereas in the 1953 study mentioned above direct judgments of performance were used (Note 6). The experiment to be introduced here follows the procedures used in 1953 utilizing direct judgmental indices.

**Hypothesis 2** (Stage 1)

When individuals interact under conditions stated in hypothesis 1, concomitant with the formation of group structure, norms will be standardized regulating their behavior in relations with one another and in practices and activities commonly engaged in.

This hypothesis is also based on empirical findings by sociologists and on studies of adolescent cliques, and will be experimentally verified in this study.

The group norms which are standardized will be expressed as attitudes and conforming behavior of individual members. The production of a set of standards or norms can be verified by observing the reaction of group members to deviations from it. When there is a norm regulating the interpersonal relations of in-group members in terms of their established statuses and roles or regulating behavior in some practice or activity, it can be predicted that behavior by a group member deviating from the norm will arouse corrective reactions from other group members. (This applies also to norms regulating behavior toward out-groups which will become prominent in Stage 2.) The corrective measures or sanctions may range from actual...
punishment meted out to the deviate through "silent treatment", scorn, ridicule, criticism, expressions of disapproval, to amusement, varying according to the importance of the norm violated, the degree of deviation, and the status of the individual. Facts relating to reactions to deviation are reported by sociologists and also in the experiment by Schachter and others.

**Stages of Intergroup Relations (2 and 3)**

As stated earlier in our definition, intergroup relations refer to interaction between two or more groups collectively or between their respective members. In our study, intergroup relations refer to interaction between the two experimentally produced groups (as formed in Stage 1) and their respective members.

Stage 2 and 3 constitute the main stages of this experiment. All of the previous work in Stage 1 (in-group formation) leads up to them. Stage 2 is the tension or friction phase of intergroup relations. Stage 3 is the integration phase of intergroup relations.

**Stage 2: (4-6 days) Intergroup Relations: Friction Phase**

Relations between the experimentally produced groups start with a friction phase because the major problem of intergroup relations today is the reduction of existing frictions between various groups. For this reason, the phase of friction is preceding the attempt to reduce tension and to integrate groups into cooperative activities with common goals.

Friction between the two groups will be brought about through the introduction of two sets of conditions:

(a) During this stage the two groups will be brought into contact in a series of competitive activities in the form of a tournament of events which will yield cumulative scores with a reward for each member of the winning team. However, these individual rewards can be obtained only by being a member of the winning group and cannot be won individually. In other words, in order to win the award individually the members of each group are to contribute their individual bits to the winning of the team.

(b) Introduction of situations which will be perceived by one group as frustrating and which will be perceived as caused by the other group, and not by the camp administration. This was tried with positive results in 1949. The situations will embody goals which can be attained by one group and not by the other, in such a way that both groups will perceive the other as an obstacle in its way to attaining the goal.

In line with the methodological point that the subjects should not perceive this as an experiment on intergroup relations, conditions set up in Stage 2 and 3 conducive to group frustration and friction, or to integration as the case may be, must be designed in such a way that the subjects cannot assign the source of these conditions to the staff. They must be planned in a way such that it is not possible for group members to ascertain by checking verbally with the members of the other group that someone (the staff) has been manipulating conditions.

[p. 46] Our general hypothesis is that subjects who did not have appreciable contact with members of the opposite group during Stage 1 will develop negative attitudes verging on enmity towards the out-group which is perceived to be in their way for the attainment of goals shared in common within their group. Negative intergroup attitudes, such as prejudice, develop whenever any out-group is perceived as frustrating or as an obstacle. (In short, norms regulating behavior toward out-groups, like social distance norms, are standardized group products.) Negative attitudes toward out-groups will be generated situationally under these conditions and will tend to persist even though the individual members in question have not undergone any special degree of frustration in their life histories. Applying this general statement to the particular case of intergroup relations in this study, our specific hypotheses will be:
Hypothesis 1 (Stage 2)

In the course of competition and frustrating relations between two groups, unfavorable stereotypes will come into use in relation to the out-group and its members and will be standardized in time, placing the out-group at a certain social distance (proportional to the degree of negative relations between groups).

Evidence for the rise of stereotypes will be obtained by recording derogatory adjectives and phrases that are used to refer to the out-group. The specific competitive and frustrating situations and the activities and verbal utterances relating to out-groups will be noted. If possible, the frequency of references made to out-groups (positive or negative) and of activities undertaken relating to out-groups, both in intra- and intergroup situations, should be recorded. Such conditions, verbal utterances and activities in relation to the out-group constitute the steps on the basis of which stereotypes are built. In time all members of the out-group will be perceived in terms of the generalizations encompassed in the standardized stereotypes. This aspect of our study constitutes a contribution to the formation of norms of social distance (prejudice) which prevail in social groups. The tendency toward stereotype formation was noted in our 1949 study and verified in a more systematic way in R. Avigdor's doctoral thesis (Note 7).

[p. 47] In addition to observational data, the rise of stereotypes will be tapped through two experimental units introduced at this stage:

1. Experimental indices reflecting the reciprocal intergroup evaluations in terms of stereotype ratings (testing Hypothesis 1, Stage 2). This is essentially the technique used by Avigdor.

2. Experimental indices revealing overestimation of performance of in-group members and underestimation of performance of out-group members. In this unit a bean-toss contest between the 2 groups will be introduced. The contest consists of rapid gathering of as many beans as possible by all members of each group within a brief time period. After the contest, beans presumably picked up by each member will be projected on a screen, identifying with each projection the individual who presumably collected them. Actually the same number of items will be projected each time in the same confined area, the items being spread in somewhat different arrangements. Estimates of the number of beans will reflect overestimation of the performance of in-group members and underestimation of the performance of out-group members. This tendency can be stated in the form of specific hypotheses:

Hypothesis 1a (Stage 2)

In-group members will tend to overestimate the number of items purportedly obtained by in-group members and underestimate the number of items attributed to out-group members.

Hypothesis 1b (Stage 2)

The degree of this tendency manifested will vary according to the status (low or high) of in-group and out-group members in question.

The feasibility of the two experimental units, viz., assessment of differential judgments of performance of members of in-groups and out-groups and differential rating of qualities in so many relevant dimensions, has already been clearly established in an experimental study carried out in our project (Note 8).

[p. 48] These data from assessment techniques as well as sociometric choices will be obtained again at the end of Stage 3, and will serve as an index of decrease of unfavorable attitudes toward out-groups in that stage.

Hypothesis 2 (Stage 2)
The course of relations between two groups which are in a state of competition and frustration will tend to produce an increase in in-group solidarity.

Increased group solidarity will be revealed in the expressions of glorification of the in-group and of "feats" of members, especially those of high standing. Increased encouragement of efforts of in-group members in a way not manifested during the period when the in-group was not in contact with the out-group will be another indication. Additional behavioral data in support of this hypothesis will be derived from the experimental units described above.

**Hypothesis 3 (Stage 2)**

Functional relations between groups which are of consequence to the groups in question will tend to bring about changes in the pattern of relations within the in-groups involved.

This hypothesis should hold true for both positive and negative intergroup relations of consequence. (See also last paragraph of this chapter.) The changes in in-group relations can be measured in terms of popularity and status of in-group members in various respects. The degree of consequence of intergroup relations for the group in question can be measured (a) by the frequency of references to the out-group, and (b) by the amount of planning and activity engaged in within the in-groups in relation to the out-groups.

One way of testing this hypothesis is through special attention to ratings of status relations within the groups by participant observers. These ratings should be continued throughout the intergroup phases with the expectation that some important changes in the functional relations between groups will produce consequential changes in the in-group structure as stabilized at the end of [p. 49] Stage 1. The participant observers' ratings will be checked with independent ratings by other observers in contact with the groups, thus contributing to the reliability of the data.

The hypothesis is predicted for both parties (winning and losing groups in our study). In the case of the group suffering defeat the impact of intergroup relations may be to the extent of disorganization of the in-group pattern, which will be marked by shifts in status positions occupied by various members.

Related to the above hypothesis is a subsidiary one concerning the functioning of low status members of the two contending groups. This has theoretical implications in view of present-day controversies. It can be stated as follows:

**Hypothesis 4 (Stage 2)**

Low status members will tend to exert greater efforts which will be revealed in more intense forms of overt aggression and verbal expressions against the out-group as a means of improving their status within the in-group (**Note 9**).

An empirical test of this subsidiary hypothesis will be found in observation and comparison of the hostile and aggressive reactions of low status members toward the out-group (a) when reacting in the presence of in-group members high in status and (b) when reacting when high status members of their in-group are not in the immediate vicinity.

**Stage 3 (6-7 days) Intergroup Relations: Integration Phase**

This stage constitutes the crucial and novel aspect of this study. Deliberately the attempt to bring about cooperation between groups follows a stage of friction produced between them experimentally. This should be the attempt in studies aiming at reduction of group tensions. Production of harmony between groups which are not in a state of tension does not present much of a problem in terms of intergroup events today. There are various possibilities or
alternatives for the study of reducing intergroup tensions. One alternative could be called the "common enemy" approach. Empirical evidence and a tryout of this measure as an expedient manner of reducing post-experimental hostility in 1949 indicates that this measure can be effectively used. But it implies conflict between larger group units.

Another alternative would be to arrange a series of events in which achievement of individuals can be made supreme. But this would simply achieve disruption of the in-groups. In terms of actual happenings in intergroup events, the use of this measure in an experimental study would be unrealistic and would have few if any realistic implications for the reduction of intergroup tensions. As noted earlier, actual intergroup tensions take place either collectively between group units or between individual members of the in-groups reacting in terms of their group identifications.

A third alternative would be through leadership techniques. With appropriate manipulation this measure can be made effective. But in actual groups, intrusion of an outside person as a leader is not a welcome one. In actual groups, leaders, too, are part of the group structure, and they have to function within certain bounds in whatever initiative they take. For this reason, manipulation of conditions through leaders who are not part and parcel of the groups in question has little implication for the state of intergroup relations that actually exist.

Such considerations led to the choice of the alternative to be used in this study. The main feature of the alternative chosen is the introduction of superordinate goals which are integral to the situation and which cannot be ignored by the groups in question. The main criteria in the choice of procedures to be introduced in this integration stage will be that goals of sufficient strength to the groups in question be superordinate, in the sense that the resources and energies of any single group will be inadequate for the attainment of the goal, thus creating a state of real and/or perceived interdependence. Situations will be planned and listed before the experiment in which such a state of interdependence inheres (a) keeping a sufficient level of motivation that members of groups are directed toward the superordinate goals, and (b) introducing a series of stimulus conditions which will make the facing of the superordinate goals and the modes of their attainment compelling.

The superordinate goals will not be introduced abruptly right after this stage starts. Initially some contact situations will be introduced. At these occasions the groups will have to be in close physical proximity under conditions in which expression of their hostility toward one another will not be very appropriate. Of course, mere get-togethers or contact will not materially help reduce the friction. The aim of this early period is to create the possibility of communication between members of the two respective groups. For example, the improvised birthday of an outsider (preferably a local personage not related to the subjects positively or negatively in an appreciable way) to which both parties are invited would be an example of such an occasion. The early phase of Stage 3 will thus consist of occasions that will give the two groups opportunity for contact or communication.

**Hypothesis 1 (Stage 3)**

It is predicted that the contact phase in itself will not produce marked decrease in the existing state of tension between groups.

The persistence of tension will be revealed in reactions showing resistance to cooperation with the out-group, in spite of contact, and persistence of negative stereotypes. If this prediction holds, it will eliminate the alternative hypothesis that contact in itself will bring about reduction of tensions.

After a series of contact situations, a series of superordinate goals will be introduced - - - goals which cannot help having appeal value to the members of both groups. The following are examples of superordinate goals inherent in a situation for members of both groups concerned, the attainment of which is dependent on collaboration on the part of both groups: (a) A project related to some improvement of the water tank on the hill and the pump near the reservoir,
since the tank provides water for members of both groups. (b) Creating a situation of interdependence in a joint overnight camp in which members of both groups will need mutual aid for their meal and sleeping facilities. Probably the increased social suggestibility in new situations or situations of uncertainty may be utilized to enhance the effects of the conditions of interdependence. (c) Other examples already suggested by staff members are the possibilities of utilizing the swimming pool or the truck (which brings their provisions) e. g., having the truck in a rut deep enough to require the combined efforts of both groups to free it.

Hypothesis 2 (Stage 3)

When groups in a state of friction are brought into contact under conditions embodying superordinate goals, the attainment of which is compelling but which cannot be achieved by the efforts of one group alone, they will tend to cooperate toward the common goal.

Hypothesis 2a (Stage 3)

Cooperation between groups necessitated by a series of such situations embodying superordinate goals will have a cumulative effect in the direction of reduction of existing tensions between groups.

Even though the groups are brought into situations which permit communication between them and then situations requiring their collaboration toward a common goal, the effects of friction produced in Stage 2 will tend to persist, along with the by-products of this friction. One of the indices important in the study of the changes in this stage, in addition to observational data giving a gross account, will be the decrease in expressions of resistance to collaboration with the out-group, which will be strong at first.

Observational data will be collected in the mess hall and other situations involving choices (of seating arrangements, etc.) to check the extent of intermingling among members of the two groups.

Another way of gaining evidence of reduced tension will be a decrease in the actual use of derogatory terms and expressions toward the out-group. After the series of superordinate goal situations have exerted a cumulative effect, the rating of relevant stereotypes will be repeated. The "bean toss" experiment or a similar procedure will be applied here if it can be carried out without spoiling the flow of the interaction process.

Toward the end of Stage 3 sociometric choices will be obtained again. It is predicted that in comparison to those obtained at the end of Stage 2 there will be a marked increase in choices of out-group members.

As predicted in Hypothesis 3 (Stage 2), intergroup relations developing in interaction directed toward superordinate goals will also tend to bring about changes in in-group relations. As in the case of the friction phase (Stage 2), proportional to the demands for intergroup cooperation, there may be changes in in-group structure. A special note should be made here of those who are contributing more to intergroup cooperation, e.g., lieutenants who exhibit strivings toward still higher position in the in-group structure and those in marginal roles. Effective cooperation will be brought about when high status members or members on the move to higher status through activities in the area of intergroup relations take a hand in (a) initiating in-group moves toward cooperation and (b) in participating in intergroup communication related to superordinate goals.

Footnotes
This chapter is an outline of the study prepared and distributed prior to the experiment in mimeographed form to staff members of the study and a number of colleagues interested in this problem area throughout the country. Since this paper gave the high points of the theoretical rationale and the blueprint to guide the actual experiment, it is presented here in substantially the same form, including the use of the future tense in referring to various procedures.

Notes


4. It was thought that obtaining sociometric indices 3 times (once at the end of each 3 stages), asking the same or similar questions within a 3-week period might appear repetitious (if not suspicious) to the subjects. Therefore, in line with our main concern not to clutter the natural flow of the interaction process, it was decided prior to the actual start of the experiment to restrict sociometric choices to the intergroup stages (2 and 3) and forego them at the end of the in-group stage (1).


9. This hypothesis does not imply that high status members will not initiate and actively participate in intergroup conflict. In line with one of the major tenets of *Groups in Harmony and*
Tension (op. cit.), intergroup behavior in conflict or cooperation consists mainly in participation in the intergroup trends of one's group. A line of activity in positive or negative intergroup relations will be ineffective unless high status members either take a lead, join or assent to the developing intergroup trend. If they stay in the way of an unmistakable trend in intergroup relations or deviate from it markedly, the consequence will be sinking in the group hierarchy (See Hypothesis 3, Stage 2).

CHAPTER 3
Role of Staff, Subject Selection, Experimental Site

As specified in the statement of the approach, hypotheses and general design (Chapter 2), the distinctive feature of this study is that subjects interact with one another in activities that appear life-like to them in a natural setting - without being aware that they are being observed while interaction is going on. Therefore, it becomes essential to make explicit (A) the special role of staff members in experimentally introduced problem situations, (B) the criteria observed in the selection of subjects in order to insure adequate testing of hypotheses, and (C) the considerations which determined the choice of an experimental site.

A Role of Staff Members in the Introduction of Experimental Conditions

The points covered in this section were instructions given the staff members prior to the experiment. They are presented here in essentially the same form.

In every step of the work it will greatly help coordination of efforts if all participating staff members in the camp realize at every moment that the camp is not one in the usual sense, but is set up as a research project to test definite hypotheses pertaining to group relations, with emphasis upon the intergroup phase. The main features are stated in the outline giving approaches, stages, plan of study and methodological considerations. Conditions and activities are introduced with these objectives in mind (see Chapter 2).

Utmost care will be exercised in ruling out all influences in word, deed, or use of various procedures which are not specified in the methodology and specific characteristics stated for conditions introduced for each stage. No activity is to be initiated, sponsored or encouraged which is not in line with the main criteria specified in the study plan as appropriate for the particular stage at the time. The behavioral effects are to be the outcome of the deliberately introduced conditions and not of verbal means or other usual camp practices. Therefore, do not use verbal means to influence subjects, do not take initiative to introduce activities on your own accord, and do not try to counsel campers individually. Of course, this does not mean a "hands off" or non-direction policy in any matter which even slightly concerns the whereabouts, safety, health and well being of the campers concerned.

No staff member is to be a leader to the boys during any stage of the study in any of the various activities which are introduced after careful consideration in line with the criteria and hypotheses. In the first stage, every activity is introduced because it is considered to be conducive to interaction among the campers, from which a pattern of status (role) relations, including the leader position, is expected to emerge. You may have to give advice when asked and institute controls when necessary to maintain order, but please refrain from giving direction and initiating action in relation to problem situations. Initiative should come from the subjects under the specifically designed problem conditions of each stage. After they start along some line of action, give them help to carry it out, but do not put yourself in the foreground of ongoing activities.
When a problem situation is introduced which demands planning, discussion and execution on the part of the subjects, utmost care should be taken not to show any partiality or preference and not to assign any single camper to take the lead. If the experimentally introduced situation involves common appeal value (motivation), the lead will naturally evolve in the interaction process among the participating campers.

Attention should be especially called to the fact that the participating campers will at times turn to you, as adults, for approval or sanction for carrying out a plan of activity in relation to the experimentally introduced problem situations. Care should be taken to be responsive to such queries or appeals. If the proposals do not run counter to health, safety and well being of the campers, and also if they do not run counter to the criteria specified for the given stage, the boys should be given opportunity to proceed in the direction of their proposed activity.

There will be times at which an ongoing course of action may not be in line with criteria set in the study outline. If such a situation occurs it may be suggested to you by the experimenter [p. 58] that a change be made in the ongoing procedures. In the flow of activities it may be impossible to explain at the particular moment why this suggestion is made. It is expected that the suggestion will be followed, and the reasons for suggesting the change will be explained later at a more appropriate time.

It is fully realized that the end results implied in the hypotheses may be secured in a more short-cut way by using other activities. Activities and procedures introduced in the various stages, especially in the first stage, might appear drawn-out and round-about. Since these successive stages are planned after long and laborious deliberation of existing theories and findings, they constitute an interrelated sequence in the plan of study, and as such, all successive steps are dependent on each other. Therefore, utmost care should be taken not to appeal to short-cuts, but to satisfy the sequence as outlined.

In line with the consideration stated in relation to the rise of leadership among the campers, and of staff not assuming leadership in experimentally introduced conditions, it becomes necessary for staff members not to exhibit special performance skill which may be conducive to focusing popularity and leadership on staff members. This is particularly important for Stage 1. However, it should be repeated that this does not mean that a helping hand should be withheld to the campers after a line of activity is proposed or initiated by them. In line with this consideration, do not wear any clothing, especially shirts, which have insignia or other identifying symbols, e. g., college or camp name. We do not wish subjects to adopt names or associations through adult leader-identification. Do not introduce to the campers nicknames, catchwords, slogans in a way which may cause them to be standardized by the subjects.

All the reports concerning verbal or behavioral observations should be written independently and not as a consequence of discussion with any other staff member. All ratings should also be done independently. Particular care should be taken to observe this procedure in order to secure reliability of results.

In the ongoing activities there is the possibility of an infinite number of events which can be observed and recorded. Therefore, please have the hypotheses for the given stage focal in your mind so that the observations will not be hodge-podge, [p. 59] but relevant to the hypotheses in question. As long as any behavioral items are relevant to the hypotheses, either validating or invalidating the hypotheses, utmost care should be taken to have all of them included. It may not be possible to record all relevant items of behavior, but indisputable recurrences of behavioral items should be recorded.

B

Subject Selection

Since the hypotheses to be tested require that the behavioral trends and products in in-group formation and the development of positive and negative relations between the groups be outcomes of experimentally introduced conditions and interaction processes within them,
certain strict criteria for subject selection were necessary. The criteria that were adopted stemmed from the basic consideration that in-group formation (Stage 1) and the development of negative and positive relations between in-groups (Stages 2 and 3) should not hinge upon similarities or differences in sociocultural background or distinct differences in personal backgrounds and adjustment of the individuals composing the experimental groups. Therefore, homogeneity of subjects as to sociocultural and personal backgrounds was the guiding determinant underlying the establishment of criteria for subject selection.

Subjects were to be normal, well-adjusted boys of the same age, educational level, from similar sociocultural backgrounds and with no unusual features in their personal backgrounds insofar as extreme or prolonged frustrations, broken home life, etc. were concerned. Any potential subject who did not appear normal in terms of these general criteria and the more specific characteristics outlined below was excluded. This meant elimination of all "problem" boys, and of boys who might have suffered unusual degrees of frustration from inadequate sociocultural and personal backgrounds. Equally important was that subjects should not have prior acquaintance before the experiment started. Otherwise it might be said that existing friendship ties influenced in-group formation (Stage 1), and the resulting groups could not be attributed to the experimental conditions introduced. Special precautions, outlined below, were taken to insure that subjects were not acquainted prior to the experiment.

Selection of subjects who met the criteria represented one of the prerequisites for the success of the study. Without adherence to such basic criteria in selecting subjects, many of the necessary conditions presented in Chapter 2 could not have been satisfied. Sociological, psychological, and physical specifications were also set up for subjects in order to insure healthy and well adjusted boys with athletic and other skills sufficient for full participation in the camp activities, which were to be introduced in line with experimental considerations.

More specifically, subjects were to be of established Protestant families (not new in the area), of middle socioeconomic class, living with both parents. (Children from broken homes and foster homes were not accepted.)

Psychological manifestations which precluded the selection of a given boy were any signs of severe homesickness, social isolation, enuresis, failure of one or more grades in school (i.e., subjects had to be of normal educational standing in relation to chronological age), abrupt changes in school performance, temper tantrums, running away from home or truancy from school.

All subjects were to be of normal physical development, and possess no physical deformities or impairments which would limit their participation in the athletic activities that were to be introduced for experimental purposes.

In interviewing parents and teachers and examining school records, information was gathered on certain skills and abilities of each boy that might enter as important factors affecting status positions that would evolve in the interaction at camp. The athletic interests and proficiency of each potential subject were ascertained, as well as musical ability and skit skills, previous camp experience, popularity and number of friends of the boy, membership in youth organizations, etc. In addition, data on attitudes of parents toward the son and his friends, condition of the neighborhood in which the boy lived, how long the family had lived in the area, size and condition of the home and its furnishings, make and model of car were secured.

**Methods of selection:** As mentioned above, one of the most important criteria of subject selection was that the boys not be previously acquainted with one another. Thus the friendship patterns and intra- and intergroup relationships formed in the experimental setting could not be attributed to existing acquaintances and friendship preferences brought to the experimental situation. This consideration dictated even the city from which subjects were selected. It required a city of sufficient size to have enough schools for children of the appropriate age and grade levels that only one boy could be selected from each school, thus reducing the likelihood of prior acquaintance. Oklahoma City has this many schools, and it was from this city that all
the subjects were selected. (Using this method it was necessary to eliminate six boys from the final subject list because they were acquainted with others previously chosen.)

In order to adhere to the criteria as effectively as possible, a rather painstaking procedure was followed in picking out potential subjects and in the final selection of experimental subjects. The city was divided into 3 areas, each containing roughly an equal number of appropriate schools. Each area was assigned to the one of 3 interviewers who knew best that particular section of the city. Schools from sections of the city which had very high and very low income families in large numbers were eliminated from consideration.

In order to get best access to school records and to be permitted freedom in observing potential subjects at first hand in the school situation, the principals of appropriate schools were contacted. After presentation of credentials from higher school authorities, a brief explanation of the purpose of the visit was given. It was explained to the principal that an experimental camp under the auspices of the University of Oklahoma was being conducted. The announced purpose of the camp was the study of interaction in group activities within teams and between teams. The statement of purpose was informally worded but uniform. It was pointed out that one of the main things that would be studied was how team members assumed and carried out initiative and responsibility under adult supervision, what would be the attitude of the boys as they participated in activities toward common goals they wanted to attain and also the attitudes that would occur when they competed with another bunch of boys. It was explained that another item for study was how the boys take it when they win or lose in various activities, when things are not going their way, when they feel others are being good or bad sports or unfair, when situations are felt as more or less frustrating, as well as how the boys pull together and cooperate toward common goals.

In order that school principals and teachers would have little opportunity to recommend favorite boys for the camp, the interviewer explained to the principal that he would like to go out on the school yard where the fifth graders were playing so that from first-hand observation he could pick out some candidates who best seemed to meet the criteria. This served the dual purpose of allowing first-hand observation of the boys in usual circumstances of interaction by observers who knew the specific criteria for selection of a boy, and preventing the principals and teachers from trying to have their favorite boys chosen.

The observer then went to the playground, and when he saw a boy that seemed to meet the criteria he asked the name of that boy from the playground supervisor. At all times the interviewer tried to be as inconspicuous as possible in order not to arouse too much curiosity on the part of the boys. After getting the names of from 5 to 10 candidates who seemed to satisfy the criteria best, the interviewer then found out all he could about each of these boys from the playground supervisor. Then he went to the homeroom teacher (if he or she was not the playground supervisor) and obtained school records and further information on each boy. From school records, information was secured concerning I.Q., grades, adjustment in school, social attitudes, and from the teacher, the boy's relationship to teachers and to other children, status, popularity, and membership in school cliques. The 5 or 6 potential subjects who remained after this first screening procedure were ranked by the interviewer in terms of the extent to which they satisfied the criteria.

The next step in selecting subjects was to contact the parents of those boys who best met the criteria up to this point. All the parents were met by the same individual, the one who was to appear at the camp as the camp director in the eyes of the boys. This policy was followed so that when subjects were divided into two groups, neither of the participant observers (who had served as interviewers of teachers) would have a particular personal preference for any given boy, that boys in neither group would go to camp already knowing their participant observer, and that boys in neither group would know the participant observer of the other group when the two groups first came into functional contact (Stage 2). (The participant observers appeared to the boys at camp as senior counselors.)

Parents were contacted in the order that their sons were ranked by the interviewers in terms of
the criteria. In interviewing parents, the same explanation of the purpose and aim of the study was given as had earlier been given school principals and teachers. It was stressed to the parents that no visiting of the boys would be permitted. The explanation given was that such visits would contribute to problems of homesickness which would be detrimental both to the enjoyment of the boys at camp and the success of the study. They were also told that there was a nominal fee (twenty-five dollars for the entire period) and that a doctor's examination and permission for the boy to participate in all camp activities would be required, in addition to their own permission. (The fee, which was a nominal device for making mutual commitments, was lowered for a few boys who met the criteria but to whose family this seemed a sizable expenditure for recreation.)

Altogether roughly 200 names of potential subjects were obtained in the manner described above. Of this number, school records and interviews with homeroom teachers were completed for almost half. In the selection of the final experimental subjects the parents of approximately 50 boys were contacted and/or interviewed. The original goal was 24 subjects who met the criteria in every respect, but strict adherence to the criteria resulted in the procurement of 22 experimental subjects. Altogether more than 300 hours were spent directly in selection of subjects, in addition to the numerous hours spent in establishing criteria and setting up the procedures.

Final experimental subjects: The 22 subjects who were finally selected were relatively homogeneous in terms of the major criteria outlined above. All were from established Protestant families. All were well adjusted both in school and at home, according to observations, school and home interviews. According to school records, all the subjects were doing average or above school work (none was failing or had a history of failures). All were fifth graders about eleven years old who were promoted to the sixth grade for the next school year. This age level was [p. 64] selected so that none of the boys would have reached puberty, which could have been an important additional factor in determining the status positions that would emerge in group interaction. All were taken from the same grade for similar reasons, namely, that no one should have a status advantage because of a more advanced grade in school.

The median income of the subjects' families was $4,900 a year. The income of eleven families was below $5,000, the lowest being $3,200, and only two were (slightly) above $7,000. However, on the basis of occupation, education, home, neighborhood, etc., the subjects' families can be characterized as "middle-class" on the whole.

The average (median and mean) age of subjects was 11 years and 1 month. Five boys would have their 11th birthdays shortly after camp, and only one would be 11 well after the school term started. One boy had reached 12; all others were eleven.

I.Q.'s were available for 18 of the 22 boys. The median I.Q. for these 18 boys was 112. Four boys had I.Q. scores between 90 and 105, and only one above 120. Thus, by and large, these boys were above average in intelligence test scores, 11 scores of the 18 available being between 110-120. The boy with the lowest I.Q. was doing satisfactory work in all school subjects and was rated by his teacher "at the low end of the upper one-third" of his class in school achievement.

The boys did, of course, differ within limits in size, manner and other personal characteristics, ability in various games, hair coloring, etc. However, these individual variations were within the range of normality for boys in the schools, grades, neighborhoods, types of families, etc., which had been chosen in terms of the criteria. Home and school interviews and school records did not offer a critical indicator of status that would be achieved in the new camp situation. The status structures developing during in-group formation and the nature of relationships between the groups as they came into functional contact during the experiment cannot be accounted for on the basis of differentiation of individuals or between clusters of individuals based on characteristics stemming from different sociocultural backgrounds, from atypical personal backgrounds, or previously existing relationships.
In dividing the 22 subjects into 2 groups of equal size prior to the experiment, great care was taken to match subjects signed to the 2 groups, so that they would be composed as similarly as possible. Matching was carried out in terms of certain personal characteristics of the boys. Considered in their order of relevance for interaction in the camp situation, they were: height; weight; sports ability (general); sports skill (special); popularity (in neighborhood and school groups); other skills relating to camp such as musical and skit skills, cooking ability, etc.; swimming; and previous camp experience. After the two groups had been matched as closely as possible in terms of these characteristics, a coin was flipped to determine which group of subjects went to what participant observer. This was a final precaution to rule out possible effects of any personal preferences of participant observers for particular boys.

C
Experimental Site

Certain characteristics were necessary in the experimental site. It had to provide isolation from the outside world during the experiment so that extraneous influences would not enter and the results would be mainly a function of conditions deliberately introduced. There had to be separate facilities for two groups to be handled in isolation from each other during in-group formation (Stage 1), so that group formation would be the consequence of conditions introduced and interaction within the in-group, without contact with an out-group. Also, the physical characteristics of the camp and surrounding area had to be of a nature allowing flexibility in choosing and planning in-group and intergroup problem situations by providing numerous circumstances conducive to the arousal of common goals of high appeal value and to a variety of activities.

The site finally chosen after inspection of a number of camps was a densely wooded area in the Sans Bois Mountains of southeastern Oklahoma about seven miles north from the small town of Wilburton which is on U. S. Route 270. This is a 200 acre Boy Scouts of America camp which is completely surrounded by Robbers Cave State Park (See Figures 1 and 2). It was available exclusively for purposes of the experiment for the three week period. The nearest large town - McAlester, Oklahoma - is about 40 miles distant.

Since terrain and facilities were utilized as part and parcel of stimulus conditions throughout the experiment, it will be helpful to specify them. For the readers' convenience, places of functional importance in in-group and intergroup activities are indicated on the accompanying map at the end of this section which gives approximate distances between points mentioned (Figure 2).

Effective isolation of the camp was made possible by a surrounding fence with "Keep Out" and "Restricted" signs posted and by the heavy foliage which screened the camp area from a park road running some 100 yards outside the fence. Functional isolation of the groups from each other during in-group formation was made possible by the terrain of the area, and by careful timing of their coming and going. The cabin used by each group was beyond sight and hearing distances of that of the other group, and duplicate facilities were available for both groups (bath houses, swimming, boating and campfire facilities, etc.). Both groups used the mess hall which was about equidistant from the two cabins. However, it was not visible from the cabin at the south end of the camp because of a hill, and its entrance could not be seen from the north cabin because of intervening buildings and trees.

Because of the characteristics of the experimental site itself, the surrounding park, and the mountainous areas within a sixty mile radius, it was possible to plan activities of high appeal to the subjects for both in-group and intergroup stages. Within easy walking distance from each cabin, and in opposite directions, were swimming, boating and camping areas which were available for the exclusive use of each group. Campfires could be held near the cabins, at the "hideout" areas, or in a natural stone corral which was near Robbers Cave on the hill above camp. A very isolated reservoir in the hills above the camp supplied its water and offered facilities within hiking distance for overnight campouts. An athletic field was located across the park road, outside camp property, and nearest to the north cabin. The field was accessible by two different routes for the two groups. Thus, when and where contact between groups would
take place during competition situations could be controlled.

[p. 67] Lake Carlton, a part of the state park area, was located about three miles from the experimental site and provided excellent swimming and picnic facilities. A number of camping areas were located on lakes and rivers within 20 to 60 miles of the camp. These could be used to advantage in increasing interdependence of the groups (Stage 3) through cutting off their usual sources of food, housing, etc. Of these various possibilities, Cedar Lake, about 14 miles from Heavener, Oklahoma and 23 miles from the Arkansas state line, was utilized in Stage 3.

![Figure 1](image_url)

**Figure 1**

*Looking Down (South) at Camp Area and Beyond from Robbers Cave*

The campsite (cabins, mess hall, etc.) is situated on the flat stretch of land below this ledge. [p. 68]
CHAPTER 4

Experimental Formation of In-groups
Revealed Through Appropriate Attitudes and Behavior

Overall Considerations Common to All Three Stages
Before summarizing Stage 1, a few considerations common to the procedures of all the three stages should be emphasized. One fact that will stand out in the rest of this report is that the stimulus conditions, the activities necessitated by them, and places in which they are carried out, are numerous and varied. It may be easy, therefore, to lose sight of the systematic rationale on which all three stages were based in the kaleidoscope of numerous and varied events.

The fundamental aim of the procedures in the experiment is to build up an interaction process which is perceived by the subjects as part and parcel of the circumstances in which they are living. The flow of interaction is followed from day to day in a longitudinal way. The interaction among subjects on a given day at a given stage of the experiment is not a discrete and unrelated event, but is built up on the basis of interactions on the previous days and is functionally related to future events. A serious concern over validity, viz., a concern that events occurring in this study have some point of contact with their counterparts in real life, forced the adoption of this fundamental approach upon us. Group behavior, in intra- and intergroup relations, is not a transitory affair. Group structure itself is anything but ahistorical. Therefore, step-by-step tracing of group structure and its norms is essential in pin-pointing the factors that enter into the shaping of group behavior now.

Groups in actual life do not ordinarily strive toward goals which are furnished by the instructions of an outsider. Group goals exist or arise because group members are situated in a certain place and time, under given circumstances, and because the pattern of interaction is what it is. All of these determinants have specific implications in relation to the state of motivation of group members.

Therefore, it is decidedly unrealistic in experiments on group relations for the investigator to introduce any old task and have groups work on it at intervals in an interrupted way under certain types of "leadership," and then to draw cut and dried conclusions concerning group behavior on that basis. There is abundant evidence in the sociological literature of small groups which one might do well to remember. In this literature, time and again, we find individuals in whom common motives or deprivations are generated (because they are where they are and are caught in the particular set of circumstances) forming groups, developing strong in-group attitudes, strong in-group solidarity and responsibility (at times, to the point of sacrifice of no mean proportions) without the benefit of this or that type of adult "leadership" from a personage who is not himself an integral part of the group. There are cases of groups formed in actual life, without the benefit of a benevolent, permissive expert, which have a strong structure, an intense sense of belongingness and solidarity. These properties may not develop in groups which are under the "leadership" of an outsider, no matter how skilled and expert he may be. For these reasons, in each of the three stages of this experiment, a series of goals and related tasks were introduced which were derived from explicit preferences of the subjects themselves. Verbal instructions as a method of introducing goals were avoided as much as possible, the aim being instead to create situations in which the subjects would immediately perceive a problem situation or a possibility for attaining some desired end.

Similar comment applies to procedures for the study of a group discussion and techniques of problem solving. Once the group members face a problem situation of strong appeal to them, they do not have to be told to gather around and discuss their common plight or desire. You cannot stop them from being preoccupied with the problem at hand nor from making it a focal concern - and discussion does not stop there. Discussion necessarily continues, or even takes place simultaneously with active search for ways and means of doing something about the problem. The procedures in every stage of this study, therefore, have involved choosing the terrain, time, stimulus conditions, equipment and words conducive to the arousal of a problem situation which implies common goals. This, we repeat, will lead to dissuasion, planning, searching for appropriate means and tools, and execution of planned lines of activity.

[p. 71] Individuals who are immersed in their plight or problems in earnest are prone to be irritated by cold-blooded nosiness in their affairs by outsiders, not to mention having to put up with doing this or that extraneous thing for the benefit of the tape recorder or the convenience
of the experimenter. Therefore, in the study of group interaction, we insist on observation by persons who are part and parcel of the situation, and that they not be caught by the subjects in the act of observing. By following the participant observer technique, in which no word was written in the presence of the subjects, we may not have obtained all relevant events. However, in return, we gained free and un压制 recurrence of behavioral items which will stand out in a striking way for any observer.

In short, our fundamental approach has been carefully to introduce a number of problem situations appropriate to the characteristics of the stage in question, and to leave the ensuing activity in word (discussion) and deed to the subjects themselves as much as possible. We did not think that reliability would be insured through repetition of the same problem situations. This would have led to boredom and/or suspicion on the part of the subjects. Instead we followed the policy of introducing varied problem situations all of which had the common property of satisfying the main conditions for the stage in question. Pitching a tent to sleep in, preparing a meal when hungry (with ingredients in bulk form), building a rope bridge cannot be carried out by one person alone, but require cooperation of all group members. Therefore, these activities satisfy the main characteristics of conditions for Stage 1, even though these varied activities require greater or less exertion from different groups of muscles.

We feel that this brief mention of the procedural considerations common to all the three stages will be incomplete without calling attention to the very bounds within which the interaction was taking place and activities were being carried out. At all points of this report, it should be kept in mind that the subjects came from a given sociocultural setting which determined the overall properties of their interaction in in-group and intergroup relations (Chapter 2). The experimental conditions were effective within these bounds. Without keeping this in mind, it would be difficult, for example, to understand:

(a) why both groups were eager to challenge each other in [p. 72] a competitive activity the moment they learned of the presence of another group in the camp (end of Stage 1);

(b) why, after hurling unpleasant words at each other at the first competitive encounter, the winning team would give three cheers for the losers during the first days of Stage 2.

Even in in-group activities, the techniques and methods in problem solving may be greatly influenced by the particular structure and norms of the group in question and by properties and values of the sociocultural setting. Certainly these methods vary from culture to culture. Therefore, no special emphasis has been placed on whether a group adopted this method or that method of problem solution. In certain cultures, there would probably have been a greater tendency to resort to the decision of a leader or an authority figure than found here.

The second point which must be mentioned in this matter of the bounds for the interaction process is the presence, words and actions of staff members. The main function of counselors and other staff members was deliberately specified to be that of producing problem situations through setting appropriate stimulus conditions at appropriate times, in terms of the motivational state of the subjects at the time, using verbal prompting as little as possible (see Chapter 3).

An important factor in initiating or continuation of activity is the presence, words and deeds of staff members (junior counselors, participant observers and other camp authorities). Even seemingly unimportant silence, or prompting, or negation during interaction in problem situations may have great influence in the direction activities take. We cannot say that we succeeded in eliminating this factor altogether in spite of all our efforts. The subjects always knew, whether they were conscious of it all the time or not, that staff members were there; that they could always appeal to them; and that they represented the ultimate authority in setting bounds. For example, at the time of exhibition of courage and bravery while engaged in group activities, the whole psychological trend might have been reversed if the subjects had been deprived of the security that the staff members afford.
Another factor that sets bounds to the particular type of interaction among subjects is their age level. Eleven year-old boys are certainly not to be taken as adults, nor their behavior in groups as identical with that of adult groups. Neither can the issues conducive to friction and cooperation between two groups of 11-year-old boys in an experimentally conducted camp situation be the grim and lasting problems that sometimes prevail between groups of adults. On the other hand, at this age level, ego functioning (hence group relatedness or identification) is carried on at a conceptual level. It would have been preferable to carry out the experiment with older subjects if that had been feasible. Originally, our hypotheses were derived from a survey of literature on in-group and intergroup relations of older subjects. Validation of these hypotheses with subjects of the age level used here should have implications for future experiments with older subjects.

Note on collection of data: A special point was made that the participant observers always be close to their respective groups. Each participant observer spent at least twelve hours a day in observing their respective groups. Making allowance for the fact that one group came to camp one day earlier, the hours spent in observation of each group by the participant observers alone (not counting observation time of other staff members) were 240 and 252 hours respectively, or a total of 492 hours for both groups. The participant observers jotted down in short form outside of the vision of subjects as soon as possible after an event occurred, then expanded their notes during the afternoon rest period and after the subjects went to sleep around 9:30 P. M. At that time, a complete report of observations for the day was written and ratings made by the observer. An additional source of data at some crucial points consisted of answers and reactions of subjects about events in response to naive questions by staff members who could appropriately ask such questions because they had not been present when the events occurred.

In addition to the observational reports, 1200 pictures were taken during the three-week period. In order to attract as little attention to the picture taking as possible, staff members exhibited to the subjects as they arrived at the bus which would take them to camp that they were shutter-bugs - conspicuously taking pictures of every conceivable object in the vicinity. Conversations were recorded by a hidden tape recorded at some choice points without the awareness of the subjects. Plans for portable [p. 74] recorders which were to be used in a candid way unfortunately did not materialize because our order for two portable recorders could not be filled at the proper time.

Experimental Formation of In-groups

Stage 1

The focal concern of the present study is intergroup relations. Extrapolations from interpersonal relations, or even from in-group relations, have given us inadequate accounts missing crucial properties which make the topic of intergroup relations so vital today (Note 1). Therefore, intergroup relations are studied in this experiment as relations between actual in-groups and their respective members.

Rather than selecting existing groups, whose structures and norms were already formed and who had perhaps established norms toward various other groups of peers in prior intergroup contacts, the experiment started with the formation of in-groups among individuals who were not previously acquainted through controlling the conditions in which they interacted. It will be remembered that the members of each group were homogeneous in terms of sociocultural, economic, educational backgrounds, etc. The rest of this chapter is devoted to a summary account of the formation of group structures, norms, attitudes manifested in relation to other in-group members and toward places, persons and objects with functional relevance to their activities.

Observation and ratings of in-group structure and functioning did not stop at the end of Stage 1, which was devoted to its study. Throughout Stage 2 (intergroup friction) and Stage 3 (intergroup integration) data on in-group structure and functioning continued to be collected.
Reciprocal effects of in-group and intergroup relations were one of the focal points of concentration throughout.

Since functional relations between groups would certainly affect the formation of in-groups and their structures, the two groups of subjects were kept apart during Stage 1. Until the last days of that stage, at no time did the groups have contact with one another.

[p. 75] One group was brought to the site on June 19, 1954, and the other on June 20, at a time when the first group was out of the immediate camp grounds on a cookout. Because of the size and layout of the site, it was possible to center activities of the two groups in different areas simultaneously (see Chapter 3, C. Experimental Site). Separation was accomplished through staggering scheduled activities (e.g., meals) for the 2 groups and careful timing. Toward the end of Stage 1, in preparation for the period of intergroup relations to follow, subjects were allowed to discover definitely that there were 2 groups in camp.

To test our hypotheses for Stage 1, conditions consisted of activities and problem situations (a) embodying goals with common appeal to all of the individuals and (b) requiring interdependent cooperative efforts on the part of these individuals. The characteristics of conditions for this stage were set up on the basis of the period of in-group formation in the 1949 and 1953 intergroup studies (see Chapter 2).

One form of activity which appealed greatly to every subject was competitive team sports, especially baseball. At one time or another, all asked about the possibility of playing baseball with another group, some even bringing this up on the bus going to camp. Since competitive sport between teams composed of members of the same group could not be considered an interdependent, cooperative activity, team play was not included in the activities of Stage 1. Delay of competitive games between teams until Stage 2 (intergroup) was accomplished with a great deal of planning through other activities, many of which were highly desirable to the boys, "work-up" games in which group members rotated positions and exhibited their skill, and the apparent lack of another team to play.

Following a summary running-account of interaction events in each of the two groups, evidence related to the hypotheses for Stage 1 will be reported briefly.

For the sake of continuity and clarity throughout this report the groups are called the [Rattlers] and the [Eagles]. However, it should be kept in mind that the groups did not have names when Stage 1 started and only adopted these toward the last days of the stage. For the Rattlers, who arrived first, Stage 1 lasted 8 days, and for the Eagles 7 days.

[p. 76] Proper names used in no case correspond to real names of the subjects.

Rattler Group

Subjects were picked up in Oklahoma City at two stops. Since one boy was late at the first stop, the waiting period at the second stop (1/2 hour) permitted the formation of a friendship cluster of 4 boys which was evident on the bus in seating arrangements, a paper-wad game, and the inquiry if "us south-siders" could stay together. Conversation on the bus concerned fathers' occupations, respective schools and ballteams, possessions, and favored activities.

At camp, boys were allowed to choose their bunks. The "south-side" boys chose neighboring bunks. At the campfire after supper, the boys selected Brown (the largest boy in the south-side clique and in the entire group) to make out a list of swimming buddies in anticipation of their most preferred activity.

At breakfast on Day 2, saying grace was proposed and Brown did it. After the boys arranged church services, Simpson (who had been active on the bus) led group singing, although opposed by "south-siders. " On a trip to Robbers Cave, Brown and Simpson were in the lead.
After lunch, the boys "discovered" the swimming hole upstream and the campsite. They suggested improvements (such as a rock approach and diving board) and began work on them after a swim. Brown directed activity in the water and at work. Mills organized a rock-moving chain which was effective. The boys decided to stay at the hideout for supper and were furnished hamburger and other bulk ingredients, necessitating interdependent specialized efforts by all, which Simpson directed - cutting the watermelon himself. They discussed further improvements of the area, most of the suggestions for improving the area being directed to Brown.

The next morning a canoe, which had simply been placed near their cabin, was transported by the boys overland to the upstream hideout, Brown directing the operation and Simpson showing the path (See Figures, Stage 1). The need for a latrine at the hideout was posed by staff. Brown handed the shovel to Simpson, [p. 77] and all helped in turn, the smallest boy finishing. Brown's tendency to play favorites in the use of the boat and in work led Swift (a "south-sider") to complain, in effect, "We're tired of just doing the things he leaves over."

Mills hurt his toe but did not mention it until it was discovered at bedtime. This incident marked the beginnings of a norm for being "tough" (not a sissy or cry-baby). Subsequently, injured members did not complain or cry, desiring to continue even the most strenuous activities if staff permitted. Related to this norm of "toughness" was group approval of cursing, which became widespread in the Rattler group. During campfire at Stone Corral, the boys planned an overnight hike further upstream enthusiastically.

On Day 4 the boys organized transportation of equipment to the reservoir and selected advance scouts. Brown carried a light load. Mills soon took over leading the party, with Simpson and Martin doing more than their share of the work. Mills' choice of a campsite was accepted even by Brown. Mills directed securing water and preparation of food, with various boys performing specialized tasks. Barton and Hill (low status) tried to climb the dam. Then, Mills organized this activity into a game with definite order of participation and rules for maintaining position. The boys started to pitch tents by pairs; but an approaching storm and an encounter with a rattlesnake posed the difficult problem of rapidly erecting a sturdier single tent, in which all cooperated.

The next morning the "tough" norm was revealed on the trip home (led by Mills) over hills and rocks with full packs and with only one rest stop. Upon arrival, beds and personal gear were found outside the cabin. Staff explained the cabin had been fumigated (an excuse to see how the boys would re-install themselves). In moving back, Mills chose a bed between Brown and Newman (the 2 top erstwhile "south-siders"); the other 2 south-siders moved to other parts of the cabin. The sub-clique was clearly integrated with the rest of the group. Mills put up a "Home Sweet Home" sign.

Staff at last yielded to the boys' pleas for canteen supplies, requesting that they list only 8 items on the grounds that the camp could not afford to have left-overs. Agreement on 8 items was reached, and Mills was selected to announce the results.

[p. 78] By Day 6 the route to the hideout was standard and preferred to an easier one. Boys planned the activities for the day. Swimming at Camp One (standard name for hideout) was first. Allen, Barton and Hill (low status) were upset to find paper cups at their hideout (probably left by the group), speculating with resentment that "outsiders" had been there. Baseball work-out followed with members accepting decisions of the rest of the group on plays, excepting Mills who changed a decision in his own favor. During the rest period, Mills started tossing pine cones and ended up in a tree being pelted by all others and shouting "Where's my fellow men?" A boy replied, "Look at our leader!" (The "clown" role often kept him in the center of activity.)

A group Treasure Hunt was held by staff in which all members had to be present at the reading of each note to receive the reward ($10 to be spent as the group chose). Hardball equipment was chosen, Mills having Martin write what he called "my proposal." Mills opened nominations for baseball captain, supporting Simpson (who was selected) and choosing his own position.
Caps and T-shirts were available through the canteen for purchase at nominal cost. Mills asked if "Tom Hale" (name of the Boy Scout campsite) would be on them. The staff reply was negative. Harrison (middle status) suggested putting "Robbers Cave Robbers" on them. Later Mills proposed stenciling "Tom Hale Rattlers" on the shirts, drew a rattler design, and requested orange and black paint, all of which was approved by the group.

The next morning the boys stenciled shirts and hats with staff assistants. White material available for crafts was selected by Mills for a flag with the same design. Staff proposed practice at tent pitching. It was undertaken in disorganized fashion. Baseball practice revealed stabilization of playing positions.

After supper, the group was allowed to wander within hearing distance of the Eagles who were playing on the ball diamond. The immediate reaction was to "run them off" and "challenge them." After this, Harrison (who had had to surrender the catcher's position to Hill because of a hurt hand) cried bitterly. Hill and Martin comforted him, and he stopped crying when Mills asked him to read a comic book aloud.

[p. 79] At baseball work-out the next day, the group noted improvements they had made on the diamond and declared: "Now this is our diamond." The boys revealed a consciousness of the other group by frequent reference to "our baseball diamond," "our Upper Camp," "our Stone Corral." That afternoon the staff informed the group that there was another group in camp and that they wanted to challenge the Rattlers. The reaction: "They can't. We'll challenge them first... They've got a nerve..." Other activities in which they could be challenged were mentioned, including tent pitching. Now that tent pitching appeared a competitive activity, it was enthusiastically supported even by those formerly opposing it. The boys initiated shifts in work positions which produced an amazing change in execution of the task. All members cheered the results.

At the hideout, Everett (a non-swimmer when camp started) began to swim a little. He was praised by all and for the first time the others called him by his preferred nickname. Simpson yelled, "Come on, dive off the board!" All members in the water formed a large protective circle into which Everett dived after a full 2 minutes of hesitation and reassurance from the others. While he repeated the performance, little Barton, a frightened non-swimmer, plunged forward and started swimming a little too. He was called to the board and he too jumped in. Allen, a swimmer who was afraid to go off the board, now followed. Harrison, on the bank with an injured hand, was assured by the others that when his hand was healed they would all help him "so that we will all be able to swim." This event, which was completely spontaneous, was most effective in building group solidarity and morale. That evening the boys planned and held an enthusiastic campfire at the Stone Corral. Group skits were organized by Mills, and Brown "shone" in an individual act.

**Eagle Group**

The bus picking up these eleven subjects was on time at both stops so that little prior interaction was possible. Conversation on the bus started concerning Clark's bugle, which he played on request. The boys exchanged information concerning schools attended, respective standings on baseball teams, and families. Upon arrival at camp, free choice of bunks and seats at supper

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**[Classics Editor's Note: Click on any of the following picture pairs to see enlarged versions]**

Rattler Group
Representative Activities During In-Group Formation
[p. 80] was allowed. At campfire, Myers built the fire, then disagreed with others on the proper method of roasting marshmallows. Craig stopped the argument, saying: "You're not the boss." Mason asked if they could take down a sign left by earlier campers. One boy proposed "O. U. Camp" as a name for the spot, but no decision was reached until the next day, when Myers suggested putting up an O. U. Camp sign as something already "decided."
On Day 2, Clark was last to wake and therefore couldn't play reveille on the bugle. Later in the week, it became standard procedure for the first boy up to awaken Clark, who then woke the rest with the bugle. The boys asked to take the canoe placed near their cabin on a hike downstream after breakfast. Division of labor was complete: 5 boys carrying the canoe, 5 others supplies (including lengths of heavy rope), and one the board and paint for the U. Camp sign (See Figures). When Davis stopped carrying the canoe, Craig called him into line. As they prepared to swim at the hideout area, Bryan suggested a bridge across the stream. After the boys took the initiative along these lines, they were told by staff they could use the rope for this purpose. During swimming Craig took over the canoe, letting one, then another paddle and hitting boys who hung on the back. Mason wanted to get in the water to pull a big rope across for a bridge. All volunteered to help, and this was done through great effort by boys and staff.

In the afternoon when they returned to the hideout for a swim and supper, the rope bridge was completed, as agreed, through Mason's initiative. Craig walked the bridge about 15 feet before falling in, Mason less, and Myers about the same. When Cutler tried, someone said, "He won't make it very far", and there was amazement when he crossed it. The prediction that Cutler could not as well as Craig and the others reveals the development of differential expectations in line with emerging status relationships within the group. The astonishment at Cutler's success indicates that some standardization of these expectations had already taken place on the second day.

When the boys were hungry, Myers ferried them to the opposite bank, making so many unpleasant comments to the boys that later he heard them discussing him negatively. As a result, Myers made active efforts to be agreeable the next day.

[p. 81] A large copperhead snake was seen 8 feet away from the campsite. After the staff threw at it, the boys were permitted to help kill it. They discussed snakes at length during food preparation. All but one of the boys took over jobs in preparing the meal. After supper a snake was seen in the water, and several boys said they didn't want to swim there again. The boys dubbed this place "Moccasin Creek" that night. In spite of the discussion, they returned to the spot the next morning.

Because the Eagles had 3 possible swimming spots, discussions arose repeatedly during the next few days about where they would swim. The decision on the third morning was for Moccasin Creek. Wilson said he heard a rattler everytime they passed a particular spot, which was christened "Rattlesnake Bay. " Davis proposed that the campfire area across the stream should be called "Copperhead Hill" because of the snake killed there. These names were used in all subsequent references to these places. The boys painted signs to label Moccasin Creek and Copperhead Hill.

Spontaneous discussion among the boys on the need for screens in the cabin found opinion divided, Craig saying they were unnecessary. A later vote to request screens was favorable, and when the screens arrived 3 days later, Craig was among the first making immediate efforts to install them.

At "work-out" softball near their cabin, Mason stood out the best player. Craig and Davis bawled out Myers for clowning (baseball was serious to these boys).

Since the boys had requested a campout, a hike to the reservoir started on Day 4. The boys carried 6 small tents, packs, and other equipment. Myers astounding everyone by carrying 3 tents in addition to his pack. Upon arrival, Mason said the reservoir wouldn't be good for swimming. Three boys who didn't go swimming volunteered to fix lunch. After lunch, Davis pointed out all of the features of this campsite which were inferior to Moccasin Creek. His requested vote to return there went 6 - 5 against returning. One by one he persuaded others to switch their votes to favor leaving. Therefore, after a rest period, Craig directed transportation of supplies on the homeward trip. When Myers kept the group waiting while he returned for a forgotten bathing suit, he was pelted with pebbles, but showed no [p. 82] signs of being
At Moccasin Creek, Myers swam without his suit and was christened "Nudie. " (This became the standard mode of swimming after Mason took it up the next day.) Several staff members were present at the group's cookout at Moccasin Creek. Craig organized its preparation and played host. The boys told the staff that Moccasin Creek was several times better than the reservoir for swimming and camping (which was not objectively true). A song introduced by Craig on the bus was now called "our song."

After breakfast on the 5th day, the boys were told to select 8 items for the camp canteen, which they had been requesting for days. Craig and Davis took the lead in making suggestions, and Craig wrote them down. He accepted Myers' formulation for some terms to make them more general to cover more items. At softball work-up, Mason, the best player, accepted Craig's decision that he was "out" at second.

On the group Treasure Hunt, some members waited for Craig and handed him the notes to read. Suggestions by middle and low status members on how to spend the $10 reward were rejected in favor of Davis' proposal (hard ball equipment) which was backed by Craig, who wrote down the decision and told the boys to line up to sign it. After lunch, Craig lectured about 10 minutes on the various baseball positions and who played them.

While screens were being put up on the 6th day, Boyd and Davis (who had shown signs of homesickness, especially at night) discussed home with Mason, who also became nostalgic as the conversation continued. Craig, Myers, McGraw and Wilson derided homesickness. Wilson told Boyd he was homesick because he got too many letters from home (see below).

At lunch it was mentioned that Craig had given each boy a number. During practice with the new hardball equipment acquired with the Treasure Hunt reward, everyone ignored Myers when he refused to accept a decision, and simply left to retire from base. Craig was not ignored when he objected to an adverse ruling, but he gave in with some grumbling. During the practice, Wilson heard the other group playing at a distance and referred to "those nigger campers." Cutler asked if the Eagles [p. 83] could play them, and Craig instructed staff to "ask those campers to play us."

On the last day of Stage 1, staff decided to permit Davis and Boyd to go home, which they had requested the previous night. These boys had endured intermittent homesickness for several days. Boyd was occasionally reduced to tears even in the daytime. It was belatedly discovered that the boy had left a camp the previous summer for the same reason. Had this been known, he would not have been chosen as a subject. Davis had not been to camp before, and seemed to become homesick chiefly at night. He often went to Boyd to comfort him, and then ended up tearful too. His status was high, but had been falling because he wanted to go home. Since the experiment was not set up to deal with homesickness and it would have run counter to the design to exert outside efforts to keep individuals in the group, the departure of these 2 boys was quietly arranged. When the group asked where they had gone, Craig said, "Things are going to be better around here now." Wilson (scornfully): "They chickened out." Mason: "They are the only boys who will. " (Mason had not been immune to their talk of home himself on previous days.)

The group entered enthusiastically into tumbling, wrestling, and tent pitching. They asked when they could play the other team in baseball, and decided to elect a captain. Craig, who by this time was clearly leader, nominated Mason and agreement was voiced.

Later in the day, Myers asked if the other group had a name. Staff replied they weren't sure. Myers commented that his group needed a name. Craig suggested "Eagles." Clark suggested "Rattlesnake Bitters," and then said he didn't like that himself. Craig's suggestion was supported. Myers said they could make a flag to take on the field when they played. Craig asked staff to help cut a stencil of "Tom Hale Eagles" to put on T-shirts they had decided to purchase, and proposed putting an "E" on their caps. Mason said he didn't want his shirt
stenciled, but Craig told him he couldn't play if he didn't do it. At ball practice, everyone
criticized Lane (low status) for not playing well; but nothing was said when Mason or Craig
missed a ball. Craig told staff the group had decided to sleep out in a tent that night.

[p. 84] **Summary of Hypotheses and Results: Stage 1**

The above accounts of interaction during Stage 1 in the Rattler and Eagle groups hold the pith
condensed from a bulk of observational material, recordings, and pictures. In the following
pages, observational data are considered further in relation to the hypotheses for this stage,
necessarily in highly abbreviated form.

**Hypothesis 1, Stage 1**

A definite group structure consisting of differentiated status positions and reciprocal
roles will be produced when a number of individuals (without previously established
interpersonal relations) interact with one another under conditions (a) which
situationally embody goals with common appeal value to the individuals, and (b)
which require interdependent activities for their attainment.

Experimental conditions with the above characteristics were varied, requiring more or less
equipment, occurring only once or being repeated over and over. Many of the specific
conditions for the 2 groups were common because they were introduced deliberately as a part
of the experiment. Among these were the group Treasure Hunts, which required joint efforts by
all members in tracing the path, winning the reward, and in deciding how to use it; another was
the canteen problem which staff posed by limiting the number of items for the much-desired
canteen to eight.

Other conditions satisfying the characteristics of Stage 1 arose in both groups as problem
situations because both groups had similar interests and interaction in each took place in
terrain common to the camp. Many activities were suggested by subjects as pastimes they
especially preferred. To a great extent, subjects were allowed to engage in these at times and
as often as they chose (being limited only by health considerations and the occasional
necessity of temporary postponement to keep the 2 groups separate). Out of these pastimes preferred by both groups (like swimming, boating, hiking, camping out, baseball) a great variety
of problem situations arose requiring interdependent activities, and many were similar for both
groups. For example, transportation of boats and equipment, planning and [p. 85] executing
hikes, improving swimming places (with rock approach and diving board for Rattlers and a
bridge for Eagles), organizing campfires, building fires and preparing meals in the woods with
bulk ingredients (requiring division of labor in preparing hamburger, cutting chunks of meat,
mixing Kool Aid, cutting watermelon, etc.) were problems common to both groups.

On the other hand, some conditions were confined only to one group, because of their
particular location in the outdoor setting, special interests, etc. For example, the Eagles' cabin
was closer to the water than the Rattlers', and a problem arose in the Eagle group which was
not at all prominent for the Rattlers. On Day 3, the Eagles discussed the need for screens twice
during the day, and when the screening arrived an Day 6, joined to install them. Another
problem situation arising from the particular situation of the Eagles was where to swim. Three
spots were easily accessible (boat dock, Rattlesnake Bay, Moccasin Creek), and the proposals,
counter-proposals, persuasions and decisions on this topic were frequent (e. g., 2 occasions on
Day 3, one on Day 4, one on Day 6). The Rattlers swam at their hideout and there was no
problem of deciding where. A number of interdependent activities embodying common goals
arose which were peculiar to the Rattlers. One was the dam-climbing game which Mills
organized after 2 group members climbed it. The idea of this game was to achieve the top
without back-sliding and to keep in the same position each time. Like most games with rules, it
required reciprocal regulation along with exhibition of skill by individuals. A spontaneous activity
peculiar to the Rattlers which met experimental conditions even better was their use of
swimmer escorts and a protective circle to encourage a new swimmer to dive, and thence to
encourage non-swimmers and non-divers. This activity involved almost the entire group.
As a result of repeated interaction in a variety of activities, all of which embodied goals common to the individuals and required interdependent efforts, status structures were stabilized by the end of Stage 1. One evidence of this is that the daily status ratings by participant observers of their respective groups correspond closely for the last several days. Below is a list of status ratings by participant observers of the Rattler and Eagle groups on the last 2 days of Stage 1:

<table>
<thead>
<tr>
<th></th>
<th>Rattlers</th>
<th>Eagles*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 7</td>
<td>Mills</td>
<td>Craig</td>
</tr>
<tr>
<td></td>
<td>Craig</td>
<td>Mills</td>
</tr>
<tr>
<td></td>
<td>Mason</td>
<td>Simpson</td>
</tr>
<tr>
<td></td>
<td>Craig</td>
<td>Mason</td>
</tr>
<tr>
<td></td>
<td>Clark-Myers-Wilson</td>
<td>Martin</td>
</tr>
<tr>
<td></td>
<td>Brown</td>
<td>Myers</td>
</tr>
<tr>
<td></td>
<td>Allen</td>
<td>Newman</td>
</tr>
<tr>
<td></td>
<td>Wilson</td>
<td>Newman</td>
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<tr>
<td></td>
<td>Lane</td>
<td>Bryan</td>
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<tr>
<td></td>
<td>Harrison</td>
<td>Swift</td>
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<tr>
<td></td>
<td>Harrison</td>
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<tr>
<td></td>
<td>Hartman</td>
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<tr>
<td></td>
<td>Hartman</td>
<td>Swift</td>
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<tr>
<td></td>
<td>Cutler</td>
<td>Barton</td>
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<tr>
<td></td>
<td>Barton</td>
<td>Lane</td>
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<td></td>
<td>Hill</td>
<td>Hill</td>
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<td></td>
<td>Everett</td>
<td>Hill</td>
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</tbody>
</table>

*Since Eagles came to camp 1 day later Day 7 was last day for them. (Names in brackets left camp because of homesickness.)

On the last day of Stage 1, the participant observer of each group and another observer familiar with the group in question made independent status ratings of the respective groups. The rank order correlation between independent status ratings for 2 observers for each group is given in Table 1.
At this point sociometric choices would have provided a [p. 87] further check on observational evidence and ratings, as planned in the study design (Chapter 1). However, as noted earlier, it was decided that repetition of sociometric procedures 3 times (after each stage) during such a brief time might arouse the suspicions of subjects and invalidate the results. Therefore, sociometric choices were obtained only in Stages 2 and 3.

This was the crucial point at which status relations of the developing in-groups were to be tapped through judgmental indices obtained in relation to performance throwing handballs at a target (See Chapter 2). Our previous research had shown that differential judgments of performance on a task in an unstructured situation may serve as indices of the relative status of the person whose performance is being judged. Attempts to carry out this unit at the end of Stage 1 were met with disappointment owing to mechanical failure of the apparatus, which did not register the actual score attained. Since the actual scores are a critical part of the data, the
experiment could not be carried out without remedying the mechanism, which proved impossible at the time. (The failure was due in part to loss of tension by brass and phosphor-bronze spring contacts, but chiefly to a thin film of iron oxide which formed on bolt-base contacts as a result of high local humidity at night.)

On the basis of observational data and observers' ratings, it was considered that the criterion for formation of group structure under conditions of interdependent activity toward goals with common appeal value to individual members was satisfied.

Before continuing to other hypotheses for Stage 1, certain characteristics of the group structures at this time are worth considering briefly because of their implications for theory and research in this area, particularly on leadership. First, the group structures at the end of Stage 1 were not static or rigid. Fluctuations as a result of changed conditions and status strivings of members were noted. On the other hand, these groups had lived and interacted together for an entire week. They were doubtless stabilized to a considerably greater extent than many experimental groups currently employed in small group and leadership research, which meet periodically for much shorter periods of time and are usually set to tasks provided entirely by the experimenter. It is therefore, that our findings may be revealing in relation to current controversies over group [p. 88] structure and the stability of leadership.

It is frequently contended that a hierarchy is not necessarily a general feature of group structure and that multiple leadership frequently exists. This contention is based on the finding that in "leaderless group" situations, leadership not infrequently changes hands from situation to situation with the task, and that differentiation of other functions varies similarly. This finding is repeatedly verified and is perfectly reasonable for such situations.

However, in the present study, which is designed as a prototype of life-like interaction in varied situations all embodying common and valued goals, differentiation of functions within the group took place over a period of time along hierarchical lines. This is indeed characteristic of lasting groups whose members are highly motivated in the direction of group goals in everyday life.

The evidence for this hierarchy is not so much in manner of treating others within the group, as in the extent to which initiative (suggestions, directions, etc.) in group activities is taken, and whether or not such initiative is effective (viz., whether suggestions are accepted, plans tried out, etc.). The ratings by participant observers in the present study were based mainly on the extent to which each member took initiative (e. g., made suggestions or plans, gave directions) and the relative effectiveness of these efforts.

Here, concrete examples may make the theoretical point clear. Many members in each experimental group showed "leadership" in the special sense of initiating activities, making suggestions, carrying-through tasks in various situations. However, by the end of Stage 1, each group had and recognized that they had a "leader" (Mills in the Rattlers and Craig in the Eagles). At this time initiative by others in the form of suggestions, plans, action was effective when the leader approved it. When he did not the matter was ordinarily dropped, perhaps after an argument. In both groups, the leaders effectively chose baseball captains by backing their choice. Baseball was extremely important to these boys, but the baseball captain in Stage 1 was in neither case the group leader. In both groups the leader told the baseball captain which position he (the leader) would play. [p. 89] Two examples were given in the running accounts and there are many more instances of the leader taking liberties in baseball and not being censured by the captain. (The exception to this was when Craig of the Eagles wanted to umpire; the entire group - not just Mason the captain - told him he could not be, that staff should umpire and he accepted this. In short, he was exceeding even the bounds of his leadership, and he accepted the group's judgment. Note Craig's behavior in intergroup competition in Stage 2 and its effects on his position.) On occasion a high status Rattler (Brown) was observed to hold the ball so that Mills could get in safe. Craig told Mason, the Eagle captain, he couldn't play if he didn't have his shirt stenciled with the group insignia.

The findings in Stage 1 of this experiment do reveal initiative displayed by various group
members on different occasions. They do not reveal "multiple leadership" in the sense of shifts in the control of group activities with shifts from one situation or task unit to the next, after group structure was stabilized as a result of continuing interaction over a time span.

Hypothesis 1a, Stage 1

If a definite group structure develops, it will be reflected in a consistent pattern in directions of communication. The specific pattern in directions of communication will be as follows: The higher the status of a group member the greater the frequency of suggestions (for group activities) addressed to him.

Because of the intensive and varied demands of both a scientific and practical nature placed on the participant observers, the observational data do not contain precise quantitative evidence needed to evaluate this hypothesis. Summaries representative of the scanty evidence available are presented here as suggestive for future research.

Rattler group:

Day 1: Brown was elected to work out a buddy system. Suggestions were made to him.

Day 2: In discussion on work at hideout suggestions were made directly to Brown by Mills, Swift, Simpson [p. 90] and others.

Day 3: Morning - Brown clearly ran the boat project with queries and suggestions coming to him and decisions made by him.

Afternoon - During work on diving board, lower level members stopped communicating with Brown. Mills organized them. Brown's slip from leadership was noted.

Day 6: Pine cone battle started by Mills, involving all boys, and centering communication to Mills. Observer noted frequent instances from Day 1 in which Mills had made himself the enter of attention and in which he had circulated among the group communicating with both high and low status members.

Afternoon - During the discussion of how to spend the Treasure Hunt reward ($10), suggestions and remarks were counted. Results:

To Mills - 16  
To others - 1  
At large 6

Suggestions during discussions of T-shirt and flag insignia were made to Mills, who accepted some of them but largely determined what was to be done himself and got group approval.

Day 8: At campfire, Mills organized skits. Suggestions and requests came to him ("Let me, A....!"). He included almost every boy at one time or another. He also encouraged Brown and Simpson in their individual performances.

Eagle group:

Day 5: During the group Treasure Hunt, Craig found only one note, but he was given 5 others to read to the group by those who found them. In discussing how [p. 91]
to spend reward, suggestions by middle and low status members were ignored. Davis' suggestion (hardball equipment) was backed by Craig, who called for a vote, declared it passed, wrote it down, told others to line up to sign it.

In deciding on 8 items for the camp canteen, Craig and Davis made most suggestions. Other suggestions were directed toward these 2, but many were ignored and Craig put his or Davis' suggestions in their stead. Several items were decided upon by these 2 without consulting the group. Craig accepted Myers' formulations for several items, which made them more general.

The above evidence, which is presented as suggestive, is in line with the hypothesis.

Hypothesis 2, Stage 1

When individuals interact under conditions stated in hypothesis 1, concomitant with the formation of group structure, norms regulating their behavior in relations to one another and in practices and activities commonly engaged in will be standardized.

As the in-group structures of the Rattlers and Eagles became delineated, members formed attitudes toward objects and places of functional importance to them, appropriating these objects as "ours."

Rattlers:

On Day 2, the group explored upstream where they "found" their swimming hole and hideout. By Day 6, this was "our Upper Camp" and the cabin was "home." When paper cups were found at the hideout, resentment was strong against supposed intruders.

The ball diamond was discovered on Day 5 with negative reaction. Play and improvements on Day 6 contributed to appropriation. On Day 8 (after hearing Eagles on it), the ball diamond was called "ours." [p. 92] The Stone Corral (behind Robbers Cave) was appropriated as "ours" and used for campfires.

Eagles:

Moccasin Creek was used for swimming on Day 2 and boys decided to swim there in future, leaving equipment there. They did so in spite of seeing snakes there, returning to it in preference to the (beautiful) reservoir. Signs naming Moccasin Creek and Copperhead Hill (across the stream) were put up on Day 4. Pictures of this area were exclusive subject of arts and crafts period, Day 5.

Campfire circle was re-named "O. U. Camp" on the first night, and a sign put up labeling it.

Attitudes toward other members of the in-group and persons important in the group's functioning were stabilized. This is particularly evident in the case of individuals whose behavior was for some reason prominent within the group. Some of these standardizations were temporary, while others were more enduring. An example of the latter is the nickname "Red" for Brown (Rattlers) which typified his coloring and probably his size and "toughness. " Among the Eagles, Myers, as noted briefly in the summary of interaction, engaged in considerable "show-off" behavior during the first days. At one time while preparing a fire, he spoke of himself with approval as "Smart Bob." Several boys echoed: "Dumb Bob! Crazy-mixed up Bob!" Such terms were used on occasion throughout this stage, although Myers began to make definite efforts to be accepted. A more enduring nickname for Myers was "Nudie, " given when he started
swimming in the nude. At his suggestion the group occasionally referred to themselves with hilarity as RCNCI (Robbers Cave Nudist Colony, Inc.). Other temporary nicknames in the Eagle group were "Marilyn Monroe" or just "Marilyn" for a boy who gave a burlesque dance one night; "Screwball, senior" and "Screwball, junior" for staff members.

Norms were standardized in both groups in relation to experiences and behavior which became important to the group. The "tough" norm among Rattlers was a notable example. At various times, Mills, Martin, Simpson and Harrison all carried on the rather strenuous activities with injuries (all of minor nature). The staff had to remember to check Martin's bruised knee and wrist because he never mentioned them. Harrison did not cry when he injured his hand, but did cry later when he found out that it would keep him from the catcher's position, and members sympathized with him. Swift did not conform to this tough norm, and was completely ignored when he cried. Along with the "tough" norm went a definite approval of cursing. "Toughness" and cursing are both norms of conduct among groups in the larger social setting; they were not original to the Rattlers. However, these norms were not standardized among the Eagles. On the contrary, cursing was definitely discouraged in the Eagle group (see also Stage 2), and crying at injuries was indulged in even by Craig, the leader.

In the Eagle group, Davis and Boyd were ridiculed for about the last 3 days for being homesick. A definite norm against being homesick was standardized, in relation to which these two were seen as deviant. Mason, who had on occasion talked longingly of home, showed no signs of wanting to go home in Stage 1 after the norm became established. Swimming in the nude was another norm which was stabilized in the Eagle group. This practice was not taken up by the Rattlers.

In both groups, methods of rotation or taking turns were standardized for saying grace at meals. These activities were initially regulated verbally by high status members, but came in time to be self-regulating. In the Rattler group, Brown passed the duty around for 2 days; then it was rotated among low status members. When Mills attained a stable position as leader, he designated the person to say grace. From the 7th day, the order of saying grace was predetermined by the group and followed without prompting.

During the early part of Stage 1 in the Eagle group, Davis usually told one of the boys to give thanks after he had figured out which one had not said grace as many times as the others. When he lost track, he asked each of the boys to state how many times he had said it. When Davis became homesick, Craig took over the function for a short while, but soon quit trying to keep track of whose turn was next. Thereafter, thanks was done on a volunteer basis, the end result being the same: the boys rotated the duty among themselves.

[p. 94] Spontaneous games were standardized (probably not original) in both groups: waterball among Eagles with a special "hot potato" rule; dam climbing with definite rules governing order and maintenance of positions among the Rattlers, as well as a paper airplane game.

One group product which clearly signifies in-group delineation is naming the group. The name chosen by the Rattlers is hardly coincidental in view of the not infrequent sights and encounters with rattlesnakes, notably during their overnight campout. Significantly enough, the only other suggestion in the Eagle group for a name was "rattlesnake biters." Eagles adopted their name after becoming concerned about the other group in camp. (Myers asked if the other group had a name.)

Both groups had favored songs, the Eagles referring to one consistently as "our song."

In both groups during Stage 1, deviation from norms or decisions by the group led to being "called down" or ignored. Myers was ignored by the Eagles when he refused to be "out" in baseball. When Swift did not live up to the "tough" norm, other Rattlers ignored him. Members were chastised verbally by others for not doing their share of work in both groups.

Reactions to the other group: When the in-group began to be clearly delineated, there was a
tendency to consider all others as out-group. The Rattlers' reactions to paper cups at Upper Camp, which they didn't remember leaving, will be recalled. The Rattlers didn't know another group existed in camp until they heard the Eagles on the ball diamond; but from that time on the out-group figured prominently in their lives. Hill (Rattler) said "They better not be in our swimming hole." The next day Simpson heard tourists on the trail just outside of camp premises and was convinced that "those guys" were down at "our diamond" again. When the presence of another group was definitely announced, the Rattlers immediately wanted to challenge them, and to be the first to challenge. Performance in all activities which might now become competitive (tent pitching, baseball, etc.) was entered into with more zest and also with more efficiency. Since the efforts to help "all of us" to swim occurred after this, it is possible that even this strictly in-group activity was influenced [p. 95] by the presence of an out-group and a desire to excel it in all ways.

The Eagles were informed that another group was in camp three days before the end of Stage 1, but they made no comments on the fact. On the following day, Wilson said he had seen a boy across the grounds, but no one remarked on this. When the Eagles were playing on the ball diamond and heard the Rattlers, Wilson referred to those "nigger campers." Cutler asked to play them. Craig at that time issued a challenge to the Rattlers through staff. The very fact that the Eagles decided to elect a ball captain was in anticipation of playing the Rattlers. The need for a name did not occur to the Eagles until they contemplated playing in competition.

In summary, by the end of Stage 1, as a result of repeated interaction in situations embodying goals common to all individuals and requiring interdependent activity for their attainment, clear-cut in-group structures and by-products (norms) of the interaction process were stabilized. Discovery of another group of campers brought heightened awareness of "us" and "ours" as contrasted with "outsiders" and "intruders," an intense desire to compete with the other group in team games, and enthusiastic preparation to do so. These developments set the scene for Stage 2.

Notes

1. Cf. Groups in Harmony and Tension (op. cit.), Chapters 1, 2 and 8.

[p. 96] CHAPTER 5

Intergroup Relations: Production of Negative Attitudes Toward the Out-group

During Stage 1, the experimental conditions which were introduced at times when they had appeal value to the subjects, and the interaction processes that arose produced two definite in-group formations. In time, each group had a definite structure in terms of statuses for individual members. Each group had its name, symbols of identification, places and facilities appropriated as "ours." Each group had its preferred songs, practices and peculiar norms. In short, each group had its particular set of group products. As noted, the groups followed somewhat different rates in developing an organization and emphasized different features in their group products.

Having produced two in-groups independently of each other through control of conditions, we could proceed to the study of relations between the groups through bringing them into functional contact under specified conditions. For reasons mentioned in Chapter 2, the first task was production of intergroup friction in order to proceed to the main phase of this study, viz., reduction of intergroup friction.
The distinguishing characteristic of Stage 2 is the interaction of the two groups under controlled conditions which are perceived by members of the respective groups as competitive and reciprocally frustrating. In other words, the aim of this stage was to control conditions so that each group would see the other as a competitor and likewise as a source of frustration. In planning this stage, we had invaluable experience from our 1953 attempt in which, at an important point during this friction phase, the source of friction was attributed to the camp administration. The 1953 study had to be terminated at this point for this reason.

**Stage 2: Experimental Conditions and Behavioral Events**

The two in-groups themselves set the stage for the friction phase of intergroup relations. During the last days of Stage 1, both the Rattlers and Eagles became insistent in their desire to challenge the other group of boys to play competitive games, especially baseball. The design of the experiment required a clear-cut stabilization of a definite structure within each group. While the staff ascertained this, the Rattlers and Eagles became impatient in their desire to engage in competitive games. When the staff members informed each group that there was another group in the camp area, the challenge was unanimous and enthusiastic. Delaying Stage 2 became increasingly difficult. When the Rattlers heard the other group playing on "their" ball field, they made remarks expressing the feeling that they considered others playing there as intrusion. Even without coming into physical contact with "those boys at the other end of the camp," the Rattlers had built up a highly competitive mood in relation to them.

The plan for a tournament of contests was made to appear to the subjects as based on their own manifest desire. The tournament plan, therefore, was not formally announced before the participant observers carried on a number of informal talks with their respective groups explaining that the staff had to make the necessary arrangements. The formal announcement and exhibit of the trophy, prizes and medals for the tournament were postponed until the second day of Stage 2. The first day was devoted to informal talk about the tournament by staff and members of each group, items that were to be included in it, and about prizes. There was no physical or visual contact between groups on this day.

The Rattlers' reaction to the informal announcement was full confidence in their victory. They spent the day talking about the contests and making improvements on the ball field, which they appropriated as their own to such an extent that they spoke of putting a "Keep Off" sign there. They ended by putting their Rattler flag on the backstop. At this time, several Rattlers made threatening remarks about what they would do if anybody bothered their flag.

The Eagles did not exhibit as much enthusiasm as the Rattlers when they first learned about the tournament in this informal way, even though there were a few "Oh, boy!" expressions. They were interested to learn if the other boys were practicing. Wilson and Cutler said, "We'll beat 'em," and several other boys joined in the discussion.

[p. 98] Mason (best athlete in the Eagles) and Simpson (Rattler) had previously been chosen baseball captains in their respective groups. Both boys had been elected captains as consequence of their nomination by the acknowledged leaders of their respective groups (Craig and Mills). From the time the tournament began, Mason was to come to the foreground as leader in the Eagle group in athletic as well as other matters, until the end of Stage 2.

Both groups spent most of the day practicing and preparing for coming events. Craig (Eagle leader) attached the Eagle flag to a pole, and another Eagle said, "Our flag shall never touch the ground." At one point during the day, Myers (E) (Note 1) expressed the opinion that "maybe we could make friends with those guys and then somebody would not get mad and have any grudges." On the following day, just before the baseball game started, when the two groups actually set eyes on each other and came into physical contact for the first time, derogatory name-calling began when this same Myers called one of the Rattlers "Dirty Shirt."

On the second day of Stage 2, the two groups had breakfast at different times. The members of
both groups were fascinated at the sight of the tournament exhibit. When it was their turn to come to breakfast, each group saw the exhibit, consisting of a trophy, medals, and 11 four-bladed knives. After each group had breakfast the staff made the formal announcement of the tournament to each separately. The contest activities included in the tournament and the score for each were specified. It was explained that the group making the highest cumulative score in the series of contests would win the trophy, and the individual members of the winning group would receive the prizes (a knife and medal).

The prizes had great appeal to the boys. One group had included knives as one of the few items selected for the canteen list. (The inclusion of knives on the canteen list was to be brought up again by the losers after the tournament was over. The winners were to guard their knives scrupulously. The trophy was so valued by the winners that they kissed it after they took possession and hid it for safety in a different cabin against a possible seizure by the losers.)

The series of events cited in the formal announcement had to be modified when the tournament started, with the consent of both sides, partly because some events were not very appealing to the subjects and partly because some were decided to be somewhat hazardous. The actual events were completed in 7 days and included the following items:

A. Events whose outcomes could be checked by contestants:

1. First baseball game (Day 2)*
2. First tug-of-war (Day 2)*
3. Second baseball game (Day 3)
4. Second tug-of-war (Day 3)
5. Touch football game (Day 4)
6. First tent pitching (Day 4)*
7. Third baseball game (Day 4)
8. Third tug-of-war (Day 5)
9. Second tent pitching (Day 5)
10. Third tent pitching (Day 5)

*Victors had to win 2 contests out of 3 for the marked activities.

B. Events judged by staff members separately for the two groups:

1. First cabin inspection (Day 3)
2. Second cabin inspection (Day 4)
3. Third cabin inspection (Day 5)
4. Skits and songs (Day 3)
5. Treasure hunt (Day 5)

The items under category B were included to enable the experimenters to juggle points in such a way that until the final events, both groups would be highly motivated with the hope of winning the prizes. This juggling had to be done in the present study in favor of the Eagles, who during the first day of actual competitive encounters (Stage 2, Day 2) lost both the first baseball game and the first tug-of-war, the first event with a very small margin and the second in a disorganized way.

[Classics Editor's note: Click on any of the thumbnails below to see larger versions of the photographs.]
TVG EXPERIMENTAL IN-GROUPS (RATTLES AND EAGLES)
INTERACT IN COMPETITIVE AND FRUSTRATING SITUATIONS
(STAGE 1)

Rattlers pick up flag on hundreds of feet above, which they appropriated after
improperly.

Initial encounter between groups: Rattlers ("hans team") watch intently as Eagles
approach.

Rattlers and Eagles sitting up each other prior to first contest; note team captains.

Eagles in one of their huddles praying for victory prior to a contest.

RATTLES AND EAGLES: INTERGROUP RELATIONS
(STAGE 1)

Eagles' strategy in 2nd Tug-of-war: Sitting down to dig in while rattlers (standing)
advant themselves.

Rattlers adopt the Eagle strategy: Both sides dig in sitting down.

One incident the morning after the flag burning episode: Eagles seizing Rattlers'
other flag.

Rattlers displaying blue jays centered in raid on Eagles and inscribed "Lost of the Eagles"
RATTLES AND EAGLES: INTERGROUP RELATIONS
(STAGE 2)

One of the tournament contestants.

Raiding Eagles sneaking Rattle cabin.

Eagles meeting-up Rattle cabin during

RATTLES AND EAGLES: INTERGROUP RELATIONS
(STAGE 2)

TOM HALE
EAGLES
YOU MAY
WIN BUT WE
WILL GIVE
YOU A HELL
MOPP
FIGHT

One of the Eagle banners during the tournament.
Up to the last day, with the procedure of equalizing scores through the category B events, the scores were fairly close together. The score values were indicated by rising thermometers on the official score chart. The increase in the readings were made with considerable flourish at meals when all boys were present (both groups). This neck-to-neck race in contests continued until the last day of the tournament. The outcome of the tournament hinged on the last event on the afternoon of Day 5 (Stage 2). This last event was the treasure hunt, which, being conducted in the respective camp areas of each group, could be manipulated by the experimenters in a way to insure the transition of two intact group structures to Stage 3, which is the crucial stage of the study. In view of the fact that 2 boys from the Eagle group had been sent home because of homesickness at the end of Stage 1 (see Chapter 4), leaving only 9 boys in that group, there was some danger of disorganization of the Eagles in case of their defeat. More specifically, there might have been a revival of Mason's desire to go home. He had been somewhat affected in this direction during Stage 1, probably through his contact with the two boys who left the group. The fact that we could proceed two days after the end of the tournament to Stage 3 indicated that the decision to tip the scales in favor of the Eagles was sound.

Right after the treasure hunt, the two groups were brought together, each on one side of the exhibit of prizes, and results were announced. The scores received by each group for every event were specified, making the outcome hinge on the treasure hunt. The tournament was declared to have been won by the Eagles through their completion of the treasure hunt in 8 minutes 38 seconds versus 10 minutes 15 seconds for the Rattlers. The Eagles were jubilant at their victory, jumping up and down, hugging each other, making sure in loud tones that everyone present was aware of their victory. On the other hand, the Rattlers were glum, dejected, and remained silently seated on the ground.

The series of contests was the main focus of attention for both groups, manifested in actual physical encounters and practice sessions in preparation for them, in group discussion, in self-justifying and self-glorifying words used in relation to themselves, and invectives and derogatory terms hurled at the out-group in actual encounters and in reference to the out-group in the privacy of the in-group circle. Various contests had differential effects in producing the above attitudinal and behavioral consequences. At least for these 11-year-old boys, the activities which were not too prolonged and which involved direct physical contact were most effective, with the tug-of-war heading the list. The build-up of negative attitudes was cumulative with rapid spurts at times, as determined by the nature of the encounter. Even though the boys hurled invectives starting with the first contest of the tournament, the norms internalized from the larger social setting concerning "good sportsmanship" were clearly evident for the first two days, as revealed through the custom of giving three cheers for the losers.
After the second day of the tournament, the "good sportsmanship" stated in specific words during the initial period and exhibited after the first contests in this series (especially by the Eagles) gave away, as event followed event, to increased name-calling, hurling invectives, and derogation of the out-group to the point that the groups became more and more reluctant to have anything to do with one another. This attitude of not having anything to do with each other was intensified owing to the impact of events taking place after the tournament was over, as we shall see presently.

The first physical encounter of the two groups, their immediate "sizing up" of each other, the explicit expressions of their rapidly developing attitudes toward each other may have significant implications for the systematic study of the rise of rather sharp an in-group and out-group delineation and rapid crystallization of attitudes toward an out-group when the functional relation involved is one of rivalry. Therefore, a description of this very first contact between the two in-groups, which were formed independently of each other, follows:

The Rattlers were first at the ballfield (which they considered "ours") as befits the "home team." The Eagles approached with their flag on a pole singing the menacing notes of the "Dragnet" theme (See Figure). For a time the two groups looked each other over. Then [sic] an Eagle used a derogatory word, a catcall from a Rattler answered him, and the razzing was on. Before the game started, Mason gave a little lecture to the Eagles on not getting rattled. As the game got underway, the Rattlers sang "The first Eagle hit the deck, parley-voo. . . The second Eagle hit the deck, parley-voo. . ., etc. " Eagles called back at them: "Our pitcher is better than yours;" "Our catcher is better than yours. " As the game progressed the Rattlers referred to Wilson (E) as Fatty, Tubby, "Little Black Sambo." Myers, the Eagle of such goodwill prior to the game, was especially active in calling out at the Rattlers, though Craig tried to hush him with [p. 102] words about sportsmanship.

Craig's downfall from leadership of the Eagles started during this game. He wanted to pitch when Mason became tired, but Mason put in Wilson, saying later that Craig just wasn't good enough. (In spite of this, Craig rubbed Mason's arm after the game.)

As the game continued, the Rattlers called, "You're not Eagles, you're pigeons!" When the game ended with a Rattler victory, the Rattlers put on a display of "good sportsmanship" for the losers. In the Eagle group, Mason threatened to beat up some Eagles if they didn't try harder, but praised Lane (low status) for his improved performance. Craig, who had not made a good showing, carried a Rattler glove left at the field and dropped it in the water near the Eagle cabin.

The two competing groups were together in the mess hall for the first time at lunch on Day 2, after the baseball game. There was considerable name-calling, razzing back and forth, and singing of derogatory songs by each group in turn. Before supper that evening, some Eagles expressed a desire not to eat with the Rattlers.

In saying grace at these first meals together, the members of each group expressed their desire for victory. Myers (E) asked that God help them win the tournament and that He keep them together and not let anyone else get homesick and go home. Allen (R) prayed: "Dear Lord, we thank Thee for the food and for the cooks that cooked it, and for the ball game we won today." In the Eagle group, prayers were said for victory at night, and it became standard practice for that group to huddle in prayer before games (see Figure). Mason (E) attributed their victory in baseball on the following day to this practice.

Before continuing with the tournament events, note should be taken of the behavior of sideline participants in the various contests. Because there were 11 Rattlers and only 9 Eagles, two of the Rattlers could not participate in certain of the contests (e. g., baseball, tug-of-war, etc.). These non-players were chosen by the group and were always low status members, unless injuries dictated the choice. Since these members were not actually taking part in the competition, their behavior under these [p. 103] circumstances is particularly significant.
At the first baseball game on the occasion of first contact between the groups, Everett (R), who had been chosen as one non-player, was the loudest of the Rattlers in haranguing the Eagles, cursing them roundly and making up a song about Eagles which was supposed to be very insulting. Harrison, the other non-player (because of an injury), arrived after the exchange of insults between groups had already started. Although he had not witnessed the events leading to friction between the groups, and, in fact, before he had exchanged a single word with any camper, he started yelling insults at the Eagles.

There were numerous other incidents of this nature at the other contests, which illustrate the point that actual physical participation is not a necessary condition for involvement and participation in some form by good group members.

The afternoon of the first day was spent by both groups in intensive preparation for other events. The Rattlers had cabin clean-up, practiced for tug-of-war, and washed their shirts which they had decided to wear at every game. Mason delivered a lecture to the Eagles on how to win, and the group practiced at tug-of-war for 45 minutes. Mason had organized a cabin-cleaning detail before lunch, insisting on full participation, although prior to the tournament he himself had shown no interest at all in such chores. Later in the tournament, Mason was to urge his group to practice other activities in which he personally had little interest, such as the skills. When he felt they were not trying hard enough, his usual procedure was to declare he was going home, even starting out the cabin door. This device was very effective since the Eagles were aware of Mason's value as player and captain, and it therefore resulted in renewed efforts on their part.

The first tug-of-war was held after supper on this first day of the tournament. Simpson (R) was particularly vocal in calling taunts to the Eagles. When the referee called for captains, Mason stepped forward for the Eagles, although he had been elected only as baseball captain, and Simpson stepped forward for the Rattlers. The contest began and the Eagles pulled the first Rattler over the line. At this point, the Rattlers began moving the Eagles and continued doing so until all the Eagles were across the line. When Craig (E) saw the Eagles were losing, he walked away from the rope. The winning Rattlers cheered, jumped, and slapped each other on the back, then gave three cheers for the Eagles (Mills noting, "that shows we are good sports!"). They passed by the dejected Eagles with much yelling and razzing, particularly from Everett who had not even taken part in the tug-of-war. Victory was on every Rattler tongue that night, and the next morning the story of how Brown, their anchor man, had shouted "Yawl come!" and they "just came", was repeated with great appreciation.

After this defeat the downhearted Eagles stood around discussing how big the Rattlers were. Mason was crying, saying the Rattlers must be at least 8th graders, that he was going home, that he would fight a Rattler the next time they met. (Since the Eagles had lost one of their large boys through homesickness, and the Rattlers did have the largest boy in camp, there was some basis for the Rattlers looking big to the Eagles.) Craig, who was chastised for leaving the rope, said they were beaten already. Myers, Clark and McGraw took an optimistic view of the situation, calling for teamwork and planned tactics. (The next day, as we shall see, the Eagles actually did work out tactics before the tug-of-war which proved highly effective. See below)

Finally someone suggested the Eagles go back to their cabin. Lane (low status) started off first and noticed the Rattlers' flag on the ballfield backstop. He yelled that they could take it down. The Eagles all ran for the backstop, Craig trying to knock down the flag and then climbing up to take it down. Mason grabbed it and tried, with the help of others, to tear it up. Someone suggested: "Let's burn it." So Mason, Craig, and McGraw (who found matches) set the flag on fire. Mason held it while it burned, then they decided to hang the scorched remnant back up. Craig did so, and the boys sang "Taps." Mason said, "You can tell those guys I did it if they say anything. I'll fight 'em!"

As they walked to their cabin, the Eagles spoke hopefully of how they would beat the Rattlers at baseball the next day. Everyone told how they contributed to the contest, comparing rope burns and aching muscles. As they went to bed, Mason found some hope for victories over the
This flag-burning episode started a chain of events which [p. 105] made it unnecessary for the experiementers to introduce special situations of mutual frustration for the two groups. The only manipulation necessary to insure that the actions of one group were frustrating to the other was careful timing of arrivals and departures of the groups on certain occasions. For this reason, it was arranged that the Rattlers would complete breakfast and proceed to the athletic field before the Eagles on the next morning, in order that the Rattlers would discover the damage inflicted to their flag.

At breakfast the next morning the Eagles were relatively quiet, not being elated over their progress thus far and perhaps wondering how the Rattlers would act when they found their flag. Later the Rattlers agreed that the Eagles had looked happy at breakfast, but this judgment was made only after they had found their flag.

As arranged, the Rattlers finished breakfast first and went to the ballfield. When they arrived and discovered their burnt flag, their reaction was noisy and resentful. All sorts of suggestions for retaliation were made in a disorganized fashion. Mills climbed the backstop to bring down the burnt remnant, leaving a portion there for "evidence" at the suggestion of Barton and Harrison. Simpson, the baseball captain, suggested that he ask the Eagles if they did it. The Rattlers then made a plan of action to follow when the Eagles arrived. Simpson was to go and ask the Eagles if they burned the flag. If the Eagles said that they did (and there was little doubt in the Rattlers' minds that this would be the reply), Simpson was to start fighting and others were to come to his help. Martin (a mild boy who had earlier espoused sportsmanship) volunteered to grab the Eagles' flag and burn it. When the Eagles arrived, this plan was put in effect. Simpson went to the Eagles and asked if they burned the flag, which they admitted. The Rattlers followed up Simpson, calling invectives; Martin worked his way close to the Eagle flag, grabbed it and ran down the road with some other Rattlers and with Mason (E) in hot pursuit.

In the meantime, on the field, the Eagles ran for the Rattlers' second flag which they had left on the field. The remaining Rattlers tried to get it, but the Eagles tore it up. Swift (R) grabbed Craig and held him in a wrestling hold, asking which Eagle had burned the flag. Craig said they all had. Simpson (R) [p. 106] had gotten Cutler (E) down in a fist fight, and the physical encounters had to be stopped.

The Rattlers who burned the Eagle flag returned with Mason (E), who was crying mad. He yelled for someone "my size" to whip and Mills, the Rattler leader, said: "Here I am!" Staff prevented further fighting and started the game over the Rattlers' violent objections to the Eagles being "home team" that day, since the diamond was "ours" and "we built everything but the backstop." The game finally got underway, with continued razzing and name-calling from both sides.

From the point of view of leadership (see Chapter 4), it is very interesting to note that the Eagles noticed the fact that although Simpson was the baseball captain for the Rattlers, Mills was in fact the leader of the group. Myers (E) yelled, "One guy calling all the time-outs - Mills!" Then he asked a Rattler if Mills was their captain, but the Rattler replied "No, he's at first base (Simpson)."

A jubilant group of Eagles won the game. There was cheering for the losers again and Wilson and Myers said "Nice game" to the Rattlers. Everett (R), who had been extremely noisy in calling names at the Eagles from the beginning, said, "I think they are trying to be friendly, " but none of the dejected, tired Rattlers who had played even bothered to reply.

As the Eagles walked down the road, they discussed the reasons for their victory. Mason attributed it to their prayers. Myers, agreeing heartily, said the Rattlers lost because they used cuss-words all the time. Then he shouted, "Hey, you guys, let's not do any more cussing, and I'm serious, too. " All the boys agreed on this line of reasoning. Mason concluded that since the Rattlers were such poor sports and such "bad cussers," the Eagles should not even talk to
them anymore.

The immediate effect of losing the game on the Rattlers was internal friction and mutual recriminations among in-group members. This sort of immediate reaction to loss was observed for both groups on some occasions in this study. In this case, Brown (R) criticized Newman (pitcher) and Simpson (captain), who in turn retaliated and were supported by Allen and Barton (both low status). Brown said he was going to write to go home. [p. 107] Later, Allen (a non-player in this event) was criticized by Simpson for not giving enough support from the bench. Allen, in turn, criticized Martin, who was supported vehemently by several others. Mills, the Rattler leader, saved the day by making a joke out of the whole verbal skirmish, and Brown and Alien both tore up letters asking to go home amid general rejoicing.

The second tug-of-war was notable both because the Eagles had planned a strategy which caught the confident Rattlers off balance, and because it revealed in a striking way the differential experience of two contending groups, one on the verge of victory and one on the verge of defeat. This contrast between the experience of the two groups during this tug-of-war was so striking that it was followed up by observers with questions the next day. The results of this questioning are reported separately later in this chapter at the end of this running account of interaction in Stage 2.

The strategy adopted by the Eagles was, on pre-arranged signal, to sit down and dig in their feet. The Rattlers tugged strenuously for about 7 minutes and were almost exhausted when they finally sat down and dug in too (see Figures). The Eagles were slowly but surely pulling the fatigued Rattlers across the line when, after 40 minutes of the contest, a time limit of 15 additional minutes was announced. Later the Eagles were to talk about how short the contest seemed and the Rattlers how long it seemed. After the event, Mason (E) started to shake hands with the Rattlers. The Rattlers told him to "shut up" and called him names. Good sportsmanship was on the downgrade.

All afternoon Simpson (R) made suggestions that the Rattlers raid the Eagles' cabin. Now, as a result of the tug-of-war, in which the Rattlers believed the Eagles had used decidedly unfair tactics, the Rattlers' mood was definitely favorable to a raid. Mills, their leader, set the time for 10:30, after the event of skits which each group put on separately that night. Enthusiasm for a raid was high, and the Rattlers decked themselves out for it in true commando style (darkening faces, arms, etc.). The Eagles had gone to bed by this time, and all were asleep but Mason, who jumped up to arouse others when the banging and noise began. Some of the Rattlers entered the cabin to turn beds over and rip mosquito netting on the windows, while others stood outside and challenged the Eagles to come out and fight. Some of the Eagles slept through the raid but those who were awake sat on their beds as though stunned. After the Rattlers left, Mason shouted to the Eagles that they were "yellow", especially Craig who had pretended to be asleep. Mason said the Rattlers had tried to blind them with a light (in reality a flashbulb from a staff camera). Most Eagles were aroused enough to want to retaliate that night; but staff prevented this when it was mentioned that rocks would be used.

Back in the Rattlers' cabin, many wild tales of the raid were being repeated over and over. Mills was considered especially heroic because he jumped in a window and secured comic books and a pair of blue jeans which, much to the Rattlers' delight, turned out to be Mason's (E leader). Mills painted these jeans the next day with orange paint, the legend "The Last of the Eagles" being inscribed on each leg, and carried them like a flag (see Figure).

After breakfast on Day 4, which the Eagles ate first, the Eagles prepared for the retaliatory raid which they had planned the previous night. After making sure that the Rattlers were in the mess hall, they started off, armed with sticks and bats, and led by Cutler who had balked at participating in a raid the previous night. The Eagles messed up the Rattlers' cabin, turning over beds, scattering dirt and possessions, and then returned to their cabin where they entrenched and prepared weapons (socks filled with rocks) for a possible return raid by the Rattlers.

The Rattlers were furious at the Eagles for the mess created in their cabin, but were stopped
from rushing to "get" the Eagles when their counselor suggested that the raid might have been planned so that they would lose cabin inspection. The Rattlers returned to clean up, cursing the Eagles to a man. Simpson (baseball captain) called them "communists," and this was echoed by Everett (low status).

Rain delayed the start of the touch football game. The Eagles spent this time planning what they would do if the Rattlers came to their cabin; the Rattlers went to work with a vengeance making posters and "raiding flags." At the game itself, the Rattlers were exceedingly vocal and abusive. Everett and Allen (R) repeatedly told the Eagle staff members to get off their side of the field, to "shut up," and called them derogatory names. [p. 109] Mason's pants, now a flag, were waved victoriously by the Rattlers; but the Eagles ignored all this as much as possible. The high status Eagles were telling their group not to yell at the Rattlers or brag in front of them as this was thought to bring bad luck. Occasionally Wilson (who had risen near the top) forgot this admonition, and had to be reminded. Clark (middle status) was the most vocal Eagle, and he was reprimanded several times.

After winning the touch football game (narrowly) and the tent pitching, the Rattlers were convinced that they were "winners" not quitters. The Rattler victory in football was so narrow that the Eagles did not feel too bad at losing; but they thought their tent was erected much better (though more slowly) than the Rattlers. Craig (E) walked away immediately after this contest, and one of the Eagles said, "He's quit on us again" (as he had in the first tug-of-war). The Eagles' morale shot skyrocket later in the afternoon when they won their second baseball victory. True to their determination to be "good sports," they carefully refrained from making bragging remarks in the Rattlers' presence. Bragging was approved behavior within the confines of the Eagle group, but by this time it was frowned upon in the presence of the out-group.

In seeking to explain their loss, which put them behind one point in the tournament, the Rattlers pointed out the weak plays various members had made, but reached general agreement that their loss was due to the fact that their bats were larger and heavier than the Eagles'. Martin expressed the current mood: "It was just like having those (prize) knives in our pockets before we lost the game." Simpson and Everett talked much of a raid, but nothing came of it at the time. The Eagles discussed the possibility of being raided by the Rattlers, and collected a bucket of stones (just in case), even "scouting" the Rattler cabin.

At breakfast on the last day of the tournament, the Rattlers sang "The enemy's coming...." as the Eagles approached. After the meal the Rattlers decided to post flags on "everything that's ours," including "home", "the swimming hole", "our Upper Camp", "our baseball diamond", and the Stone Corral. They drifted off with the idea of raiding the Eagles' cabin, but met staff members and abandoned the attempt.

The Eagles won the third tug-of-war easily, but lost the [p. 110] second tent-pitching contest to the Eagles decisively. Before lunch, Mason (E) directed: "Take all (the food) you can get; let's don't leave much for them (Rattlers)." However, lunch was a relatively quiet meal. The Eagles were figuring out whether or not they had to win both afternoon events (tent-pitching and treasure hunt) or just one. They got into a discussion of their standing in the tournament up to that time and decided they would have to win both of the remaining contests to win the tournament.

Talk of raids had been in the air in both groups all day. The Eagles had mentioned the possibility and indulged in bravado talk, but no plans were made. Simpson was pushing the raid idea in the Rattler group, and as the possibility of their winning the tournament faded during the day, it became generally accepted. Mills (leader) stipulated that it should not be a night raid, because the Eagles had told them they were cowards to raid at night while the Eagles had come in broad daylight. Martin said he would raid if the Rattlers won, but not if they lost because that would be bad sportsmanship. (This same Martin entered into the raid that same day without question after the Rattlers lost. He was one of few boys actually engaging in a physical clash with two Eagles, and had to be forcibly restrained from fighting.)
The Eagles won the third tent-pitching easily and also won the treasure hunt (through experimenters' manipulation in plotting the routes). Their elation and the dejection of the Rattlers was described earlier in this chapter. Mason (E) was so happy that he cried. After entrusting the beloved trophy to staff for safe-keeping, the Eagles set off for their Moccasin Creek, some boys jumping in with their clothing on to celebrate.

The Rattlers raided while the Eagles were gone, messing up beds, piling personal gear in the middle of the cabin, setting loose boats at the dock, and absconding with the prize knives and medals. When the Eagles found what had happened, they rushed to the Rattler cabin shouting invectives. Mason (E) was in the lead, furious and ready to fight. Lane and Clark were right behind him, and Wilson, Myers, and Cutler arrived within seconds. (Craig, Bryan and McGraw returned to the Eagles' cabin.) The groups lined up, separated by an invisible line. Mason and others shouted at the Rattlers. Mason refused to fight the big Rattlers (Brown and Swift), and the smaller Rattlers refused to step out to fight him. At last, Mason turned rapidly on his heel [p. 111] and strode toward the Eagle cabin. The other Eagles started to retreat, but did so facing the jeering Rattlers, thus walking backward the entire distance. Clark and Wilson were the last to leave and closest to the pursuing Rattlers.

About ten feet from the Eagle cabin, Mason came back with McGraw yelling to Craig and Bryan in the cabin: "Come on, you yellow bellies. Are you going to lay down and take this?" At this, Craig came out and the Eagles took a last ditch stand before their Mason, Clark, Wilson and Lane were in the front line; McGraw and Myers (who was frightened) composed the second echelon, and Craig stood in the rear. The Rattlers told the Eagles that if they would get down on their bellies and crawl, they would return the prize knives and medals they had taken. Mason (E) begged the Rattlers to take out their two big boys and fight, which the Rattlers refused to do. Martin (R) got into a fist fight with Lane (low status E). Mills (R) was scuffling with Clark (E). At this point, it was decided to stop the interaction altogether to avoid possible injury. The Rattlers' staff started forcing their boys up the trail to their cabin, one by one. Hill was the last Rattler to be pulled away, and he struggled to go back.

As the Rattlers were being herded up the trail, the Eagles came right behind them yelling that the Rattlers were running away. Eagle staff got the boys back to the cabin, but Mason ran out determined to "get" the Rattlers. He was returned shortly. Lights were brought to the cabin (lanterns and flashlights had been taken during the raid), and the boys began to clean up the mess. When the staff member who had the role of camp director arrived with some of the stolen prizes, the Eagles brightened up and told him about the event (since he had not been present). By the time they were through telling of their exploits, the Eagles had turned the whole affair into a magnificent victory for themselves. They related that the Rattlers would not take their two big men out of the fight, and how they had chased the Rattlers "over halfway back to their cabin" (actually about 40 feet).

The end result of the series of competitive contests and reciprocally frustrating encounters between the Eagles and Rattlers was that neither group wanted to have anything whatsoever to do with the other under any circumstances. On previous days, the now familiar invectives and names had been hurled back and forth ("stinkers, " "braggers, " "sissies, " and many considerably [p. 112] worse), derogation of the out-group had been expressed in word and deed (e. g., holding noses when in their vicinity). Now both groups objected even to eating in the same mess hall at the same time.

Clearly negative attitudes and social distance in relation to the out-group were standardized in both groups. These products of intergroup friction could have been tapped at that time through judgments of performance and stereotype ratings. Nevertheless it was decided to delay these crucial checks of the products of intergroup friction for one more day (a) to avoid the possibility of obtaining merely momentary reactions to the out-group, and to insure that the attitudes toward out-group had some stability, and (b) to secure further checks through a planned encounter between the groups. Accordingly the day after the tournament ended (that is, the day after the Rattlers raided the Eagles) was set aside as an interim period devoted entirely to in-group activity with the exception of one planned contact between groups.
The Eagles were taken to Lake Carlton, a more civilized and comfortable place to swim and picnic. They spent the day in self-contained and contented in-group activity, all pitching in to make the swim and picnic a success. There was discussion of the Rattlers, what a "bunch of cussers," "poor losers" and "bums" they were, and of the Eagles' glorious "victory" in the previous night's raid (see above). Craig carried the Eagle flag, and the group stayed entirely apart from other people on the beach. The only exchange with outsiders was when Lane bumped into someone and said, "Excuse me."

The Rattlers spent most of the time at their hideout, swimming, playing, and working in a congenial and happy manner with everyone included (Mills, the leader, making special efforts to involve low status members in games). There were occasional references to the Eagles as "sissies," "cowards," "little babies," etc. Upon returning to camp for supper, the Rattlers made it clear that they did not want to eat with the Eagles, who as it happened were not there. Martin and Hill asked if knives were on the canteen list. Mills said he didn't want the kind of knives the Eagles had won, and others expressed interest in having knives, but not the kind the Eagles had won.

The Eagles returned after supper. As planned for the "test [p. 113] situation" arranged by the staff, the Rattlers were taken on a hike in the Eagle area, passing within about 20 to 30 yards of the Eagles' cabin. Mason heard the Rattlers approaching and yelled, "Come on, you guys, we're being raided!" After the boys had rushed toward the cabin, Mason stopped to listen. Bryan and McGraw had by this time taken to the bushes to hide. In the meantime, the Rattlers, with Mills, Brown, Simpson and Everett in the lead, decided to take a look at the Eagles' hideout (Moccasin Creek). There they became quite engrossed in crossing the Eagles' rope bridge, and although the Rattlers mentioned above spoke of cutting it before they left, this was not done.

The Eagles were discussing the possibility that the Rattlers might do something to their swimming hole, Wilson, Clark and Mason arguing that they should protect it. Wilson said he thought they must be at O. U. Camp: "That's our camp and they'll try to tear down our sign." The Rattlers returned by the Eagle cabin, yelling insults in loud voices. Mills (R) said: "They were afraid to even look at us." The Eagles inspected their swimming place the next morning and commented that there were more rocks in the water, which the Rattlers must have been responsible for.

Thus, reaction in this test situation further confirmed the prior evidence of this friction phase of intergroup relations which by this time had crystallized in negative attitudes toward the out-group (stereotypes of out-group characteristics and considerable social distance in relation to its members). These negative attitudes were maintained even after intergroup contact in competitive and reciprocally frustrating situations ceased.

**How Long the Tug-of-War Lasted**

**Viewpoints of groups on the verge of victory and defeat:** Among the factors frequently reflected in judgments of objects, persons, or events in Stage 2 were immediate and long-range trends in intergroup relations, strenuous physical efforts, victory or defeat, etc. A striking contrast between groups, as evidenced by differential effects along group lines, was seen in estimates of the time consumed by the second tug-of-war. As noted above, reactions of the two groups to this event were followed up by participant observers. Evidence for differential experience by the members of the two rival groups was found, both [p. 114] when estimates were made individually and when they were a matter of consensus within groups.

The Rattlers had won the first tug-of-war easily. When the groups met again the Eagles had adopted a strategy of sitting down and digging in their feet. The Rattlers stood up and pulled mightily for about 7 minutes (losing ground steadily) and were almost exhausted when they finally sat down and dug in too. The Rattlers' fatigue gave the Eagles a decided advantage, and they were gradually pulling their opponents across the line when, at the fortieth minute of the contest, a time limit of 15 additional minutes was announced. The event ended in a tie through
a mighty effort of the Rattlers to keep their last man from crossing the line.

Later in the evening, at their own cabins, both groups talked about the event. Most of the Eagles seemed to feel that the time had literally flown by, one of them saying, "That was the shortest ten minutes in my life" (referring to the last 15 minutes of the contest). However, remarks at the Rattler cabin revealed that they felt the event had lasted a "helluva long time."

Since these remarks indicated differential biases according to group membership the members of both groups were asked individually by their participant observers on the morning following the event, "How long did the tug-of-war last after both groups sat down and dug in?" The objective time was 48 minutes. The estimates made are tabulated on the following page.

It is significant that the Eagles all gave their estimates in minutes and the Rattlers all gave theirs in hours, even though the same question was asked both groups and all boys were questioned individually. The members of the two competing groups used the same dimension (elapsed time) in making estimates, but used different units - the shorter unit being used by those on the verge of victory and the longer by those on the verge of defeat. Also, it was found on further questioning that the Rattlers were unable to differentiate between the length of time occupied by the whole event and the time after both groups sat down.

Note that the median judgment for the Eagles represents an 18 minute underestimation of elapsed time; that of the Rattlers a 12 minute overestimation. The median judgment for Rattlers [p. 115] was twice that of the Eagles, giving a 30 minute difference between groups. Although there is no overlap in judgments of the members of the two groups, and the significance of the results is obvious, they may be put in the more formal language of statistics. According to the Mann-Whitney U test (1947) the probability of getting these estimates, so distributed between groups, by chance is less than .001.

After polling the group members individually, each participant observer asked his group (at a time when the group was all in one place) how long the event had lasted. After some discussion the Eagles decided the estimate should be 45 minutes (the original estimate of the group's leader). The Rattlers decided it was "over an hour." These estimates arrived at by consensus still represent under- and overestimations of the objective time.

| Table 1 |

Estimates of How Long the Second Tug-of-War Lasted, Made Individually by Eagles (who almost won) and Rattlers (who almost lost.)*

<table>
<thead>
<tr>
<th>Rattlers</th>
<th>Eagles</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>hour</td>
<td>22 1/2 minutes</td>
<td>2 1</td>
</tr>
<tr>
<td>hour</td>
<td>22 12.5 minutes</td>
<td>2 1</td>
</tr>
<tr>
<td>hour</td>
<td>22 12.5 minutes</td>
<td>2 1</td>
</tr>
<tr>
<td>hour</td>
<td>25 12.5 minutes</td>
<td>4 1</td>
</tr>
<tr>
<td>hour</td>
<td>Median-30 minutes</td>
<td>5.5</td>
</tr>
<tr>
<td>hour</td>
<td>30 12.5 minutes</td>
<td>5.5 Median-1</td>
</tr>
<tr>
<td>hour</td>
<td>32 12.5 minutes</td>
<td>7 1 hour</td>
</tr>
<tr>
<td>plus</td>
<td>45 16 minutes</td>
<td>8.5 1 1/2</td>
</tr>
<tr>
<td>hours</td>
<td>minutes</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>---</td>
</tr>
<tr>
<td>17</td>
<td>8.5</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>1/2</td>
</tr>
<tr>
<td>19.5</td>
<td>3</td>
<td>1/2</td>
</tr>
<tr>
<td>19.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*When an interval was given as an estimate, the mid-point was tabulated, e.g., 22 1/2 minutes for 20 to 25 minutes.

**Notes**

1. (E) is used for Eagles; (R) for Rattlers

**Reference**


[p. 117] **CHAPTER 6**

Intergroup Relations: Assessment of In-Group Functioning and Negative Attitudes Toward the Out-Group

In order to insure validity of findings and to increase their precision, the plan of this experiment on intergroup relations specified that different methods of data collection would be used and the results checked against each other (Chapter 2). On the other hand, it was noted that excessive interruption of the interaction processes would result in destroying the main focus of study, viz., the flow of interaction within groups and between groups under varying conditions. Therefore, it was necessary to exercise great restraint in introducing special measurement techniques and experimental units to cross-check the observational data.

At the end of Stage 2, special methods were utilized to check observations related to the main hypotheses for the friction phase of intergroup relations. In addition to sociometric techniques, two experimental units were introduced to tap the subjects' attitudes toward their respective in-groups and the out-group. The results of these units are presented in this chapter, along with additional observational data pertaining to the various hypotheses for Stage 2. These results are not intended to test any separate hypotheses, but to provide further evidence to be evaluated in conjunction with the observational data.

Section A summarizes the effects of intergroup friction on in-group functioning, while the following sections deal with end-products of intergroup friction and conflict, and their assessment through judgmental reactions.

**A**

Intergroup Friction and In-Group Functioning
The study of in-group structure and functioning was not confined to the first stage of the experiment, which was devoted to experimental formation of in-groups. Several of the hypotheses for Stage 2 specifically concern the effects of intergroup relations (friction, in this case) on in-group structure and functioning. Some [p. 118] consequential effects to the respective in-groups were pointed out in the summary of interaction in the last chapter. Further data will be summarized here. Throughout the experiment the effort was made whenever possible to obtain data by as many methods as feasible without disrupting the ongoing interaction. Checking results obtained by several methods (e. g., observational, sociometric, ratings, judgments of the subjects) leads to confidence in the reliability and validity of the conclusions reached. In considering the hypotheses and data concerning in-group relations in Stage 2, it was necessary to rely heavily on observational data. The more precise techniques of data collection (viz., stereotype ratings and laboratory type judgments) were used for testing the validity of observational findings concerning the negative attitudes (see section B, this chapter).

Because of space limitations, the observational data of this experiment were given in summary form. The danger of selectivity in observation and in reporting observational data is not surmounted by piling example on example. The illustrations chosen are representative of the many available. The conclusions drawn from them are justified by available evidence. They are intended to be suggestive for future research in which observational methods are supplemented increasingly by other more precise techniques of data collection.

At the end of Stage 2, the Rattlers and Eagles were both clearly structured, closely knit in-groups. This is revealed in observational data, observers' ratings, and in sociometric choices obtained at this time from each member individually by the participant observer of his respective group (who appeared as counselor to the subjects).

1. Testing in Terms of Sociometric Indices

The most general criterion on the sociometric questionnaire specified that friendship choices should be made from the entire camp. Table 1 presents the resulting choices for this criterion by members of the Rattler and Eagle groups. In spite of the fact that choices of out-group members were forced somewhat by the manner in which this item was presented, the proportion of choices of in-group members in both groups was approximately 93 per cent, [p. 119] and the differences between choices of in-group members and out-group members are too large to be attributed to chance.

| Table 1 |
| Friendship Choices of In-group and Out-group Members |
| By Rattlers and Eagles |

**End Stage 2**

<table>
<thead>
<tr>
<th></th>
<th>Rattlers</th>
<th>%</th>
<th>Eagles</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choices of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-group members</td>
<td>73</td>
<td>93.6</td>
<td>62</td>
<td>92.5</td>
</tr>
<tr>
<td>Out-group members</td>
<td>5</td>
<td>6.4</td>
<td>5</td>
<td>7.5</td>
</tr>
</tbody>
</table>
Sociograms were constructed for the Rattlers and Eagles using total score on 4 criteria, as a basis for placement of members (see accompanying sociograms). The score on each criterion was the total of weighted choices, first choices receiving a weight of 4, second choices of 3, third choices of 2, and those thereafter a weight of 1. The choice network was based on the most general criterion (friendship); and rejections were obtained from an item included in the interview, but not used as a criterion in computing total scores. The lines on the ordinates of the sociograms represent Q1, Q2, and Q3 of these ranks in ascending order, the lowest line being Q1.
Several discrepancies in ratings of group members based [p. 122] on the various criteria were noted. Two of these criteria were concerned with friendship choices (one general, one more specific), and two were concerned with initiative displayed by various members. It is significant that the scores obtained for these two kinds of choice were widely disparate in several cases. For example, Everett (R) ranked second on the friendship criteria but only ninth (out of 11) on the initiative criteria. Craig (E) ranked seventh on the friendship criteria, but fourth on the initiative criteria, as did Hill (R).

Since observers' ratings were made more on the basis of effective initiative than on popularity, it is interesting to compare the status ratings of observers and ranks in total sociometric score (4 criteria). As Table 2 indicates, the rank order correlation for these two rating measures is significant and high. Observers undoubtedly gave greater weight to effective initiative than did the combined sociometric scores. This greater weight given to effective initiative in observer status ratings is revealed in cases of discrepancy between sociometric ranks and observer ratings. For example, Brown (R) ranks fourth in sociometric score, but only eighth in observer's ratings. In this case, the sociometric score as computed from choices does not reveal what the
observer knew, and what was also revealed during the sociometric interviews. Although Brown received only one rejection from his group, he was mentioned by six members (more than any other member) as the member who would stand in the way of what most of the group wanted to do. To take another example, Bryan (E) ranked fourth in sociometric score and eighth in observer's ratings. In this case, nothing in the sociometric interview revealed, or could reveal, that Bryan was frightened of physical conflict and that during the closing days of Stage 2 he withdrew from interaction altogether on several occasions (even hiding in the bushes). For this reason, he was rated near the bottom of the group by the observer at this time (in terms of effective initiative and influence in the group). On the other hand, the observer noted that since many eagles were frightened of the Rattlers, they did not (excepting Mason, the leader) impose sanctions because of Bryan's behavior. He participated effectively when physical contact with the out-group was not in the picture. Nevertheless, Bryan had very little influence in the group at the end of Stage 2. Such cases illustrate some difficulties in interpreting sociometric scores based on choice, and point to serious problems of validity when sociometrics are used apart from concrete observational material.

[p. 123] Table 2

Comparison of Ranks in Sociometric Scores and Status Ratings

By Participant Observers of Rattler and Eagle Groups

End of Stage 2

<table>
<thead>
<tr>
<th></th>
<th>Rho</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattlers</td>
<td>.70</td>
<td>2.94</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Eagles</td>
<td>.731</td>
<td>2.83</td>
<td>&lt;.013</td>
</tr>
</tbody>
</table>

2. Testing in Terms of Observational Data

Three of the hypotheses for Stage 2 are concerned with in-group functioning. Data pertinent to them is summarized below.

Hypothesis 2, Stage 2

The course of relations between two groups which are in a state of competition and frustration will tend to produce an increase in in-group solidarity.

Observational data supports this hypothesis with the qualification that in several instances defeat in a contest with the rival group brought temporarily increased internal friction in its wake. This was noted in the Rattler group (Day 3) when they lost the second baseball game. Disruptive tendencies within the group reached their peak when Brown and Allen wrote letters that afternoon wanting to go home, thus threatening to leave the group. Solidarity was achieved shortly afterward through the integrative leadership of Mills, whose joking about these events led the boys to tear up their letters amid rejoicing by all members.

Similar signs of temporary disorganization followed the first tug-of-war, when the downhearted Eagles stared loss of [p. 124] the tournament in the face. In this case, Myers, Clark, and McGraw took the optimistic view that they had to plan tactics which would defeat the Rattlers. After the group joined whole-heartedly in burning the Rattler flag, this view was accepted by the leader as well, and considerable hope was seen for the next day.
A somewhat similar adaptation to defeat was made by the Rattlers at the end of the tournament. In this important instance, group action in raiding the out-group was agreed upon right after defeat, sanctioned and planned by the leader and lieutenants, and was executed soon afterward. The aftermath was self-glorification with reference to the group and all its members. The next morning, when Mills "roughed up" several group members, not one tried to challenge his prerogatives, although any one of them could have whipped him easily. (It should be noted here that the Rattler leader, Mills, was one of the smallest boys in size.) The rest of that day was spent in highly congenial play in which Mills made special efforts to involve the low status members and succeeded in effecting their active participation.

It should be emphasized that the temporary disruptive tendencies following defeat illustrated above did not follow loss of every contest. Some defeats were accepted with remarkably little concern or depression, either because the group in question (both Rattler and Eagle) had decided prior to the event that they probably would not win it or because they felt they did not have to win that particular event to win the tournament.

In instances where temporary disorganization did follow defeat (above), heightened solidarity within the group was achieved through united cooperative action by the in-group against the out-group, and this is in line with the above hypothesis. It should be noted and emphasized that the aggressive actions toward the out-group which followed frustration of group efforts experienced in common by in-group members were taken after they were sanctioned by the leaders (Mills or Mason, the leaders of the Rattlers and Eagles respectively). These aggressive actions were sometimes suggested by high status members (notably Simpson and Mills in the Rattlers and Mason in the Eagles), and sometimes suggested by low status members (e.g., Everett in the Rattlers, and Lane in the Eagles). In no instance did the in-groups engage groups in aggressive action toward the out-group if this had [p. 125] not been approved by the leaders of the respective groups. Other evidence supporting this hypothesis as stated is the recurring glorification of the in-group, recounting of feats and accomplishments of individual members, support and approval given low status members, support given the leader, and intensified claims on areas appropriated as belonging to the group.

The Eagles bragged to each other that they were "good sports" who did their best and who prayed and didn't curse. Later they refrained from bragging in the presence of the out-group since this was agreed to bring bad luck. The Rattlers were constantly telling each other, and all within hearing distance, that they were brave, winners, not quitters, tough, and (naturally) good sports.

After the contests and raids, stories were told over and over of the accomplishments of this person and that person, blisters acquired in the tug-of-war were compared both in winning and losing groups, and these tales of individual feats grew with each telling. (The dramatic reversal by the Eagles of their role in the last raid was noted in the account of that event in Chapter 5). Brown (R) revealed special gifts for recounting such episodes.

During Stage 2, Lane (low status E) was praised for his playing for the first time (by Mason). Lane became more active in in-group affairs and said they must not swim so much in order to save their strength for the tournament, even though he had earlier been a constant agitator to go swimming at every possible moment. Approval was also given to low status Rattlers during games. After the big raid in which Mason (E) had accused several Eagles of being "yellow-bellied" and cowards, he "covered up" for them completely in telling staff of the events. No mention was made of any defection; all Eagles were made to appear heroic.

The leaders (Mills and Mason) were supported by group opinion consistently, especially after the first day or so when Mason was effectively extending his leadership in baseball (elected) to all areas of group life. Mills was supported by the group even during games when he interfered in decisions made by Simpson (baseball captain); and on one occasion he took Simpson out as pitcher and put in another member in his place.

[p. 126] At the end of Stage 1, we mentioned the increased concern of the in-groups over
places appropriated as "theirs." Swift (R) even went so far as to object, when he saw fishermen near their swimming hole, that they had no business taking "our fish." The Rattlers talked, near the end of Stage 2, of putting signs on all of "their" places, including the ball diamond and Stone Corral (which was a part of Robbers Cave). The Eagles were extremely concerned over the fact that the Rattlers went to their hideout on the day after the big raid, and claimed they could detect changes there which did not actually exist.

Hypothesis 3, Stage 2

Functional relations between groups which are of consequence to the groups in question will tend to bring about changes in the pattern of relations within the in-groups involved.

The most striking change in relationships within the in-groups as a consequence of the particular functional relationship between them (rivalry and friction) was in the Eagle group. At the end of Stage 1, Craig was acknowledged leader of the Eagles. Mason was elected captain of the baseball team (only) with Craig nominating and backing him. Even after this, Craig informed Mason that he could not play ball if he didn't have the Eagle insignia stencilled on his T-shirt, and Mason submitted to this after some argument. From the first day of the tournament, however, Mason began to extend his leadership to all group activities, while Craig lost ground throughout Stage 2, being in the middle of the hierarchy by the end (fifth in rank). Some of the incidents revealing this alteration in the Eagles' status structure are mentioned in the summary of interaction presented in the last chapter.

Mason took the group goal of winning the tournament very seriously, giving talks on how to keep from getting rattled, threatening to beat up everyone if they didn't try harder, lecturing on how to win after the first loss in baseball. Although he had not shown interest in keeping the cabin clean before the tournament, he organized cabin cleaning details, and struck Lane (low status) for not helping pick up papers. He had praised Lane's playing in baseball earlier, and the combined effect of Mason's attention was that Lane saw the necessity of reducing the groups' swimming time to "save our strength" - for him a sacrificial act. [p. 127] When captains for the tug-of-war were called, Mason stepped forward, although he had been elected only as baseball captain, and there was no discussion on the point. When the Eagles burned the Rattler flag, Lane first directed attention to it, but Mason took the initial action in trying to tear it up.

Rather convincing evidence of Mason's leadership followed the second tug-of-war, which ended in a tie. Estimates of the time consumed were first obtained individually for each boy, as reported in the last chapter. Subsequently, the boys were asked in a group how long they thought it lasted. Every single Eagle agreed with Mason's estimate of 45 minutes, although only one other boy had made previously an estimate that high individually.

Craig allowed leadership of the Eagles to slip through his fingers by submitting to Mason' a decisions, perhaps in part because he recognized Mason's superiority as an athlete. (Mills in the Rattler group was not as good a ball player as a few other members; nevertheless he kept control of the group's progress even during baseball games. ) However, Craig fell as far as he did in the status hierarchy because of his defection at several critical points during the tournament. When the group was losing the first tug-of-war, Craig simply walked away from the rope before the contest was over. Afterward he said the Eagles were already beaten in the tournament, and tried to blame others for the tug-of-war loss. However, the Eagles blamed Craig for the loss. When he walked away after the Eagles' loss in tent pitching, the comment was: "He's quit us again. " Craig pretended to be asleep during the first Rattler raid, and kept in the background during the second.

Another shift in the Eagle group which accompanied Mason's rise to the leadership position was Wilson's increasing importance in the group. From a position in the middle of the group's hierarchy (fifth) at the end of Stage 1, Wilson rose to become Mason's lieutenant through his effective playing in sports, his concern with maintaining joint efforts to win the tournament, his
support of Mason’s decisions. Mason chose Wilson as pitcher in preference to Craig during the first baseball game, and the two figured together in most of the group efforts and activities throughout Stage 2.

The most pronounced changes in the pattern of status relations in the Rattler group during intergroup competition were in the cases of Allen and Brown. After the second baseball game, which the Rattlers lost, Allen was accused of not contributing to the game. He, in turn, accused Martin (higher status) of bragging; but Martin was supported by the other members in the argument. The group members were ruthless in denouncing Allen who cried, wanted to go home, and was talked out of it by Mills (leader). After this, Allen was ignored a good deal, was not chosen to play on the team, and fell from a middle status level to the bottom. Mills’ friendship was his chief tie with the group.

Brown, the largest Rattler, slowly slipped downward in the status structure during Stage 2 until just before the second raid on the Eagles. Because of a pronounced tendency to rough up the smaller boys, Brown was subject to group sanctions and fell to the bottom level of the group. During the raid his size so impressed the Eagles that he became something of a hero of that event to the Rattlers, and had attentive audiences of smaller boys in recounting his feats. Intergroup conflict was the medium by which Brown regained a position higher in the group at the end of Stage 2, after having slipped to the bottom level.

Thus, changes in the pattern of relations within the in-groups occurred during Stage 2. These changes are related to the altered contributions of the various members to group activities and efforts as the in-group functioned in a competitive and mutually antagonistic relationship with another group.

Hypothesis 4, Stage 2

Low status members will tend to exert greater efforts which will be revealed in more intense forms of overt aggression and verbal expressions against the out-group as a means of improving their status within the in-group.

The observations relevant to this hypothesis are inconclusive.

As noted in Chapter 2, this hypothesis was not intended to imply that high status members will not initiate and actively participate in conflict with the out-group. In line with one of the major tenets of Groups in Harmony and Tension (1953), its implication should be that intergroup behavior of members consists mainly in participation in the trends of one’s group in relation to other groups. Since low status members would be highly motivated to improve their status, it seemed a reasonable hypothesis that they might do so through active participation in the trend of group antagonism and conflict toward the out-group. On the other hand, the establishment and responsibility for such a trend in intergroup affairs rests heavily with the high status members, as does responsibility for sanctioning and conducting affairs strictly within the group. If an upper status member, even the leader, stands in the way of an unmistakable trend in intergroup affairs, he is subject to loss of his standing in the group. This is precisely what happened to Craig, the erstwhile Eagle leader, in the present study. He did not enter into the tournament with sufficiently wholehearted identification with the group's efforts to win; he even walked out on them at critical points when they were losing and "played possum" to avoid conflict (raid) with the out-group.

In view of the necessity to clarify the intent and implications of this hypothesis, it should probably be re-formulated along the following lines: Aggressive behavior and verbal expression against the out-group in line with the trend of intergroup conflict sanctioned by high status members will be exhibited by low status members as a means of improving their status within the group.

This hypothesis could be tested empirically by comparing the reactions of low status members toward the out-group (a) when in the presence of in-group members high in status and (b)
when high status members of their in-group are not present. Since the primary concern of Stage 2 in this present experiment was the end products of intergroup friction, this empirical test relating to the behavior of in-group members was not made. As stated in Chapter 2, it was necessary to limit such devices in the present study in order that the interaction processes within groups and between groups would not be complicated by excessive intervention by experimenters. The test situations and more precise methods of measurement which were used during Stage 2 were all devoted to tapping the end products of intergroup friction.

Observational data bearing on this hypothesis cannot be crucial without an empirical test such as that suggested above. The data available are not contradictory of the hypothesis as modified. One consistent finding supports it, namely, that in those instances in which low status members initiated aggressive acts directed toward the out-group, group action followed when the suggestion was approved or taken over entirely by high status members, and particularly the leader. Conversely there were instances of suggested aggressive action toward the out-group initiated by low status members (and even upper status members) which was not carried out because the leader did not assent to it. The number of raids suggested by various group members far exceeded the number actually carried out. In every case the leader decided on the major details of the raid. Mills set the time for both of the Rattler raids, and Mason (who was the moving force in making the suggestion and in its execution) managed the Eagles’ morning raid on the Rattler cabin, even though Cutler (low status) led the way to the cabin after the decision was reached.

B

Verification of Observational Findings Concerning Intergroup Friction Through Laboratory-type Tasks: Stereotype Ratings and Performance Estimates

In this stage of negative intergroup relations, Hypothesis 1, Stage 2 is crucial:

In the course of competition and frustrating relations between two groups, unfavorable stereotypes will come into use in relation to the out-group and its members and will be standardized in time, placing the out-group at a certain social distance (proportional to the degree of negative relations between groups).

This hypothesis goes to the core of issues concerning the formation and standardization of prejudice of social distance scales in relation to out-groups that prevail in actual social life.

The main events between groups in this stage were manifested through rivalry and actual conflict. Our emphasis in formulation of the crucial hypothesis was on end products in the form of standardized norms relating to the out-group, rather than on specific events revealing conflict, fights, and rivalry. If negative functional relations between groups are more than momentary affairs and give rise repeatedly to fights and hurling of derogatory terms, the end products will be standardized generalizations concerning the out-group which are expressed in the form of unfavorable stereotypes. These standardizations constitute the basis of the institution of group prejudice or social distance. Once standardized, such institutions crystallized in negative stereotypes outlast the actual state of negative relations, henceforth predisposing in-group members to categorize out-group members in the light of unfavorable generalizations even at times when the acts of out-group members are not of an unfavorable character. Therefore, our emphasis in formulating hypotheses concerning negative relations between groups has been on negative generalizations concerning the out-group, i.e., standardized stereotypes, rather than on a syllabus of behavioral items revealing hostility, aggression, and other expressions of intergroup conflict.

As the account of interaction during Stage 2 indicates (Chapter 5), there were many specific examples of conflict, in which members of the two experimental groups had to be separated, much name-calling of the out-group, much use of derogatory terms and ridicule. Briefly, one end result of competition and rivalry in a series of contests and of situations in which the
behavior of one group was frustrating to significant aims or goals of the other was a desire manifested by both groups to have nothing further to do with each other. With the assumption that generalizations concerning the out-group and attitudes toward it would outlast the state of actual conflict which engendered them, the two groups were brought within hearing distance of each other after a full day of exclusively in-group association. The result was repetition of the name-calling, derogation, and other manifestations of attitudes revealed during the period of intergroup conflict itself. This was the critical time to tap these end-products of intergroup conflict through more precise laboratory methods to check further the validity of the observations. This was done on the following day, two days after the end of the tournament and the climactic raid by the Rattlers. The two experimental units undertaken at that time are reported on the pages that follow.

1. Verification of Stabilized In-Group and Out-Group Attitudes Through Judgmental Indices: Stereotype Ratings.

At the end of Stage 2, judgmental ratings of stereotypes [p. 132] actually used by the subjects in relation to out-groups were obtained. This unit was carried out to provide a further test of Hypothesis 1, Stage 2, namely, that unfavorable stereotypes will arise in relation to the out-group and its members as a consequence of competitive and frustrating relations between the two groups, and will become standardized in time.

The procedures for this unit were repeated at the end of Stage 3. A comparison of the data obtained at the end of Stage 2 with those obtained at the end of Stage 3 provides a crucial test of the prediction that cooperative efforts in situations embodying superordinate goals will have a cumulative effect in reducing intergroup tensions (Hypothesis 1b, Stage 3). This comparison is presented in Chapter 7 with the summary of Stage 3.

The judgments were obtained in this experimental unit to supplement data from observers' reports and to provide a more clear-cut check of the hypothesis stated above. No new hypotheses are tested separately by this experimental unit. Throughout the entire study, results obtained by as many methods as feasible are brought together to test a particular hypothesis. In this particular instance, judgments of in-group and out-group members are used as further evidence for conceptual products (stereotypes) of intergroup interaction under conditions of competitive rivalry. The hypothesis is to be evaluated in terms of all relevant evidence obtained, including observational and sociometric data summarized in the last chapter and in this chapter, and judgmental data presented below.

In reviewing the problem of prejudice, Sherif (1948) emphasized that prejudice and stereotypes held toward out-groups are products of past or present relationships between the groups in question.

The favorable or unfavorable properties or 'traits' attributed to 'they' groups, and inevitably to their individual members in a rather absolutistic way, are determined by the nature of positive or negative relations between the groups in question. If the interests, direction, and goals of the intergroup relations are integrated or in harmony the features attributed to 'they' groups are favorable. If the activities and views clash while the interacting groups pursue their peculiar interests and goals, the features attributed are negative (p. 357).

[p. 133] The intergroup relations of such small groups as gangs show this in a striking way. In the process of group formation there is a tendency to appropriate certain areas, objects, places, etc., as their "own." Encroachment or invasion of these private domains by an out-group results in clashes which tend to be accompanied by attribution of unfavorable characteristics to the "intruders." If the relationship of conflict endures for any length of time, derogatory terms for the out-group become standardized which mirror the nature of the underlying attitudes of prejudice or social distance.

When stereotypes become standardized with an in-group, they may and do persist beyond the
functional relationships between groups of which they are a product. Existing stereotypes may then be manipulated by powerful members of the in-group or, at times, by other interest groups and extended to groups with whom there has been little or no contact. However, the present experiment on intergroup relationships is concerned with studying stereotypes from scratch, that is, tracing their formation from the time of first contact between groups in conditions of rivalry through a period of intergroup conflict. Therefore, those studies which reveal differential response to contact with out-groups under varying conditions of interaction were especially pertinent in formulating our hypotheses.

A survey of historical studies in various countries reveals that social distance scales do reflect the nature of intergroup relationships in which they evolve and that over a period of time they are responsive to altered conditions of intergroup interaction (Note 1). For example, MacCrone's intensive historical study tracing intergroup relations and social distance attitudes in South Africa during a period of over 200 years (1937) shows "radical alteration" of attitudes of original European settlers, who originally placed natives in the "heathen" category, which offered at least the possibility of salvation. As a consequence of active efforts to utilize native labor, reactions of native groups to these efforts, importation of more docile groups as slaves, and many actual intergroup conflicts, as well as developments external to the area itself (e.g., expansion of imperialism, industrial developments, etc.), contemporary emphasis on "the white man and his civilization" in contrast to "inferior" native groups began to emerge in the early 19th century.

Klineberg's summary (1950) of changing stereotypes of the Chinese by Americans on the West Coast at different periods in American history is particularly illuminating. When there was a great demand for Chinese labor, and thus, conditions of interdependence between Chinese and white settlers, favorable verbal pictures of Chinese were common in journals and newspapers. However, around the 1860's, when other groups began to compete strongly with Chinese for their positions, descriptions of the Chinese began to undergo a radical shift in the negative direction. Whereas they had been described earlier as "thrifty," "sober," "inoffensive," and "most worthy" adopted citizens, the stereotype held of the Chinese became negative. The Chinese who had earlier been seen as possessing "adaptability beyond praise" now were pictured as "a distinct people" who were "unassimilable," "debased," "servile," etc.

Experimental evidence supporting the view that stereotypes arise as products of functional relationships between in-groups was provided in Sherif's 1949 experiment on intergroup relations (Sherif, 1951, Sherif and Sherif, 1953). The design of the last two phases of that study was the same as that of Stages 1 and 2 of the present experiment (see Chapter 2). The hypothesis tested in the final phase of the 1949 experiment was essentially the same as our main hypothesis for Stage 2. In the course of interaction in intergroup situations of competition and frustration highly derogatory labels were used in relation to the out-group. In time such terms as "pig," "bums," and "cheaters" were standardized for reference to members of the out-group.

Utilizing such leads from the 1949 intergroup experiment, Avigdor (1951) carried out her doctoral study at New York University on the specific problem of "The spontaneous development of stereotypes as a result of a specific type of group interaction." By subtle control of conditions, Avigdor was able to create first a relationship of cooperation between small groups and later to turn this relationship into one of unfriendliness between certain of the interacting groups.

Groups of 10-year-old girls ("friendship clubs") were paired by Avigdor (who became an adult leader of the groups for the purpose of the experiment) in both cooperative and competing activities. The cooperative situation was one in which a compelling common goal existed for each of the paired groups, that of earning enough money to purchase highly desired club jackets. Attainment of this goal required that two groups work together to put on [p. 135] a play. At the height of the cooperative activities each group rated the other cooperating group on 32 characteristics, half favorable and half unfavorable, on a five-point rating scale.
The conflict situation developed when two of the cooperating groups were more successful in preparation of their play than the other groups. Intergroup conflict reached such an intensity that when one group which was lagging behind was brought to a final rehearsal of the play being prepared by two more successful groups, the visitors became objectionable and were forcibly expelled. At this point ratings on the 32 characteristics were obtained from members of the rival group in relation to the two groups which had expelled its members, and from members of those two cooperating groups in relation to the group thrown out.

Among Avigdor's conclusions were that the ratings made after the cooperative interaction were generalized in the favorable direction, "that is, development of favorable stereotypes," while the ratings obtained after interaction involving conflict generalized in the unfavorable direction, "that is, development of an unfavorable stereotype" (p. 65).

In one aspect of an experimental study of negative and positive relations between small groups existing in everyday life, Harvey (1954) obtained results in line with those reported above. He found that when the interacting groups were positively related preponderantly favorable adjectives were attributed to the out-group and its members. But when the relationship between groups was negative, derogatory adjectives were used in relation to members of the out-group.

Before presenting results of stereotype ratings obtained in the present experiment, it should be stressed that negative relations between groups with accompanying patterns of social distance and negative stereotypes do not imply that a similar pattern of relationships prevails among members of the in-group. There is evidence from the present intergroup study, as well as from the 1949 study and sociological fieldwork, to indicate that conflict with an out-group tends to result in increased in-group solidarity with consequent favorable verbal pictures of in-group members. (This significant point was elaborated in relation to Hypothesis 2, Stage 2.)

[p. 136] The results of stereotype ratings by Eagles and Rattlers of their own groups and of the respective out-group provide a critical check of the validity of conclusions based on observational data, namely, that unfavorable stereotypes in relation to the out-group were produced as a consequence of competitive and frustrating relations between experimentally formed in-groups.

Procedure:

At the end of Stage 2, the two experimental groups, Eagles and Rattlers, were asked to make ratings of their own and each others' group. It was explained to the subjects that they were being asked to do this to help the administration find out what they thought of their new acquaintances and how they were enjoying camp.

The stereotype scale contained critical characteristics as well as uncritical or favorable ones, and a five-point rating scale for each of the terms. The five points or categories were the same as those used by Avigdor, via., "All of the (Rattlers or Eagles) are. . .," "Most of the ____ are. . .," "Some of the ____ are. . .," "A few of the ____ are. . .," and "None of the ____ are. . .." The subject made his rating on each characteristic by writing that particular term in the one of five incompleted categories that, in his opinion, was the most appropriate description of the group being rated, in-group or out-group.

The characteristics on which in-group and out-group were rated were not postulated merely on a priori grounds. They were terms that the subjects themselves had used during Stage 2. Thus there was some assurance of the appropriateness of the characteristics chosen. Although more terms were presented on the scale, six were chosen as critical ones. It was thought that these six characteristics were sufficiently standardized in both groups to provide a clear-cut distinction between in-group and out-group ratings. The critical characteristics included three favorable terms (brave, tough, friendly) and three unfavorable ones (sneaky, smart alecs, stinkers).

Results:
The frequency of ratings on the six characteristics (brave, tough, friendly, sneaky, stinkers, and smart alecks) within each of the five categories ("All of the ___ are. . .","Most of the ___ are. . .","Some of the ___ are. . .","A few of the ___ are. . .","None of the ___ are. . .") was determined. The categories were then numbered from 1 to 5, 1 being the most unfavorable and 5 the most favorable category. Thus a response of "All of the ___ are (unfavorable term)" would go into category 1, while a response of "All of the ___ are (favorable term)" would be tabulated in category 5. The results are presented in terms of ratings on the six characteristics combined.

Table 3 presents the ratings of out-group members by each group at the end of Stage 2 (friction stage).

### Table 3

<table>
<thead>
<tr>
<th>Category</th>
<th>Rattlers' Ratings of Eagles</th>
<th>Eagles' Ratings of Rattlers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1.*</td>
<td>14</td>
<td>21.2</td>
</tr>
<tr>
<td>2.</td>
<td>21</td>
<td>31.8</td>
</tr>
<tr>
<td>3.</td>
<td>8</td>
<td>12.1</td>
</tr>
<tr>
<td>4.</td>
<td>13</td>
<td>19.9</td>
</tr>
<tr>
<td>5.**</td>
<td>10</td>
<td>15.0</td>
</tr>
</tbody>
</table>

* Most unfavorable category.
** Most favorable category.

[p. 138] These results confirm observational data indicating that members of both groups tended to rate the out-group unfavorably following the stage of intergroup competition and friction. Fifty-three per cent of the ratings made by the Rattlers were negative and 24.9 per cent favorable. The Eagles’ favorable picture of the out-group is even more accentuated. Their ratings of the Rattlers were 76.9 per cent unfavorable and only 15.4 per cent favorable.

Table 4 presents a composite picture of the ratings six characteristics made by Rattlers and Eagles of their groups (in-groups) at the end of Stage 2 (friction).

### Table 4

| Stereotype Ratings for the In-Group on Six Characteristics |
(Combined) by Members of Rattler and Eagle Groups

End Stage 2

<table>
<thead>
<tr>
<th>Category</th>
<th>Rattlers Ratings of Rattlers</th>
<th>Eagles' Ratings of Eagles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>1.*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3.</td>
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<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>9</td>
<td>13.7</td>
</tr>
<tr>
<td>5.**</td>
<td>57</td>
<td>86.3</td>
</tr>
</tbody>
</table>

* Most unfavorable category.
** Most favorable category.

From these results it can be seen that at the end of Stage 2, in which conditions gave rise to intergroup friction, members of both the Rattler and Eagle groups were rated favorably by other members of their respective in-group. While the tendency was to rate out-group members unfavorably at this stage (Table 3), there was an even more pronounced tendency to rate in-group members favorably (100 per cent favorable ratings of in-group by Rattlers and 94.3 per cent favorable ratings of in-group by Eagles). [p. 139]
The accompanying figure presents the main findings in graphic form. Ratings of the out-group by both Eagles and Rattlers are significant in the unfavorable direction; ratings of in-group by both groups are significant in the favorable direction. And, as noted above, ratings of in-group and out-group differ significantly in direction.

Thus, competition and rivalry between the groups led to attribution of unfavorable characteristics to the out-group, while this same pattern of intergroup relations was accompanied by a marked tendency to see members of one's own group in a highly favorable light. This finding is relevant to the prediction of intense in-group solidarity under conditions of intergroup competition, rivalry and hostility (Hypothesis 2, Stage 2). It constitutes further evidence that intergroup relations do not necessarily follow the same pattern as in-group relations, particularly when the relationship between the interacting groups is one of rivalry and antagonism.

On the basis of both observational and sociometric data, and evidence in this unit, Hypothesis 1, Stage 2 is supported. During the course of competition and frustrating relations between the experimentally formed groups, unfavorable labels were assigned to the out-group and its members and were used and shared to varying extents by members of the in-group. Social distances crystallized in these standardized derogations were great enough that for a time members of each group expressed a strong desire not to associate in any way with the out-group or its members (see Chapter 5).


At the end of Stage 2 (intergroup friction), a second experimental unit was introduced to obtain further evidence of the products of prolonged negative interaction between the two experimentally formed in-groups. In this experiment, direct judgments of a numerical nature were obtained in such a way that they might reflect the character and intensity of intergroup
relations after a period of competition, rivalry and friction between the two groups. Members of both experimental groups made judgments of items presumably accumulated by members of their own in-group and by members of the rival out-group while performing a task for which the winning group would be rewarded.

It was proposed that negative intergroup relations would produce in time derogatory conceptions (stereotypes) of the out-group accompanied by intensified in-group solidarity and a highly positive picture of the in-group. Further it was proposed that the deprecatory picture of the out-group and flattering picture of the in-group would be internalized by individual members as negative attitudes toward the out-group and positive attitudes toward the in-group, and that these would be revealed

(a) in their ratings of in-group and out-group on significant characteristics embodied in the stereotypes (see [p. 141] preceding section), and

(b) in judgments of the performance by members of the in-group and out-group on a relevant task.

The task chosen for the latter purpose was a bean toss contest, judgments of the number of beans presumably collected by each individual being made after the contest.

Specifically it was predicted that as a consequence of intergroup competition, rivalry, and hostility:

In-group members will tend to overestimate the number of items purportedly obtained by in-group members and underestimate the number of items attributed to out-group members (Hypothesis 1 a, Stage 2).

The data from this experimental unit are to be evaluated in conjunction with observational findings showing increased glorification of the in-group and its members and deprecation of the out-group as a consequence of intergroup rivalry and conflict (Note 2). The judgmental indices obtained should reflect this state of affairs reported by observers and are intended to supplement their findings, not to replace them.

The plan to obtain experimental measures of attitudes formed toward the groups by the end of Stage 2 represents an extension to the level of intergroup relations of a basic psychological principle underlying the conception of this entire study, namely, that all psychological activity is determined by the frame of reference within which it occurs (Chapter 2). The frame of reference consists of the totality of functionally related factors, external and internal, that operate interdependently to determine the psychological reaction at any given time. The relative weights of the external and internal factors in determining psychological activity are not necessarily the same in different instances. The relative weight of these factors varies with the degree of stimulus structure and the nature and intensity of internal states at the time. When stimulus conditions are compelling in structure, the effects of internal (e. g., motivational) factors in patterning perception and behavior are not readily apparent; but under conditions of minimum stimulus structure, of ambiguity or flux, internal factors operating at the time may be clearly reflected in the subsequent behavior. Therefore, in attempts at studying [p. 142] motivational factors through their influence on the patterning of perceptual and judgmental responses, stimulus conditions should be both appropriate and sufficiently unstructured that the nature of the motivational factors can be revealed through the resulting behavior.

Since the presentation of the foregoing formulation (Sherif, 1935), there have been a number of studies investigating various motivational factors through their influence on such processes as perceiving and judging. The distinctive feature of the present experiment is that judgments are used as indices of the relationship between experimentally produced in-groups.

In Sherif's 1949 intergroup relations experiment, in-groups and negative relationships between
them were produced through controlling conditions of interaction in essentially the same way as in this 1954 experiment. It was observed that as a consequence of the negative relationship between groups, in-group members extolled and maximized the performance of in-group members while depreciating and belittling the performance of members of the unfriendly out-group. Attention was called to the feasibility of obtaining precise experimental indices of intergroup relations through their differential effects on the perception and judgments of individual members. Judgments and perceptions of individual members will reflect the influence of membership and participation in the on-going activities of the group.

This being the case, the effects of the group situation, and the changes brought about in attitudes toward the in-group and the out-group and their respective members, can be studied in terms of precise laboratory experiments, such as the currently accumulating judgment and perception studies. This will constitute a significant advance in method over observation of actual behavioral events alone. The actual behavioral events are more difficult to observe with precision and present baffling problems in their ordering along definite dimensions. If the psychological significance can be epitomized and measured in terms of representative judgmental and perceptual situations, we shall be achieving a methodological gain close to the laboratory level. (Sherif, 1951, p. 422).

This proposed method of studying group relations through judgmental indices was applied to a study of status relations within groups that already existed in everyday life (Harvey, 1953). It was found that judgments of future performance of group members provided an index of their relative status positions within the group. Owing to the differential expectations that had become standardized for each status position, performance of high ranking members tended to be overestimated, while that of lower ranking members was estimated significantly less, even to the point of underestimation of actual performance.

The same methodological approach was applied in our 1953 experiment on intergroup relations to the study of status relations in experimentally produced groups. Going a step further, that study tapped the differential expectations for members occupying positions in a status structure which was itself experimentally produced (Note 3). Members of the experimental groups judged the performance of in-group members on the task of throwing handballs at a target board which was designed so that there was little indication of actual performance. The status positions that had evolved during the period of group interaction were reliably revealed in the subjects' judgments of other members' performance made immediately following each throw. The performance of higher ranking members was judged significantly higher than that of lower ranking members.

More recently this technique was extended to the study of negative and positive relationships between small groups existing in everyday life. Harvey (1954) showed that the relationship prevailing between interacting groups is revealed in the judgments of group members under appropriate stimulus conditions. Performance actually achieved by each subject, i.e., the names of cities written under conditions of distraction, were projected on a screen too briefly for actual count, and the number was judged by both in-group and out-group members. When intergroup relations were negative, the tendency was to judge the performance of in-group members at a significantly higher level than that of out-group members.

The present experimental unit is concerned with obtaining judgmental indices of the relationship between two groups which were experimentally produced and which came into conflict as a consequence of experimentally introduced conditions of competition and frustration.

[p. 144] **Procedure:**

Members of the two groups (Eagles and Rattlers) participated in a bean toss contest under strongly competitive conditions and then made judgments of the number of beans collected by each in-group and out-group member as the purported performance of the particular individual was projected on a screen by an opaque projector.
The contest was held after the tournament and various raids of Stage 2 (see Chapter 5). Social distance between the groups was sufficiently great that neither wanted to be in a situation with the other. They entered into this contest when told that the staff members of their respective groups had made a wager on the outcome and as they began to anticipate the five dollar reward offered to the winning group. Before the contest, the leader of the Eagle group predicted darkly, "It will turn into a gang fight." In spite of this initial resistance, both groups participated in the contest with considerable zeal once it was underway.

The beans were spread in equal density in two marked-off areas of similar size. The Rattlers picked up beans from one area, while the Eagles gathered beans from the adjoining area (see Figure). Separate areas were used to prevent pushing and shoving of out-group members. The time allowed for picking up beans was one minute. Pre-tests with comparable subjects before the experiment showed that one minute permitted the collection of 25-40 beans. To prevent the subjects from exceeding this range and to limit possibilities of their counting the beans collected, each was given a small brown paper sack, the open end of which was gathered around a hollow rubber tube with a half-inch opening. Subjects were instructed to pick up only one bean at a time and put it in the sack through the half-inch opening. Thus speed of performance was at a premium. They were instructed not to count the beans, that this would be done later, and were told that everyone would judge the performance of everyone else. The judgmental aspect of the task which was actually the crucial one for this unit, was presented as a regular part of the bean toss contest.

After the beans had been collected, the subjects went to an experimental room (large recreation hall) where the beans collected of each member of both groups were purportedly projected by an opaque projector and judged by both in-group and out-group members. Actually the same number of beans (thirty-five) was projected every time as the performance by every individual in the two groups. The number chosen had been found in pre-tests prior to the experiment to be the optimum number for the brief exposure time used (5 seconds). It was necessary that the number of items projected should exceed the perceptual
span (should be too great to count in 5 seconds), but at the same time be few enough that the subjects would feel that if they had tried just a little harder they could have finished the count. If the actual number could have been accurately established by the subjects, obviously there would have been no indication of motivational factors in their judgments.

The experimenter made it appear that he was putting in new beans to be projected each time, but the same ones were retained for every projection. The experimenter moved the location of some of the beans each time only slightly. Therefore, the form of the projection (circular) remained essentially the same, but the pattern was slightly different from projection to projection.

By a toss of a coin, it was determined that the performance of members of the Eagle group should be projected and judged first. Before the purported performance of each boy was projected, the experimenter called his name and the boy stood up so that both in-group and out-group members would know exactly whose performance was being judged. The subjects wrote their judgments on small pads of paper. Each boy wrote down the name called out. When the biggest of the Rattlers was called off, "Red Brown, "one of the Eagles (Wilson, a lieutenant) said, "I'm just going to put Red Bum on mine."

**Results:**

To test the hypothesis, it was necessary to ascertain the extent to which the performance of each in-group and out-group member was over- or underestimated and to compare these mean differences. Since the same number of items (35) was projected as the performance of each subject, this constant was subtracted from each judgment of performance. Means of these differences were then computed for judgments of performance by in-group members and by out-group members. The differences between the means were subjected to the t-test, using the formula for correlated means. Results of this analysis are given in Table 5.
Table 5

Comparison of Mean Discrepancies between Judgments of Performance and Number of Items Projected (35):

In-group and Out-group Members

<table>
<thead>
<tr>
<th>Group Judging</th>
<th>Group being Judged</th>
<th>Mean Differences</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattlers</td>
<td>Rattlers</td>
<td>3.404</td>
<td>3.697</td>
<td>3.452</td>
</tr>
<tr>
<td>Eagles</td>
<td>Eagles</td>
<td>-0.293</td>
<td>7.246</td>
<td>4.609</td>
</tr>
</tbody>
</table>

From this table it can be inferred that the performance of in-group members was judged significantly higher than that of members of the out-group. The Rattlers' mean discrepancy for judgments of performance by in-group members was 3.404 and that by members of the out-group (Eagles) was -- .293. Thus while members of the Rattler group overestimated the performance of in-group members, they tended to underestimate the performance of negatively related out-group members. (When the beans supposedly collected by the leader of the Rattlers were projected, a member of his group whistled appreciatively.)

Members of the Eagle group greatly overestimated the performance of in-group members (mean discrepancy of 11.802) and overestimated the performance of out-group members significantly less, although not to the point of underestimation reached by the Rattlers in their judgments of the Eagles' performance. (Perhaps the Eagles' recent victory in the tournament over great odds had something to do with this difference.)

For both groups, the performance of in-group members was judged significantly higher than that of out-group members. The results cannot be explained in terms of differences in actual performance:

(a) Since speed was the crucial factor each bean had to [p. 147] be inserted through a small opening in the bag, individuals did not have an opportunity to observe each others' performance.

(b) The number of items projected as the performance of each individual in both groups was identical, in all cases being thirty-five.

These results are concordant with observational findings concerning the valuation of in-group members and deprecation of members of the out-group, and with sociometric findings which revealed a preponderance of in-group choices. Therefore, it can be concluded that the results reflect the solidarity within groups and negative attitudes toward out-groups at the end of Stage 2. Data from this unit also support the hypothesis that, as a consequence of intergroup competition and conflict, in-group members will tend to overestimate the performance of members of their own group and will tend to deprecate the performance by members of a rival out-group.

The findings indicate that conceptions of the in-group and out-group can be tapped experimentally through judgments obtained from individual members of the functionally related groups. Their larger significance bears on the individual - group relationship. They point again to the fallacy of dichotomies between the individual and the group. Here the relationship between groups, a phenomenon at the group level, has consequences not only for the formation of values or social norms within the group, but for the perception and judgments of
individual members as well.

********

Summary of End Products of Intergroup Friction

As a consequence of repeated interaction between the two experimentally formed groups in competitive and reciprocally frustrating situations, and of the cumulative intergroup friction thus engendered, negative attitudes toward the out-group were formed by members of each in-group. These negative attitudes toward the out-group, crystallized in unfavorable stereotypes, were manifested by name-calling, derogation of the out-group, and the explicit desire to avoid association with the out-group (see observational data summarized in Chapter 5). In order to [p. 148] check these observations and to ascertain that they indicated more than merely momentary reactions in intergroup conflict situations, an entire day was devoted to in-group activities following the close of actual competition and conflict between the groups. On the day following this, attitudes toward in-group and out-group were tapped through (1) sociometric choices, (2) stereotype ratings of the in-group and out-group, and (3) judgments of performance by in-group and out-group members in a competitive task (bean toss contest). Analysis of these results confirms in a more precise way the observational findings. The methodological importance of this correspondence between observational and judgmental data is two-fold. First, it provides a check on the validity of conclusions reached. Second, it indicates the possibilities of utilizing judgments of in-groups and out-groups as indices of the state of affairs prevailing on the level of group relationships.

The methodology stems from the approach to the study of the complex processes of interaction in intra- and intergroup relations stated in Chapters 1 and 2. On the one hand, it is feasible to set up the flow of interaction processes in a life-like, natural way; on the other hand, validity and precision can be insured through obtaining data by observation (looking from without), by sociometric techniques (looking from within) and by the introduction of precise laboratory-type experiments at choice points. In our opinion, only through the use of such a combination of methods, applied to the flow of interaction process without chopping it into disjointed pieces, can we hope to attain generalizations with some bearing on the persistent group problems of actual life situations. If we follow such an approach in testing hypotheses, we are less likely to be troubled with the problems of validity which plague so many current studies in this area.

From a theoretical point of view, the results of these experimental units, carried out after actual intergroup conflict had ceased, indicate that events occurring between groups have consequences at both a group level (norms relating to the out-group) and at a psychological level (formation of negative attitudes toward the out-group), and that these consequences outlast the intergroup events themselves.

The crucial question which remains to be answered is whether or not changes in the character of relationships between groups, wrought through altering the conditions in which the groups interact [p. 149] from those conducive to friction to those of interdependence, will result in reduction of friction between groups and changes in negative attitudes and stereotypes standardized in relation to the out-group. This question was the point of departure for Stage 3 of this experiment, to which the next chapter is devoted.

Notes

2. It had been planned to repeat this experimental unit and the stereotype ratings at the end of Stage 3 to secure further evidence of the differential effects of intergroup cooperation toward superordinate goals. However, it became evident that a repetition of this unit and of the stereotype ratings too would yield most direct evidence with least cluttering of the on-going trend of Stage 3.

3. The plans for the 1953 study called for utilizing the same methods to tap attitudes toward ingroup and out-group after a period of intergroup friction. However, this unit was not undertaken until the present 1954 study.

References

Avigdor, R. The Development of Stereotypes as a Result of Group Interaction, on file in the Library, New York University, 1951.

Harvey, O. J. An experimental approach to the study of status relations in informal groups. American Sociological Review 1953, 18, 357-367.


[p. 151] CHAPTER 7

Intergroup Relations: Reducing Friction (Stage 3)

A. Approach to Reducing Friction

At this stage of the experiment, the main objective of our study could be undertaken, namely the reduction of intergroup friction. There are now two distinct groups in an unmistakable state of friction with one another. The groups exhibited in word and deed repeated hostility toward one another; they standardized unflattering attitudes and stereotypes toward one another.
The derogatory attitudes toward one another are not the consequence of pre-existing feelings or attitudes which the subjects had when they came to the experimental site. They are not the consequence of ethnic, religious, educational or other background differentiation among the subjects. Nor are they the result of any extraordinary personal frustration in the particular life histories of the subjects, or of marked differentiation in physical, intellectual or other psychological abilities or characteristics of the subjects. Possible effects of such differences were carefully ruled out in the laborious procedures used in subject selection (Chapter 3).

The state of friction was produced systematically through the introduction of conditions of rivalry and frustration perceived by the subjects as stemming from the other group. By the end of Stage 2, as we have seen, the intergroup friction was crystallized in some unfavorable stereotypes and in the repeatedly expressed desire to have nothing more to do with the other group. To be sure, the words and deeds of hostility, the unflattering stereotypes towards the out-group, the self-righteousness of the in-group were not expressed with the same determination, the same vehemence, the same degree of feeling by any two group members. But, whatever the differentiating degree or intensity in the unique personal manifestation of hostility, the general trend of negative attitude toward the out-group was a common property of all group members. The intergroup hostility was prevalent despite the occurrence of occasional interpersonal rivalry, bickering and friction in the relations within each group. Two boys who engaged in some interpersonal exchange of unfavorable reactions toward one another, at a given time, would join hands a few minutes later in a [p. 152] concerted, common front in carrying out the developing intergroup trend in relation to the out-group. It should also be remembered that the in-group identification and solidarity in in-group and intergroup relations exhibited by in-group members did not stem from pre-existing interpersonal ties. The boys were not even personally acquainted with one another prior to the study. The two in-groups themselves were experimentally produced from scratch in the manner reported in Chapter 4.

It would have been a relatively easy task to bring about positive relations or harmony between groups right after the formation of the two in-groups. We deliberately postponed this positive step in intergroup relations until after the unpleasant task of producing a state of friction, because the vital issue of intergroup relations in the present-day world is the reduction of existing intergroup friction.

The general character of the alternative chosen in our attempt at reducing friction was stated in Chapter 2. In short, the alternative of appeal to a common enemy, which was effectively used in our 1949 study because of expediency at the time, was not used. The unification of groups against a "common enemy" necessarily implies widening the area of conflict.

The alternative of reducing tension by disintegrating the groups as units through devices which make individual "shining" and rivalry supreme without concern for the other fellow was rejected. By following such an approach, we would be destroying the property of intergroup relations which makes its study so crucial today, namely, the relations between group units.

Likewise, the alternative which emphasizes exclusively the role of leaders in change misses the mark, because the effectiveness of leaders, even though weighty, is not unlimited. Leaders are not immune to influences coming from the rank-and-file, once a group trend starts rolling, even though initially the leaders might have been largely responsible for starting the trend.

With such considerations in mind we chose the alternative of introducing common, superordinate goals of sufficient appeal value. But before doing this, we studied the possible effect of mere intergroup contact situations as equals, because there are adherents of this approach both in academic and practitioner circles.

[p. 153] At this point a word of clarification concerning the concept "contact" will be helpful. The word "contact" has flexible denotations which allow it to become a blanket term. It could be used to refer to any kind of interpersonal or intergroup interaction which is within the actual perceptual range. In customary usage, the word "contact" in intergroup relations refers to having individuals from different social, ethnic, or national backgrounds come together on some
specific occasion, such as a tea party, lecture, dinner, or dancing party. We are using the term "contact" in this customary sense and reserving the concept "interaction" for broader generic reference.

We shall report the intergroup contact situations and their results in the next section. The common superordinate goal situations and their products are presented in section C.

B. Intergroup Relations: Contacts Introduced to Reduce Friction

The first part of Stage 3 was devoted to a series of contact situations varying in duration from about 15 minutes to an hour or so, and differing in the character, such as (a) participating together in a psychological experiment with opportunity to interact before and after the experiment, (b) attending a movie together, (c) having meals together in the same mess hall with utmost freedom to choose seats and interact with anyone in any way desired.

Essentially the same general procedure was followed in each of the contact situations. The two groups were taken to the place of contact (for example, the recreation hall or mess hall), both groups arriving at the same time or one shortly after the other, and then they were left to their own devices. Once the groups were in the contact situation, the staff walked away from the immediate contact range and pretended to be engaged in some activity, such as sitting under a tree in conversation. In no contact situations did the Eagle and Rattler staff members associate with one another during the period while the contact situations were being initiated and carried out.

The first contact situation was during the second part of the "bean toss" experiment, in which the subjects were to estimate individually the projected number of beans supposedly picked up by each of the subjects in both groups. The first part of the experiment consisted of picking up as many beans as possible in a [p. 154] unit of time. (See description of this experiment at the end of Chapter 6). Each group was strongly opposed to taking part in the "bean toss" experiment because it involved association with the other group. Even a prize of $5 for the winners was not very effective at first in reducing the resistance of the groups.

Later in the day during a Rattler cookout at Lake Carlton it was announced to them that they had won the bean toss contest and they were given the prize, a $5 bill. They were told they could spend it any way they liked. Assent was unanimous to the first suggestion to the effect that they spend their $5 for the repair of one of their two boats which they had been unable to use for several days because of a leak.

The Eagles, especially, were dead set against participating in any activity which had anything whatsoever to do with the Rattlers. In an early morning swim that day, the Eagles had discovered their flag in the water, burned the previous evening by the Rattlers. Upon making this discovery, they denounced the Rattlers as "dirty bums," and accused them of having put ice in the water (because it appeared to one of them as colder than usual), and of throwing rocks in their creek (because one of them stubbed his toes a number of times during the swim).

Shortly after the beans were collected as one aspect of the experiment, both groups were instructed to come to the recreation hall to estimate the number of beans each "picked up." Two sets of four rows of benches were arranged for subjects during the experiment, only a narrow aisle of about one yard separating the two sets of benches (see pictures, last part of Chapter 6). When both groups arrived in front of the building, they were told to wait there for a short time until the apparatus was fixed. During the wait there was some bantering back and forth between the groups about who had won the tournament. During this waiting period the staff kept away from the groups. When the staff gave the signal to enter (addressed to no particular group), the Rattlers went in the building first. One of the Eagles remarked, "Ladies first." Until the last days of Stage 3, when the Rattlers went in first on such occasions, this "Ladies first" remark was made by the Eagles. The Rattlers took the front seats, leaving the back seats for the Eagles, thus producing seating arrangements strictly along group lines.
There were jeering, cat-calls and insulting remarks as the proceedings permitted. During the event, Mason (E) warned Simpson (R) to stay out of the Eagles' swimming hole. When the beans which were supposed to be Mills' (R leader) were projected, Everett (R) said "Whew!" and several other Rattlers whistled, presumably in respect. It will be remembered that the number of beans projected for all subjects was exactly the same (35 in each case). Toward the end of the event, a Rattler noticed that the pencils were "Eagle" brand, and dropped his, saying in a loud voice that he did not want to touch anything that had anything to do with the Eagles. Most of the other Rattlers followed suit. When the affair was over the groups parted yelling insults at each other. The outstanding among these were Eagles calling Rattlers "Dirty Bums," and Rattlers calling Eagles "Sissies" and "Babies."

The second contact situation took place about half an hour later before the first stereotype rating session. Neither group appeared to be pleased with the prospect of participating in this task in the company of the other group. The Rattlers felt positively insulted at being asked to do so. The same procedure of a short wait for both groups in front of the building was followed. When they were asked to come in, with no indication of which group was to enter first, the Rattlers again entered first, eliciting the "Ladies first" remark from the Eagles. The response to this remark was derisive. The tables for this event were arranged in a V-shape, something that had not been done before. This was done so that position habits would not determine that the groups sit separately, and in their accustomed eating positions. The seating arrangement was strictly along group lines. Again there were no signs of intermingling, but there were complaints about the Eagle pencils and derogatory remarks hurled, especially by Rattlers.

The rest of the day was spent in in-group activities. The Rattlers had their lunch at Lake Carlton, the public picnic ground about two miles south of the camp grounds. The picnic area was full of outside people. The Rattlers' dealings were almost entire within their in-group. The Eagles had lunch at the usual camp mess hall. The Eagle participant observer intentionally sat down at the Rattlers' table to see what would happen. Only Bryan came to sit beside him. Wilson shouted to him to get up because he would get all dirty sitting at that table. Bryan got up and brushed his clothes off.

[p. 156] The third contact situation was before supper in front of the mess hall. Both groups waited in close proximity, the pretext for the wait being that the food was not yet ready. The staff again withdrew from the scene. While waiting, an argument arose as to which group was the best, and invectives were exchanged. When a neutral party gave the signal that the food was ready, the Rattlers started in first, accompanied by the Eagles' now standardized remark: "Ladies first." The Rattlers were in the mess hall quite a while, but the Eagles were not making a move to go in as they usually did. Seeing this, the Eagle participant observer told them to go in when they wanted to. The Eagles waited until the Rattlers had all gotten food on their trays. After the Eagles entered the mess hall, the exchange of unflattering words between the two groups became louder and louder. The Rattlers lived up to their "tough" boy self-image and became somewhat vulgar.

Staff stayed outside, talking until supper was half-way through. The row inside increased in proportion. Both sides were throwing papers and left-overs at each other. This lasted until the Eagles finished eating and left the hall (at their observer's instructions), followed by yells and jeers.

The fourth contact situation was centered around the showing of two 15 minute films, both devoted to maritime topics. The procedure of a joint wait in front of the building (while the projector was being "fixed") and free choice of seats was followed. The Eagles passed the Rattler cabin on the way, and were yelled at by Rattlers. The staff moved away. There was again the exchange of hostile remarks, again the same "Ladies first" remark. During the movie there was practically no exchange between groups. But there was some exchange during the change of films. The seating arrangement was strikingly along group lines. When the event ended, around 9:30 P. M., the staff walked out without telling the boys to leave or anything else. The boys arose and went out, intermingling. But at the door they completely split - each group in the direction of its respective cabin.
The fifth contact situation was planned as breakfast the following morning. The positions of the tables in the mess hall had been completely changed, so that any habitual fixations on a particular table would be broken. The two tables, which had been placed across the mess hall, now ran longitudinally; and the staff table was moved to the opposite end of the hall - away from the [p. 157] boys. (At no meal during any of the three stages did any of the staff members sit at any of the subjects' tables in the mess hall.) When both groups came in front of the hall, the counselors and other authority figures withdrew on a pretext. During a short wait an argument arose as to which group had the most firecrackers. Again a person who had no authority in the eyes of the subjects announced that breakfast was ready. The same "Ladies first" ritual followed.

One of the low status Rattlers (Allen) happened to be the first one in front of the Rattler line. He picked up his food first and carried his tray to the table by the south wall of the mess hall. (The south side of the mess hall was in the general direction of the Eagle area.) Seeing one Rattler at that table (for the choice of which there was no facilitation from previous experience), all the rest of the Rattlers sat at that table. This, of course, determined that the Eagles choose the table by the north wall of the mess hall. During the meal there was razzing and yelling, but not as intense as during supper on the previous night. There were attempts at kicking each other between two different Rattler and Eagle pairs during the course of breakfast.

The sixth contact situation was planned in relation to shooting firecrackers. It was the Fourth of July. In line with the decision not to appeal to values from the larger setting in achieving reduction of intergroup friction, and in line with the subjects' preference, separate ceremonies appropriate to the national holiday were held by each group. However, the shooting of firecrackers was planned as a special contact situation. On the previous day, the Eagles went to town as a group and bought firecrackers with their staff. A similar supply of firecrackers was bought for the Rattlers. Both groups were taken in close succession to a place by the wayside outside of the State Park area to shoot their firecrackers. (It is prohibited to shoot firecrackers within the park area, and the camp is within its bounds.) Wilson of the Eagles said that he didn't want to get out of the truck if they had to shoot their firecrackers with the Rattlers. The subjects were told that they could shoot their firecrackers with anyone they wanted to. Both groups started shooting them at about the same time. At no time was there intermingling of the two groups. At one particular time, Simpson (R) and Clark (E) were closest to one another. Simpson accused Clark of shooting a rock up in the air and hitting him on the head.

The seventh contact situation: Both groups arrived at the mess hall for lunch at the same time, as planned. All staff members withdrew from the immediate area of contact. From that distance, conversation within or between groups could not be heard. Each group stayed on the side of the mess hall entrance nearest its own cabin. There was no crossing-over between groups.

When the announcement "food is ready" was made, both groups moved in. This time the Eagles rushed in first to form the line to pick up trays and food. The Rattlers followed them. McGraw (E), who was the first person through the line, sat at the same table that the Eagles had used in the morning after the new table arrangement.

After eating for a while, someone threw something, and the fight was on. The fight consisted of throwing rolls, napkins rolled in a ball, mashed potatoes, etc. accompanied by yelling the standardized unflattering words at each other. The throwing continued for about 8-10 minutes, then the cook announced that cake and ice cream were ready for them. Some members of each group went after their dessert, but most of them continued throwing things awhile longer. As soon as each gobbled his dessert, he resumed throwing. As the Eagles were leaving they shouted at the Rattlers that they would resume the fight at supper, and the Rattlers responded to this challenge with counter-challenges.

After describing the events summarized above, the Eagle participant observer added the following comment to his report written that day: "It was apparent by this time that mere contact between the groups without the introduction of superordinate goals was going to be insufficient
to reduce the negative between the groups." The Rattler participant observer wrote in his daily report his opinion concerning the inadequacy of mere contact situations in reducing the intergroup friction and name-calling in much stronger terms.

The intergroup events accompanying and following the series of contact situations summarized above confirm the following hypothesis:

**Hypothesis 1, Stage 3**

It is predicted that contact in itself will not produce marked decrease in the existing state of tension between [p. 159] groups.
First efforts to start the truck: Some boys from both groups try to push it.

Successful effort to start the truck: Both groups have transformed against
INTERGROUP RELATIONS: REDUCTION OF FRICTION

STAGE 3

Joint meals on the overnight camp-out show intergroup mingling in preparation and set

Members from both groups asked to be photographed on attaining the Arkansas
Accordingly, it was decided to start introducing interaction situations involving common superordinate goals, instead of situations involving mere contact. In spite of the fact that the activity engaged in during contacts (such as eating, shooting firecrackers) was gratifying or pleasing for each individual member within the in-group bounds, the mere fact of contact had no positive effect toward reducing existing hostility.

C. Intergroup Interaction Involving Superordinate Goals

Thus, contacts which did not involve superordinate goals, in the sense defined at the outset (Chapter 2), were far from effective in reducing intergroup friction. If anything such contacts
served as occasions for further irritation and for expressing unflattering attitudes of group against group.

At this point we turned to procedures suitable for testing the main hypothesis concerning the reduction of intergroup conflict:

When groups in a state of friction are brought into contact under conditions embodying superordinate goals, the attainment of which is compelling but which cannot be achieved by the efforts of one group alone, they will tend to cooperate toward the common goal. (Hypothesis 2, Stage 3)

The present section will be devoted to a summary report of stimulus conditions introduced which were conducive to the emergence of superordinate goals and to reactions of the subjects obtained by various measurement techniques. Thus this section includes:

1. A brief account of stimulus conditions introduced for the arousal of superordinate goals and observational data relevant to the hypothesis stated above.
2. Sociometric choices of group members revealing their attitudes toward in-group and out-group members and a comparison of these choices with those obtained at the end of Stage 2.
3. Judgment indices of attitudes toward the respective [p. 160] in-groups and out-groups in the form of stereotype ratings and their comparison with the stereotype ratings obtained at the end of Stage 2.

1. Superordinate Goals and Interaction Episodes Related to Them

The Drinking Water Problem: The first superordinate goal to be introduced pertained to drinking-water at a time when both groups faced the prospect of thirst and became progressively thirstier with the successive steps of activities directed toward solution of the problem. In general outline, the plan consisted of having members of both groups perceive common deprivation which could be alleviated (so it appeared to them) by the cooperation of members of both groups. Thus a situation of functional interdependence involving a common goal was produced.

First, a word concerning the preparation of stimulus conditions is necessary. All of the drinking water in the camp, which is distributed to various parts of the camp (kitchen, latrines, drinking fountains located near cabins and other convenient spots), comes from a reservoir on the mountain north of the camp. It is pumped up to the large water tank higher on the mountain (about 1 1/4 miles from camp) and stored there in sufficient supply for a certain period. A valve at one end of the tank controls the flow of water and can be cut off to prevent the passage of water to the main pipe which, as it reaches the camp grounds, runs into various smaller pipes to the various outlets. (For location of the places and items mentioned above, see the map, Chapter 3.)

Several hours before the execution of the plan, the valve on the tank was cut off, leaving only the water already in the main pipe to supply the camp for the time being. After turning off the valve, two large boulders were placed over it, which had to be removed before the valve could be turned on again. In addition, the faucet at the end of the tank opposite the valve was stuffed with pieces of sacking so that no water came from the faucet when it was turned on. The latter device was planned to require a solution of the problem, since getting a drink when members of both groups were thirsty would itself have very high common appeal value.

Right after the water was cut off at the tank, the boys were [p. 161] informed by their respective participant observers that there might be a water shortage in the whole camp as there seemed to be some trouble with the water system, but that it was being investigated. They advised
members of each group to fill their canteens in case the water shortage became worse. The boys were told that in the past, on occasion, vandals had tinkered with the water system, causing difficulties. This warning was given in order that the blame for their thirst not be placed on the camp staff. After this all of the remaining water was drained out through faucets which were not within sight of the subjects. (Of course, for any emergency sufficient water was stored in the small tank in the kitchen both for cooking and drinking purposes. But the subjects did not know this.)

The execution of the plan was postponed until 4 P. M. so that there would not be much, if any, water left in the subjects’ canteens. Before actual efforts toward getting the water to run again the topic of the water shortage became a common topic for concern in both groups.

The experimentally planned activities may be summarized as follows: All members of both groups were present at the announcement of the complete failure of the water system, depriving the entire camp of drinking water. In order to make the situation real to the subjects, this took place at the spot where the end of the main water pipe from the tank was visible and where there were a number of faucets in a row which could be turned on. Thus subjects could see for themselves that there was not a drop of water coming through.

After the above demonstration the subjects were informed that there was something wrong with the water system and that the trouble could not be located. They were told that the difficulty might be a leakage in the pipe between camp and the reservoir, it might be at the pump by the reservoir, or it might be at the tank. Thus the first step was to find the cause so that necessary steps could be taken to remedy the difficulty. The announcement went on to say that the help of about 25 people was needed.

Upon hearing the announcement, members of both groups volunteered to help. The area between the camp and the reservoir, it was announced, was to be divided into four segments to be inspected by four different searching details. One staff member would accompany each detail. It was announced that five boys [p. 162] were needed for the area around the reservoir. This was the detail to go farthest, and it would be accompanied by an Eagle staff member. The volunteers that stepped forward for this detail were all Eagles. The detail for the segment adjacent to the reservoir area up to the tank was to be accompanied by a Rattler staff member. Volunteers for that detail were all Rattlers. The same alternation was followed for the remaining two segments with an Eagle staff member and Rattler staff member accompanying the two details, respectively. Without any exception, each detail consisted of volunteers from the same group as the staff member accompanying the detail. (A detail of 2 boys and a staff member was to stay by the faucets in camp for an hour, and then go to report at the tank area.) The details at the end segments were to move toward the tank area, reporting on the way to the adjacent detail if they found any difficulty. All groups would congregate at the tank to investigate it if nothing was found along the way. Thus, the division of the area into segments and alternation of adjacent segments between Rattlers and Eagles produced a situation of interdependence in a coordinated activity.

In a little over an hour, all the details from both sides of the tank congregated at the tank, of course having found nothing wrong on the way. Thus the tank was the only alternative left for locating the trouble.

The first object to attract attention of everyone in both groups was the faucet at the north end of the tank, since most of them were thirsty. Some of the Rattlers still had a little water in their canteens, but the Eagles did not even have their canteens with them. The appeal of water was great and urgent, especially for the Eagles. (Both groups had come to this faucet for drinking water during their camp-outs at the reservoir during Stage 1.) Of course, no water came out of the faucet. The next problem was immediate and compelling: to secure drinking water then and there. The fact that no water came out of the faucet led to a discussion within and between groups as to whether there was any water in the tank. During this discussion, there was pounding of the sides of the tank. Then some Rattlers discovered a ladder about 30 feet from the tank (where it had been moved in the morning when the faucet was stopped up and the
valve turned off). There was rejoicing over this discovery. Immediately some of the Rattlers brought the ladder to the side of the tank and climbed to the top, followed by the Eagles. The boys took turns taking off the lid to inspect the inside of the tank (see [p. 163] picture in this chapter). There were several exclamations that the tank was three-fourths full.

The discovery of a practically full tank turned attention of both groups to the faucet again. In investigating the outlet, Mills (R leader) found the sack stuffed in the faucet. Almost all the boys gathered around the faucet to try to clear it. Suggestions from members of both groups concerning effective ways to do it were thrown in from all sides simultaneously with actual efforts at the work itself. Especially Craig (E) gave continual advice to whoever was trying to get the material out, no matter which group that boy belonged to.

In the actual extraction of the sack, various improvised tools (knives) belonging to different individuals were used. Mills worked for a time; Clark (E) was one of the first to work, making suggestions at the same time. First one and then another boy tried to get the sacking out: Simpson (R), Clark (E), Mills (R), McGraw (E), Brown (R), Mason (E), Allen (R), Swift (R) all taking turns. The work on the faucet lasted over 45 minutes, during the first 30 minutes being the focus of interest for most members of both groups. During this first period, there were continually from 15 to 19 boys standing in a tight bunch watching the work. A few drops of water aroused enthusiasm, but completion of the task was not in view. Interest started lagging toward the end. At this point Everett (R) suggested that the Eagle participant observer (calling him by his first name) was a big guy, and how about letting him try it. (This same Everett had been very vociferous in denouncing this same Eagle staff member when he had come near the Rattler cabin on some occasion.) Everett’s suggestion was taken up by other boys, and the staff took over, eventually completing the job with the use of wrenches.

When the water finally came through, there was common rejoicing. The Rattlers did not object to having the Eagles get ahead of them when they all got a drink, since the Eagles did not have can teens with them and were thirstier. No protests or "Ladies first" type of remarks were made.

When the first enthusiasm for the work on clearing the faucet had died down, individual drifting away from the faucet increased. Among these boys there was a noticeable increase of mingling across group lines in such activities as catching lizards and making [p. 164] wooden whistles. This good-natured mingling in several spontaneous activities took place within the framework of the common deprivation and of the interdependence that arose as a consequence of the immediate concern of everyone. This was the first striking instance in which we observed friendly interaction among members of the two groups on a general scale. For example, during the work, Everett (R) offered the use of his knife. Craig (E) told him that if it worked he would shake hands with him for supplying the tool that did the job.

After the Eagle staff member took over work on the faucet, staff called attention to the fact that there should be a valve leading to the main water pipe, which might be the cause of the water shortage at camp. Some of the Rattlers went to that side of the tank and removed the boulders, then turned on the valve. Subsequently there were contradictory claims as to who discovered the valve.

It cannot be said that the negative attitudes toward the out-groups, the standardized unfavorable stereotypes were disappearing as a consequence of the introduction of this single superordinate goal of high appeal value, even though there was cooperation and friendly mingling at the time of the activities related to it. The carry-over effects of the negative intergroup attitudes were observed at supper that very evening, and on subsequent occasions as well.

At supper time the procedure was followed again of having both groups wait for a short time before the meal while the staff members withdrew from the contact area. When announcement was made for the groups to enter, the Eagles went in first, and this time the Rattlers expressed the insinuation: "Ladies first." During the meal, members of both groups started throwing leftovers, bottle caps, and paper. Thus they did live up to the public announcement which they
made to each other when leaving the mess hall after lunch that they would resume the "garbage fight," as the Eagles called it. At this supper, throwing of objects started in a rather good-natured way, but, in time, took on serious proportions. The throwing continued and had to be stopped.

On the way to breakfast the following morning, the Rattlers saw the Eagles coming and made several derisive comments. Barton (R) remarked that the Eagles had gone in the mess hall [p. 165] first the last time. When they got close to the front of the mess hall, Simpson (high status R) said "Howdy," and was answered by several Eagles. The same procedure was followed of having both groups wait for a time while staff members kept away. The Eagle entered first again. While in line the Rattlers started singing the Caisson Song and were joined by several Eagles. As the boys started putting food on their trays, the cook (who had no special authority in their eyes) asked for their attention. She told them that throwing things at each other during meals made such a mess and cleaning up was taking so much time that she would not be able to cook such good meals if it did not stop. This appeal was effective. During breakfast there was some horseplay and intermingling between groups. Someone started to throw something and McGraw (E) said, "Remember, you guys, no throwing." The groups parted peacefully after the meal.

In spite of the cessation of "garbage fights" there was tangible evidence of negative intergroup attitudes when the Rattlers were told before lunch that there was a possibility of going to a nice lake 60 miles away for an overnight camp-out. The Rattlers showed general enthusiasm until Mills (R leader) asked, "Are those damn Eagles going?" Another Rattler added, "I'm not going if they go."

Similarly, when the Eagles were told of the possibility of getting a movie to show, Craig said, "Do we have to do it with the Rattlers?" Later he said, "We want to do some things by ourselves." On the other hand, other Eagles indicated that they had no serious objection if the Rattlers were in on the movie too.

The Problem of Securing a Movie: The next superordinate goal to be introduced was a feature-length movie which has been a favorite for boys of this age level. Two films had been chosen after consulting experts on films and brought to camp along with other stimulus materials. The plan was to ascertain the appeal value of the film for the boys and then to make securing it (supposedly from the neighboring town) dependent on both groups contributing a sum of money which would appear rather prohibitive for one group to contribute alone.

In the afternoon, the boys were called together and the staff suggested the possibility of securing either "Treasure Island" or "Kidnapped": Both groups yelled approval of these films. After [p. 166] some discussion, one Rattler said, "Everyone that wants Treasure Island raise their hands." The majority of members in both groups gave enthusiastic approval to "Treasure Island" even though a few dissensions were expressed to this choice.

Then the staff announced that securing the film would cost $15 and the camp could not pay the whole sum. Members of both groups began to make all kinds of suggestions. Mills (R leader) jumped out between the two groups and suggested $5 each from the camp, Rattlers, and Eagles. Myers (E) said the camp should pay $5, the Rattlers $10, and the Eagles nothing. Harrison (R) suggested that the Eagles pay $5, the Rattlers $10, and the camp nothing. Simpson (R) suggested that the Eagles pay $5 and the Rattlers $2. Then Myers (E) proposed that each group pay $3.50. Mills (R) took this suggestion from Myers (E) and called for a vote. He counted votes in both groups. The proposal was strongly supported. After this, there was heated discussion in both groups concerning who would do the figuring for each group to find out how much each member of the respective groups would have to pay. While the groups were figuring this out, there was a great deal of horseplay and intermixing of the groups.

At last, each group came up with its solution. The Rattlers figured that each of the 11 Rattlers would have to contribute 31¢. Each of the 9 Eagles would have to contribute 39¢ toward securing the common goal. The Rattlers asked their staff members to contribute so that their
total would come to $3.50. McGraw and Myers (E's) told the Eagle staff members that they
would have to pay too, and gave the reason that the staff would get to see the movie too. Both
staff members agreed to do so. Martin read the list of contributions from the Rattlers, and
McGraw those of the Eagles.

It is worth noting that in individual terms this scheme of contribution was not equitable. But it
was an equitable solution between the two groups. The cooperation needed to secure the
movie was cooperation between groups, and it was perceived as such by individual members.
Therefore, the solution was seen as an equitable one by individual members of both groups.

At supper there were no objections to eating together. Some scuffling and play at sticking
chewing gum around occurred between members of the two groups, but it involved fewer boys
on both sides than were usually involved in such encounters. It [p. 167] looked like a fist fight
might develop between Simpson (R) and Mason (E), but their tempers cooled off.

After supper, "Treasure Island" was shown in the mess hall. Five rows of benches were placed
in the hall with an aisle in between. Both groups were waiting to enter, and were told to come in.
There was some confusion momentarily as to where to sit. When the milling about stopped,
the seating arrangement was pretty much along group lines with a few exceptions. The boys
were absorbed in the film, and there was very little conversation.

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In line with the main hypotheses of this stage, it was planned to have a series of situations
embodying superordinate goals. However, a serious concern arose for further planning of
superordinate goals. It became evident that in a camp situation like this one, isolated from a city
or town and from outside influences, the facilities for daily activities were by this time acquiring
decidedly routine aspects. Since the subjects had come to know the facilities afforded by the
camp and in the general surroundings, it became increasingly difficult to introduce
superordinate goals that would arouse high motivational appeal but were also inherent in the
situations. Therefore, an attempt was made during the day to secure additional transportation
facilities to take both groups to Cedar Lake, which is 60 miles southeast of the camp and
affords complete detachment from the accustomed camp facilities in many respects.

Of course, this procedure does not imply that under all circumstances and for all groups one
has to search for an isolated place to find situations embodying superordinate goals for
functionally related groups. If there are goals of sufficient strength for both groups in question,
or serious issues in which both groups are involved with high concern, these superordinate
goals can be introduced even within some neighborhood of a metropolis. But in a camp
situation which was by now familiar and with subjects of the age level in question, the
alternatives for superordinate goals were limited in number. The immediate possibilities at the
camp were fairly static, since no outside influences intervened.

[p. 168] The attempt to carry out the plan to go to Cedar Lake on the day following the showing
of "Treasure Island" failed because transportation was not secured. Therefore, instead of
introducing superordinate goals in an improvised way with items which might appear artificial to
the subjects, the day was marked by a return to in-group areas and activities.

While waiting in line for breakfast on the day following the movie, the two groups discussed and
reached an agreement that the Rattlers would go into breakfast first, and at lunch the Eagles
would be first. (Such alternation had been discussed the previous day, but no agreement
reached.) Thus the notion of "taking turns" was introduced by the boys on the intergroup level
to regulate matters of mutual concern, rather than each group rushing to be first.

The Rattler group went to their hideout to look after their boat, tent, and other equipment there
to take them back to their cabin. One of the activities they engaged in there had important
carry-over effects and significant implications in the course of intergroup interaction on the
following day when the joint overnight camp actually did materialize. Before lunch, the Rattlers
again started chopping on a big, dead pine tree which they had been trying to chop down for two days in leisure moments. When the trunk was chopped through, the tree still did not fall. The standing tree constituted both a challenge and a hazard (since it might crash down at some inopportune moment). The boys discussed how to get it down. One suggested that they had beaten the Eagles at Tug-of-War, so let's have a Tug-of-War against the tree. The tug-ropes were tied to the tree, and they all pulled the tree down - to everyone's great satisfaction. Thus, a means once used in conflict with the out-group was now employed to defeat a stubborn and hazardous tree.

In the meantime, the staff was planning the overnight camp at Cedar Lake, both its introduction to the groups and its execution. Both groups were asked to name their preferred activities for the remaining three days of camp, with the promise that as many as possible would be carried out. The selection of activities was discussed in the two groups separately. Camping out was on the list of preferred activities prepared by both groups. During the two previous days, the staff had been dropping descriptions of the Cedar Lake site, 14 miles south of Heavener, [p. 169] Oklahoma. Objectively that site is an attractive spot -- a clearwater lake surrounded by wooded hills, picnic facilities on high flat ground with tall shady trees, a fresh water pump centrally located. The greatest advantage this site afforded was that there were practically no people visiting there. It looked as though it were an abandoned island. This isolation, as well as other characteristics of the site, were carefully checked beforehand on two trips to the site by different staff members.

The "build-up" of the Cedar Lake site to the subjects became almost superfluous. While the Eagle participant observer was trying to describe it, the boys had decided they wanted to go there, even before he finished. One of the attractions for them was riding there in a truck. When the fact was mentioned that Cedar Lake was only about 30 miles from Arkansas, the immediate response was "Maybe we could go to Arkansas." This desire spread among the members of both groups. However, Mason (E) asked in a displeased way if the Rattlers would be in on every thing the Eagles wanted to do.

It will be recalled that the Rattlers had also raised some objections on the previous day to going to Cedar Lake with the Eagles. Staff members in both groups assured the members that they could have their own trucks for the trip to Cedar Lake.

Camp-out at Cedar Lake: The staff spent most of the night before the departure for Cedar Lake on final preparation. A separate truck was parked near each cabin, and equipment for each group was placed near their respective truck. A special point was made by staff to mix up the tent accessories (poles, stakes, hammers) in a way that would make it impossible for either group to erect their tent without exchanging parts with the other group. Food was chosen for lunch in bulk form so that the problem of dividing it between groups and then of slicing it into individual portions would arise.

Both groups were most enthusiastic about the trip. Breakfast was eaten at 6 A. M. in short order. Especially in the case of the Rattlers enthusiasm was so great that their insistence on an early start acquired nuisance proportions for the staff. They had voluntarily loaded and packed the truck before breakfast, the truck being floored with mattresses, with bedrolls around the [p. 170] sides to lean on. The trucks pulled out around 7 o'clock, the Rattlers' shortly after the Eagles'. Except for intervals of rest, the boys sang their preferred songs during most of the trip.

On arrival at Cedar Lake each group was taken first to a level place over the concrete dock by the lake. The swimming place was about one-fifth of a mile from the main camping area and separated from it by a little valley and trees so that it was not visible. When the Rattlers arrived the Eagles were already in the water. The Rattlers went in the water also. There was about a half-hour overlap when both groups were in the water together. There was some intermingling between groups, but most conversation was directed to fellow group members.

While both groups were swimming, the trucks moved to the main camp area. The gear, tents, etc. were dumped in two piles about 50-60 yards apart, the water pump being approximately
half-way between the Eagle pile and the Rattler pile. Beside each pile of belongings there were separate picnic tables and fireplaces, in case the Eagles and Rattlers chose to have their meals separately. Only one truck was left at this main camp area, and this was the older-looking of the two. The tug-of-war rope was thrown on the ground about 20 feet from the truck, which was parked at a central point. The newer truck and a station wagon were removed and hidden behind trees on side paths away from the main camping area. The food was left in the station wagon; however eating utensils (paper plates, cups, flatware) and jars of pickles and mustard were stacked on a table centrally located and near the lake.

After swimming, the counselor of each group took his group to its respective tent and picnic table location. The boys were getting hungry after the early breakfast, trip, and swim. Members of both groups went to inspect the centrally located table on which utensils and accessories were piled. This set the stage for the introduction of a superordinate goal.

**Tug-of-War against the Truck:** The staff member who drove the truck announced, so that everyone could hear, that he would go down the road a piece to get the food. Both groups (about 15 yards apart now) watched with interest as the driver got into the truck. The driver struggled and perspired, the truck made all sorts of noises, but it just would not start (as planned). The boys became more and more interested. Several Rattlers suggested, "Let's push it," but they abandoned the idea because the truck was parked facing up-hill. The tug-of-war rope was in plain sight of both groups. Mills (R) said, "Let's get 'our' tug-of-war rope and have a tug-of-war against the truck." Someone said, "Yeah, we can't push it." Swift (R) said, "20 of us can." Several boys agreed loudly with this, Mills adding, "20 of us can pull it for sure." The idea of having a tug-of-war against the truck was repeated by several boys in both groups. Mills (R) ran over to get the rope and started to tie it to the front bumper of the truck. An Eagle said it would be too long, and suggested pulling it halfway through the bumper, thus making 2 pulling ropes. Clark (E) fed it through the bumper while Mills (R) stretched it out. Harrison (R) suggested that the Eagles pull one rope and the Rattlers the other. Barton (R) said, "It doesn't make any difference."

The line-up pulling on the two ends of the rope was Eagles on one side and Rattlers on the other, with the exception that Swift (big R) joined the Eagle side as anchor-man and Craig (E) was next to Brown (R), the anchor-man on the Rattler side.

The first pull did not "start" the truck, and it was allowed to roll back down the hill for another pull. (The truck was, of course in running order, but the performance was completely convincing.) On the second pull, the members of both groups were thoroughly intermixed on both ropes. Some members of both groups began chanting "Heave, heave" in rhythm, something the Eagles had started during the tug-of-war in Stage 2. Finally the truck started, and the boys all jumped and cheered. Allen (R) shouted: "We won the tug-of-war against the truck!" Bryan (E) repeated, "Yeah! We won the tug-of-war against the truck." This cry was echoed with satisfaction by others from both groups.

Immediately following this success, there was much intermingling of groups, friendly talk, and backslapping. Four boys went to the pump and pumped water for each other: Mills (R), Hill (R), Craig (E), and Bryan (E). Thus the successful, interdependent efforts of both groups in pulling the truck, which was to get their food, had an immediate effect similar to that of superordinate goals introduced on previous days at the camp - intermingling of members of the two groups and friendly interaction between them.

[p. 172] **Separate vs. Integrated Meal Preparation:** The driver went to get the food in the truck. While waiting for it to arrive, the participant observer of each group brought up the problem of whether his group wanted to alternate preparing meals with the other group or prepare them separately for themselves. In the Rattler group, Mills (leader) suggested that the Rattlers prepare one meal that day and the Eagles the other. This was discussed at some length and agreed upon by the Rattlers. There were no derisive comments about the Eagles during this discussion, and no objections made to eating with them, although prior to the trip, several Rattlers had objected to the idea of coming to the same place the Eagles were.
The discussion on this topic in the Eagle group took a different turn: At the outset, Craig and McGraw objected to an alternating arrangement in preparing meals, saying they wanted to cook for themselves. Low status Eagles (Clark, Cutler, Lane) were in favor of alternating with the Rattlers. After some discussion the decision was crystallized by Mason (E leader) who stated his opposition to alternating food preparation, and other high status members supported his position, one after another.

These discussions and the decisions reached are particularly enlightening in view of what actually took place immediately thereafter. The lunch materials had been selected so that if the groups decided to eat separately, they would have to divide the ingredients before doing so. For example, the main item was an 8 pound can of uncut luncheon meat. These situational factors, including the location of the food, took the upper hand in determining how the meal would be prepared. Here curtailment of effort involved in division of the supplies became dominant.

When the truck arrived with the food, both groups rushed from their respective camp areas and started carrying the food to the centrally located picnic table. At the table, they gathered around discussing across group lines whether they would alternate in meal preparation, the Rattlers favoring it and the Eagles opposing it. But in the midst of this discussion, food preparation together actually began. McGraw, the customary meat-cutter in the Eagle group, began cutting the meat. He received much advice from everyone, and Mills (R) stood at his elbow for a time and helped him. In the meantime, Simpson (R) and Craig (E) poured Kool Aid into a bucket, Harrison (R) went for water to mix it, and Myers (E) poured in what he thought was sugar. Unfortunately, it turned out to be salt; but Myers was not berated by either Eagles or Rattlers for his mistake, even though the only immediately available Kool Aid was ruined. Harrison (R) pointed out that it wasn't really Myers' fault since the salt was in a sugar sack. Low status members on both sides were particularly active after this in preparing and distributing food. At one point, Mason (E leader) and Simpson (R) were talking and Simpson said, "You never thought we'd be eating together?" The reply was laughter. (See pictures.)

The first Eagles through the line went to a centrally located picnic shed nearby and sat down at the tables. The first five or six Rattlers went to tables near their own camp area. Allen (R) asked a staff member where he should sit, and was told to sit any place he wanted. He then went to the shed and sat down with the Eagles. Neither at this time nor later was he criticized for his action. After eating, Mills (R) and Barton (R) also drifted over to the Eagle table for a short time. Shortly both groups went to their respective camp areas for a rest period.

After separate rests, the two groups were taken to swim, one shortly after the other. This time the Rattlers were in first, but got out of the water on seeing a water moccasin darting about. When the Eagles arrived, the Rattlers told them in excited tones of a snake moving around in the vicinity, describing it in detail. For about 15 minutes, all of the boys stood together at the pier and discussed this common threat coming from nature. Then they swam together at another spot for a short time, both groups mixing together in the water.

Tent-pitching: At about 4 o'clock in the afternoon, after the swim, another superordinate goal was introduced. It will be remembered that in packing the tents, the accessories were mixed so that for either group to erect a tent, some exchange of parts would be necessary. Now when each group prepared to erect their tents for the night, each noticed right away that they did not have all the complete and necessary accessories. The staff member who was regarded by the boys as the camp authority was standing between the two camp areas. The two groups started toward him carrying extra parts and arrived in front of him at about the same time. Members of the two groups began telling [p. 174] each other what extra parts they had, and what was needed. After exchanging very few words, the trading of necessary items was accomplished in a matter-of-fact way between the two groups - the perceptual situation was so compelling.

When the Rattlers started to erect their tent, they found they had neglected to get a stake-driving mallet in the trade. They used rocks instead, with staff assistance, finishing the job by themselves. They were aware throughout of the Eagles' progress in tent-pitching and felt quite
satisfied when their own tent was up first, since the Eagles had won the tent-pitching contest in Stage 2. Someone commented that they had won this time even using rocks; and another Rattler suggested that maybe they should have used rocks for driving stakes in the contest. The Eagles were also aware of the Rattlers' progress; but since they were having a hard time putting their tent up on uneven ground, they did not try to compete with the Rattlers.

The Truck Stalls Again: Before supper, the truck going to get food stalled again, as planned. This time, discussion was practically unnecessary. The pattern for cooperation was established. The first effort, initiated by Rattlers, was to push the truck (see picture). When the truck rolled into a hanging tree limb, Mills (R) got the tug-of-war rope again. The rope was pulled through the bumper, and two bunches of boys lined up to pull. However, these two lines on each side were not the Eagle and Rattler groups. Members of both groups were thoroughly mixed together in the pulling, which was accompanied by concerted rhythmic chants of "Heave, heave."

Again there was pride in the joint accomplishment. Thus the same tool which had served first in a competitive situation during group conflict, and which was later used by one group in their efforts to fell a tree, now became the standard means for interdependent efforts by both groups toward a common, superordinate goal (starting the truck which brought food for all).

This sequence probably points to the fact that the nature of intergroup relations - for good or evil - does not necessarily stem from the existence of tools and techniques: the same tools and techniques can be used in the service of harmony and integration as well as in the service of deadly competition and conflict.

As soon as the boys saw the truck returning with food, they rushed to the table where food was served at noon. This time the main dish was steak-meat in a big chunk, and the necessary division of labor was more elaborate. However, the cooperative pattern was now established and there was no appreciable discussion of it. As soon as the truck was unloaded, in which the boys helped both groups began to work at preparing supper. There was much intermingling - Rattlers and Eagles working side by side, taking suggestions from each other, and reaching decisions about what to do together. For example, McGraw (E) told three Rattlers to "Come on, boys, and put that Kool Aid in there," and they did. Simpson (R), Hill (R), and McGraw (E) all tried their hand in the initial stage of cutting steaks off the big chunk of meat. McGraw (E), Simpson (R), and Wilson (E) declared that they were going to cook.

After these boys declared their intention to cut meat and cook, staff members stepped in to give effective assistance in getting the meat cut and the steaks broiled. Other Eagles and Rattlers worked together in setting out utensils and other food. After the preliminary preparations, those boys who were not helping rushed to pick up paper plates and to form a line by the fire, in which no one gave a moment's thought of preserving arrangements in terms of group lines.

All of the boys ate under the shed where the Eagles had eaten lunch. Eagles and Rattlers were interspersed up and down the table on both sides. There was considerable changing and shifting back and forth in the seating arrangements throughout the meal.

After supper a good-natured water fight started at the edge of the lake, but the throwing and splashing was not along group lines. The leading parties on one side were Simpson (R), Mason (E), and Swift (R), while those leading the other side were Mills (R) and Brown (R). The boys engaged in this until they were soaking wet, then dried out by the fire. Rain clouds came up over the hill with a strong wind. The boys retired for the night to their respective group areas.

The Trip to the Border: The following morning (Day 6, Stage 3), the Rattlers awoke first and started talking about the trip to Arkansas, exchanging notes on the states they had visited. The Rattlers attention was concentrated on the Eagle camp. Martin (R) asked if the Eagles were going to Arkansas too. When the counsellor answered affirmatively, there was no objection or comment. Simpson, Newman, Harrison, and Alien (all R's) went to the Eagle camp to see the lizards Mason (E) had caught and frogs that Cutler (E) and Clark (E) had collected.
The Rattlers were anxious to start on the trip to Arkansas before breakfast, and they kept getting in and out of their truck, which they had loaded even before breakfast. A short time later both groups were asked to come to a central location for an announcement.

It was announced that, as they well knew from experiences of the previous day, the older truck was not in good shape for the trip to Arkansas and back to the camp. (The truck referred to happened to be the Eagle truck. Of course it was in running condition. But it had been demonstrated to be liable to break down on the previous day as a part of the plans for producing problem situations embodying superordinate goals. This build-up of a poor reputation for the truck was also appropriate for the introduction of the problem situation now being described.) It was added that in view of the condition of the truck, it might be preferable to give up the idea of going to Arkansas, since there was only one truck. General disappointment was voiced, especially by the Eagles.

McGraw (E) suggested that the Rattlers go to Arkansas first, and then that the Eagles would go in the Rattler truck when they returned. But Craig (E) objected that the Eagles didn't want to wait around all morning; and when Mason (erstwhile E leader) started chanting "Let's go home, Let's go home..." (meaning camp), Craig joined him.

At one point, Clark (E) said, "We could all go together" but Simpson (R) said, "No" - that the Rattlers would go to Arkansas and the Eagles could go back to the camp. This discussion illustrates well the state of flux which prevailed at this time in intergroup affairs. At times, as at supper the previous evening, the group lines seemed to disappear; at others the group demarcations would re-appear. Whether or not group lines would be followed was coming to depend more and more on factors in the immediate situation (situational factors).

[p. 177] In this instance, the problem at hand was discussed for a short time. Then Mills (R leader) proposed that they all go in the Rattler truck: "We can move some of the mattresses into the other truck, and then we can all get in our truck." Allen (low status R) repeated this suggestion and several Eagles expressed approval. Simpson (R) agreed that would be possible, but added, "Let's don't."

Mills (R) now moved out of his group and paced up and down between the groups, explaining his ideas to both of them. When staff asked what they were going to do, there was a general hub-bub which was resolved when Mills (R) and Clark (E) said "Let's go!" and headed for the Rattler truck. All the other boys, both Rattlers and Eagles, ran after them, piled in the truck, and yelled out to staff to "Hurry up!" "Let's go!" This is another striking instance of action taking precedence over verbal discussion, although the latter played an important part even in this decision.

While both groups were in the Rattler truck waiting to pull out, the Rattlers asked the Eagles to tell them who got homesick and went home from their group. Then as the truck started out on the trip, notes and memories were exchanged concerning the raids which had aroused so much indignation during Stage 2. Now there was mirth over some of the episodes, and some bragging over who did what. Shortly, Clark (E) began to whistle the Star Spangled Banner and was joined by several boys. Boys from both groups joined and shortly everyone was singing. Without any discussion, the members of both groups now continued signing for about half-an-hour, alternating a song which had become associated with the Eagles with one which the Rattlers had adopted. No one suggested that the songs of the two groups be alternated, but in fact they were. The arrangement of "taking turns" at an intergroup level was being extended from one activity to others.

The truck stopped in Heavener, Oklahoma to allow the boys to have cool drinks. They streamed out of the truck into a drugstore; and the seating arrangements at the tables, which seated four or five boys each, reflected little of the group demarcations.

Back in the truck and onto the highway, the Arkansas line was reached, but the road had turned from a hard-surfaced highway to a dirt road. Conversation died down during this dusty
portion of the trip. When the truck finally arrived at the prearranged lunch stop, the boys felt they had "been through" something together: the fine dust was deposited over everything and everyone.

Lunch was eaten in a private dining room, secured at a restaurant, amid much laughter and boisterous conversation. Members from both groups were thoroughly intermixed at the four tables. After second servings, a paper and pencil were placed on each table, and the boys were told to list the flavors of ice cream they wanted. Then they were told to combine the lists at a side table. Myers (E) and Martin (R) both volunteered to do this. Myers was closest to the table, and therefore was able to get the pencil and paper first. But boys from both groups intervened, insisting that Myers and Martin work up the combined list together, which they did.

After lunch most of the boys wrote postcards to send home as evidence that they had been in Arkansas. Then the trip continued back to the Arkansas line, which had been crossed in the morning but not noted because there was no marker and the road was so dusty.

At a coke stop near Fort Smith, Craig (E) and Allen (R) suggested that when the camp was over everyone should return to Oklahoma City together on the same bus. This idea was approved by most boys in both groups, although some said nothing and Harrison (R) muttered, "Let's go back like we came." Mills (R leader) said nothing until it was evident that the majority supported the idea, then he backed it too.

When the truck arrived at the state line between Arkansas and Oklahoma, the boys got out of the truck and most of them posed to have their pictures taken. Many of them stood straddling the state line so they could tell their family and friends that they had been in two states at the same time when they returned home (see picture).

During the entire trip from Cedar Lake into Arkansas and back across the line into Oklahoma, there were very few signs of group demarcations or identifications. However, when the truck arrived at camp and the Eagles were dropped off at their cabin, the Rattlers started yelling "Goodbye, Eagles", and the Eagles reciprocated.

The Last Evening in Camp: In order to check the influence of situational factors at this rather fluid state of intergroup relations, the staff re-arranged the camp dining room while the two groups were at their cabins cleaning up from the trip. Four tables smaller than the usual mess hall tables were brought from various parts of the camp. They were square and could conveniently seat eight people, two to a side. This change was made that the habitual spacing and size of tables in the mess hall situation would be entirely different. The influence of situational factors has been noted previously. It was thought that if the mess hall situation were different than it had been previously, the present state of relationship between the two groups would be revealed more clearly through a new seating arrangement.

The wisdom of this plan was confirmed even outside of the mess hall. There the two groups formed two lines, just as they had done prior to the Cedar Lake camp-out, even though they had been mixing up at meals as well as in other situations during the past 24 hours. The groups began discussing who would go in first the trip away from camp having upset their "taking turns" arrangement. There was discussion on both sides as to whose "turn" it was. When Simpson (R) finally said, "O.K., let them go ahead", the Eagles entered the mess hall first without further objections by the Rattlers.

Once inside the two groups went through the line to get their food separately, but there was friendly conversation between members of the two groups. The reactions to the new table arrangement were as anticipated. In spite of the fact that the groups had lined up separately in habitual fashion to get food, the seating at the newly arranged tables cut across the in-group demarcations. The two tables in the middle were occupied by Eagles and Rattlers sitting together. The few Rattlers left over occupied one or the other of the two end tables.

During the meal several boys commented that everyone was going back to Oklahoma City on
the same bus. Almost all the boys seemed to be planning on it, although one voice was heard to say, "No, we're not." There was even some talk about what they would do on the bus.

After supper the boys were asked what they wanted to do on their last night at camp. There were several suggestions, including a Rattler's that they all go to the Stone Corral. The Rattlers [p. 180] backed this idea strongly, since the Stone Corral was the site of their campfires, and was considered "theirs." Wilson (E) wanted to go to Robbers Cave, and most of the Eagles backed this idea. But the Rattlers replied that the Stone Corral was a part of Robbers Cave, and they couldn't build a fire at the Cave itself. The discussion ended when Mills (R) announced they would all meet in five minutes to go to the Stone Corral. The Eagles said they would meet at the mess hall, but Mills (R) kept insisting that they should meet at the Rattlers' cabin, because this was closer to the Stone Corral. The groups parted with that understanding.

When the Eagles arrived at the Rattler cabin, both groups went together to the Stone Corral. Simpson (R) took his ukulele with him and began to play as soon as they arrived. Everyone began singing the favorite songs of both groups, then it started to rain. The boys scattered to find cover. Some of them continued singing until the rain stopped and the campfire could be built. While waiting for the fire, a Rattler suggested that the two groups entertain each other by putting on the skits they had done for the tournament. Two or three boys thought this was a good idea, but nothing came of it until after both groups joined in roasting marshmallows.

Then Mills (R leader) started organizing the "Dragnet" skit which he had put on with several other Rattlers before his own group earlier in camp. Myers and Craig, both Eagles, were asked to help the Rattlers put the skit on. Some of the Eagles called to Myers (E), and he answered that he would be in the Eagle skit too.

After the Rattler skit, Mills (R) announced that the Eagles were next. There was some discussion on what to do, then Wilson and Myers put on an act for the Eagles. The Rattlers next started trying to persuade Brown to do his "Donald Duck" imitation. This performance was received with great enthusiasm. Then Allen (R) said, "Now it's the Eagles' turn," and the Eagles did a "spitball act."

At this point the Eagles wanted the Rattlers to be next on the evening's program; but the Rattlers replied that since the Eagles had won the singing during the tournament, they should sing for them now. After some discussion, Myers (E) announced that Simpson (R) would sing a song, which he did. Then the Eagles [p. 181] took their turn, singing "Zem Bones" (actually "Dem Bones").

Following this request performance by the Eagles, Mills (R) announced that the Rattlers would do a skit called "Murder in the Haunted House." The evening ended with both groups singing together some of their favorite songs (see pictures).

Up to the time of this joint campfire at the Stone Corral, the observations had revealed increasing reduction of intergroup friction and increasingly friendly relations between the groups as a consequence of interdependent activities embodying superordinate goals which were experimentally introduced. The Eagle observer noted that derogatory references to the out-groups had decreased gradually, until there were none.

However, the evening campfire was a striking demonstration of the cumulative effectiveness of situations requiring interdependent activities toward common superordinate goals. Procedures for cooperative give-and-take between groups had been developed. The entire program was arranged and presented by the two groups themselves to entertain each other. The notion of "taking turns", which had started as a way of regulating activities in which a conflict of interests was involved (going in to meals), had been extended to joint singing of the two groups' favorite songs on previous occasions. Now the "taking turns" idea was spontaneously used to regulate group participation in entertaining one another, as groups and as individuals. Thus the establishment of friendly relations between groups through functional interdependence in situations involving experimentally introduced goals was carried over (transferred) to
spontaneous intergroup cooperation in a situation in which no superordinate goal was formally introduced.

During the following day, which was the last day of camp, no planned stimulus conditions were introduced. It was designated as "follow-up" day. Observations were restricted to striking instances of the interaction patterns and carry-over effects of the experimentally introduced conditions. At breakfast and lunch the last day of camp, the seating arrangements were again mixed up insofar as group membership was concerned. The morning was devoted to preparations for leaving camp and to securing checks on observational findings through sociometric choices and stereotype ratings. The results of these units are reported in the following parts of this chapter.

[p. 182] The Trip Home: The majority of subjects had agreed by the last day that it would be a good thing to return to Oklahoma City all together on one bus. When they asked if this might be done and received an affirmative answer from the staff, some of them actually cheered. When the bus pulled out, the seating arrangement did not follow group lines. Many boys looked back at the camp, and Wilson (E) cried because camp was over.

Just before the bus pulled into the town where a refreshment stop was planned, a Rattler inquired if they still had the five dollar reward they had won in the bean toss contest. This inquiry was repeated by others when the boys were at the refreshment stand, and Mills (R leader) suggested that their five dollars be spent on malts for all the boys in both groups. Several Rattlers nearby agreed; the others approved the idea when asked. This meant that malted milks for all 20 boys would be paid for exactly with the five dollars contributed by the Rattlers, but that each boy would have to pay for sandwiches and other treats himself.

Several Rattlers were questioned by observers while they were eating, and they were all fully aware that this sum would have paid for everything the Rattlers wanted if it had not been shared with the Eagles. Nevertheless, they were glad they had shared it. A few boys were short of money for other refreshments and other boys (several from the out-group) paid for them.

Nearing Oklahoma City, the boys at the front of the bus (mostly high status members from both groups) began to sing "Oklahoma." Several boys seated near the back rushed up to join them. Everyone in both groups took part, all sitting or standing as close together as possible in the front end of the bus. The gaiety lasted during the last half hour of the trip; no one went back to the rear. A few boys exchanged addresses, and many told their closest companions that they would meet again.

At the bus station, goodbyes blended with the excitement of meeting parents.

Summary of Observations in Stage 3

On the basis of the above observations reported by participant observers and independent observations by other staff members, it can be concluded that:

[p. 183] When groups in a state of friction are brought into contact under conditions embodying superordinate goals the attainment of which is compelling but which cannot be achieved by the efforts of one group alone, they cooperate toward the common goal.

On the basis of the above observational data it can also be concluded that:

Cooperation between groups necessitated by a series of situations embodying superordinate goals will have a cumulative effect in the direction of reduction of existing tension between groups.

Thus, our hypotheses 2 and 2a (Stage 3) are confirmed. In the following parts of this chapter
the validity of the above conclusions based on observational findings will be tested in terms of sociometric choices and also in terms of laboratory-type judgmental indices.

**Verification of Observational Findings Revealing Reduction of Intergroup Friction**

Evidence of reduced intergroup friction and increasingly cooperative relations during the closing days of Stage 3 was dramatic to those who had witnessed the hectic days of intergroup conflict in Stage 2 and the early contact situations without superordinate goals early in Stage 3. The intermingling among members of the previously antagonistic groups at meals, campfires and at play; their joint efforts at tasks and entertainment during the camp-out and on the return to camp; their preference to return home together - all of these and other observational data indicated unmistakable shifts in attitudes toward the out-group. If these observed alterations in behavior of the two groups in a variety of interaction situations were in fact indicative of changed attitudes toward the out-group, they would be revealed as well through more precise methods for assessing attitudes of individual members.

Accordingly, at the end of Stage 3 attitudes toward in-group and out-group were tapped, as a further check on observational [p. 184] data, through:

1. sociometric choices of in-group and out-group members, and
2. ratings of in-group and out-group in terms of the stereotypes actually used during the period of intergroup friction.

The results of both measurements could be evaluated in relation to (a) observational findings of Stage 3, and (b) the results obtained by these same methods at the end of Stage 2 when in-group solidarity and glorification, and out-group avoidance and derogation were at their height.

In line with the chief methodological concern of this experiment, findings throughout were checked by as many different methods as it was feasible to introduce without destroying the dominant trend of the on-going interaction processes. We sought to achieve the combination of methods which are frequently (though erroneously) viewed as antithetical: observation of the natural flow of interaction processes in life-like situations and more precise measurement of the effects of interaction on the perception and judgment of individual members through laboratory-like methods.

The interaction situations are "life-like" because they embody valued goals and appear to subjects as spontaneous and natural, even though they are controlled and systematically altered by experimenters. The techniques used for verification of observational data are "laboratory-like" because they are introduced with little of the artificiality of the laboratory, but with no loss in precision. When it has been necessary, we have sacrificed precision rather than cluttering or unduly interrupting the interaction process, with the conviction that the flow, events, and effects of interaction within and between groups are the basic data which cannot be easily restored if trifled with. Sociometric choices were not obtained at the end of Stage 1, but only at the close of Stages 2 and 3 on the grounds that three repetitions within such a short time might very well arouse the subjects' suspicions. Similarly, the experimental unit tapping attitudes toward in-group and out-group members through judgments of their performance executed at the end of Stage 2 was not repeated in Stage 3 because of the serious concern that its repetition would clutter the main flow of the interaction process at that time.

[p. 185] The results of the two techniques employed at the end of Stage 3 to check the validity of observational findings are summarized in the following two sections.

2. **Verification of Shifts in Attitudes Toward In-group and Out-group Through Sociometric Choices**

At the end of Stage 3, sociometric choices were obtained by participant observers through
informal interviews with individual members of their group (see Chapter 6). Sociometric scores were again computed for each group member on the basis of total weighted choices on four criteria (see Chapter 6). Since the most general criterion permitted out-group choices as well as in-group choices, total scores were computed separately for in-group and out-group choices and also by combining in-group and out-group choices (the latter had been insignificant at the end of Stage 2). The ranks within each group were the same by either method of computing total sociometric scores (viz., including out-group choices or not including them).

Table 1 compares the ranks of members of each group in terms of sociometric scores with the status ratings by participant observers of each group. The rank order correlations for status ranking by the two methods are high and significant for both groups.

Table 1

Comparison of Ranks in Sociometric Scores and Status Ratings by Participant Observers of Rattler and Eagle Groups

<table>
<thead>
<tr>
<th>End of Stage 3</th>
<th>rho</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattlers</td>
<td>.853</td>
<td>4.903</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Eagles</td>
<td>.836</td>
<td>4.038</td>
<td>&lt;.003</td>
</tr>
</tbody>
</table>

[p. 186] For purposes of comparison with data at the end of Stage 2, the members of the Rattler and Eagle groups are listed below in terms of rank of sociometric score at the end of Stage 3. The list of boys in each group is divided in terms of score values. Those boys in the top level of the list received scores above 50; those in the second section 40-50; in the third section 20-30; and in the bottom section below 20 (see Sociograms, Chapter 6).

<table>
<thead>
<tr>
<th>Rattlers</th>
<th>Eagles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mills</td>
<td>Wilson</td>
</tr>
<tr>
<td>Newman</td>
<td>Mason</td>
</tr>
<tr>
<td>Simpson</td>
<td></td>
</tr>
<tr>
<td>Martin</td>
<td>Myers</td>
</tr>
<tr>
<td>Brown</td>
<td>Bryan</td>
</tr>
<tr>
<td>Harrison</td>
<td>Craig</td>
</tr>
<tr>
<td>Everett</td>
<td>Clark</td>
</tr>
<tr>
<td>Hill</td>
<td>Cutler</td>
</tr>
<tr>
<td>Swift</td>
<td>McGraw</td>
</tr>
<tr>
<td>Barton</td>
<td></td>
</tr>
<tr>
<td>Allen</td>
<td>Lane</td>
</tr>
</tbody>
</table>

In line with the hypothesis stated in general form in Stage 2, it was predicted that shifts in in-group relationships might occur concomitant with changes of consequence in relations between groups. The most significant of these (according to sociometric indices) is Mason's slip from the leadership position in the Eagles. As elaborated in Chapter 6, Mason came to the leadership
position in the Eagle group in the early days of intergroup competition and rivalry in the tournament. He was intensely involved with the group effort to win and identified with its victory. It was Mason who took the lead in attempting retaliation on the Rattlers for their last raid. Perhaps this partially explains why Mason resisted the trend in his group toward increased intermingling with the Rattlers near the end of Stage 3. While he became quite friendly with individual Rattlers, he made it known that he preferred that the Eagles do things together and without the Rattlers. Although his status in the Eagle group remained high, he was followed less and less in his separatist preferences.

[p. 187] In-group and out-group choices: The data obtained from the most general criterion on the sociometric questionnaire, and through an item on the questionnaire tapping rejections (dislike), provide clear-cut verification of changed attitudes toward the out-group as a consequence of intergroup relationships in a series of situations embodying superordinate goals.

Table 2 gives the choices of in-group and out-group members by Rattlers and Eagles made at the end of Stage 3. As indicated in the table, friendship choices were still predominantly for in-group members.

<table>
<thead>
<tr>
<th></th>
<th>Rattlers</th>
<th>Eagles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f %</td>
<td>f %</td>
</tr>
<tr>
<td>In-group choices</td>
<td>63 63.6</td>
<td>41 76.8</td>
</tr>
<tr>
<td>Out-group choices</td>
<td>36 36.4</td>
<td>15 23.2</td>
</tr>
</tbody>
</table>

However when the choices of out-group members at the end of Stage 3 are compared with those at the end of Stage 2, a substantial and significant increase is found for both groups. This comparison is made in graphic form in the figure on the next page.

At the end of Stage 2, only 6.4 per cent of the Rattlers' choices were for Eagles; but by the end of Stage 3, 36.4 per cent of their total friendship choices were for Eagles. In the Eagle group, the proportion of choices for the out-group (Rattlers) shifted from 7.5 per cent at the end of Stage 2 to 23.2 per cent [p. 188] at the end of Stage 3.

Concomitant with the increased tendency to choose out-group members as friends there was a decreased tendency to reject members of the out-group as persons most disliked. In the Rattler group, 75 per cent of the rejections at the end of Stage 2 were of Eagles; however by the end of Stage 3, only 15 per cent of their rejections were of Eagles. Similarly, in the Eagle group, 95 per cent of their rejections at the end of Stage 2 were Rattlers, but the proportion of rejections directed at out-group members decreased to 47.1 per cent at the end of Stage 3.

Table 3 compares the changes toward increased choice of out-group members from Stage 2 to
the end of Stage 3 and the changes toward decreased rejection of out-group members for both groups.

Table 3
Comparison of Differences in Friendship Choices and in Rejections of Out-group Members at the end of Stage 2 and at the end of Stage 3

<table>
<thead>
<tr>
<th>Difference between:</th>
<th>Rattlers</th>
<th>Eagles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>chi-square</td>
<td>p</td>
</tr>
<tr>
<td>Out-group choices</td>
<td>21.950</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Stage 2 and Stage 3</td>
<td></td>
</tr>
<tr>
<td>Out-group rejections</td>
<td>7.251</td>
<td>&lt;.01</td>
</tr>
<tr>
<td></td>
<td>Stage 2 and Stage 3</td>
<td></td>
</tr>
</tbody>
</table>

In the Rattler group, the increase in out-group choices from the end of Stage 2 to the end of Stage 3 is significant at less than .001 level (McNemar test). The decrease in rejection of out-group members from Stage 2 to the end of Stage 3 is significant at less than the .01 level. The observational data revealed some divergence among members of the Eagle group in attitudes toward the out-group. As might be expected, the differences between out-group choices at the end of Stage 2 and at the end of Stage 3 were slightly less than for Rattlers and significant at [p. 189]
These data obtained through sociometric techniques constitute, therefore, clear-cut verification of observational findings that when the two hostile out-groups interacted repeatedly in situations embodying goals superordinate to both, the prevailing tendency in both groups was to intermingle with the other, to have increasingly friendly associations with out-group members, and friendly attitudes toward them.

3. Verification of Effects of a Series of Superordinate Goals on Attitudes Toward the Out-group Through Stereotype

Ratings

As a result of the series of situations embodying superordinate goals in Stage 3 and the interdependent interaction between the hitherto antagonistic out-groups, the two groups engaged in a greater variety of activities together and with increasing freedom. The observations during Stage 3 revealed sharp decrease in the standardized name-calling and derogation of the out-group which had become so familiar during the closing days of Stage 2 and the contact situations without superordinate goals early in Stage 3. In addition, there was less of the blatant glorification of the in-group and bragging on its accomplishments than during the days of rivalry in Stage 2. These observational data were believed to imply changes in attitudes toward the out-group in a more favorable direction, weakening of negative stereotypes of the out-group, and shifts in conception of the in-group as well.
The validity of these observational findings was checked at the end of Stage 3 through ratings by both groups of their in-group and the out-group on the stereotypes which had been standardized in Stage 2. It is significant that when it was announced that the ratings were to be made again, several boys remarked that they were glad, because they had changed their minds since the last ratings.

At the end of Stage 3, the procedures utilized for tapping stereotypes at the end of Stage 2 (intergroup friction) were repeated (see Chapter 6). The second ratings of in-group and out-group on stereotypes which had been used by subjects during [p. 191] Stage 2 were obtained in order to compare them with those obtained before the series of superordinate goals was introduced in Stage 3. The comparison reveals the effects of interdependence created by compelling goals superordinate to both groups and of the subsequent cooperation between groups. The data to be presented here, therefore, will constitute additional evidence for the verification of the following hypothesis:

**Hypothesis 2 a, Stage 2**

Cooperation between groups necessitated by a series of situations embodying superordinate goals will have a cumulative effect in the direction of reduction of existing tension between them.

Observational and sociometric data relevant to this hypothesis were summarized earlier in this chapter.

Table 4 shows ratings of out-group members made by Rattlers and Eagles at the end of Stage 2 (friction) and at the end of Stage 3.

<table>
<thead>
<tr>
<th>Category of Rattlers</th>
<th>Rattlers' Ratings of Eagles</th>
<th>Eagles' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage 2</td>
<td>Stage 3</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>1.*</td>
<td>21.2</td>
<td>1.5</td>
</tr>
<tr>
<td>5.6</td>
<td>31.8</td>
<td>3.0</td>
</tr>
<tr>
<td>2.</td>
<td>12.1</td>
<td>9.2</td>
</tr>
<tr>
<td>17.0</td>
<td>19.9</td>
<td>28.7</td>
</tr>
<tr>
<td>3.</td>
<td>15.0</td>
<td>57.6</td>
</tr>
<tr>
<td>9.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chi-square diff. 44.67 34.51
p <.001 <.001

*Most unfavorable
** Most favorable
A comparison of these data obtained following intergroup friction and following cooperative interaction in situations embodying superordinate goals shows a marked shift in the nature of characteristics attributed to the out-group. At the end of the friction stage ratings of out-group members tended to be unfavorable, but by the end of the integration stage, ratings of out-group members were preponderantly favorable in both groups. At the end of Stage 2, 53 per cent of the ratings made by Rattlers of the Eagles had been unfavorable; but at the end of Stage 3 only 4.5 per cent of these ratings were unfavorable and 86.3 per cent were favorable. Most ratings of the Rattlers by the Eagles (76.9%) were unfavorable at the end of the friction stage; but by the end of Stage 3 the proportion of unfavorable ratings was reduced to 22.6, and the favorable ratings of Rattlers increased to 68 per cent.

The Eagles' ratings of the Rattlers did not change as much in the favorable direction from conditions of competition to conditions of cooperative interaction as the Rattlers' ratings of the Eagles. However, these shifts in the positive direction from Stage 2 to Stage 3 were significant for both groups (Table 4).

Table 5 presents ratings made of members of the in-group at the end of Stage 2 (friction) and Stage 3 (integration). These results suggest that changes in the functional relations between groups tend to produce changes in the conceptions of the in-group. The ratings of in-group members after cooperation with the out-group were not as favorable as the highly positive ratings of the in-group made after the intense intergroup rivalry of Stage 2 although the trend is not statistically significant. At the end of Stage 3, in-groups were still rated favorably by their own members.

For the Rattler group, the difference in proportions of ratings in the most favorable category at the end of Stage 2 and the end of Stage 3 was 9 per cent, and the proportion of ratings in the middle category increased by 4.5 per cent. In the Eagle group, the proportion of ratings in most favorable category after the cooperative activities with the out-group (Stage 3) was 25.9 per cent less than at the end of Stage 2 (intergroup friction).

The trend toward rating the in-group less favorably was more pronounced in the Eagle group. This finding is in line with

<table>
<thead>
<tr>
<th>Category</th>
<th>Rattlers' Ratings of Rattlers</th>
<th>Eagles' Ratings of Eagles</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Stage 2</td>
<td>Stage 3</td>
</tr>
<tr>
<td>1.*</td>
<td>0.0</td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<td>4.5</td>
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<tr>
<td>4.</td>
<td>13.7</td>
<td>18.2</td>
</tr>
<tr>
<td>5.**</td>
<td>86.3</td>
<td>77.3</td>
</tr>
</tbody>
</table>

Chi-square diff. = 3.546, p = .30
Chi-square diff. = 7.501, p = .10-.11

* Most unfavorable
** Most favorable
observational data indicating that the Eagle group revealed shifts in status structure, during the interaction in cooperative activities with the Rattlers during Stage 3. Briefly, most of the Eagles were drawn into the compelling interdependence between groups in Stage 3 and all participated in cooperative intergroup activities. A few Eagles, including the leader during Stage 2, entered into these activities and became friendly with individual members of the Rattler group, but were more tenacious than others in preferring in-group association to contacts with the whole Rattler group. As noted earlier, this state of affairs, in turn, reduced the effectiveness of the Eagle leader, who had achieved his greatest eminence during intergroup rivalry.

The accompanying figures present a graphic summary of the stereotype ratings of in-group and out-group by the Eagles and Rattlers on the six characteristics (combined) following Stage 2 and Stage 3. At the end of Stage 3, ratings of in-group and out-group members did not differ significantly (p .10).

[p. 194]
End of Stage 3
Stereotype Ratings of In-Group and Out-Group Members on Six Characteristics (Combined)

End of Stage 2
Stereotype ratings of out-groups. R - by Rattlers, E - by Eagles.
Thus, at the end of Stage 3:

(a) Favorable characteristics tended to be attributed to the out-group, in contrast to the predominantly unfavorable picture of the out-groups the end of Stage 2 (friction).

(b) Ratings of both the in-group and the out-group were favorable and did not differ significantly.

(c) The relative frequency of favorable ratings made in relation to in-group members was slightly less than at the end of Stage 2 (friction), particularly in the case of the Eagle group which was undergoing some shifts in in-group structure.

Competition and rivalry between groups in Stage 2 was accompanied by attribution of unfavorable characteristics to the out-group and favorable characteristics to the in-group (Chapter 6). This generalisation takes on added significance when viewed in terms of the backgrounds, personal and socio-cultural, of the two groups of boys. All were normal, well-adjusted boys who enjoyed high and secure status positions both at home and in school. None were problem children who had suffered unusual frustrations and privations. The results indicating the formation of negative stereotypes of the out-group during competitive intergroup relationships cannot be attributed to unusual psychological conditions brought by the boys to the experimental situation. The enthusiastic participation in intergroup competition reflects, of course, the strong emphasis on competition in the larger socio-cultural setting. However, the rise of intergroup hostility and attribution of derogatory labels to the out-group was a development opposite in direction to another important value from the larger setting, namely "good sportsmanship" on the part of participants in competitive activities.

The observance of norms of social distance between the groups and maintenance of a derogatory picture of the out-group did not decrease until the two groups had interacted in a series of situations embodying superordinate goals. The subsequent cooperation between the groups was accompanied in time by a marked change in the conception of the out-group in the favorable direction.

These results may be taken as further evidence supporting our hypothesis that cooperation between groups as a consequence of interaction in situations embodying superordinate goals has a cumulative effect in the direction of reducing existing tensions between them (Hypothesis 2 a, Stage 3).

The data obtained by tapping judgments concerning the character of one's in-group and of the out-group under conditions of competition and rivalry (Stage 2, see Chapter 6) and conditions leading to cooperative intergroup activity are congruent with observational findings concerning behavior in relation to the in-group and out-group. Together they are presented as a contribution to the study of the formation and change of values or social norms. Specifically, these data confirm the hypotheses concerning conditions conducive to the formation of unfavorable attitudes toward functionally related out-groups and conditions conducive to their change to attitudes of cooperation and friendship between groups.

CHAPTER 8

Summary and Conclusions

A. The Present Approach

In this book we have presented an experiment on Intergroup relations. The theoretical approach to the problem, the definitions of groups and relations between them, the hypotheses, the selection of subjects, the study design in successive stages, the methods and techniques,
and the conclusions to be drawn are closely related. This chapter is a summary statement of these interrelated parts.

The word "group" in the phrase "intergroup relations" is not a superfluous label. If our claim is the study of relations between two or more groups or the investigation of intergroup attitudes, we have to bring into the picture the properties of the groups and the consequences of membership for the individuals in question. Otherwise, whatever we may be studying, we are not, properly speaking, studying intergroup problems.

Accordingly, our first concern was an adequate conception of the key word "group" and clarification of the implications of an individual's membership in groups. A definition of the concept improvised just for the sake of research convenience does not carry us far if we are interested in the validity of our conclusions. The actual properties of groups which brought them to the foreground in the study of serious human problems have to be spelled out.

The task of defining groups and intergroup relations can be carried out only through an interdisciplinary approach. Problems pertaining to groups and their relations are not studied by psychologists alone. They are studied on various levels of analysis by men in different social sciences. In the extensive literature on relations within and between small groups, we found crucial leads for a realistic conception of groups and their relations (Chapter 1).

Abstracting the recurrent properties of actual groups, we attained a definition applicable to small groups of any description. A group is a social unit which consists of a number of individuals who, at a given time, stand in more or less definite interdependent status and role relationships with one another, and which explicitly or implicitly possesses a set of norms or values regulating the behavior of the individual members, at least in matters of consequence to the group.

Intergroup relations refer to relations between groups thus defined. Intergroup attitudes (such as prejudice) and intergroup behavior (such as discriminatory practice) refer to the attitudes and the behavior manifested by members of groups collectively or individually. The characteristic of an intergroup attitude or an intergroup behavior is that it is related to the individual's membership in a group. In research the relationship between a given attitude and facts pertaining to the individual's role relative to the groups in question has to be made explicit.

Unrepresentative intergroup attitudes and behavior are, to be sure, important psychological facts. But attitude and behavior unrepresentative of a group do not constitute the focal problem of intergroup relations, nor are they the cases which make the study of intergroup relations crucial in human affairs. The central problem of intergroup relations is not primarily the problem of deviate behavior.

In shaping the reciprocal attitudes of members of two groups toward one another, the limiting determinant is the nature of functional relations between the groups. The groups in question may be competing to attain some goal or some vital prize so that the success of one group necessarily means the failure of the other. One group may have claims on another group in the way of managing, controlling or exploiting them, in the way of taking over their actual or assumed rights or possessions. On the other hand, groups may have complementary goals, such that each may attain its goal without hindrance to the achievement of the other and even aiding this achievement.

Even though the nature of relations between groups is the limiting condition, various other factors have to be brought into the picture for an adequate accounting of the resulting intergroup trends and intergroup products (such as norms for positive or negative treatment of the other group, stereotypes of one's own group and the other group, etc.). Among these factors are the kind of leadership, the degree of solidarity, the kind of norms prevailing within each group. Reciprocal intergroup appraisals [p. 199] of their relative strengths and resources, and the intellectual level attained in assessing their worth and rights in relation to others need
special mention among these factors. The frustrations, deprivations and the gratifications in the life histories of the individual members also have to be considered.

Theories of intergroup relations which posit single factors (such as the kind of leadership, national character, individual frustrations) as sovereign determinants of intergroup conflict or harmony have, at best, explained only selectively chosen cases.

Of course leadership counts in shaping intergroup behavior, the prevailing norms of social distance count, so do the structure and practices within the groups, and so do the personal frustrations of individual members. But none of these singly determines the trend of intergroup behavior at a given time. They all contribute to the structuring of intergroup behavior, but with different relative weights at different times. Intergroup behavior at a given time can be explained only in terms of the entire frame of reference in which all these various factors function interdependently. This approach, here stated briefly, constituted the starting point of our experiments on intergroup relations. The approach was elaborated fully in our previous work, *Groups in Harmony and Tension*.

The relative weights of various factors contributing to intergroup trends and practices are not fixed quantities. Their relative importance varies according to the particular set of conditions prevailing at the time. For example, in more or less closed, homogeneous or highly organized groups, and in times of greater stability and little change, the prevailing social distance scale and established practices toward out-group which have been standardized in the past for group members will have greater weight in determining the intergroup behavior of individual members. But when groups are in greater functional interdependence with each other and during periods of transition and flux, other factors contribute more heavily. In these latter cases, there is a greater discrepancy between expressed attitude and intergroup behavior in different situations, attributable to situational factors, as insistently noted by some leading investigators in this area of research. Alliances and combinations among groups which seem strange bedfellows are not infrequent in the present world of flux and tension.

[p. 200] Because of their influence in social psychology today, two other approaches to intergroup behavior deserve explicit mention. A brief discussion of them will help clarify the conception of the experiment reported in this book.

One of these approaches advances frustration suffered in the life history of the individual as the main causal factor and constructs a whole explanatory edifice for intergroup aggression on this basis. Certainly aggression is one of the possible consequences of frustration experienced by the individual. But, in order that individual frustration may appreciably affect the course of intergroup trends and be conducive to standardization of negative attitudes toward an out-group, the frustration has to be shared by other group members and perceived as an issue in group interaction. Whether interaction focusses on matters within a group or between groups, group trends and attitudes of members are not crystallized from thin air. The problem of intergroup behavior, we repeat, is not primarily the problem of the behavior of one or a few deviate individuals. The realistic contribution of frustration as a factor can be studied only within the framework of in-group and intergroup relations.

The other important approach to intergroup relations concentrates primarily on processes within the groups in question. It is assumed that measures introduced to increase cooperativeness and harmony within the groups will be conducive to cooperativeness and harmony in intergroup relations. This assumption amounts to extrapolating the properties of in-group relations to intergroup relations, as if in-group norms and practices were commodities easily transferable. Probably, when friendly relations already prevail between groups, cooperative and harmonious in-group relations do contribute to solutions of joint problems among groups. However, there are numerous cases showing that in-group cooperativeness and harmony may contribute effectively to intergroup competitiveness and conflict when interaction between groups is negative and incompatible.

The important generalization to be drawn is that the properties of intergroup relations cannot be
extrapolated either (1) from individual experiences and behavior or (2) from the properties of interaction within groups. The limiting factor bounding intergroup attitudes and behavior is the nature of relations between groups. Demonstration of these generalizations has been one of the primary objectives of our experiment.

[p.201] B. The Experiment

The Design in Successive Stages

Experimental Formation of Groups: In order to deal with the essential characteristics of intergroup relations, one prerequisite was the production of two distinct groups, each with a definite hierarchical structure and a set of norms. The formation of groups whose natural histories could thus be ascertained has a decided advantage for experimental control and exclusion of other influences. Accordingly, Stage 1 of the experiment was devoted to the formation of autonomous groups under specified conditions. A major precaution during this initial stage was that group formation proceed independently in each group without contacts between them. This separation was necessary to insure that the specified conditions introduced, and not intergroup relations, were the determining factors in group formation. Independent formation of distinct groups permitted conclusions to be drawn later from observations on the effects of intergroup encounters and engagements upon the group structure.

The distinctive features of our study are Stages 2 and 3 pertaining to intergroup relations. The main objective of the study was to find effective measures for reducing friction between groups and to discover realistic steps toward harmonious relations between them. If we had attempted to get two groups to cooperate without first bringing about a state of friction between them, there would have been no serious problem to be solved. The great task that social scientists, practitioners and policy-makers face today is the reduction of prevailing intergroup frictions.

Intergroup Conflict: After formation of definite in-groups, we introduced a period of intergroup relations as Stage 2 of the experiment. During this stage, the two experimentally formed groups came into contact under conditions which were competitive, so that the victory of one group meant loss for the other. This series of encounters was conducive to successive frustrations whose causes were experienced as coming from the other group.

Only after an unmistakable state of friction between the two groups was manifested in hostile acts and derogatory stereotypes was the stage of reducing intergroup friction introduced.

[p. 202] Reduction of Intergroup Hostility: Various measures could have been tried in this experimental attempt toward the reduction of intergroup friction. One possible measure is the introduction of a "common enemy." Exposed to a common enemy, groups may join hands to do away with the common threat. This measure was not resorted to because it implies intergroup conflict on a larger scale.

Another possible approach is through dissemination of specific information designed to correct prevailing group stereotypes. This measure was not seriously considered because of the large body of research showing that discrete information, unrelated to central concerns of a group, is relatively ineffective in changing attitudes. Stereotypes crystallized during the eventful course of competition and conflict with the out-group are usually more real in the experience of the group members than bits of information handed down to them.

The alternative of channeling competition for highly valued rewards and prizes along individualized directions may be effective in reducing intergroup friction by breaking down group action to individual action. This measure may be practicable for small groups and is attempted at times by supervisors in classroom and recreational situations. However, frictions and conflicts of significant consequence in life and the problem of their resolution are in terms of group demarcations and alignments.
The initial phase of Stage 3 was devoted to testing the effects of intergroup contact involving close physical proximity in activities that were, satisfying in themselves, such as eating meals or seeing a movie. This initial phase was introduced with the objective of clarifying the blanket term "contact" as applied to intergroup relations.

The alternative chosen as the most effective measure for reducing intergroup friction was the introduction of a series of superordinate goals, in line with the hypothesis stated prior to the experiment. Superordinate goals are goals of high appeal value for both groups, which cannot be ignored by the groups in question, but whose attainment is beyond the resources and efforts of any one group alone.

[p. 203] Research Methods

The methods used in this experiment to bring about the formation and subsequent change of attitude and behavior in directions predicted by the hypotheses were neither lecture method nor discussion method. Instead, the procedure was to place the members of respective groups in demanding problem situations, the specifications of which met the criteria established for the experimental stage in question. The problem situations concerned activities, objects or materials which we knew, on the basis of the expressed preferences of the individuals or the state of their organisms, were highly appealing to them at the time. Facing a problem situation which is immediate, which must be attended to, which embodies a goal that cannot be ignored, group members do initiate discussion, do plan, do make decisions and do carry through the plans by word and deed until the objective is achieved. In this process, the discussion becomes their discussion, the plan becomes their plan, the decision becomes their decision, the action becomes their action. In this process, discussion has its place, planning has its place, action has its place, and when occasion arises, lecture has its place, too. The sequence of these related activities need not be the same in all cases. In many instances, we observed two or three of them carried on simultaneously.

Thus, problem situations introduced in Stage 1 embodied goals of immediate appeal value to all members within a group, and the goals required their concerted activity or coordinated division of labor for attainment. The problem situations of Stage 2 offered goals whose attainment by one group necessarily meant failure for the other group. Intergroup conflict was generated in the course of such engagements. The main part of Stage 3 consisted of introducing a series of situations conducive to super-ordinate goals requiring joint action by both groups towards common ends. In every stage, changes in attitudes and action were not attempted through a single problem situation, but through the cumulative effect of a series of varied activities which, during each stage, had the distinctive characteristics summarized here.

All problem situations were introduced in a naturalistic setting and were in harmony with activities usually carried out in such a setting. The individuals participating in the study were not aware that each step was especially designed to study a particular phase of group relations. Once the problem situation was [p. 204] introduced under specified conditions and at a specified time, the initiative, discussion and planning were theirs, of course within bounds insuring health, security and well-being of the individuals studied.

Every effort was made that the activities and the flow of interaction in these activities appear natural to the subjects. Yet these activities and the interaction in them were experimental: Problem situations were chosen for each stage according to specified criteria (Chapter 2) and were introduced under specified conditions (including the place, terrain, time, arrangement of facilities, stimulus materials available, etc.). The choice of an isolated site made it possible to restrict interaction situations and the individuals involved in them to those appropriate during each experimental stage.

Techniques of data collection were also determined by the theoretical approach and methodological considerations briefly stated above. The subjects were not aware that behavioral trends reflecting favorable or unfavorable, friendly or hostile intergroup attitudes were being studied. Knowing that one is under constant observation cannot help becoming a
factor in structuring experience and behavior, particularly when the observation is related to our status concerns, our acceptance or rejection by others, our good or bad intentions toward others.

To the subjects, the participant observers appeared to be personnel of a usual camp situation. They were introduced as senior counselors. In this capacity they were close to their respective groups in a continuing way. True to their announced roles, the participant observers jotted down relevant observations out of the subjects’ sight, and then expended their notes later each day.

When the technique of observation is adapted to the flow of interaction, there is danger of being selective in the choice of events to be recorded. The effective remedy against possible selectivity is using a combination of methods to check findings obtained with one method against those obtained by other methods.

The events which revealed stabilization and shifts in statuses, and crystallization of negative and then positive intergroup attitudes were recurrent and so striking that one could not help observing them. However, in testing our main hypotheses, we [p. 205] supplemented the observational method with sociometric and laboratory-like methods. One distinctive feature of this study was introducing, at choice points, laboratory-like techniques to assess emerging attitudes through indirect, yet precise indices. Such laboratory-like assessment of attitudes is based on the finding that under relevant conditions, simple judgments or perceptions reflect major concerns, attitudes and other motives of man.

Reliability of observation and observer ratings was checked by comparing those of the participant observer with independent observations by others in crucial test situations. One such test situation illustrates the technique. When the status hierarchy in one group became stabilized toward the end of Stage 1, a problem situation was introduced which, like other problem situations of this stage, required initiative and coordination of the membership. A staff member who was not with the group regularly and who had not rated the status positions from day-to-day, observed the group interaction in this situation. On this basis he made independent ratings of the status hierarchy, which were significantly correlated with those of the participant observer of that group.

C. Main Conclusions

Individual Characteristics and Intergroup Behavior

In this experiment, the rigorous criteria and painstaking procedures for selecting subjects ruled out explanations of hostile or friendly intergroup attitudes in terms of differences in socio-economic, ethnic, religious, or family backgrounds. Similarly, the criteria for subject selection insured against explanations on the basis of unusual individual frustrations, failures, maladjustment or instability.

The subjects came from families who were established residents of the same city. They were stable families composed of natural parents and siblings. No subjects came from broken homes. Their religious affiliations were similar. They were from the middle socio-economic class. They were of the same chronological and educational level. They had all made satisfactory progress academically; none had failed in school. In school and neighborhood, their social adjustment was above average. None was a behavior problem in home, neighborhood or school.

[p. 206] In short, they were normal, healthy, socially well-adjusted boys who came from families with the same or closely similar socio-economic, ethnic, and religious backgrounds.

Since none of the individuals was personally acquainted with others prior to the experiment, pre-existing positive or negative interpersonal relations did not enter into the rise of intergroup
attitudes.

The conclusion that explanations of the intergroup trends and attitudes on the basis of individual characteristics are ruled out in this experiment should not be construed to mean that the relative contributions of individuals within their own groups and in intergroup relationships are unimportant. Individuals do contribute differentially both in shaping and carrying on the trend of group relationships. This experiment does indicate, however, that intergroup attitudes are not merely products of severe individual frustrations or background differences brought to the situation.

**Formation of Group Organization and Norms**

When the individuals interacted in a series of situations toward goals with common appeal value which required interdependent activity for their attainment, definite group structures arose. These groups developed stable, but by no means immutable status hierarchies and group norms regulating experience and behavior of individual members.

More concretely, a pattern of leader-follower relations evolved within each group as members faced compelling problem situations and attained goals through coordinated action. As group structure was stabilized, it was unmistakably delineated as an "in-group." Certain places and objects important in group activities were incorporated as "ours." Ways of doing things, of meeting problems, of behaving under certain conditions were standardized, permitting variation only within limits. Beyond the limits of the group norms, behavior was subject to group sanctions, which ranged from ridicule, through ignoring the offender and his behavior, to threats, and occasionally to physical chastisement.

[p. 207] **In-Group Cooperativeness Is Not Directly Transferable**

When two groups met in competitive and reciprocally frustrating engagements, in-group solidarity and cooperativeness increased. Toward the end of intergroup friction (Stage 2), in-group solidarity became so strong that when the groups were taken to a public beach crowded with outsiders and affording various distractions, our groups stuck almost exclusively to activities within their respective in-groups. Psychologically, other people did not count as far as they were concerned. In the presence of so many people and distractions, this intensive concentration of interests and activities within the group atmosphere would have been impossible had the groups gone there before attaining such a high degree of solidarity.

This heightened in-group solidarity and cooperativeness were observed at the very time when intergroup hostility was at its peak, during the period when the groups asserted emphatically that they would not have anything more to do with each other. This can only mean that the nature of intergroup relations cannot be extrapolated from the nature of in-group relations. In-group solidarity, in-group cooperativeness and democratic procedures need not necessarily be transferred to the out-group and its members. Intergroup relations cannot be improved simply by developing cooperative and friendly attitudes and habits within groups.

**Consequential Intergroup Relations Affect In-group Relations**

Special note should be made of a related finding, namely that consequential intergroup relations have an impact on the in-group organization.

When it became evident that certain members of one group, including the leader, were not living up to the responsibilities expected of them by other members during the eventful course of intergroup competition, leadership changed hands. Those individuals who distinguished themselves by giving a good account for their group rose in the status hierarchy. Internal shifts in status were observed again during the cooperative intergroup activities of Stage 3. Functional relations between groups which are of consequence tend to bring about changes in the pattern of in-group relations.
Limiting Conditions for Intergroup Attitude and Behavior

We have seen that the individuals studied in this experiment were selected in ways which rule out explanations for the direction of intergroup behavior on the basis of differences in their backgrounds or on the basis of their individual frustrations, instabilities and the like. In the preceding sections, we have seen evidence that in-group properties were affected by consequential intergroup relations. Thus the intergroup hostility and its reduction cannot be explained merely by the nature of relationships within the groups.

Our findings indicate that the limiting condition determining friendly or hostile attitudes between groups is the nature of functional relations between them, as defined by analysis of their goals. When the groups competed for goals which could be attained by only one group, to the dismay and disappointment of the other, hostile deeds and unflattering labels developed in relation to one another. In time, derogatory stereotypes and negative attitudes toward the out-group were crystallized. These conclusions are based on observations made independently by observers of both groups and other staff members. Sociometric indices pointed to the overwhelming preponderance of friendship choices for in-group members. Experimental assessment of intergroup attitudes showed unmistakable attribution of derogatory stereotypes to the villainous out-group and of favorable qualities to the in-group. Laboratory-type judgments of performance showed the tendency to overestimate the performance attributed to fellow group members and to minimize the performance of members of the out-group.

What Kind of Contact Between Groups is Effective?

The novel step in this experiment was Stage 3, in which intergroup friction was reduced. We have already stated why we discarded certain procedures in this stage, such as introducing a "common enemy" or disseminating information. In order to clarify the term "contact," we tried the method of bringing the groups into close proximity in a series of activities. Most of these contact situations involved activities which were satisfying in themselves, such as eating good food in the same room, attending a movie together, or engaging in an exciting activity like shooting fireworks. But none of them created a state of interdependence between the groups. Such contact situations did not prove effective in reducing friction. Instead contact situations not conducive to interdependence were used by our groups for overt acts of hostility and further exchanges of unflattering invectives.

The ineffectiveness of contacts during which hostile groups engaged, while in close physical contiguity, in activities which were themselves satisfying to each individual has obvious implications for psychological theorizing.

The Introduction of Superordinate Goals

During the final period of the experiment, the prevailing friction between groups was reduced. Reduction of the conflict and hostility was observed in reciprocally cooperative and helpful intergroup actions, in friendly exchanges of tools, in developing standard procedures for alternating responsibilities and in meeting problems. The change in behavior and patterns of interaction between the groups was striking to all observers. The reliability of these observations is established by sociometric indices which showed increases of friendship choices for the erstwhile antagonists and also in the sharp decrease of unfavorable stereotypes toward the out-group. Favorable conceptions of the out-group developed, so that ratings of the in-group and out-group were no longer a set of contrasted polarities.

The end result was obtained through introduction of a series of superordinate goals which had compelling appeal value for both groups but which could not be achieved by the efforts and resources of one group alone. When a state of interdependence between groups was produced for the attainment of superordinate goals, the groups realistically faced common problems. They took them up as common problems, jointly moving toward their solution, preceding to plan and to execute the plans which they had jointly envisaged.
In this experiment, the setting and circumstances for the introduction of superordinate goals were elaborately prepared by the experimenters. But beyond setting the scene, the methods followed, the discussion necessary for the solution, the plans to be made and executed were left to the groups themselves. Faced with superordinate goals, the groups carried on discussion when necessary, listened to the advice and suggestions of members of both groups who were resourceful, made decisions, and even combined discussion, decision and deeds simultaneously when the goal was attained more effectively this way.

**Cumulative Effects of Superordinate Goals**

If the hostile attitudes generated during intergroup friction had any stability, it could not be expected that one or two situations embodying superordinate goals could wipe them out. Indeed intergroup antagonisms did not disappear in one stroke. At first, cooperative interaction involving both groups developed in specific situations in response to common problems and goals, only to be followed by a renewal of sharply drawn group lines and intergroup friction after the challenge had been met. Patterns and procedures for intergroup cooperation were laid down at first on a small scale in specific activities. Only during interaction in a series of situations involving superordinate goals did intergroup friction begin to disappear and the procedures for intergroup reciprocity developed in specific situations extend spontaneously to widening areas of activity.

In the sequential events of Stage 3 (Chapter 7), it was abundantly evident that the series of activities conducive to superordinate goals provided opportunities for members of the two groups to work out and develop procedures for cooperation in various spheres of action. Once a cooperative pattern was effective in a specific activity, it was extended by members of both groups to related actions. In the face of successful functioning of such procedures, the occasional dissident member who preferred the old days of intergroup strife or self-imposed separation found it more difficult to make his voice count in his own group.

Some procedures successful in intergroup interaction had previously been used by the groups in meeting problems within their own groups. But their transfer to intergroup interaction involved a significant step: the tacit recognition that the procedures now involved groups of individuals and not merely so many individual members within a group. Each individual within his group had been expected and encouraged by others to contribute to group efforts to the best of his abilities. Now, each group expected the other to contribute its share to meeting intergroup problems. While previously solutions were experienced as equitable or not relative to the individual's expectations and contributions within his group, now justice was also evaluated relative to equitable participation and opportunity for the groups as well.

**The Same Tools May Serve Intergroup Conflict or Cooperation**

In planning and working towards superordinate goals, there were times when the groups used jointly the tools and techniques which had been used by one or both groups separately in the service of tights during the intergroup conflict. Tools and techniques can be put to the service of harmony and integration as well as of deadly competition and conflict. Tools, in themselves, are not opposed to cooperation among individuals using them. It is the individuals as group members who put the tool to use in their opposition to other groups.

Even the proprietary pride that a place, a technique, a tool is "ours" takes on a different significance when the trend in intergroup relations is cooperation toward superordinate goals. Use of the technique or the tool in intergroup activities now implies a contribution toward a goal common to both groups - a contribution by the group in which members may take personal pride and which can be reciprocated by the other group equally enjoying its benefits through its own contributions at that or future occasions.

**Superordinate Goals Alter the Significance of Other Influences**

Contacts between groups in the course of actions towards superordinate goals are effective.
They are used for developing plans, making decisions, and for pleasant personal exchanges. Information about the out-group becomes a matter of interest to group members and is actually sought in the course of interactions between members of the two groups. Leaders find that the trend toward intergroup cooperation in activities involving superordinate goals widens the spheres in which they may take positive steps toward working out procedures for joint endeavors and planning future contacts. Mingling with members of the other group and sharing in activities with them is no longer perceived.

[p. 212] by in-group members as "betrayal" or "treason". Similarly, the out-group member who engages in activities with the in-group is no longer seen by them as a strange and threatening figure in "our midst." On the contrary, intermingling of persons from different groups becomes a joint opportunity to work towards goals shared by both groups.

These are products of interaction toward goals superordinate to all groups, which are genuinely appealing to all, whose attainment requires equitable participation and contributions from all groups in interdependent activities.
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