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TITLE OF THESIS.....The Efficacy of Step-level ^{ANALYSIS} and Small Group
.....Experiments in International Relations..
.....Theory: An Isomorphic Approach to the..
Reduction of Intergroup Hostility
UNIVERSITY....CARLETON.....
DEGREE FOR WHICH THESIS WAS PRESENTED.....M.A.....
YEAR THIS DEGREE GRANTED.....1969.....

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DATED. *October 17* 1969.

/The Efficacy of Step-level Analysis and
Small-group Experiments in International
Relations Theory: An Isomorphic Approach
to the Reduction of Intergroup Hostility

by

James Gibson Murray
=

A thesis submitted to Carleton University
in partial fulfilment of the requirements
for the degree of Master of Arts in Pol-
itical Science

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September, 1969.

ABSTRACT

The ensuing study emphasizes the utility of an isomorphic approach in which propositions generated at lower levels of analysis, i.e. psychology and sociology, are heuristically applied to higher levels of investigation, i.e. nation-state interaction. The paper accordingly seeks to validate the efficacy of step-level analysis through the application of select hypotheses on intergroup conflict and cooperation to a median level -- intertribal relations. Fourteen pairs of interacting "societies" exhibiting occurrences of open hostility are examined along with ten tribal pairs which have coexisted in relative harmony for an extended period of time. The data collected are examined within the context of isomorphism as previously discussed and in contrast to a few contemporary examples of interstate hostility. The thesis employs as a conceptual framework the criteria that the contemporary study of international relations should be interdisciplinary, analytical, and empirically oriented.

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An Introduction

The demand for theories in the contemporary study of international relations has resulted in a painstaking, yet often superfluous, enterprise. Indeed, the term "theory" itself has become so honorific that all too frequently hypotheses, statements of fact, and even intuitive guesses are "dressed up" and, worse still, accepted as theories. In part, this longing for theory can, and has been, ascribed to a desire for the status and power of the physical sciences, since these so-called "hard sciences" are often viewed by laymen as the theoretical sciences par excellence.

Generally speaking, this demand for theory is probably good, since we cannot reason without generalization and, where matters are complex, the web of reasoning logically takes the form of a theory. Morton Kaplan, for one, doubts that theories employed by the social sciences, and in international relations in particular, can ever possess the status of theories in the physical sciences. He is, however, somewhat optimistic about the possibility of progress in the use of theory:

"Theoretical physical science lay fallow from the time of the Greeks until Galileo. The theory of international politics may indeed be awaiting its Galilean revolution."¹

However, the present sorry state of social science and of international politics is not in itself proof that the latter cannot attain the usually acknowledged criteria of theory: explanation and predictability. Indeed, it might prove insightful and enlightening to examine, for a moment, the types of argument and method which the physical sciences in actual practice employ. Discovery, as in social science, is a twofold process from unknown to known "involving the development of a technique [or approach] for representing phenomena which is found to fit a wide range of facts and the adoption along with this technique of a new model, a new way of regarding these phenomena, and of understanding why they are as they are."²

1 Morton A. Kaplan, "Problems of Theory Building and Theory Confirmation in International Politics" in Klaus Knorr and Sidney Verba, The International System: Theoretical Essays, 6; also, see the discussion by Kaplan in System and Process in International Politics, xi ff; and in idem, "Toward a Theory of International Politics", Journal of Conflict Resolution, Vol. 2 (December 1958), 335-47. Needless to say, there are varying opinions on this matter. Even a brief compendium would be remiss if it ignored the following: H.V. Harrison (ed.), The Role of Theory in International Relations; S. Hoffman (ed.), Contemporary Theory in International Relations; M. A. Kaplan (ed.), New Approaches to International Relations; C. A. McClelland, "The Function of Theory in International Relations," Journal of Conflict Resolution, Vol. 4 (1960), 303-36; J. Rosenau, et. al., "Theory and Reality in International Relations", Journal of International Affairs, Vol. 21 (Summer, 1967); J. D. Singer, Human Behavior and International Politics; and Q. Wright, The Study of International Relations.

2 Stephen Toulmin, The Philosophy of Science, 30.

Hence, discovery it would appear is the discovery of novel methods of representation and, therefore, of inference-drawing in ways which fit the phenomena under investigation. Moreover, the physical scientists "do not hunt out regularities in phenomena but investigate the form and scope of regularities whose existence is already recognized.... to occur not universally, but on the whole."³

By observing the manifest behavior patterns of unseen entities, such as the atom, scientists have inferred or extrapolated, albeit empirically and in the laboratory, as to their properties. Thus, the physical scientist, in seeking to define and correlate an unknown quantity, measures observable phenomena through the conceptualization of his techniques of representation. As Toulmin so adroitly notes: methods of representation are as important ~~as the phenomena represented~~. Laws and theories of science, therefore, can more correctly be viewed as pictures or maps, imaginatively conceived, whose role is to relate and make intelligible different aspects of nature. They do not describe but provide a method of coordinating descriptions. They are neither true nor false, but are useful or useless, fruitful or barren.⁴

The physical sciences, therefore, achieved their power of predictability chiefly as a result of two factors and the organic nature of their subject-matter: the ability to deal with simple problems, or with a problem or conceptualization in which only a small number of

³ Toulmin, ibid., 44, 49.

⁴ Cf. Toulmin, ibid., 138 ff.

important variables are operative, and the ability to carry on studies and experiments in a laboratory that is closed to the outer world and historical forces. Accordingly, the physical sciences become less scientific, or less theoretic as one moves away from, rather than approximating, these two conditions, i.e. as one moves from laboratory generalizations to engineering applications and to the complexities and uncertainties of the real world. Hence, the problem of engineering a theory of international relations to the conditions of the real world is fundamental and itself requires to be understood at a theoretical level.

What is required, therefore, is an approach which enables us to test the generalizations we seek to employ at the level of international relations, that is, to apply these generalizations to the historical context in an effort to verify and hence explain and, at best, predict. The task, at first sight, appears onerous. If we endeavour to include, for the sake of analysis, all relevant intranational and transnational factors the complexity becomes so great that serious efforts to discuss and relate them all systematically would founder under the detail. Therefore, if it is our purpose to apply our hypotheses, propositions, generalizations, or whatever, to concrete cases, we must choose just those factors for which we have some reason to believe operate in the particular instance we wish to understand and explain. Such an approach fertilizes the soil for the future growth of theories in the study of contemporary international relations. Such an approach is the object of this thesis.

The chapters that follow seek to explore the relevance for the study of international relations of a theory and method that evolved under the aegis of the disciplines of sociology and social psychology. The theory is derived from the behavior of small face-to-face groups. The method is that of the controlled experimental study of interaction in small groups.

Although one of its main features is to introduce to an audience essentially composed of international relations' theorists a new and hopefully exciting field of research, the ensuing paper will be more than an essay in interdisciplinary contact. Indeed, it will attempt to illustrate that the small-group approach, at first glance extremely remote from the study of international relations, as an illustration and as a source of step-level analysis, has certain unique contributions to make to international relations theory. Hence, it is toward the enrichment of theory and method in the study of international relations that the following effort is directed.

Small-group studies reveal little directly about the operations of political systems generally or about the behavior of people in political systems. Indeed, the interests of small-group analysts have proved to be substantially different: they have sought to find uniformities of behavior within the confines of certain experimental situations. Hence, an examination of small-group research should present new facts about political behavior -- though our immediate concern is not for more facts or more data. Rather, it is for adequate conceptualization and systema-

tization of the data we now possess,⁵ and the facts we shall no doubt gather in the future. Moreover, we require more precise and explicit techniques of data gathering such that the reliability and validity of the data we accumulate can be estimated. The author feels that small-group analysis can contribute to the amelioration of some of the present theoretical and methodological problems in the study of international relations.

In the development of adequate and usable theories, there is a further need for the specification of the significant variables of the international system, ways of observing and measuring these variables, and propositions about their relations with other variables in the system. Ultimately, this is the task of an overall systematic

⁵ For example, see Bruce Russett and Hayward Alker, et al., World Handbook of Political and Social Indicators; and its companion volume, Comparing Nations: The Use of Quantitative Data in Cross-National Research, ed. by Richard L. Merritt and Stein Rokkan. Two additional pioneering attempts are Arthur S. Banks and Robert B. Textor, A Cross-Polity Survey (Cambridge, 1963); and George P. Murdock, An Outline of World Cultures (New Haven, 1963).

theory of international relations.⁶ Such a goal is, however, well beyond the scope of this paper. I shall be concerned only with certain variables and processes and with what might be called "bits" of theory.

A major tenet of this paper, then, is that in all the social sciences, one ought to work on significant problems and employ, for the analysis of these problems, whatever approach seems most useful. Accordingly, it is not so much a question of whether the problem falls into one academic domain or into another or into several at once but of whether the propositions so developed have a wide range of generality. Consequently, as methods of representation and as modes of analysis,

⁶ For an exposition on the dangers of grand theories, cf. C. Wright Mills, "Grand Theory" in System, Change and Conflict, N.J. Demerath and Richard A. Peterson (eds.), 171-83. Mills notes: "The basic cause of grand theory is the initial choice of a level of thinking so general that its practitioners cannot logically get down to observation. They never...get down from the higher generalities to problems in their historical and structural contexts. This absence of a firm sense of genuine problems, in turn, make for the unreality so noticeable in their pages. One resulting characteristic is seemingly arbitrary and certainly endless elaboration of distinctions, which neither enlarge our understanding nor make our experience more sensible. This in turn is revealed as a partially organized abdication of the effort to describe and explain human conduct and society plainly." Mills greatly expands upon these ideas in his work, The Sociological Imagination (Oxford, 1959).

such propositions will be all the more useful and fruitful.

Step-Level Analysis and the Quest for Interdisciplinary
Corroboration: A Study in Isomorphism

Within the social sciences, and as a consequence of the construction of somewhat artificial boundaries between them, there is inherent a diversity of emphases in the formulation of problems and in the generation of hypotheses for study. The concepts evolved and the theories advanced by the practitioners of these various "disciplines," as we have come to refer to them, are graphic testimony of this diversity.¹

Quincy Wright once observed that:

"...all disciplines have tended in the modern period to become sciences, however resistant their material may be to such treatment. They usually begin as arts or histories, then become generalized into philosophies, and then struggle to become sciences."²

Regardless of the stage of development of those disciplines that have been loosely subsumed under the general rubric of the social, and more recently what some practitioners have chosen to refer to as the behavioral sciences, the "struggle" which Wright refers to has engendered an increasing division of labour both between and within the disciplines for the sake of "scientism." The ensuing and increasing propensity to specialize has all too frequently created a situation

¹ An evidence of this state of affairs is Elton McNeil's inventory of the past and current "theories" or viewpoints from each of the social science disciplines expressed on a single topic, i.e. the nature of human conflict. For an elaboration of each disciplines approach to the study of conflict, see E. B. McNeil, The Nature of Human Conflict (Englewood Cliffs, 1965).

² Quincy Wright, The Study of International Relations (1955), 19.

threatening intellectual civil war between the disciplines. I am not attempting to create a case against the actual existence of disciplinary boundaries per se; indeed, those of the more established social sciences preceeded the impact of "scientism." I am, however, concerned with the exaggerated reinforcement of those boundaries which subsequently prevents the exchange of data-gathering and data-interpretive skills and knowledge in relevant areas of scholastic endeavour. More seriously, perhaps, is that specialization tends to obfuscate the accumulation of scientific knowledge for in the very process of specializing, the receptors of information within the disciplines themselves become specialized or "compartmentalized."

Kenneth Boulding, offers some scathing remarks on this "assemblage of walled-in hermits" and the "desert of mutual unintelligibility":

"The more science breaks into sub-groups, and the less communication is possible among the disciplines, however, the greater chance there is that the total growth of knowledge is being slowed down by the loss of relevant communications. The spread of specialized deafness means that someone who ought to know something that someone else knows isn't able to find it out for lack of generalized ears."³

The great danger of these specialized compartments, then, is that all too often researchers have yielded to the temptation of improvising their own "sociologies" of knowledge as reflected in terms of their preferred concepts and, consequently ignoring much of the existing data and interpretive skills from other fields of inquiry.

3 Kenneth E. Boulding, "General Systems Theory -- The Skeleton of Science," Management Science, Vol. 2 (1956), 198.

More seriously, these proliferating "theories" tend to confuse the student by requiring the assimilation of often unnecessary, even irrelevant, concepts and jargon. In this respect, interdisciplinary cooperation has generally come to mean rallying the various social sciences to toss their "theories" and concepts into a hat in hopes that the mere juxtaposition of theoretical utterances will, in itself, produce interdisciplinary collaboration.

Within our own developing discipline, we as practitioners must be cognizant of the fact that no one emphasis, approach, classification, or method can hold a monopoly on insight. The history of social science provides much data to suggest that it would be a rash scholar indeed who would condemn or sanctify any single approach in the frontier areas of political analysis. One such frontier area is the contemporary study of international relations. Commenting specifically with this latter field of scholastic endeavour in mind, J. David Singer notes:

"...I would contend that we in political science have not only failed to utilize much of the ready-at-hand data from the behavioral sciences, but, more seriously, have limped along with vague and open-ended concepts...which we define in a multitude of private ways, and with modes of data-gathering and data-interpretation that are no more operational and replicable than those of literature, art, theology, or journalism."⁴

If this criticism appears unduly harsh, the reader need only ask himself how many well-established propositions or hypotheses about the behavior of nation-states or, more generally, the operation of the international system he can call to mind,⁵ and, even more compellingly,

⁴ J. D. Singer (ed.), Human Behavior and International Politics, 6.

⁵ To qualify, such propositions must not be at so high a level of abstraction as to be tautological, or at so low a level as to apply only to a single, discrete case.

what procedures might be used to test these hypotheses empirically.

A related, though considerably more obscure, problem lies in determining the unit of analysis for coordinating data and data-interpreting skills. Again, with respect to the contemporary study of international relations, Singer is aware of the problem when he laments:

"We have, in our texts, and elsewhere, roamed up and down the ladder of organizational complexity with remarkable abandon, focusing upon the total system, international organizations, regions, coalitions, extra-national associations, nations, domestic pressure groups, social classes, elites, and individuals as the needsoof the moment required. And though most of us have tended to settle upon the nation as our most comfortable resting place, we have retained our propensity for vertical drift, failing to appreciate the value of a stable point of focus. Whether this lack of concern is a function of the relative infancy of the discipline or the nature of the intellectual traditions from whence it springs, it nevertheless remains a significant variable in the general sluggishness which characterizes the development of theory in the study of relations among nations."⁶

This state of affairs, I would contend, has engendered a definite need for considerable "elbow-rubbing" and interdisciplinary collaboration. However, mere juxtaposition of "theories" is not enough. What is required is a critical appraisal of ~~the~~ utility of each other's approaches in the transfer of data-gathering and data-interpreting techniques from one field of study to another. Moreover, this implies some means by which to measure the utility, i.e. the level of generality and/or applicability, of another approach to the study of given or chosen phenomena. If the interdisciplinary approach is to become the vehicle for achieving a more rounded, comprehensive, and insightful approach of human interaction, collaboration must beget corroboration and integration.

⁶ J. David Singer, "The Level-of-Analysis Problem in International Relations," in Klaus Knorr and Sidney Verba (eds.), The International System: Theoretical Essays, 78. An important pioneering attempt to deal with some of the implications of one's level of analysis is Kenneth N. Waltz, Man, The State, and War (New York, 1959). Waltz restricts himself to a consideration of these implications as they impinge on the question of the causes of war.

The beginnings of such an approach appear more likely, and hopefully more clearly, with the realization that the various disciplines signify different levels of analysis. Hence, a prime contention of this paper is that social scientists examining human behavior are approaching related, similar, or even the same problems but at different levels of analysis and thus necessitating units and concepts appropriate for dealing with events on that level. If, for example, we are working on the psychological level, our unit of analysis is the individual; thus, our treatment is in terms of the individual's psychological functioning and in concepts such as motives, judging, perceiving, learning, and the like. If we are working on a sociological or cultural level, our concepts are in terms of group functioning, i.e. social organization, value systems, kinship systems, institutions, etc. on the validity of research findings. If it is valid, a generalization reached on a given topic at one level of analysis is not contradicted by and, in fact, gains support, or at least insight, from valid generalizations reached at another level. Thus, checking and cross-checking the findings obtained at one level of analysis against those obtained at another level on the same topic, e.g. the factors conducive to conflict and cooperation between groups, will make the interdisciplinary approach the corroborative, and subsequently the integrative, meeting ground that it should be.⁷

⁷ It is clear that the proponents of the interdisciplinary approach share a common excitement and euphoria as to its efficacy and viability. If this excitement is to be productive, however, it must operate within a certain framework of coherence. It is all too easy for the interdisciplinary to generate into the undisciplined. If the interdisciplinary "movement," therefore, is not to lose that sense of form and structure which is the "discipline" involved in the various separate disciplines, it should develop a structure of its own. Unfortunately, however, the need for an interdisciplinary approach has preceded of necessity for structuring that approach. General systems theorists have established that great

Before accepting this contention re the transfer of knowledge from one field of inquiry to another, prior reflection on some of the key theoretical and methodological problems which it raises appear to be in order. The interdisciplinary exchange of ideas and of modes of data-gathering and data-interpretation is frequently referred to as "analogizing" and is usually illustrated by the construction of some representative "model." It goes without saying, perhaps, that some analogies and some models [for the purpose of this paper I treat these concepts as synonyms] are useful as inference-drawing techniques at certain levels of analysis. All too often, however, the model is allowed to "represent" all levels of analysis in that it is frequently left up to the observer or the user of the analogy to posit the constraints on the applicability or the nonapplicability of the model. Hence, "reality" is so complex that without some specification as to the degree of representativeness, and correspondingly the level of utility of the major tenets of the ~~model~~, the process of building models or of "analogizing" falls short of its intended purpose. We shall return to this theme presently.

Even if the skeptic is persuaded that other disciplines may be of some value in his attempts to fathom his own field of inquiry, he may still boggle at the effort to utilize their models and their data. In other words, there may well be a cogent argument that the findings of

task as their goal. Although it is well beyond the defined scope of this paper to examine the multitude of possible ways in which the proposals and research of this paper might be structured or incorporated into the systems theory schema, the reader should at least be cognizant of the author's epistemological alignment with general systems analysis.

one empirical concern -- as well as the ideas generated to organize those findings -- cannot legitimately be transferred to another, and distinctly different, empirical discipline.⁸

Indeed, much depends upon the literalness of the transfer under consideration. While recognizing how absurd it would be to make a one-to-one extrapolation from the psychological or sociological experiment to the "real" world because of the important discrepancies between the two -- for example, the well-established frustration-aggression syndrome is much too axiomatic and exclusive to be directly applicable to the behavior of nation-states -- it is worth noting that there are other discrepancies of a less obvious, but equally germane, nature. Indeed, no two social (or physical) phenomena are exactly identical; they must always differ, if only in time and place.⁹ If every event or condition is, in fact, unique, the question becomes one of whether it is possible to generalize at all, since generalizations require a large number of comparable cases. Therein, of course, lies the point: there is a world of difference between identical and comparable. Indeed, if we could only generalize on the basis of identical cases, conditions, or experiments, all science would be impossible. Hence, we must settle for that degree of identity which is sufficient for our theoretical

8 For a very negative view of the possibilities of applying psychological knowledge to the problems of international relations, see Morton A. Kaplan, "Review of The Human Dimension in International Relations by Otto Klineberg," American Political Science Review, Vol. 58 (1964), 682-83. For another view, and particularly a more multidisciplinary view, see J. D. Frank's answer, "Psychology and International Relations," American Political Science Review, Vol. 58 (1964), 965. Kaplan's answer is on pp. 965-66 of the same Review.

9 An excellent article which raises this and related issues in a clear and sophisticated fashion is Carey B. Joynt and Nicholas Resher, "The Problems of Uniqueness in History," History and Theory, Vol. 1 (1961), 150-62.

needs. In other words, all we require is that the cases be similar enough to be comparable in terms of the specific variables that concern us in any particular inquiry. At the same time, however, if we are to approximate the aspired to scientific criteria, we must also be cognizant of the degree of comparability, that is the degree to which our given or our chosen cases are representative of the so-called "real" situation which we wish to examine.

Herein lies an objection to the social sciences' continual and cherished use of the terms "analogy," "metaphor," and "model." To what extent, one must ask, does interdisciplinary "analogizing" represent or simulate the empirical world of international relations? Is the simulation close enough to be useful, or is it likely to be so far-fetched as to make it misleading or even irrelevant? In other words, since there is no way in which to actually measure the degree to which the model, or the propositions and concepts it generates, actually corresponds to the "real" situation, we are all the more likely to be misled by the much simpler and more explicit (even formalized) model. The very acceptance of the model's propositions and concepts as modes of representation for the "real" world results in an abstraction and, correspondingly, a distortion of that "reality."

The task, therefore, appears to be the location of models or, at the very least, propositions which enable us to determine their degree of representativeness or comparability in interpreting and drawing-inferences about the "real" world. An awareness of this degree of comparability of a model or approach -- or what I have chosen, for reasons which follow, to refer to as its isomorphism -- will enable us

to specify its level of applicability and, consequently, to draw inferences about the phenomena under investigation in a more novel and imaginative manner. At the same time, it should enable us to more closely approximate what Toulmin has described in the preceeding chapter as the types of argument and method which the physical sciences in actual practice employ.¹⁰ A further contention is that the development of an isomorphic approach is facilitated by the previously enunciated step-level analysis process, which enables the researcher to empirically test the degree of applicability of generalizations at a higher (or lower) level of analysis.

Generalizations or propositions developed at one level of analysis, while perhaps insightful, may require slight modification in their wording at another level. Unlike the terms "model" or "analogy," a postulated isomorphism allows, indeed suggests, that this alteration take place; it is a reservoir of hypotheses once a pattern of correspondence between the elements and concepts at each level and between the relations between these elements and concepts has been established. While most isomorphisms are discovered through empirical testing at the various levels of analysis, it is possible to postulate or establish an isomorphism prior to testing by the suitable redefinition of old hypotheses and the introduction of new concepts which more adequately fit the phenomena under investigation.¹¹ On the other hand, the terms

10 Stephen Toulmin, Philosophy of Science, op. cit., passim. See also the introductory chapter of this paper, pages 3-4.

11 While this paper seeks to discover an isomorphism, Johan Galtung, in an excellent article, endeavours to establish an isomorphism prior to testing. He suggests a dictionary for small group theory—international relations correspondence, with the individual (representing nation-state) as the unit of analysis, and then attempts to examine the posited correspondnece in light of selected hypotheses from small group and psychological studies. See especially, "Small Group Theory and the Theory of International Relations," in Morton A. Kaplan, New Approaches to International Relations, 270-302.

"model" and "analogy" are deficient in their inability to specify this pattern of correspondence between the elements and concepts examined at each level of analysis. With complete or perfect isomorphism, we can attribute a high degree of predictability to the generalization or approach as an analytic tool.

Before proceeding, however, a more detailed elaboration on the concept of isomorphism would appear in order. A purely mathematical definition of isomorphism would be posited in a fashion similar to the following:

"...a relation between two sets, such as the set of points on a map and the set of points in the terrain, which holds when: (1) There is a one-to-one mapping between the elements in one set and the elements in the other; (2) There is a one-to-one mapping between relations in one set and relations in the other; and (3) These two mappings correspond to each other -- if two elements in the first set are mapped on two elements in the second and there is a relation between the elements in the first set, then the image of that relation will hold between the image of the two elements."¹²

For example, if a point were to the right of another on a map, then the image of that point would be to the east of the image of the first point in the terrain, since "to the right of" corresponds or is mapped on "to the east of."

However, as a mathematical definition the concept is of limited utility in the construction or the discovery of analytic tools as a heuristic for research. For, like the term "model," acceptance of this

¹² Cf. Galtung, "Small Group Theory," Ibid., especially n. 4.

notion of a "one-to-one mapping" is likely to distort the "real" situation by the much simpler and more explicit or formalized framework. The definition must, therefore, be made more fruitful or useful by the addition of two more concepts, viz., "richness of isomorphism" and "degree of isomorphism."

Utilizing the terrain-map example, the terrain may be said to represent "reality." If we want to obtain knowledge about the terrain (which in the present paper would correspond to intertribal relations), one possible way would be to use the map. The map then becomes what social scientist's frequently refer to as their "model" or "analogy" (and the map in this paper would correspond to small-group experiments, specifically the Robber's Cave study to be examined at greater length in the following chapter). The usefulness of the map as a model is due to the circumstance that several relations are included in the isomorphism, e.g. both distance and direction. Now, imagine that the map were printed on a rubber sheet and distorted so that both distance and direction were lost. Topological relationships would, however, still be preserved -- one would still know from the map what is in the neighbourhood of what in the terrain. Hence, the map would ~~not~~ be altogether useless, only less useful or less fruitful. We might express this situation by stating that the isomorphism has lost in richness, it is poorer than it originally was, and define the "richness of an isomorphism" simply in terms of the number of relations in the analogy

or map that is also included in the isomorphism.¹³ Similarly, "degree of isomorphism" is this number relative to the total number of relations contained in the model. Hence, the two concepts are closely related, since "degree of isomorphism" is merely the relative version of "richness of isomorphism."

If the degree of isomorphism of the analogy or proposition is very high, then, the model has been (almost) completely ~~exploited~~ for its explanative and, subsequently, its predictive ability; if it is very low, it has either been underutilized or is simply a poor analogy that in addition may be misleading. The temptation, in either case, is toward unwarranted conclusions and even toward poor hypotheses.

It is contended, therefore, that what practicing social scientists often refer to as their "models," "analogies," or "metaphors" are, in fact, poor and/or low in degree of isomorphism. One reason, as previously suggested, is that their models are often in themselves so ~~complicated~~, because the "reality" studied is so complex, that the degree of isomorphism will have to be low even if the richness is quite high. Furthermore, the increasing propensity to compartmentalize

¹³ When two models or analogies are compared in terms of "richness," a safer method than simply counting the number of relations would be to say that one model is richer than the other if it includes all the relations of the latter and at least one more in its isomorphism.

disciplines only adds to the complications. The usual result is that model-building, as such, easily falls into disrepute because of the tendency to step outside the established isomorphism. On the other extreme, the model may be much too simple or too explicit in expressing its pattern of correspondence between the tenets of the model and the "real" situation. In such cases, the analogy is poor and/or low in richness of isomorphism, that is the postulated model is incapable of accounting for specified occurrences in the "real" situation.

One solution to the problem has been briefly touched upon: we require that the cases or the "reality" which we wish to investigate be comparable in terms of the specific variables that concern us in any given inquiry, regardless of their traditional focus of inquiry. If, for example, intergroup conflict in the social-psychologist's laboratory is best described, explained, and even predicted in terms of the same variables necessary to understand such phenomena between nation-states, then the comparability is sufficient for analysis though the proposals or the analogy may require modification or alteration at this higher level of analysis. If such is the case, the model at this stage may be said to be poor and/or low in richness and/or degree of isomorphism. The model or its hypotheses which are supported or even reinforced by the findings at this level may be said to be high in richness and/or degree of isomorphism. The isomorphic approach, then, enables us to measure the degree of applicability and the level of generality of interdisciplinary research.

Finally, no matter how comparable the variables may be, or how compelling the analogy, an important distinction remains to be made. Is the analogy drawn for descriptive or predictive purposes, or merely for heuristic¹⁴ purposes? Put another way, in the absence of better data and better models from which to describe and explain the so-called "real" world, the analogy may well ~~have to~~ serve as evidence, albeit evidence of a clearly interim nature. Its main value, then, is to generate reasonable hypotheses, whose confirmation ultimately requires further testing in the empirical world about which we want to generalize. Until such testing by operational, and therefore replicable, procedures occurs, we stand a goodly distance from our objective of data-based theory. Given the tremendous gap which presently separates us from that achievement, however, it should be regarded as no great crime to treat our more sophisticated and careful analogies as a tentative variety of empirical evidence. In sum, if the theoretically more experienced behavioral sciences are to be of any relevance it is only through interpretation and only through careful selection of what appears to be most suggestive.

14 Heuristic here means "suggestive" or "productive of tentative ideas and hypotheses." The concept only serves to point out that there is no a priori confirmation of any model of the empirical world. The model or map, therefore, is a reservoir of hypotheses. One should use the model with a readiness for revision should the isomorphism fail. Finally, it should be noted that there is nothing new in the use of such heuristic devices in the study of international relations. The only new element would be the endeavour to make them more fruitful and systematic as analytic tools.

Intergroup Competition and Cooperation

A. The Robber's Cave Experiment

Cognizant of the issues raised in the foregoing chapter, the research which will follow seeks to apply selected proposals or hypotheses from the study of small-group interaction to a higher level of analysis -- that of intertribal relations -- in the hope of generating insight and understanding into the processes of hostility occurrence and hostility reduction between nation-states. It is expressly designed, then, to reflect the utility of step-level analysis in enhancing the development of interdisciplinary corroboration. Moreover, as an illustration of the isomorphic approach, it will endeavour to test the degree of generality or applicability of the proposals selected for study.

Specifically then, the research is oriented towards the evaluation of two hypotheses generated from the small-group experiments of a most distinguished social psychologist, Muzafer Sherif, and his colleagues. The original experiments were initiated as an attempt to integrate field and laboratory approaches to the study of intergroup relations, essentially dealing with an examination of the factors conducive to conflict and cooperation between groups.¹ The ensuing experiments summarized the

¹ In order to cope with the non-laboratory situation, social scientists have developed several types of strategy. For a cursory exposition on these approaches, see J. David Singer (ed.), Human Behavior and International Politics, 8-10. A more fully developed discussion is Ernest Nagel, The Structure of Science, especially Chapter 13, "Forms of Controlled Inquiry."

efforts of a research programme formulated on the basis of extensive surveys of the literature on engagements between groups in racial, industrial, and political situations which had evolved as early as the mid-thirties under the aegis of the Institute of Group Relations at the University of Oklahoma.²

Serious concern over the correspondence between the conception of the studies and the actualities of intergroup relations that the studies purported to investigate prompted Sherif and his associates to test their hypotheses under a much more controlled, yet natural environment.³ Indeed, the essence of the studies began with a serious concern as to the rise and functioning of actual small groups in natural,

² The experimenters, under the direction of Sherif, included O.J. Harvey, Jack White, William R. Hood, and Caroline Sherif, all of whom were outstanding sociologists and social psychologists in their own right.

³ Needless to say, several significant considerations shaped the conception and the methodology of the Sherif approach to the study of intergroup relations. Although it is not feasible at this time, given the focus of the paper, to survey the major theories on group interaction, I have nonetheless recognized the necessity of elaborating on the theoretical outlines which determined the formulation of the hypotheses advanced as well as the design of the Sherif experiment in successive stages. However, for the sake of coherence and style, and not as an indication of its importance to an understanding of this paper, a detailed outline of the approach, hypotheses, and general design of the Robber's Cave experiment has been relegated to an appendix (cf. Appendix A). Furthermore, the logic and the techniques of the experiment are summarized in a paper, "Toward Integrating Field Work and Laboratory in Small Group Research," which appeared in the special Small Group Research Issue of the American Sociological Review, Vol. 19 (December, 1954), 759-71. Also, a survey of the major theories on intergroup relations and a summary of the original experiments are presented more fully in Caroline and Muzafer Sherif's Groups in Harmony and Tension (1953).

i.e. life-like, social interaction situations. The hypotheses originally advanced, therefore, were formulated on the basis of recurring events as reported in sociological research on small-group interaction. Hence, the theoretical and methodological consideration of crucial significance to the Sherif people was the testing of these hypotheses and findings under conditions which appeared natural to the subjects whose behavior was being observed. Priority was accordingly given to the uninterrupted and uncluttered flow of interaction under experimentally introduced stimulus conditions. Hence, the techniques of data-collection were adapted to the flow of interaction, rather than cluttering or abruptly precluding interaction for the convenience of the experimenter. Evidence of this bias abounds in the invaluable experience of two earlier experiments (1949 and 1953) in which the proceedings were halted as soon as it became evident that the above criteria were not being satisfied.

I have intentionally sketched out this concern at some length in order to assure the reader, and especially the reader unfamiliar with Sherif's many published works, of Sherif's overbearing attention to the question of validity. In his experiments, the aim was to establish definite trends as they developed in natural, life-like situations and to introduce precision at chosen points when this could be done without sacrificing the life-like character which, Sherif contends, gives the greatest hope for achieving valid trends and conclusions on the behavior of interacting groups.⁴

⁴ Cf. Sherif, "Toward Integrating Field Work and Laboratory in Small Group Research," American Sociological Review, op. cit., 764-68.

The immediate focus of my research concerns the hypotheses derived from the last stage of Sherif's Robber's Cave experiment (1954) -- those concerning the occurrence of hostile intergroup relations and the reasons postulated for the reduction of same -- or what Sherif himself refers to as the "integration phase."⁵

Briefly stated, the hypotheses are as follows:

1. Intergroup hostility is the result of intergroup competition; and
2. Superordinate goals, i.e. those goals whose attainment necessitates intergroup cooperation, reduce the occurrence of intergroup hostility.⁶

Employing a schema of categories⁷ as a means of isolating and identifying what are perceived to be the reasons for hostility occurrence, its termination, and, as well, the occurrence of non-violent relations between groups, the above hypotheses will be tested at a higher level of social organization -- or what I have chosen to refer to as "intertribal relations."

However, prior to, and in preparation for, an analysis of the applicability of these proposals to tribal interaction, some epistemological reflections on the nature of intergroup competition and cooperation appear to be in order.

5 The observations and conclusions of this experiment in its successive stages are discussed more fully in Sherif's report, Intergroup Conflict and Cooperation: The Robber's Cave Experiment (Norman, Oklahoma, 1961).

6 The terminology employed is defined and discussed at much greater length in Part B of this chapter.

7 The schema of categories is outlined and the categories defined in Part C of this chapter.

B. Some Epistemological Considerations on the Nature of Conflict

The behavior of the species homo sapiens in conflict has long been the fascination of the social sciences. Indeed, the skill and energy of a substantial number of scholars has been, and continues to be, occupied with the task of defining and analyzing the nature of interpersonal and intergroup conflict.⁸ In spite of this effort, our knowledge of the phenomenon remains sadly underdeveloped. In part, the reason for this state of affairs would seem to lie in the formidably

⁸ Among the more noteworthy: G. W. Allport, The Resolution of Intergroup Tensions; J. Bernard, "The Conceptualization of Intergroup Relations with Special Reference to Conflict," Social Forces, Vol. 29 (1951), 243-51; J. Bernard, "Some Current Conceptualizations in the Field of Conflict," American Journal of Sociology (January, 1965); J. Bernard, T. H. Pear, R. Aron, and R. C. Angell, The Nature of Conflict: Studies in the Sociological Aspects of International Tensions; L. Coser, The Functions of Social Conflict; R. Fisher (ed.), International Conflict and Behavioral Science; T. Horowitz, "Consensus, Conflict, and Cooperation," Social Forces, Vol. 41 (December, 1962), 177-88; I. L. Janis and D. Katz, "The Reduction of Intergroup Hostility: Research Problems and Hypotheses," Journal of Conflict Resolution, Vol. 3 (1959), 85-100; E. McNeil (ed.), The Nature of Human Conflict; A. Rose and C. Rose, "Intergroup Conflict and its Mediation," International Social and Science Bulletin, Vol. 6 (1954), 25-43; G. Simmel, Conflict; R. Stagner, Psychological Aspects of International Conflict; R. Stagner, Dimensions of Human Conflict; Q. Wright, "The Nature of Conflict," Western Political Quarterly, Vol. 4 (1951), 193-208; A. Yates, Frustration and Conflict. Cf. bibliography for a more complete listing of the available sources.

tangled and controversial status of the existing scholarly literature on the topic -- itself, the result of increasing compartmentalization and proliferation of concepts within and between the social sciences.

Needless to say, considerable clarification of standards of evidence and inference are required if progress is to be made in the direction of developing the study of intergroup conflict into useful analytic tools for examining and generating prediction about the behavior of groups in conflict. Before plunging into this quagmire, we should at least be aware of the definitions of those concepts we will be dealing with.

With respect to the research of this paper, a group may be defined in terms of a social unit which consists of a number of individuals who, at a given moment, stand in more or less definite interdependent status and role relationships to one another and 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.⁹ Groups, so defined seek goals which arise as integral parts in situations, which have common appeal value to members of the group and, therefore, necessitate facing a common problem,

⁹ For the most part, this is the definition which Sherif developed for his experiments on intergroup relations; cf. Appendix A for an elaboration. In my research, I have adopted Sherif's conception of "group", as here defined, and have used it more or less synonymously with such descriptive epithets as "tribe," "society," "interacting unit," and the like. I am, however, cognizant of the fact that these latter terms, as well as certain aspects of the data to be examined, more properly signify different levels and processes of societal organization. But I shall have more to say about this in the chapter which follows.

discussion, planning, and execution in a mutually cooperative way. Moreover, in functional relationships between groups, situations arise in which the groups may find themselves in competition for given goals and, hence, in conditions which imply some frustration in relation to one another. This latter situation implies intergroup tension.

Interaction may be regarded as the sine qua non of any kind of social relationship (be it interpersonal or intergroup).¹⁰ Since human interaction takes place largely on a symbolic level, communication is here considered to be an integral part of the interaction process. The term "intergroup relations" refers to the relations between two or more groups and their respective members. The appropriate frame of reference for studying group interaction includes the functional relations between the groups. Moreover, intergroup situations are not voids. Though not independent of relationships within the groups in question, the characteristics of group interaction cannot be deduced or extrapolated from the properties of in-group relations, ie. prevalent modes of behavior within a group, in the way of cooperativeness and solidarity or competitiveness and rivalry among members, need not be typical of actions involving members of an out-group.

¹⁰ For a stimulating analysis of the concept of "interaction," see Johan Galtung, "Expectations and Interaction Processes," Inquiry (1959), 213-34.

Conflict, sociologically conceived, involves some kind of cost. Cost is inherent in the nature of conflict itself, for conflict exists when mutually incompatible values are involved, e.g. one cannot travel and at the same time remain rooted in the community. The existence of mutually exclusive, incompatible group values, therefore, generates increasing tension between groups aspiring to and competing for the same goals. Furthermore, the sociologist posits several kinds of possible strategy for groups with such different and incompatible values yet common aims:

"(a) one group may withdraw from the system or be ejected from it; (b) one group may impose its system on the other; (c) an equilibrium may be established in which concessions are made, the more 'expendable' values of one group being exchanged for the more 'expendable' values of the other; (d) values may be modified so that coalescence is possible; or (e) the groups may assimilate to one another, or one may absorb the other." 11

In other words, given disparate group-value structures, groups may either cooperate in some process of accommodation or engage in hostilities in the effort to achieve desired goals.

The all-to-frequent implication of the foregoing sociological conception, for some observers, is that tensions, hostility, and conflict, often viewed in the form of competitiveness, which in itself may not result in, nor could it possibly be conceived as, hostility or violence.

11 Jessie Bernard, "The Sociological Study of Conflict", in The Nature of Conflict, International Sociological Association (UNESCO, 1957), 42. See also pages 88 ff. of the same essay. With some minor exceptions, sociologists generally have attempted to distinguish among the various conceptions of conflict -- sometimes by way of scaling them, and at other times by considering them as reflecting related but different dimensions of interaction.

In the endeavour to comprehend the nature of conflict, acceptance of its interchangeable identity with the terms "tension" and "hostility" is to obfuscate the task at hand. Indeed, conflict in itself is such a complex phenomenon that it is inadequate and misleading to subsume its mechanisms and processes under a single, interwoven entirety. From a more practical or applicational point of view, it is perhaps desirable to distinguish between conflict in its manifest and its latent form.

With respect to competition and the generation of intergroup tension, Georg Simmel, considered by many scholars to be "the Freud of the study of society," is insightful:

"The foremost characteristic of competition is the fact that conflict in it is indirect... In general, linguistic usage reserves the term only for conflicts which consist in parallel efforts by both parties concerning the same prize."¹²

Inherent, therefore, in any situation of intergroup competition is the occurrence of indirect, or what we have chosen to refer to as latent, conflict.

Whenever one group deliberately seeks to gain a given superior position in relation to the other, competition per se may be said to have generated into a hostile relationship, viewed as violence or "conflagration." The latter situation may be referred to as manifest conflict. Simmel is again helpful:

¹² Georg Simmel, Conflict and the Web of Group-Affiliation, 57.

"In so far as one gets rid of an adversary or damages him directly, one does not compete with him....The pure form of the competitive struggle is above all not offensive and defensive, for the reason that the prize of the fight is not in the hands of either adversary. If one fights with somebody to obtain his money, wife, or fame, one uses quite other forms and techniques than if one competes with him as to who is to channel the public's money into his pockets, who is to win the woman's favour, who by deed or word, is to make a greater name for himself." 13

Hence, it is the specific colouration of the competitive struggle that its outcome does not itself constitute the goal, as it does whenever anger, revenge, or the ideal value of victory as such motivates hostility occurrence.

Cooperation as a concept complements the notion of manifest conflict in a different way from that of competition, or latent conflict. Although, as suggested, latent and manifest conflict have in common the fact of struggle, they differ in the main objective of that struggle -- for manifest conflict, it is defeat of an opponent; for latent conflict, it is to appropriate a scarce resource. Hence, with respect to two interacting units, cooperation is excluded in the former case, yet compatible at times in the latter. For example, it is conceivable that two industrial nations may engage in hostility, whereas an agricultural and an industrial state are more likely to cooperate. For in the latter situation, it is the incompatibility of interests

13 Simmel, ibid., 57.

(and its attendant effect on group goals) that is crucial.¹⁴ Hence, it would appear entirely possible to postulate that the presence of some cooperative enterprise is more likely to reduce the potential for intergroup competition to generate into a situation of violence.

A number of measures designed to combat the occurrence, or stimulate the reduction, of intergroup hostility have been proposed by social scientists and by such people as administrators, policy-makers, and educators. Inter alia, they have included the following: introduction of legal sanctions; creation of opportunities for social and other contacts among members of conflicting groups; dissemination of correct information to break down false prejudices and unfavourable stereotypes; and even appeals to moral ideals of fair play and brotherhood.¹⁵ Each of the measures, it would appear, is aimed either directly or indirectly at enhancing or establishing communication between the groups. Although I do not wish to deny that such proposals have value in the reduction of intergroup hostility, our knowledge of the effectiveness of these proposals is indeed scant. To date, we have acquired or established very few generalizations concerning the circumstances and kinds of intergroup violence in which these measures may be effective. Moreover, their present application in a somewhat trial-and-error fashion precludes the attainment of more valid generalizations which can be applied, at least in their essentials, to any group.

¹⁴ Cf. Robert C. Angell, "The Sociology of Human Conflict", in Elton B. McNeil (ed.), The Nature of Human Conflict, 91-115.

¹⁵ See especially the article by I.L. Janis and Daniel Kutz, "The Reduction of Intergroup Hostility: Research Problems and Hypotheses", op. cit.

The measure to be examined and applied to the reduction of intergroup hostility in this analysis is that which Sherif refers to as "superordinate goals." Specifically, superordinate goals may be defined as those which cannot easily be ignored by the members of two groups, but the attainment of which is beyond the resources and efforts of any one group alone.¹⁶ Thus, it is contended, the presence of superordinate goals, such as the existence of a malevolent common enemy or mutually beneficial commercial relations, creates a state of real and/or perceived interdependence. The latter, in turn, produces or at least facilitates more favourable images of one's out-group and, consequently, further exchange of group values. Hence, cumulative communication increases the likelihood of further cooperation in areas of mutual concern. The absence of superordinate goals, therefore, implies the increasing likelihood that competition or latent conflict will generate into hostility.

Locating measures that tend to reduce violence between groups and that have wide validity in practice at all levels of analysis can come about only with the attainment of two requisites: clarification of the nature of intergroup conflict and an analysis of those factors conducive to intergroup violence and cooperation under actual or given circumstances. The former has been the intended function of this section of the paper, the latter is the task of the research in the following chapter.

¹⁶ Cf. Sherif, "Superordinate Goals in the Reduction of Intergroup Conflict," American Journal of Sociology, Vol. 63 (1958), 349-56.

C. The Categories Defined

In the ensuing examination of what appear to this analyst to be the reasons for the occurrence of hostility, and its eventual termination, between a pair of interacting, societal-units, the following 'schema of categories' will be employed:

<u>A-B (Interacting Groups)</u>	[1] ¹⁷
<u>Perception of Hostility Occurrence</u>	<u>Perception of Hostility Termination</u>
Subsistence	Common Enemy
Trespass	Change of Economic Base
Expulsion	Necessity for Trade
Incorporation	European Intervention
Trade	Annihilation or Expulsion
Prestige	Incorporation
Wealth	

Although it is to be recognized that the above classifications are clearly arbitrary distinctions, it should also be appreciated that a major attempt has been made by the author in delimiting, for the sake of the research which is to follow, the field of available variables for study.¹⁸

¹⁷ Denotes the interacting groups' reference number which will be used in summarizing the data into tables.

¹⁸ Cf. especially Kenneth Boulding, "Is Peace Researchable?" in Background, Vol. 6 (Winter, 1963), 70-77.

Moreover, the categories specified above, as well as those contained in the schema for identifying the perceived areas of cooperation between interacting groups, are in no way meant to be mutually exclusive; indeed, it is expected that any given pair of societal-units or "tribes" may well fulfill the criteria outlined in several of the foregoing categories and, hence, be nominally scaled in those perceived areas of relevance.

For the purpose of operationalizing the categories, several distinctions in conceptualization are offered. Hostile relations may ensue in instances where one of the groups has a need to acquire food-stuffs due to a lack in its own provisions. Such a condition normally results from an uncontrolled adversity, e.g. a severe winter, drought, famine, pestilence, etc. In the research which follows, the existence of such a condition, which results in the affected group engaging in hostile relations with another group, will be subsumed under the Subsistence category. Hostile relations may also develop from a lack of food-stuffs which the affected group does not itself produce. This is, however, a rare instance since it is more likely that such goods would be obtained in trade or commercial relations of some sort. Not only is it more stable, but it is usually also more efficient. If one of the groups were to desire to control the source of trade which their trading-partner possessed, the motivation would be inherently different from that subsumed under this category (cf. Trade below). Finally, not included in this category is the acquisition of surpluses as a factor of hostility since such activity

is generally not considered a feature of primitive societies.¹⁹

Trespass has been classified as a potential reason for hostility occurrence in that conflict situations often develop out of minor or temporary violations of one group's territory by another. Such trespass may be perceived as either violation of a recognized area of ownership, or violation of an area which one group symbolically considers to be its own ("declaratory ownership") in spite of nonrecognition, or even non-awareness, of the claim by the other group (it is also, therefore, conceivable for the latter group to commit "declaratory trespass"). Occurrences of this latter form of trespass is, however, uncommon in primitive societies unless a situation of institutionalized conflict (expressed in ritual) has been established between the combatants.

Extended and intentional trespass may eventually lead to Expulsion, i.e. those instances in which one group seeks to control another group's territory through the forceful removal of that group from the desired area. Perhaps the most notable example of trespass leading to expulsion (and consequent forced migration once again creating an instance of trespass) can be found in the recent history (eighteenth century) of the North American Indian, as dozens of tribal groups converged upon the Great Plains. Aspects of some of the resulting hostilities are documented in the following chapter.

19 See especially, Clyde Kluckhohn, Politics, Law, and Ritual in Tribal Societies; and Paul Bohannan, Law and Warfare, Studies in the Anthropology of Conflict. I am also indebted throughout this section of the paper to D. P. Force for his critical suggestions.

A third expression of this "territorial propensity" is Incorporation. Hostility results from one group's desire to acquire and to control the territory of another group through the incorporation of the original owners as "subjects." If reference is specifically made to tribal units, anthropologically and sociologically defined, then this phenomenon of "empire" or federation is rare, if not altogether absent. However, as will be further elaborated, the term "tribal" is, for the sake of clarity in the research to follow, an epitome for groups to be examined regardless of their level of societal organization. Properly speaking, incorporation is a phenomenon of states or quasi-states such as the "chiefdom." The research deals with such groups, e.g. the Zulu and the Natchez.

Hostility generally arises from the desire of one or both groups to control, and therefore to benefit from, the same commercial source of the same commercial routes. Hence, conflict may ensue directly from a Trade relationship between two groups or may result from competition for trade with a third group. Often, the desire to control commodities for trade has led to increased cultural contact and, with reference to the research, made the possibility of "European" intervention more likely. In some instances, the reverse conditions would seem to have prevailed, i.e. cultural contact, such as the introduction of some new economic system, increased the demand for goods with which to trade. Again, the North American setting provides a graphic illustration: European fur interests precipitated hostilities, or at least a level of conflict, between indigenous populations that

had been lacking prior to their intervention. Consequently, the tribes competed for the most lucrative fur-trapping grounds (which frequently introduced additional sources of friction, such as trespass, expulsion, prestige, etc.).

Though almost all societies consider courage and "warriordom" to be an honoured area of man's endeavour, some groups place a special emphasis upon its achievement. Indeed, in some primitive groupings, anthropologists have described this as one of the prime motives leading to the occurrence of hostile relations; in other societal units, it certainly plays a part in reinforcing, say, raiding habits which may have developed as the result of a more direct, ulterior motive. In any case, the effect of a group's social emphasis on courage and "warriordom" as a stimulus to the occurrence of hostile relations with another group shall be subsumed under what I have chosen to call Prestige. However, in so doing, one need be aware of the fact that, frequently, with reference to interaction at the tribal level, as sociologically and anthropologically defined, this phenomenon is usually very limited. That is, hostility is more likely to occur within certain "rules of the game." Where a situation of "controlled conflict" exists, it is likely that the groups involved recognized the importance of the survival of the second group, i.e. to conduct all-out war would lead to either the demise of a convenient group for measuring "prestige" (as in counting coups) and acquiring valued objects or would invite total destruction. Hence, such is to call attention to the fact that, in certain instances, limited conflict ensures "systems-maintenance," though frequently not explicitly perceived. Even in this latter situation, however, the "prestige"

motive, more often than not, is formalized in the ceremony and ritual which preceeds the dispatch of a raiding party and which follows upon its return.

Hostile relations frequently develop as the result of one group desiring to possess that which another group has ownership of, given a scarcity of the economic commodity in question, e.g. the horse in the culture of the Plains Indians and cattle as the valued objects of Nuer society. Included in this category, which I shall refer to as Wealth, will be those groups in which the acquisition of scarce or valuable commodities, whether it be loot, captives, cattle or horses, is a primary motive for the occurrence of hostility.

The following conditions may be briefly defined as leading toward the termination of a given hostile relationship:

a) Common Enemy: Hostilities between two groups are usually terminated when the necessity arises that they combine resources and cooperate in the face of a third, more alien enemy; e.g. the Iroquois federation.

b) Change of Economic Base: The termination of hostile relations may arise when one or both groups have altered their basic subsistence pattern such as, for example, from hunting and gathering to agriculture, so that either the products of one group are now undesirable or more likely, unnecessary to the other, or the basic pattern now tends to discourage the raiding motive. In the latter instance, agriculture tends to encourage settled ways of living which are not generally compatible with extensive raiding habits. Although, on the other hand, it is

entirely conceivable that a change of economic base and its attendant culture patterns may introduce the appeal of expansionism and "incorporation" (cf. (f) below). Hence, an alteration in the nature of one group's economic base and mode of living is just as likely to contribute to hostile relations as it is to reduce or terminate such an occurrence. It is the latter condition that I have subsumed under this category.

c) Necessity for Trade: Hostile relations may be terminated when mutual trade or trade with a third party becomes a prior necessity.

d) European Intervention: Hostilities may be terminated through "European" conquest, threat of intervention, or missionization. The term "European" in this instance is meant to refer not to Europeans per se but to the cultural contiguity of more advanced -- economically, militarily, technologically, politically, and the like -- societies. Hence, the term includes Europeans per se, Americans, British, and other "imperial" groups whose migrations, expeditions, and campaigns resulted in confrontations with indigenous peoples.

e) Annihilation or Expulsion: Hostilities between two groups may be terminated through either the annihilation of one or both groups, or the spacial displacement of one group from the contested area.

f) Incorporation: Hostile relations may be terminated when the ability and/or the desire of one group to resist another is broken and the group, subsequently, is incorporated into the expanding societal unit. Needless to say, a situation of stable or unstable domination may occur without actual incorporation of the dominated group. In primitive societies we usually refer to incorporation as implying a

coercive takeover. [At higher levels of social organization, i.e. the nation state, this process is usually referred to, or made to appear, as integration or the voluntary fusion of decision-making units.] If, however, the incorporation proves to be unstable, hostilities may be only barely suppressed and, consequently, short-lived, e.g. the Aztec Empire. 20

In a similar fashion, those groups or "tribal-pairs" illustrating nonhostile interaction patterns will be examined and, accordingly, what appear to be the reasons for the occurrence of such a relationship will be considered. I am specifically concerned with the perceived areas of cooperation between the groups. The schema employed for nominal classification of the interaction patterns, therefore, corresponds to the previous one with, of course, altered categories:

C-D (Interacting Groups) [a]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference

a) Trade: The existence of extensive trade between societies may not, in itself, be a "cause" of peaceful relations, but it nonetheless contributes to a widening of the channels of communication as well as the possible avenues to further cooperation between groups.

20 Once again, if we define "incorporation" as it is in sociological and, more specifically, anthropological research, it usually refers to phenomenon at the quasi-state or the chiefdom level of social organization and not tribes per se.

Indeed, it would appear that in those groups having a history of close commercial ties the concept of active hostility towards one another is virtually nonexistent.

b) Common Enemy: Alliance situations usually evolve from the desire to increase the potential for victory over a perceived alien. In the sense that the resources and energies of any single group will be inadequate for the attainment of that goal, a state of real and/or perceived interdependence is created. Since this state of interdependence concerns the basic survival of alliance members, they are likely to maintain a sufficient level of motivation among other groups involved in the alliance, as well as introducing a series of stimulus conditions which will make the attainment of their common goal, viz. defeating the enemy, all the more compelling. Generally speaking, the groups would appear to have either always been allied against a third, more alien, party or to have had peaceful or even "neutral" relations which have tightened because of the real and/or perceived threat.

c) Indifference: Nonhostile relations may, in rarer instances, be due to the fact that neither group considers the other to have anything worth taking or competing for. Or, one (or both) of the groups may be so culturally insulated that it appears to be not overly concerned about the existence of an alien culture on its frontiers. [Indeed, in this latter example, it is perhaps impossible to refer to the societal-pair as engaging in an interaction pattern, since such transaction involves communication which, in itself, is culture-bound.] Or, an even rarer case is the situation in which each group lives in relative abundance and, hence, the necessity to trade or to plunder is inconceivable.

An Analysis of Intertribal Relations: The Sherif
Hypotheses Applied

The research which follows below in Part A seeks to outline the perceived reasons for hostility occurrences and their ensuing termination among fourteen pairs of interacting societies, defined in terms of the group,¹ and according to the categories previously specified. Part B subsequently seeks to examine those instances of tribal interaction in which hostility was notably absent (ten pairs of interacting units) and endeavours to isolate or identify perceived areas of cooperation between the groups.

For the sake of clarity in the research design, I shall refer to the units comprising a "societal-pair" as tribes, by which I wish to imply no more than those groups which can be distinguished by a tenacious loyalty to those primitive subgroups representing certainty amongst a bewildering environment.²

¹ As cited earlier.

² That the term "tribe" may be sociologically incorrect in a few instances, I have little reason to doubt. Elman Service distinguishes between five levels of societal complexity: the band, tribe, chiefdom, primitive state, archaic, and imperial civilization (cf. Profiles, op. cit., xv-xxix). For example, in the research which follows, the Eskimo would more properly be referred to as a band; the Cheyenne, Nuer, and Navaho, as tribes; the Trobrianders as a chiefdom; and the Zulu as a primitive state. See especially, I. Schapera, Government and Politics in Tribal Societies (London, 1956); C.D. Forde, Habitat, Economy, and Society (New York, 1963); and Murdock, Contemporaries, op. cit. I am again indebted to D. P. Force for his insights.

The selection of tribal-pairs has not been, nor could it possibly be, a rigorous random sampling from all available instances of tribal interaction; they have, however, been selected in a random fashion from an extensive reading of the literature on primitive anthropology.³ In addition to the volume of secondary data from the several exhaustive area studies on primitive interaction that will be cited in the research which follows, extensive use of the (Yale) Human Relations Area Files⁴ has hopefully supplemented the validity of the findings.

The scheme of categories for each pair of interacting units will be followed by a brief exposition of what appear, to this analyst, to be the prime reasons for the occurrence of hostility, its termination, and, in Part B, areas of cooperation. The exposition is not intended to be definitive but merely to enable the reader to "see" the logic of plotting the preceding categories as I have done in each case. Moreover, the explanations may provide the reader with unintentional stimuli by which to draw analogies to contemporary international relations. But let us leave that until later.

3 For purposes of methodological clarity, the selection of interacting societies might more realistically be viewed as the fortuitous products of an exhaustive, yet not altogether systematic, search of the relevant literature. Accordingly, the tribal-pairs should not be regarded as representative, either of the literature, or of historical instances of tribal conflict; indeed, just as the available anthropological field-work cannot, without some demonstration to the contrary, be viewed as representative of tribal populations. The reader should be aware also that my data has been "pre-sifted" by many others and sifted differently -- anthropologists field techniques as well as their conceptualizations have changed **radically over the past 40 years**. In addition, cases of societal interaction which could readily qualify for analysis had to be rejected on the basis of insufficient data. This methodological note hopefully suggests considerations for further research.

4 See Appendix B.

Finally, Part C seeks to present a brief analysis of the findings thus far accumulated in the two preceeding sections of this chapter and, more directly, whether or not the Sherif proposals may be substantiated (and, if so, to what degree) or refuted by the acquired data. To review, the immediate focus of the research in this chapter involves selected hypotheses from the Robber's Cave study and those specifically, and in simplest form, are as follows:

1. Intergroup hostility is the result of intergroup competition; and
2. Superordinate goals reduce the occurrence of intergroup hostility.

That these hypotheses are related is, perhaps, somewhat obvious: the presence of superordinate goals, i.e. those goals whose attainment necessitates intergroup cooperation, reduces the occurrence of competition between the groups thus concerned and should also if premise (1.) above is valid, reduce hostility between them.

Part C, therefore, attempts at a preliminary answer to the relevant question raised at the outset of the paper: Are the hypotheses, generated in small group experimentation by social psychologists, applicable, and correspondingly insightful, at a higher level of analysis, i.e. tribal interaction?

A. Case Studies of Hostile Interaction

Cheyenne and Teton Dakota

[1]⁵

Perceptions of Hostility Occurrence

Subsistence

Trespass

Expulsion

Incorporation

Trade

Prestige ✓

Wealth ✓

Perception of Hostility Termination

Common Enemy ✓

Change of
Economic BaseNecessity for
TradeEuropean
InterventionAnnihilation or
Expulsion

Incorporation

The Cheyenne and Teton Dakota were both tribes of the North American Plains. Hostility was primarily motivated by the desire for wealth (viewed as the acquisition of horses and eventually guns as well) and prestige (military and economic). The Cheyenne were quite typical of the horticulturalists who turned into mounted nomads. Once they became fully equestrian, their culture became the quintessence of the Plains type. In the 1600's the rival machinations of the British and French dislocated many tribes and the repercussions apparently caused the Cheyenne to finally move into North Dakota sometime before 1700. The primary currency was horses, and, hence, the desire

⁵ Indicates interacting groups' reference number.

for guns and the continuing necessity for more lead and powder, drove the Cheyenne to ever more risky horse-raiding parties to acquire more "money". "Just as Indians without horses were driven desperately to try to acquire [horses and guns] because of the great military, as well as economic, advantage they represented, so when competitors acquired guns, all their neighbours were driven to do so as well."⁶ All in all, the Plains area for about one hundred years was one of the arenas of the most intense tribal conflict ever known. No balance or stasis in territorial rights was possible for long because the fluctuation, first in the number of horses acquired by the various tribes and next in the possession of guns, kept the whole area in a state of turmoil.

Indeed, Teton history in the nineteenth century is well documented and is a history of conflict for Indian and European alike. The Teton Dakota were the scourge of the Northern Plains and though the Cheyenne were perhaps their most traditional enemy they were by no means their only one. They dominated the village horticulturalists "placing the Arikara in a position approaching complete subjugation, forcing them to trade agricultural products at rates of exchange set by the Teton."⁷ They raided the Mandan and Hidatsa and were the continual enemies of the surrounding nomadic tribes.

⁶ Elman R. Service, Profiles in Ethnology, 117. For further elaboration of the Cheyenne and their history see especially E. A. Hoebel, The Cheyennes: Indians of the Great Plains (New York, 1960); R. H. Lowie, Indians of the Great Plains (New York, 1954); and E. R. Service, Profiles, ibid., 112-137.

⁷ Robert F. Spencer, Jesse D. Jennings, et. al., The Native Americans; 351; cf. also Lowie (1954), op. cit.

Moreover, the Teton constantly harassed the keelboats bringing trade goods up the Missouri, and later were a threat to wagon trains crossing the plains to the west.

Only in the late nineteenth century when gold was discovered in the Black Hills, and finally when white settlers began competing for land, did the Teton and the surrounding tribes submerge their differences and attempt to ally against a common enemy. The Battle of Little Big Horn in 1876 against the troops of General Custer brought the Teton and Cheyenne together as allies and saw the resolution (or, at least, the reduction) of their traditional rivalry.

Iroquois and Huron

[2]

Perception of Hostility Occurrence

Subsistence

Trespass

Expulsion ✓

Incorporation

Trade ✓

Prestige ✓

Wealth

Perception of Hostility Termination

Common Enemy

Change of
Economic Base

Necessity for
Trade

European
Intervention

Annihilation or
Expulsion ✓

Incorporation

Hostility between the Iroquois and Huron ensued basically from the desire of the Iroquois to dominate those trade routes which the Huron originally controlled. An additional factor in

the intensification of this rivalry was the Iroquois' ritual of recognizing those who had been courageous and successful in warfare but who were not sachems (tribal leaders). The acquisition of "battle-honours" brought increased prestige to the warrior, many of whom had no possibility of becoming sachems (which was usually a hereditary position) and thus could not receive the prestige accorded a sachem -- hence, they continually demanded the right to organize war parties. Hostilities terminated with the annihilation of the Huron.⁸

Zulu and Ndwandwe

[3]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common Enemy

Trespass

Change of
Economic Base

Expulsion

Necessity for
Trade

Incorporation ✓

Trade

European
Intervention

Prestige

Annihilation or
Expulsion

Wealth

Incorporation ✓

The Zulu of the early nineteenth century became an expanding state under Shaka, a young warrior chief. Following the political consolidation of the Zulu kingdom, Shaka's

⁸ Cf. especially Spencer and Jennings, Native Americans, op. cit., 386-393; and G. P. Murdock, Our Primitive Contemporaries, 291-323.

paramount rival became another large chiefdom, the Ndwandwe, led by a strong military leader, Zwide. Regrouped after an earlier defeat at the hands of the Zulu, Zwide attacked the Zulu again in 1819, but this time Shaka not only defeated the Ndwandwe army but also followed the Zwide's homeland and destroyed it. Though Zwide escaped to settle down later as a powerless refugee, Shaka incorporated the territory into the Zulu state (what is today called Zululand).⁹

Nuer and Dinka

[4]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common Enemy

Trespass

Change of
Economic Base

Expulsion

Necessity for
Trade

Incorporation

Trade

European
Intervention ✓

Prestige

Annihilation or
Expulsion

Wealth ✓

Incorporation

The Nuer and Dinka were pastoral tribes of the upper Nile region, whose concept of wealth revolved around cattle. Elman Service observes:

⁹ Service, Profiles, op. cit., 293-314; especially 294-5; E.A. Ritter, Shaka Zulu: The Rise of the Zulu Empire (London, 1955); and Max Gluckman, "The Kingdom of the Zulu of South Africa," in M. Fortes and E. E. Evans-Pritchard (eds.), African Political Systems, 25-55.

"The dwindling of herds may, partly at least, explain the aggressiveness of the Nuer. The pastoral Dinka have been raided most persistently by the Nuer in the present country. Other tribes, such as the Shilluk, are not raided by the Nuer, because, as they explain, "We only raid people who possess cattle. If they had cattle, we would raid them and take their cattle...."10

Hostility between these tribes was terminated, more or less, by European intervention. Arab slavers and ivory traders, who conquered many of the Sudanic tribes in the past, had little effect on the Nuer. The Egyptian government and the later Mahdist government, which attempted to govern the Sudan between 1821 and the end of the century, had no control over the Nuer, nor did any other agency until the Anglo-Egyptian government of the Sudan finally established administrative posts in Nuerland after 1928.¹¹

Navaho and Pueblo

[5]

Perception of Hostility Occurrence

Subsistence ✓

Trespass

Expulsion

Incorporation

Trade

Prestige ✓

Wealth ✓

Perception of Hostility Termination

Common Enemy

Change of
Economic Base ✓

Necessity for
Trade

European
Intervention

Annihilation or
Expulsion

Incorporation

¹⁰ Service, Profiles, op. cit., 156.

¹¹ The most authoritative documentation on the Nuer and their intertribal relations is E.E. Evans-Pritchard, The Nuer (Oxford, 1940).

Although historic documentation with respect to Navaho-Pueblo interaction is somewhat vague, it suggests the possibility that the arrival of the Navaho in the American Southwest created an intensification of warfare. The Pueblos were the sedentary, wealthy agriculturalists, whereas the Navaho and related Apache were nomadic hunters, who undoubtedly found the Pueblos easy to raid. During this time, at any rate, began the great cultural dichotomy in the Southwest between the intensive agriculturalists who lived in their tight little villages and the free-ranging, proud, warlike Navaho-Apache. It would appear, therefore, that the raiding Navaho adopted agriculture from the Pueblo Indians about 1400-1600 A.D. and apparently settled down until the appearance of the horse after 1600 revived, to some extent, their raiding habits. The original raids on the Pueblo, at any rate, seem to end with Navaho agriculture.¹²

Haida and Tlingit

[6]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion ✓

Incorporation

Necessity for
Trade

Trade

European
Intervention ✓

Prestige ✓

Wealth ✓

Annihilation or
Expulsion ✓

Incorporation

¹² The history of the Navaho during this period is perhaps best related in C. Kluckhohn and D. Leighton, The Navaho (Cambridge, 1946); see also Service, Profiles, op. cit., 159-184.

Generally speaking, all of the Northwest Coast Indian tribes raided to gain wealth and prestige, usually exemplified by gaining control over the Salmon-rich rivers of the Northwest region. The losers were either expelled or exterminated.¹³ Such was the case when the Kaigani Haida forced some southern Tlingit to withdraw from part of Prince of Wales Island and established themselves there. Philip Drucker notes:

"...bitter, long drawn-out wars were carried on by various local groups and tribes for the express purpose of capturing the territory of their neighbours. In addition, the objective of frequent raids...was to capture wealth goods and slaves. The Haida raids down into the Puget Sound area have been mentioned. Presumably the development of a concept of war of conquest is to be attributed to the highly developed concepts of property right in lands and places of economic importance, and to a certain amount of actual population pressure in the north in aboriginal times."¹⁴

Earlier Earlier, he states:

"But true warfare, aimed at driving out or exterminating another lineage or family in order to acquire its lands and goods, was a well-established practice in the north."¹⁵

Samoan and Samoan¹⁶

[7]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common
Enemy

Trespass ✓

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade

Trade

European
Intervention ✓

Prestige ✓

Annihilation or
Expulsion

Wealth

Incorporation

¹³ Cf. Philip Drucker, Indians of the Northwest Coast, passim.

"The Samoans live in a chronic state of war."¹⁷ Rarely was there a time when neighbouring villages somewhere in the islands were not in arms, and great wars involving two or more districts were not infrequent. According to G. P. Murdock, the causes included "trespassing on alien territory, retaliation for real or imagined wrongs and insults, the murder of a chief, ambition for power, disputes over titles, and marriage with the divorced wife of a chief."¹⁸ Generally speaking, warfare was mainly conducted to gain prestige, as in retaliating to an insult, or resulted from trespass.

Though discovered in 1722 by a Dutch expedition under Roggeveen, the islands received no white settlers until 1830, when the London Missionary Society established a mission there. There occurred a marked decline in local hostilities as traders followed the missionaries, and governments the traders.

Kazaks and Oasis Dwellers

[8]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence ✓

Common
Enemy

Trespass

Expulsion ✓

Change of
Economic Base

Incorporation

Necessity for
Trade

Trade

Prestige ✓

European
Intervention ✓

Wealth ✓

Annihilation or
Expulsion

Incorporation

14 Drucker, ibid., 148.

15 Drucker, ibid., 147.

16 Since each "local-group" or village of Samoans is independent, I have considered them here as a tribal-pair. Note that this discretion does not violate the definitions previously decided upon.

Before their pacification by the Russians in 1865, the Kazaks were a warlike and predatory people. They considered theft from a fellow clansman a crime, yet regarded as honourable such activities as stealing cattle from other groups, attacking alien caravans, and sacking the towns of sedentary tillers. They resorted to arms whenever the unprotected condition of their neighbours offered opportunity for plunder, or a raid demanded revenge, or a bad winter decimated their herds, or increasing population made their winter quarters and grazing grounds inadequate. The long period of hostility between Kazaks and the various Oasis tribes came to an end when Tashkent fell to Tzarist Russian rule.¹⁹

Granda and Kitara

[9]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade

Trade

European
Intervention ✓

Prestige

Wealth ✓

Annihilation or
Expulsion

Incorporation

17 Murdock, Contemporaries, op. cit., 63. The classic anthropological treatise on Samoan society is Margaret Mead's Coming of Age in Samoa (New York, 1928).

18 Murdock, Contemporaries, ibid.

Prior to European intervention in the latter part of the nineteenth century, the Ganda tribe of Uganda in Africa waged war nearly every year with the Kitara and other neighbouring states, chiefly for the acquisition of plunder and captives.²⁰

Mali and Songhai

[10]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade

Trade ✓

European
Intervention

Prestige

Wealth

Annihilation or
Expulsion ✓

Incorporation

The Mali and the Songhai empires of the thirteenth and fourteenth centuries warred to control the trade routes -- gold to North Africa and salt to Central Africa. Paul Bohannon comments

"The whole history of the Sudanic kingdoms and of the Saharan trade might, in an oversimplification, be said to be written politically in iron and religion and economically in salt and gold. Empires rose and fell on their ability to dominate trade...."²¹

19 For a history of the Kazaks of Central Asia, see Elizabeth E. Bacon, Central Asians Under Russian Rule, 29-115; also Murdock, Contemporaries, op. cit., 135-162; and T. W. Atkinson, Oriental and Western Siberia (New York, 1958).

20 Data on the Ganda tribe is scant indeed. Aside from Murdock's chapter (Contemporaries, op. cit., 508-550), the Human Area Files provide the only recourse to valid data that I am aware of. See Appendix B.

21 Paul Bohannon, Africa and Africans, 93. Cf. also Roland Oliver and J. D. Farge, A Short History of Africa (Baltimore, 1962).

Both tribes eventually became so weakened by the continuing war efforts that they were over-run by the Mossi raiders to the south in the sixteenth century.

Yellowknives and Eskimos

[11]

Perception of
Hostility Occurrence

Perception of
Hostility Termination

Subsistence

Common
Enemy

Trespass ✓

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade ✓

Trade

European
Intervention ✓

Prestige

Wealth ✓

Annihilation or
Expulsion

Incorporation

The Yellowknives have a history of warfare and, most often, their feuds were with the Eskimo and the Dogrib tribe. Yellowknives frequently raided the Athabaskan region desiring loot and captives. This, coupled with the Eskimos' revenge for territorial trespass generated continual small-scale warfare. Hostilities diminished with the establishment of European trading-posts situated in areas between the warring groups.²²

²² Spencer and Jennings, Native Americans, op. cit., 120-167.

Mohave and Cocopa

[12]

Perception of
Hostility OccurrencePerception of
Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade

Trade

European
Intervention ✓

Prestige ✓

Wealth ✓

Annihilation or
Expulsion

Incorporation

The Mohave of Southwestern United States engaged in warfare primarily for the sake of prestige, viewed as the reward of the warrior who fought well and bravely. The Cocopa were chronic enemies of the Mohave. The westward drift of fur trappers and immigrant parties in the middle nineteenth century intervened in the disputes directly, as the main overland tide of travel passed between the territories of the combatants. Despite their warlike disposition, the Mohave made no notable resistance to the intruding settlers and withdrew, it appears, into their own tribal territory.²³

²³ Spencer and Jennings, ibid., 264-273.

Ojibwa and Eastern Dakota

[13]

Perception of Hostility OccurrencePerception of Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion ✓

Incorporation

Necessity for
Trade

Trade

European
Intervention

Prestige

Wealth ✓

Annihilation or
Expulsion ✓

Incorporation

During the middle and late sixteenth century, the Ojibwa moved their territory west from the central Great Lakes area and began a series of continual meetings with the Eastern Dakota who occupied villages west and south of Lake Superior. The first contacts with the Dakota were friendly, for the Ojibwa and their French allies had trade goods to offer and the Dakota had much to gain.

Eventually, however, the Dakota and Ojibway began a series of conflicts, most of them in the nature of skirmishes and small raids, that did not end until the expulsion of the Dakota from Minnesota in the middle of the nineteenth century. The hostilities developed from the Ojibwa desire to control the territory of the Eastern Dakota for the purpose of fur-trapping.²⁴

²⁴ Spencer and Jennings, ibid., 398-401.

Natchez and Taensa

[14]

Perception of
Hostility OccurrencePerception of
Hostility Termination

Subsistence

Common
Enemy

Trespass

Change of
Economic Base

Expulsion

Incorporation

Necessity for
Trade

Trade

European
Intervention ✓

Prestige ✓

Wealth ✓

Annihilation or
Expulsion

Incorporation

Both the Natchez and the Taensa of the southern United States were socially and "politically" organized into strict classes. Ceremony and ritual cemented their rigid communal life. Hence, warfare offered the only way in which an aspiring individual could gain prestige and, with it, participate in the significant social classes. The capture of slaves was also a primary motive for hostility occurrence. Both tribes were destroyed as groups by Europeans.²⁵

²⁵ Spencer and Jennings, ibid., 409-419.

TABLE IPerceived Reasons for Hostility Occurrence: Summary

<u>Category</u>	<u>Reference Number</u>	<u>Total</u>
Subsistence	5, 8	2
Trespass	7, 11	2
Expulsion	2, 6, 8, 13	4
Incorporation	3	1
Trade	2, 10	2
Prestige	1, 2, 5, 6 , 7, 8, 12, 14	8
Wealth	1,4,5,6,8,9,11,12,13,14	10

TABLE IIPerceived Reason for Hostility Termination: Summary

<u>Category</u>	<u>Reference Number</u>	<u>Total</u>
Common Enemy	1	1
Change of Economic Base	5	1
Necessity for Trade	5, 11	2
European Intervention	4,6,7,8,9,11,12,14	8
Annihilation or Expulsion	2,6,10,13	4
Incorporation	3	1

B. Case Studies of Nonhostile Interaction

Trobrianders and Dobuans

[a]

Perception of Areas of Cooperation

Trade

Common Enemy

Indifference

The Trobriand Islanders and the Dobuans engaged in a highly formalized trade pattern which provides a graphic example of the essential difference between the phrasing of the exchange of goods in primitive societies and that of modern Western civilization. Supporting this form of "economic ceremonialism" is a division of labour and district specialization among villages and whole island groups. Whereas in modern commerce goods are explicitly exchanged to produce profits, primitive exchange emphasizes reciprocity and social obligation. The ideal is to give more than to receive. But the relationship is functional: people are able to get rid of surpluses and acquire something they need in return. It is, perhaps, an inefficient form of trade, as trade, but it creates a friendly atmosphere rather than a competitive one. This kula ring, as it is called, is unusual in the primitive world in its extensivity, uniting so many independent societies in its orbit.²⁶

26 Cf. Service, Profiles, op. cit., 229-249. Two excellent works which elaborate more fully on the kula ring are C.S. Belshaw, Changing Melanesia (Oxford, 1954); and D. L. Oliver, The Pacific Islands (Cambridge, 1951).

The phrasing of trade as gift exchange is not as unusual as it may at first appear. It is typical of primitives who, in the absence of police and enforced law and order among communities, must evolve mechanisms for economic exchange which minimize competition and enhance solidarity.

Specifically, two kinds of objects, symbols of the reciprocal relationship of all the trade partners who are links in the whole ring, circulate in opposite directions among the islands. The Trobrianders and the Dobuans, as trade partners, exchange white shell bracelets for red shell necklaces respectively, which they later present to their partners in the opposite direction to be passed on around the ring. The circulation of these two objects symbolizes reciprocity and social interdependence. Utilitarian goods are exchanged, secondarily, as part of this formalized trade arrangement.

Mandan and Hidatsa

[b]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference

The Mandan and Hidatsa material and social culture did not differ markedly from that of the Teton Dakota and other tribes of the central and Northern Plains. Where it differed significantly it reflected their sedentary mode of existence. The Mandan and

Hidatsa manufactured goods such as pottery for trade. Moreover, the Hidatsa were, according to tradition, taught horticultural techniques by the Mandan. Although there probably were differences between the Mandan and Hidatsa tribes, these were undoubtedly diminished by whatever trade occurred between them and their common alliance against the extremely warlike Arikara to the South.²⁷

Kiowa and Comanche

[c]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference

The tribes of the southern Plains were dominated by the Comanche, the largest and most powerful group in that area. For many years after the arrival of the Spanish and the introduction of the horse into the southern Plains, groups like the Comanche and Kiowa incorporated the 'horse and gun complex' into their cultures and moved from the northern and central Plains toward the south and the inviting Spanish settlements of the Rio Grande and Mexico.

When the Kiowa moved into the southern Plains from the north in the eighteenth century they came in conflict with the Comanche. The Kiowa soon allied with the Comanche in opposing

²⁷ Cf. Spencer and Jennings, Native Americans, op. cit., 340-50, especially 342; also A. W. Bowers, Mandan Social and Ceremonial Organization (Chicago, 1950).

the Cheyenne to the north and this experience began an existence in which both tribes cooperated in raids to the south throughout the early nineteenth century.²⁸

M

Mohave and Yuma

[d]

Perception of
Areas of Cooperation

Trade ✓

Common Enemy ✓

Indifference

The Mohave made frequent trips to northern Arizona to trade with upland Yuman peoples. To a certain extent, the Mohave shared a rather peculiar clan system with the river Yumans. The relationship itself was cemented by their common alliance against other river-valley tribes, such as the Halchidhoma, Maricopa, and Cocopa, with whom they conducted extensive warfare.²⁹

Hupa and Yurok

[e]

Perception of
Areas of Cooperation

Trade ✓

Common Enemy

Indifference ✓

28 For a fully elaborated version of this relationship between the Kiowa and Comanche, see B. Mishkin, Rank and Warfare among the Plains Indians (American Ethnological Society, Memoir 3, 1940). Also, cf. Spencer and Jennings, Native Americans, op. cit., 381-383.

29 See Forde Habitat, op. cit., 220-259; and Spencer and Jennings, Native Americans, op. cit., 268-273.

The Yurok were lower river-valley-coastal people who engaged in rather extensive commerce relations with the upper river-valley Hupa. In return for dried seaweed, which furnished the salt supply, surf fish and other marine products, the Hupa supplied the coast people with inland foods. W. J. Wallace makes the further comment about the Hupa's desire to engage in hostilities:

"Though there were many person-to-person quarrels, the Hupa disliked fighting and bloodshed."³⁰

Though hostilities occasionally flared up, they normally involved only a few individuals and usually to the form of feuds between kin groups. While neighbourhoods might from time to time become involved in conflict, the Hupa as a whole never did.

Coastal and Inland Alaskan Eskimo

[f]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference

Each coastal Eskimo normally had a trading partner among the many inland groups with whom he could exchange maritime products such as seal-skins for inland goods such as caribou hides. This intricate commercial system prevented the rise of

³⁰ W. J. Wallace in Spencer and Jennings, Native Americans, op. cit., 237.

raiding parties as a means of acquiring essential goods. Indeed, the necessity for trade became so great that the unique "wife-lending complex" evolved as a means of solidifying the bonds between the trading partners.³¹

Semang and Sakai

[g]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference

The Semang and Sakai of Malaya were organized into small, extended-family groups and subsisted by hunting and gathering in the forests. These bands lived at peace with one another and roamed with perfect freedom over the territories of the other group. G. P. Murdock notes:

"War, or any other form of hostility, is absolutely unknown, not only between the different bands and tribes of the Semang themselves, but also with the Sakai, and even with the Malays, by whom they are not infrequently harassed. They never react to ill-treatment with treachery, much less with open violence. They merely withdraw and avoid their oppressors. As a result, self-preservation has developed in them a marked timidity and suspicion of all strangers."³²

31 Cf. Forde, Habitat, op. cit., 114-117; Spencer and Jennings, Native Americans, op. cit., 127-47; and P. Freuchen, Book of the Eskimos (New York, 1961).

32 Murdock, Contemporaries, op. cit., 95 See also Forde, Habitat, op. cit., on the Semang and Sakai, chapter 2.

Toda and Kotas

[h]

Perception of
Areas of Cooperation

Trade ✓

Common Enemy

Indifference

An interesting trading relationship exists among the peoples of the Nilgiri Hills of southern India. The Todas are a cattle-raising tribe, the Kotas are primarily artisans, and a third group, the Badagas are agriculturalists. The Todas believe implicitly in their own superiority over all other peoples, and they regard the Kotas as definitely inferior (the Badagas are generally treated as equals). The relations of these three tribes with other groups are much less intimate. Between them, however, peace prevails -- indeed, the Todas do not even possess weapons save for degenerate clubs, bows, and arrows which survive in certain ceremonies. Their economies are so interlocked that hostilities between these tribes are absolutely unknown.³³

Nuer and Shilluk

F[i]

Perception of
Areas of Cooperation

Trade

Common Enemy

Indifference ✓

33 Murdock, Contemporaries, op. cit., 107-134, especially 109-110.

Although the Nuer are a rather war-like people, much given to extensive raiding, they live in peace with the Shilluk because the Shilluk possess no cattle -- the one thing the Nuer values above all others. As Elman Service observes:

"The dwindling of the herds may, partly at least, explain the aggressiveness of the Nuer....the Shilluk are not raided by the Nuer because...[they] only raid people who possess cattle. If [the Shilluk] had cattle, [the Nuer would undoubtedly] raid them and take their cattle...."³⁴

Cheyenne and Arapaho

[j]

Perception of Areas of Cooperation

Trade

Common Enemy

Indifference

The Arapaho had a history similar to that of the Cheyenne though spoke a different language. They and the related Gros Ventre maintained a close alliance with the Cheyenne that enabled them to control a large territory west of the Missouri River against the incursions of their old enemies the Dakota and Crow to the north and west, the Pawnee to the east, and the Kiowa and Comanche to the south.

³⁴ Service, Profiles, op. cit., 156. See footnote (11.), this chapter, supra.

Trade relations cemented the alliance though the Arapaho did not adopt the culture of the much larger Cheyenne and continued to speak their own language.³⁵

TABLE III

Perception of Areas of Cooperation: Summary

<u>Categories</u>	<u>Reference Number</u>	<u>Total</u>
Trade	a,b,d,e,f,h,j,	7
Common Enemy	b,c,d,j	4
Indifference	e,g,i	3

C. An Analysis of the Findings: Applicability of Sherif's Hypotheses

At first glance, two categories in Table I above stand out significantly: Prestige (8 pairs of interacting units) and Wealth (10 pairs). A further examination establishes a close correlation between these two categories, i.e. 7 tribal-pairs were classified and correspondingly plotted in both categories. Indeed, the wish to gain prestige and the desire for wealth are, in themselves, often viewed synonymously though they are not equivalent in meaning.³⁶ An argument might be raised that the two categories are not reliable indicators of the occurrence of competition between groups. However, a valid counter-argument would express the fact that it all depends on how the analyst chooses to define, or apply, his terms. As stated earlier in the paper, "competition" includes "the wish to control or acquire scarce commodities" (scarce, in this instance, meaning that

³⁵ Service, Profiles, op. cit., 118. See especially footnote (6.), this chapter, supra.

³⁶ See earlier chapter on the definition of categories.

not everyone in a group has these commodities, or has them in abundance). Hence, in the analysis of our tabulated results, the acquisition of wealth and prestige may be classified under the concept "competition."

Further, Table I reveals the possible construction of another category which has thus far, for purposes of a clinical vivisection, remained fragmented. I refer to the notion of "territory": Trespass (2 pairs) plus Expulsion (4 pairs) plus Incorporation (1 pair). The wish to acquire territory (or, for that matter, the desire to defend against an intruder), with or without its original inhabitants, can easily be classified under the concept of competition previously decided upon.³⁷ When coupled with the category Trade (2 pairs), or the desire to control the sources or avenues of trade, this urge to acquire and to defend territory directly contributed to the occurrence of hostility in eight of the fourteen instances of tribal interaction examined.

~~Tentatively~~ Tentatively, then, the findings thus far appear to support Sherif's initial contention, ie. that intergroup hostility is the result of intergroup competition.

Table II suggests some objections to the proposals under study. Specifically, the data contained in this tabulation reveal that hostilities, once commenced, were likely to be terminated either through European

37 Robert Ardrey describes the biological evolution of man's territorial instincts in The Territorial Imperative (New York, 1966). Man's desire to defend a given territory, Ardrey claims, is a basic biological drive yet is inherently in conflict with the necessity to hunt, "show off," compete for his mate, and the like. Although Ardrey in many cases is merely reporting on previous ethnological studies, his basic premise is quite probably untenable.

intervention (8 pairs) or through the successful completion of one group's war-aims (Annihilation or Expulsion plus Incorporation -- 5 pairs). Only in one instance did the advent of a third force, perceived as the common enemy, succeed in uniting the combatants. Moreover, in this case, the pattern of hostility was merely redirected and the arena of manifest conflict was widened to encompass a larger number of units. Finally, in no case did the Necessity for Trade alone halt or diminish the pattern of hostility occurrence; it always occurred in conjunction with some other activity, such as a Change of Economic Base or European Intervention.

Table II taken by itself, therefore, would appear to cast some doubt on the validity of Sherif's second proposal, viz. superordinate goals reduce the occurrence of intergroup hostility, at this level of analysis. However, before rejecting this proposal specifically with reference to those perceived reasons for hostility termination in the cases previously examined, it would perhaps be more judicious to interpret the results of Table II in conjunction with those of Table III, i.e. in light of those perceived reasons for the non-occurrence of hostility between interacting units.

Of those tribal groups interacting in relative harmony, the main area of cooperation appeared to be that of Trade (7 pairs). The Common Enemy classification, at first glance, appears significant, though in three of the four tribal-units forming an alliance against

a real or perceived common enemy, the allies also had previously engaged in extensive trade relations. With respect to our third category, two of the three pairs classified as Indifferent either had nothing in common or of value to compete over (such as the Nuer and Shilluk) or else lived in relative abundance (e.g. the Semang and Sakai of the Malay Peninsula). The third pair in this category had a long history of trade relations with their neighbours.

This cursory reading of the tables sheds a different light on the second Sherif hypothesis. Table III strongly implies the presence of superordinate goals, such as the maintenance of mutually beneficial and desired trade relations or the essential banding of forces for the defeat of a common menace, in those interaction situations in which hostile relations were notably absent. Hence, it would appear that the presence, or introduction of superordinate goals increases the level of cooperation between groups not actively engaged in the conduct of hostilities. An increase in the level of cooperative activities correspondingly minimizes the potential of "friendly" competition (i.e. latent conflict) to generate into hostility.

However, our examination of Table II suggests the possibility of a slight modification to the second Sherif proposal. The major factors contributing to the termination of hostilities can not be classified as superordinate goals, viz. the successful completion of war-aims by one of the groups concerned, or the intervention of a third force (opposition to which would constitute a superordinate

goal for the interacting units.) In itself, the evidence does not refute the basic tenets of Sherif's proposal re the function of superordinate goals. At the very least, all Table II reveals is that once a situation of latent conflict, for one reason or another, ignites into conflagration it becomes increasingly more difficult to obfuscate the contributing factors to hostility. More specifically, it becomes exceedingly more difficult to determine whether or not superordinate goals are in fact present, or to measure the posited reduction of hostilities.

If, however, the findings analyzed jointly in Tables II and III are to have any value, it must be to suggest the following modification to the second Sherif hypothesis: superordinate goals reduce the potential for intergroup hostility. This is not to imply that the original proposal is to be rejected; not only is the evidence meagre but the original hypothesis may yet prove insightful as an analytic tool.

The findings in Table II suggest, inter alia that superordinate goals are not the only means for the cessation of hostilities but then Sherif only contended that, cumulatively, they tend to reduce the level of manifest conflict.

"Cooperation between groups which is necessitated by a series of situations embodying superordinate goals [such as a functional trade relationship], will have a cumulative effect in the direction of reducing existing tensions between groups."³⁸

³⁸ Sherif, Intergroup Conflict (1961), 184.

The cumulative effect, in this case, is the maintenance of competition or conflict in its latent form. Needless to say, competition continued to exist between those tribal-pairs examined in Table III, yet remained subordinate in terms of resources and effort to the prior significance of the superordinate goal for each group.

Finally, though outside the scope of this paper, the increasing levels of cooperation are an evidence and a source of the unmistakable shifts in attitudes toward the so-called "out-group". Hence, we encounter a mutually reinforcing cycle: the introduction of goals which cannot be easily ignored by the members of two inherently antagonistic groups, but the attainment of which is beyond the resources and efforts of any one group alone, creates a state of real and/or perceived interdependence and necessitates cooperation; the latter results in more favourable images of out-groups, correspondingly facilitates further communication of more positive values between them, and, consequently, increases the likelihood of cooperation in other spheres of mutual endeavour (hence Sherif's emphasis on the term cumulative). The value of the data in Table II is to point to the difficulty of introducing superordinate goals into an interaction situation whose very nature precludes the requisite communication of positive (group) values. If the war-aims of one group had been designed or intended to seek a reduction in hostilities, or if the third force had intervened for the sake of introducing mutually beneficial superordinate goals (and hence facilitating positive

communication between the combatants), I have little reason to doubt from the foregoing analysis that both of the Sherif hypotheses would have been upheld and reinforced.

Nevertheless, the findings suggest that at the level of inter-tribal relations, the first Sherif hypothesis is high in its richness and its degree of isomorphism. We may conclude, therefore, a high level of predictability to the proposal that, in the absence of superordinate goals (Table III), intergroup competition will eventually lead to hostility between the competing units. Secondly, the Sherif proposal with respect to reducing or terminating hostile interaction has been found to be lacking, not in richness, but in its degree of isomorphism at this higher level of analysis. Accordingly, we have altered the original hypotheses somewhat to read: superordinate goals reduce the potential for the outbreak or occurrence of hostilities between groups. It should also be noted, in summary, that it is entirely possible that at a higher level of analysis, the hypotheses may further increase or decrease their richness and/or their degree of isomorphism and hence their utility as an analytic tool at that level. But perhaps that is fodder for another thesis, although I will make some abbreviated remarks on this and related issues in the next, and concluding, chapter.

A Summing-up

As a heuristic approach, there still remain some enormous problems with respect to the empirical confirmation of the Sherif propositions at a higher level of analysis. Despite the praise that has been heaped upon the Sherif experiment at Robber's Cave by social scientists -- and praise which I agree is well deserved -- if we wish to use their experience as an isomorphism for the study of other groups, we must also be aware of its limitations. If anything, the shortcomings should provide adequate stimuli for a wealth of future research possibilities and, accordingly, novel methods of inference-drawing about the nature of international politics.

It is obvious that the behavior of twenty-four carefully selected twelve-year-old boys during a three week session at camp can be extrapolated to the larger scene only with considerable caution. Indeed, as has been repeatedly suggested throughout this paper, further testing and the development of more appropriate analogical models are required if progress is to be made in the direction of developing the findings of interdisciplinary studies into useful analytic tools for examining and, at best, generating prediction about the behavior of groups "in conflict."

For instance, such a model might well be found in the study of delinquent children for whom open hostility produces less guilt, the concept of "fair play" is less cloying, the response to implicit social criticism is more contemptuous, and the drive to power is woven more tightly into the fabric of their being. With such raw

material, the consequent experimental broth might resemble less the cup of friendship than the devil's brew. Again, however, the actual pattern of correspondence or isomorphism will have to be established through empirical testing for its degree of applicability at higher levels of analysis. To explore a similar dimension, what if this experiment were to be repeated with children of Thailand, China, Paraguay, or Nigeria?

Other possibilities for experimentation involve the selection of preferred means for resolving the test-tube-produced intergroup hostility, i.e. means other than superordinate goals. What if, rather, a suitably unappetizing common enemy had been conjured up to redirect the angry energies of the boys?¹ What if selected members of the groups had been inspired to launch some form of protest for peace? What if the two groups had been prevailed upon to establish a "super-national" agency to regulate intergroup tension? The long list of possible "what ifs" needs to be explored singly and in concert in order to develop some rough index of usefulness such that we can judge the relative effectiveness of each proposition at other levels of analysis.

¹ It is interesting that the "common enemy" approach to the reduction of intergroup hostility was attempted by the Sherif researchers in an earlier (1953) study. While it proved to be a somewhat successful device, it was also an expensive one since it was a solution which relied on spreading the conflict even further and involving a greater number of combatants. Something like a war to drain off the feelings that lead to war.

In addition, Janis and Katz² have made it clear that the nature of the group struggle acts as a conditioning factor in the success that can be expected from various methods used to attain peaceful relations between groups. They suggest, for example, that nonviolent means of conflict resolution may be more applicable to factions within the same institution than to contests between distant groups. Hence, it is difficult to characterize the enmity relationship between the Robber's Cave groups since the formal institutionalization of aggression as an integral part of the structure was short-lived. If each of the groups had operated as a solid unit for an extended period of time the lure of superordinate goals might have been reduced in direct proportion to the degree of cohesion of each in-group. They were, essentially, new-born "states" formed in the same general culture but denied even a tribal heritage.

Therein, of course, lies another problem in extrapolating to a higher level of analysis. Unlike "tribes," nations are inclusive and pluralistic; they contain large bodies of unrelated citizens governed by complex political institutions through such abstract notions as "legitimacy" and "patriotism." What caused most of the world's "tribes" to become part of nation-states appears to be a combination of forces that widened loyalties to ever larger political units (though most primitive groups resisted the efforts to integrate them into larger units). As farming and industry advanced, "tribes" became

2 I. L. Janis and Daniel Katz, "Reduction of Intergroup Hostility: Research Problems and Hypotheses," Journal of Conflict Resolution, Vol. 3 (1959), no. 1, 85-100.

economically interdependent. Most were consolidated by the military force of empires, e.g. the Roman and Chinese; the growth of great religions, intertribal languages, technology, and unifying national crises did the rest. Hence, a substantial change in the units of analysis has implications for the nature of interaction, and consequently the pattern of correspondence, between these units.

Furthermore, the concept of nation-state in any analysis, and especially in the step-level approach, is difficult to operationalize. For example, compared to the measurable precepts of economic theory, in competitive situations between nations there is not an easily calculable unit like money involved; indeed, the concept of national capabilities is rather vague. Nor is there an adequate measuring rod like that of profit to indicate the viability of a nation "in conflict" with another. Although there may be considerations of capital strength such that a very large company might undersell its competitor uneconomically in order to insure its hold on the market, interstate political rivalry is much more direct, since it involves not merely competition for a market but occasional forcible seizures of desired objectives. Moreover, motivation and rationality are reasonably evident when an entrepreneur increases production until marginal cost equals price; whereas it is much more difficult to decide whether a particular international action occurred because of strategically rational considerations or because of a particular ideological pattern of beliefs or, for that matter, because of internal political inhibitions.

And even where a constraining pattern of beliefs can be demonstrated, it may be increasingly difficult to decide whether it accounts for the empirical pattern of activity or is merely a rationalization of activity decided upon for more strategic reasons.³ And finally, with respect to strategy, the increasing acquisition of weapons of mass destruction would appear to have radically altered the nature, frequency, and potential effects of intergroup hostility as well as the effectiveness of the traditional means with which to reduce and/or terminate international conflict.

In spite of these difficulties, however, step-level analysis, qualified through the application of an isomorphic approach, appears to be of some value in the study of international interaction. If anything, small-group research outlines a theory of interaction in its most naked form, stripped of all extra connotations. Small-group theory is, moreover, empirically rather well established since it can draw on common sense insights, laboratory experiments, surveys, and the like as data. It has a degree of precision, but also a certain degree of artificiality. To the extent that international interaction systems are to be studied directly, and not through simulation techniques for instance, it will not be through experiments but through observation, letting the system generate its own data. Thus, a better point of comparison is perhaps a vast amount of well-analyzed data about interaction processes in natural rather than contrived groups. However,

³ Cf. especially Morton A. Kaplan, Some Problems in the Strategic Analysis of International Politics, Research Monograph No. 2, Center of International Studies, Princeton University, January 12, 1959; and idem., System and Process in International Politics, chapter 10.

in the absence of such data and of the skills necessary to organize it, this limitation may safely be ignored. For small-group theory and experimentation has the advantage of being based on a rich variety of relatively solid data and of insights currently at the disposal of social scientists. Finally, small-group research has developed not only well-established propositions but also a relatively high degree of theoretical integration to them. Hence, the isomorphisms, once imputed and established, will be relatively rich in the sense of involving many relations between the elements.

Moreover, the isomorphic approach specifies that the researcher "come to grips" with these problems in extrapolating the findings of propositions developed at lower levels of analysis to research into international relations. As do all really good experiments, perhaps, the research of the enterprising sort conducted by Sherif and his associates raises at least as many issues as it resolves. Daniel Katz, in his compendium of current and needed psychological research in international relations,⁴ frames the Robber's Cave experiment in its proper perspective by listing it as one of a series of much needed types of research. Indeed, such efforts can provide only a segment of the much-sought-after answers but its experimental magic seems to lie in the degree to which it provokes new research and a rethinking of the fundamental issues of hostility reduction. Ideally, a systematic plan of experimentation ought to be undertaken to explore the effectiveness

⁴ Daniel Katz, "Current and Needed Psychological Research in International Relations," Journal of Social Issues, Vol. 17 (1961), 69-78.

of a variety of means for the reduction of intergroup hostility with a variety of groups having different characteristics and natural histories. We suffer from an abundance of speculation about such matters and a dearth of actual theory.

With respect to the research undertaken in this paper, it would appear that the "reasons why" tribal societies engaged in warfare and, subsequently, the "reasons why" intergroup hostility was eventually terminated are remarkably similar to those of the contemporary era. Indeed, expansion to control territory and to gain "wealth" from its resources, to control the avenues of trade, and to enhance "prestige," have to be regarded as major factors in modern situations of international conflict behavior.⁵

Consider, for example, the German "Lebensraum,"⁶ the Japanese

5 Undoubtedly the most authoritative and revered elaboration on these factors and their attendant policy implications is Hans J. Morgenthau's classic, Politics Among Nations (New York, 1966, 4th ed.); Cf. also F. H. Hartmann, World in Crisis (New York, 1962); and A. J. P. Taylor, The Origins of the Second World War (New York, 1961).

6 "Lebensraum," in its crudest sense, meant a demand for empty space where Germans could settle. But Germany was not overpopulated in comparison with most European countries; and there was no empty space anywhere in Europe at the time. Nevertheless, Hitler would constantly lament: "If only we had a Ukraine...." Cf. Taylor, Origins, op. cit., 139-40, passim; E. H. Carr, International Relations Between the Two World Wars (New York, 1947); and Alan Bullock, Hitler (New York, 1952), especially the chapter on Hitler's foreign policy. Also insightful is an unpublished research paper by Harald von Riekhoff, "The Economic Offensive of the Third Reich in the Danubian Region Between 1934 and 1939," (May, 1961).

wartime intentions to create a "Co-prosperity Sphere,"⁷ and the Suez crisis of 1956.⁸ [It is also somewhat enlightening to note the presence or the attempted introduction of a form of superordinate goal in the endeavour, by one or more of the parties concerned, to terminate hostilities in two of these cases, i.e. the Munich conference of 1938 which sought to accomodate Hitler's demands for "living space" and thus reduce the intense alarm of Europe;⁹ and the Canadian initiative in the United Nations -- euphorically described as our "finest hour"-- which had the backing of all parties concerned in their attempt to "save face" over the Suez issue.] The termination of hostility in contemporary international affairs also appears to closely parallel the termination of primitive conflict as revealed in our study, that is, victory (successful completion of one group's war aims) or the intervention of a third force (or the major powers acting in concert under the aegis of the United Nations).

7 There is little explicit literature on the Japanese "Co-prosperity" theme as it appears to have been a recurring foreign and economic policy and, as such, has been variously labelled. Cf. M.E. Cameron, et. al., China, Japan, and the Powers (New York, 1960); Thomas A. Bisson, Japan's War Economy (New York 1945); and E. O. Reischauer, The United States and Japan (Cambridge, 1950).

8 The Suez crisis of 1956 which resulted in the nationalization of the Suez Canal, and the unfortunate invasion by a combined British and French military force is still only imperfectly understood aside from those intimately involved. See A. J. Barker, The Seven Days War (New York, 1965); P. Johnson, The Suez War (London, 1957); and T. Robertson Crisis: The Inside Story of the Suez Conspiracy (Toronto, 1964) for alternate points of view on the issue.

9 A brilliant argument in favour of appeasement is E. H. Carr's The Twenty Years' Crisis (London, 1938); see also J. W. Wheeler-Bennett, Munich, Prologue to Tragedy (London, 1948).

With respect to the function of superordinate goals in international interaction, it is noteworthy that the majority of societies whose relations are peaceful also have extensive commercial relations. Indeed, attempts to end the possibility of future hostility between France and West Germany, and hence to facilitate the movement towards European integration, are primarily based on so interlocking their economies through trade that war between them would be practically inconceivable.

Japan, desirous of stability and security in Southeast Asia and fearful of becoming the main target of any Chinese nuclear blackmail, is anxious to establish a modern version of the "Co-prosperity Sphere"; or as Robert E. Osgood comments;

"Japan will probably develop a special political alignment with India, Australia, and Indonesia... based on mutual interests in the restraint of Chinese influence and the promotion of regional cooperation and stability... Japan would probably become the major participant in the economic development of the area."¹⁰

Furthermore, the notion of superordinate goals may be of immense value as a heuristic device in combination with other, more established, approaches to the study of international relations. For instance, William Riker's thesis on the nature of superpower interaction becomes all the more compelling with the addition of Sherif's second proposal. Riker's contention, briefly, is as follows:

¹⁰ R. E. Osgood, Japan and the United States in Asia (Baltimore, 1968), 13.

"In the Age of Maneuver,¹¹ for both the United States and the Soviet Union, the main strategic goal -- albeit perhaps a goal unrecognized by one or both governments -- is the prolongation of the age for the greatest possible duration. Inasmuch as the end of this age is likely also to be the end of the leadership of both powers, it is in the objective interests of both to forestall the end."¹²

If the prolongation of this age is viewed as a superordinate goal -- and, indeed, it is not possible without the reciprocal efforts of both -- aspired to by the United States and the Soviet Union, then the "spheres of influence" strategy is made more comprehensible. The nonoccurrence of direct hostilities between these powers over Cuba and Czechoslovakia are indicators of the effectiveness of this superordinate goal in maintaining the system of interaction, and correspondingly each other's predominance within its bloc, and in reducing the threat of a potential outbreak of hostilities which might result in the demise of that system.

The paper, moreover, suggests a method for judging the probability that international conflicts will either escalate or terminate rapidly through the identification of the presence, and the nature of that presence, of superordinate goals. Indeed, Quincy Wright has sought

¹¹ The Age of Maneuver, which Riker contends we are presently engaged in, is characterized by the two main opposing powers attempting to meet increasing prices for the allegiance of their followers and by an excessive expenditure of energy on the maintenance of their leadership in the face of increasingly intense politics between nations. The maintenance of their leadership depends, essentially, on avoidance of nuclear or great wars and on controlling the prices paid for allies (inhibiting a free market).

¹² William Riker, The Theory of Political Coalitions, 238.

to mathematically test the propensity for escalation and reduction of conflict between states with particular reference to a number of hostile interactions since 1914.¹³ His extensive data might well be utilized as a vehicle for applying the Sherif proposals, or any other interdisciplinary heuristic device for that matter, to a higher level of analysis, i.e. international politics. Another useful data-bank for the application and testing of step-level hypotheses to international hostilities is Lewis F. Richardson's exhaustive list of wars and "fatal quarrels" from 1820 to 1949.¹⁴ Richardson's study has provided a mine of coordinated source material for future investigators, especially, for our purposes, his reflections on the conditions and presumptive causes of hostile interaction between states. Clearly, no competent scholar can fail to be impressed by the originality of Richardson's methods and by the objectivity and extensiveness of his data.

In addition, to these and other relevant studies, in the last decade there has been developing in the United States, and to a lesser degree in Canada and a few other countries, an increasing sophistication in the methods of data-gathering and data-interpreting research on the

13 Quincy Wright, "Theory of Escalation of International Conflicts," Journal of Conflict Resolution, Vol. 9 (December, 1965), 434-449.

14 Lewis F. Richardson, Statistics of Deadly Quarrels (London, 1960). In the companion volume, Arms and Insecurity (London, 1949), Richardson uses his propositions and other data to formulate in mathematical terms the interrelation of the many causes of war.

nature of intergroup and interpersonal conflict. It goes without saying, perhaps, that this knowledge could most adequately fuel the empirical testing of interdisciplinary propositions. It is reflected in the work of such institutions as the Center for Research on Conflict Resolution at the University of Michigan, the Institute for International Order in New York, the programmes in international relations at Northwestern, Stanford, and Duke, the Peace Research Institute in Washington, and a multitude of smaller research endeavours. Indeed, the development of an adequate information-processing system is a crucial step in the direction towards data-based theory.¹⁵

It would appear, then, that the findings of our examination into primitive tribal relations with respect to hypotheses developed at a lower level of analysis represent an evidence and a source of the efficacy of step-level analysis in the future development of international relations theory. Moreover, the striking resemblance between the occurrence and termination of intergroup hostility at the tribal and nation-state levels of analysis reveals a wealth of research possibilities in our endeavour to comprehend the processes of international relations. As stated at the outset of this paper, it is toward the enrichment of theory and method in the contemporary study of relations between nations that I have attempted to present

¹⁵ Cf. Kenneth Boulding, "Is Peace Researchable?" in Background, Vol. 6 (Winter, 1963), 70-77.

the outlines of an approach with which to enable the student to make use of available and relevant data-gathering and data-interpreting skills from the various social sciences. My concern, therefore, has been in illustrating the utility of "discovering" or of establishing isomorphisms which, though developed in or generated from the findings of "alien disciplines," have such a wide range of generality or of heuristic import that they cannot help but prove to be all the more useful and fruitful as methods of representation and modes of analysis in the study of international politics.

Clearly, research activities into the relations between nation-states must be interdisciplinary. Gunnar Myrdal, reflecting on how we can most effectively terminate or at least bring about a reduction in the level of hostilities between nations, is aware of the issue, and concerned with our use of it, when he comments:

"...none of our individual disciplines has a broad enough research front to attack in a decisive and completely fruitful way the problem of how to bring about effective international cooperation. It is only when our resources are pooled together that we can hope for a real clarification of the issues and a forging of the powerful tools of social engineering which are so badly needed in this field where more than anywhere else the practitioner must at present work by rules of thumb."¹⁶

We urgently have need of a new breed of social scientists--one less tied to his discipline and dependent on its limited view of human and group interaction. Despite the fact that the practitioners

¹⁶ Gunnar Myrdal, "Psychological Impediments to Effective International Cooperations," Journal of Social Issues, Supplement No. 6 (1952), 6.

in every discipline cry that they are unable to absorb even the literature in their own field, it nevertheless seems vital to me to have a new breed of scientist whose intellectual grasp is great enough to encompass knowledge and method across the range of the behavioral sciences. It is apparent that scholastic enterprise is overburdened with an increasing production of narrow specialists who can grasp well only a limited part of man's relations with his fellow man. It is equally apparent that the disparate attempts over the last decade to gather the various disciplines together for cooperative exchange have produced a great deal of conversation, but it has proved to be, all too often, a dialogue of the deaf.

A P P E N D I C E S

APPENDIX A: Approach, Hypotheses, and General Design of the Robber's Cave Experiment

This appendix represents, with minor deletions, an outline of the study prepared and distributed prior to the Robber's Cave Experiment in the summer of 1954 to staff members of the study and a number of Sherif's colleagues interested in this problem area. Its intention is to present the significant points of the theoretical rationale as well as the "blueprint" to guide the actual experiment. I have presented it below in substantially the same form, including the use of the future tense in referring to various procedures.

The essential principles of Sherif's social-psychological theory concerning the relations of small groups are summarized in his 1956 version of An Outline of Social Psychology, especially chapters 4, 7, and 9, and in his most recent publication (1967), Social Stratification. The major tenets of the present approach are elaborated more fully in Groups in Harmony and Tension (1966) which Sherif co-authored with his wife Caroline. The preliminary outline of the study follows.

1. Summary of the Design

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 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 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 appendix.]

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.

2. 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. 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 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.

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, (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.

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.

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 judgement 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 developing reciprocities.

Carrying this line of conceptualization to the area of intergroup 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.

3. 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 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.

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-the-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 judgemental variations ("distortions") as a function of attitude or motive, relevant perceptual or judgemental 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.

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.

4. 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.

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.

5. 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. 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 choice 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 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-groups 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 co-operation 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:

- (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 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 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 1 a (stage 1)

If a definite group structure develops, it will be reflected in a consistent pattern in directions of communi-

cation. 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: 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. (Differentials 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. However, in that study indices used were estimates of future performance, whereas in the 1953 study mentioned above direct judgments of performance were used. 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.

Stages 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 inter-group 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.

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.

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).

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 out-group members, ~~and~~ underestimation of the performance of out-group members. This tendency can be stated in the form of specific hypotheses:

Hypothesis 1 a (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.

Hypotheses 1 b (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.

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. 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 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-groups.

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 try-out 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 2 a(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 their 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 collaborations 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.

APPENDIX B: Human Relations Area Files

The Human Relations Area Files collection of data on a sample of the world's societies represents the most massive data-collection effort yet undertaken in anthropology. Many significant analytical projects have depended on the collection in this repository. The files incorporate information on societies at all levels of development, but the effort to apply these essentially anthropological techniques of data gathering and codification to nation-states has not, to date, been fully successful.

For an explanation of the code used in classifying information, cf. G. P. Murdock, et. al., An Outline of Cultural Materials (4th ed., New Haven, 1961), and for the list of societies which comprise the files, cf. Murdock, An Outline of World Cultures (New Haven, 1963, 1965, 1967). An excellent summary of the trends and history of data collection can be found in the companion publications of the Yale Political Data Program: Richard L. Merritt and Stein Rokkan, Comparing Nations: The Use of Quantitative Data in Cross-National Research (New Haven, 1966); and Bruce M. Russett, et. al., World Handbook of Political and Social Indicators (New Haven, 1965), 1-12.

For the purposes of my own research, the Human Relations Area Files, and the Carleton University's holdings of this collection in particular, are somewhat deficient in accounting for all twenty-four of the societal- or tribal-pairs selected for analysis. Therefore, in those instances where the files are applicable, I have utilized the information primarily to augment certain secondary anthropological sources which, for one reason or another, appeared either spurious or exiguous. Hence, the files provided a rather authoritative cross-check on the validity of those findings contained in the several area studies on primitive interaction cited in the footnotes of the text.

Those "societal units" examined in the research and for which information was available from the Human Relations Area Files are listed below, preceded by their group-interaction reference number and followed (in brackets) by their file code:

2.	Iroquois	(NM9)
4.	Nuer	(FJ22)
6.	Tlingit	(NA12)
7.	Samoan	(ØP)
9.	Ganda	(FK7)
13.	Ojibwa	(NG6)
a.	Trobrianders	(ØL6)
e.	Yurok	(NS31)
G.	Semang	(AN7)
h.	Toda	(AW60)
i.	Nuer	(FJ22)
i.	Shilluk	(FJ23)

B I B L I O G R A P H Y

BIBLIOGRAPHY

- Allport, G. W. The Resolution of Intergroup Tensions: A Critical Appraisal of Methods (New York: Macmillan, 1952).
- American Sociological Review. Special Issue on Small Group Research, 19 (December, 1954).
- Angell, R. The Sociology of International Relations (Paris: UNESCO, 1966).
- , "The Sociology of Conflict," in E. McNeil (ed.), The Nature of Human Conflict (Englewood Cliffs: Prentice Hall, 1965), 91-115.
- Ardrey, R. The Territorial Imperative (New York: Dell, 1966).
- Bacon, E. E. Central Asians Under Russian Rule (New York: Ithica, 1966).
- Berelson, B. and G. A. Steiner. Human Behavior (New York: Harcourt, 1967).
- Berkowitz, L. Aggression: A Social Psychological Analysis (New York: McGraw-Hill, 1962).
- Bernard, Jessie. "The Conceptualization of Intergroup Relations with Special Reference to Conflict," Social Forces, 29 (1951), 243-251.
- , "Some Current Conceptualizations in the Field of Conflict," American Journal of Sociology, 71 (January, 1965), 48-70.
- , "The Sociological Study of Conflict," International Sociological Association, 15 (1957), 33-117.
- , T. H. Pear, R. Aron, and R. Angell, The Nature of Conflict (Paris: UNESCO, 1957).
- Bohannon, P. Africa and Africans (New York: Garden City, 1964).
- , Law and Warfare: Studies in the Anthropology of Conflict (New York: Garden City, 1967).
- Boulding, K. E. Conflict and Defense: A General Theory (New York: Harper, 1962).
- , "Is Peace Researchable?" Background, 6 (Winter, 1963), 70-77.
- , "General Systems Theory -- The Skeleton of Science," Management Science, 2 (1956), 197-208.
- Cantril, H. Tensions That Cause Wars (Urbana: University of Illinois Press, 1950).

- Cohen, R. and J. Middleton (eds.). Comparative Political Systems (New York: Garden City, 1967).
- Coser, L. The Functions of Social Conflict (Glencoe: Free Press, 1956).
- . "The Termination of Conflict," Journal of Conflict Resolution, 5 (Dec. 1961), 347-353.
- Demerath, N. J. and R. A. Peterson. System, Change, and Conflict (New York: Free Press, 1967).
- Denton, F. and W. Philips. "Some Patterns in the History of Violence," Journal of Conflict Resolution, 12 (1968), 182-195.
- Drucker, P. Indians of the Northwest Coast (New York: Garden City, 1963).
- Fisher, R. (ed.). International Conflict and Behavioral Science (New York: Basic Books, 1964).
- Forde, C. D. Habitat, Economy, and Society (New York: Dutton, 1963).
- Fortes, M. and E. E. Evans-Pritchard (eds.). African Political Systems (London: Oxford University Press, 1940).
- Galtung, J. "A Structural Theory of Aggression," Journal of Peace Research, (1964), 95-119.
- . "Small Group Theory and the Theory of International Relations," in M. A. Kaplan, New Approaches to International Relations (New York: St. Martin's Press, 1967).
- Harrison, H. V. (ed.). The Role of Theory in International Relations (Princeton: Princeton University Press, 1964).
- Hoebel, E. A. The Cheyennes: Indians of the Great Plains (New York: Holt, 1960).
- Hoffman, S. (ed.). Contemporary Theory in International Relations (Englewood Cliffs: Prentice-Hall, 1964).
- . "International Relations: the Long Road to Theory," World Politics, 11 (April, 1959), 346-377.
- Holsti, O. R. and R. C. North. "Comparative Data from Content Analysis: Perceptions of Hostility and Economic Variables in the 1914 Crisis," in R. L. Merritt and S. Rokkan, Comparing Nations (New Haven: Yale University Press, 1966).
- Horowitz, I. "Consensus, Conflict and Cooperation," Social Forces, 41 (Dec. 1962), 177-188.
- Janis, I. L. and D. Katz. "The Reduction of Intergroup Hostility: Research Problems and Hypotheses," Journal of Conflict Resolution, 3 (1959), 85-100.

- Journal of Conflict Resolution. Special Issue on "Psychology and Aggression," 3 (1959).
- . Special Issue on "The Anthropology of Conflict," 5 (1961).
- . Special Issue on "The Place of Theory in the Conduct and Study of International Relations," 4 (1960).
- Joynt, C. B. and N. Resher. "The Problems of Uniqueness in History," History and Theory, 1 (1961), 150-162.
- Kaplan, M. A. System and Process in International Politics (New York: John Wiley, 1957).
- . Some Problems in the Strategic Analysis of International Relations, Research Monograph No. 2, Center of International Studies, Princeton University, January 1959.
- . New Approaches to International Relations (New York: St. Martin's Press, 1967).
- Katz, Daniel. "Current and Needed Psychological Research in International Relations," Journal of Social Issues, 17 (1961), 69-78.
- Kelman, H. C. (ed.). International Behavior: A Socio-Psychological Analysis (New York: Holt, 1965).
- . "Changing Attitudes Through International Activities," Journal of Social Issues, 18 (1962), 68-87.
- Klineberg, O. The Human Dimension in International Relations (New York: Holt, 1964).
- , and R. Christie. Perspectives in Social Psychology (New York: Holt, 1965).
- Klingberg, F. "Predicting the Termination of War," Journal of Conflict Resolution, 10 (1966), 129-171.
- Knorr, K. E. and S. Verba (eds.). The International System: Theoretical Essays (Princeton: Princeton University Press, 1963).
- Le Vine, R. A. "Anthropology and the Study of Conflict: Introduction," Journal of Conflict Resolution, 5 (1961), 3-15.
- Llewellyn, K. N. and E. A. Hoebel. The Cheyenne Way: Conflict and Case Law in Primitive Jurisprudence (Norman: University of Oklahoma Press, 1941).
- Lowie, R. H. Indians of the Plains (New York: McGraw-Hill, 1954).

- McClelland, C. A. "The Function of Theory in International Relations," Journal of Conflict Resolution, 4 (1960), 303-336.
- McNeil, E. (ed.). The Nature of Human Conflict (Englewood Cliffs: Prentice-Hall, 1965).
- Merritt, R. L. and Stein Rokkan (eds.). Comparing Nations: The Use of Quantitative Data in Cross-National Research (New Haven: Yale University Press, 1966).
- Murdock, G. P. An Outline of World Cultures (New Haven: Yale University Press, 1963).
- . Our Primitive Contemporaries (New York: Macmillan, 1962).
- . Ethnographic Atlas (Pittsburgh: University of Pittsburgh Press, 1967).
- Myrdal, Gunnar. "Psychological Impediments to Effective International Cooperations," Journal of Social Issues, Supplement No. 6 (1952), 1-31.
- Nagel, Ernest. The Structure of Science (New York: Harcourt, 1961).
- North, R. et. al. "The Integrative Function of Conflict," Journal of Conflict Resolution, 4 (1960), 355-374.
- Olson, M. The Logic of Collective Action (Cambridge: Harvard University Press, 1965).
- Parsons, Talcott. The Social System (London: Routledge, 1964).
- Pear, T. H. "The Psychological Study of Tensions and Conflict," in The Nature of Conflict (Paris: UNESCO, 1957), 118-176.
- . Psychological Factors of Peace and War (London: Hutchinson, 1950).
- Richardson, L. F. Statistics of Deadly Quarrels (Pittsburgh: Boxwood Press, 1960).
- Riker, William. The Theory of Political Coalitions (New Haven: Yale University Press, 1962).
- Rose, A. and C. Rose. "Intergroup Conflict and its Mediation," International Social Science Bulletin, 6 (1954), 25-43.
- Rosenau, J. et. al. "Theory and Reality in International Relations," Special Issue of Journal of International Affairs, 21 (Summer, 1967).
- Russett, Bruce. Trends in World Politics (New York: Macmillan, 1965).
- . "Toward a Model of Competitive International Politics," Journal of Politics, 25 (May, 1963), 226-247.

Schapera, I. Government and Politics in Tribal Societies (London: Watts, 1956).

Schelling, T. C. Strategy of Conflict (Cambridge: Harvard University Press, 1960).

Service, E. R. Profiles in Ethnology (New York: Harper, 1963).

Sherif, Muzafer. Intergroup Conflict and Cooperation: The Robber's Cave Experiment (Norman: University of Oklahoma Press, 1961).

----- . An Outline of Social Psychology (New York: Harper, 1956).

----- . Social Stratification (Chicago: Aldine, 1967).

----- . Interdisciplinary Relations in the Social Sciences (Chicago: Aldine, 1969).

----- . In Common Predicament (Boston: Houghton Mifflin, 1966).

----- . "Superordinate Goals in the Reduction of Intergroup Conflict," American Journal of Sociology, 63 (1958), 349-356.

----- . "Integrating Field Work and Laboratory in Small Group Research," American Sociological Review, 19 (1954), 759-771.

-----, and C. Sherif (eds.). Groups in Harmony and Tension (New York: Harper, 1966).

----- .et. al. Intergroup Relations and Leadership (New York: John Wiley, 1962).

Simmel, Georg. Conflict and The Web of Group-Affiliation (New York: Free Press, 1955).

Singer, J. D. (ed.). Quantitative International Politics (New York: Free Press, 1968).

----- . Human Behavior and International Politics (Chicago: Rand McNally, 1965).

----- . "The Relevance of the Behavioral Sciences to the Study of International Relations," Behavioral Science, 6 (1961), 324-335.

----- . "Level of Analysis Problems in International Relations," in K. E. Knorr and S. Verba (eds.), The International System: Theoretical Essays (Princeton: Princeton University Press, 1961), 77-92.

- Snyder, R. "Some Recent Trends in International Relations Theory," in Austin Ranney (ed.), Essays on the Behavioral Study of Politics (Urbana: University of Illinois Press, 1963), 103-172.
- Spencer, R. F. and J. D. Jennings. The Native Americans (New York: Harper, 1965).
- Stagner, R. Psychological Aspects of International Conflict (Belmont: Brooks/Cole, 1967).
- , Dimensions of Human Conflict (Detroit: Wayne State University Press, 1967).
- Toulmin, Stephen. The Philosophy of Science (New York: Harper, 1960).
- United States Congress, Senate, Committee on Foreign Relations. Psychological Aspects of International Relations, May 25, 1966 (Washington: U. S. Government Printing Office, 1966).
- Verba, S. Small Groups and Political Behavior (Princeton: Princeton University Press, 1963).
- Waltz, Kenneth. Man, the State, and War (New York: Macmillan, 1959).
- Williams, Robin. The Reduction of Intergroup Tensions (New York: Committee on Techniques for Reducing Group Hostility, 1947).
- Wright, Quincy. The Study of International Relations (New York: Appleton-Century-Crofts, 1955).
- , "Theory of Escalation of International Conflicts," Journal of Conflict Resolution, 9 (1965), 434-449.
- , "The Nature of Conflict," Western Political Quarterly, 4 (1951), 193-208.
- , M. W. Evans, and M. Deutsch. Preventing World War III (New York: Simon and Schuster, 1962).
- Yates, A. (ed.). Frustration and Conflict (Princeton: Princeton University Press, 1965).
- Zawodny, J. K. Man and International Relations (San Francisco: Chandler, 1966).
Vol. I: Conflict
Vol. II: Integration