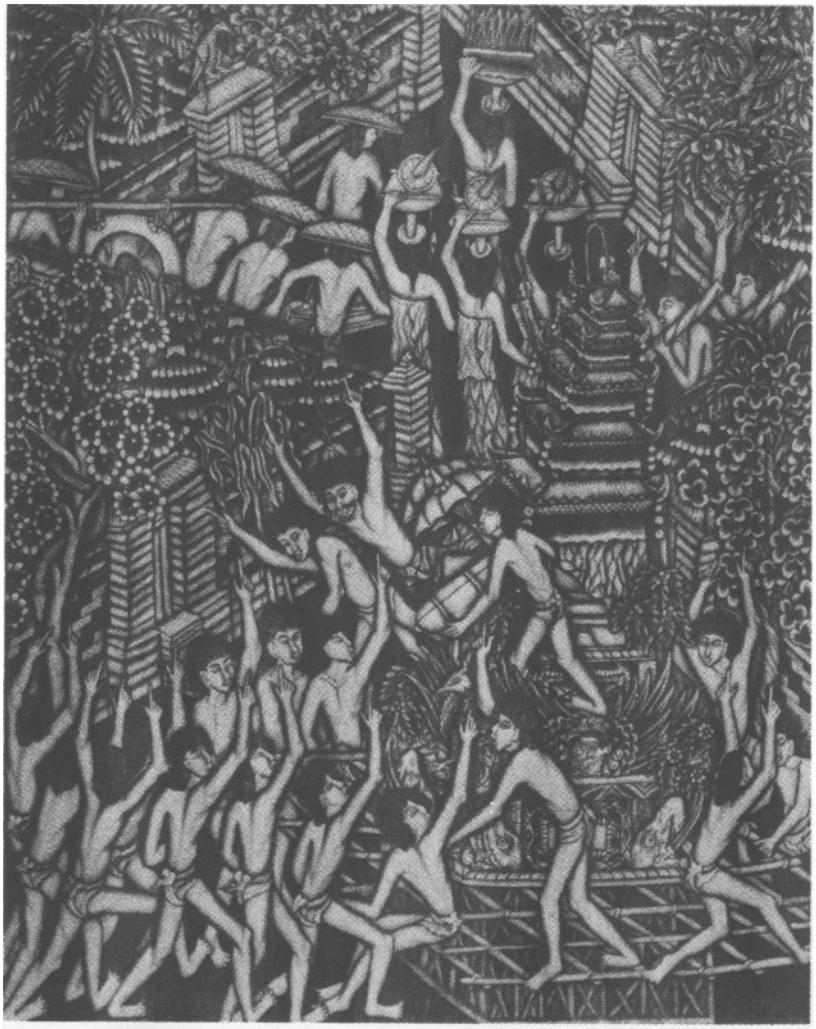
STEPS TO AN ECOLOGY OF MIND

COLLECTED ESSAYS IN ANTHROPOLOGY, PSYCHIATRY, EVOLUTION, AND EPISTEMOLOGY

Gregory Bateson

Jason Aronson Inc.
Northvale, New Jersey
London



Balinese Painting (Ida Bagus Djati Sura; Batuan, 1937)

[Analysis, p. 147]

Copyright ® 1972, 1987 by Jason Aronson Inc.
10 9 8 7 6 5 4 3 2 1

All rights reserved. Printed in the United States of America. No part of this book may be used or reproduced in any manner whatsoever without written permission from *Jason Aronson Inc.* except in the case of brief quotations in reviews for inclusion in a magazine, newspaper, or broadcast.

Library of Congress Cataloging-in-Publication Data

Bateson, Gregory.
Steps to an ecology of mind.

(Chandler publications for health sciences)
Reprint. Originally published: San Franciso :
Chandler Pub. Co., 1972. With new pref.
Collection of articles reprinted from various
periodicals.
"The published work of Gregory Bateson": p.
Includes index.
1. Anthropology, Cultural—Collected works.
2. Knowledge, Theory of—Collected works. 3. Psychiatry — Collected works. 4. Evolution — Collected works.
I. Title. II. Series. [DNLM: 1. Anthropology, Cultural—collected works. 2. Ecology — collected works.
Evolution — collected works. 4. Schizophrenic
Psychology—collected works. 5. Thinking—collected
works. GN 6 B329s 1972a]
GN6.B3 1987 306 87-24133
ISBN 0-87668-950-0

CONTENTS

1971 PREFACE vi
1987 PREFACE viii
FOREWORD xi
INTRODUCTION 1
Part I: Metalogues.....12
Metaloque: Why Do Things Get in a Muddle? 13
Metalogue: Why Do Frenchmen? 19
Metalogue: About Games and Being Serious 24
Metalogue: How Much Do You Know? 31
Metalogue: Why Do Things Have Outlines? 37
Metalogue: Why a Swan? 43
Metaloque: What Is an Instinct? 48
Part II: Form and Pattern in Anthropology.....70
Culture Contact and Schismogenesis 71
Experiments in Thinking About Observed Ethnological Material 83
Morale and National Character 98
Bali: The Value System of a Steady State 116
Style, Grace, and Information in Primitive Art 137
Comment on Part II 162
Part III: Form and Pathology in Relationship 165
Social Planning and the Concept of Deutero-Learning.....166
A Theory of Play and Fantasy 183
Epidemiology of a Schizophrenia 199
Toward a Theory of Schizophrenia 205
The Group Dynamics of Schizophrenia 233
Minimal Requirements for a Theory of Schizophrenia 249
Double Bind, 1969 276
The Logical Categories of Learning and Communication 284
The Cybernetics of "Self": A Theory of Alcoholism 315
Comment on Part III 345

Part IV: Biology and Evolution.....347
On Empty-Headedness Among Biologists and State Boards of Education 348
The Role of Somatic Change in Evolution 351
Problems in Cetacean and Other Mammalian Communication* 369
A Re-examination of "Bateson's Rule" 384
Comment on Part IV 404
Part V: Epistemology and Ecology.....406
Cybernetic Explanation 407
Redundancy and Coding 419
Conscious Purpose versus Nature 434
Effects of Conscious Purpose on Human Adaptation 447
Form, Substance, and Difference 455
Comment on Part V 472
Part VI: Crisis in the Ecology of Mind.....474
From Versailles to Cybernetics 475
Pathologies of Epistemology 484
The Roots of Ecological Crisis 494
Ecology and Flexibility in Urban Civilization 499
THE PUBLISHED WORK OF GREGORY BATESON 512

Culture Contact and Schismogenesis[*]

The Memorandum written by a Committee of the Social Sciences Research Council *(Man,* 1935, 162) has stimulated me to put forward a point of view which differs considerably from theirs; and, though the beginning of this article may appear to be critical of their Memorandum, I wish to make it clear from the outset that I regard as a real contribution any serious attempt to devise categories for the study of culture contact. Moreover, since there are several passages in the Memorandum (among them the Definition) which I do not perfectly understand, my criticisms are offered with some hesitation, and are directed not so much against the Committee as against certain errors prevalent among anthropologists.

(1) *The uses of such systems of categories.* In general it is unwise to construct systems of this sort until the problems which they are designed to elucidate have been clearly formulated; and so far as I can see, the categories drawn up by the Committee have been constructed not in reference to any specifically defined problems, but to throw a general light on "the problem" of acculturation, while the problem itself remains vague.

(2) From this it follows that our immediate need is not so much the construction of a set of categories which will throw a light on all the problems, but rather the schematic formulation of the problems in such a way that they may be separately investigable.

(3) Although the Committee leave their problems undefined, we may from a careful reading of the categories gather roughly what questions they are asking of the material. It seems that the Committee have, as a matter of fact, been influenced by the sort of questions which administrators ask of anthropologists—"Is it a good thing to use force in culture contacts?" "How can we make a given

[*] The whole controversy of which this article was a part has been reprinted in *Beyond the Frontier,* edited by Paul Bohannon and Fred Plog. But the ripples of this controversy have long since died down, and the article is included here only for its positive contributions. It is reprinted, unchanged, from *Man,* Article 199, Vol. XXXV, 1935, by permission of the Royal Anthropological Institute of Great Britain and Ireland.

people accept a certain sort of trait?" and so on. In response to this type of question we find in the definition of acculturation an emphasis upon difference in culture between the groups in contact and upon the resulting changes; and such dichotomies as that between "elements forced upon a people or received voluntarily by them"[1] may likewise be regarded as symptomatic of this thinking in terms of administrative problems. The same may be said of the categories V, A, B, and C, "acceptance," "adaptation" and "reaction."

(4) We may agree that answers are badly needed to these questions of administration and, further, that a study of culture contacts is likely to give these answers, But it is almost certain that the scientific formulation of the problems of con-tact will not follow these lines. It is as if in the construction of categories for the study of criminology we started with a dichotomy of individuals into criminal and noncriminal —and, indeed, that curious science was hampered for a long while by this very attempt to define a "criminal type."

(5) The Memorandum is based upon a fallacy: that we can classify the traits of a culture under such headings as economic, religious, etc. We are asked, for example, to classify traits into three classes, presented respectively because of: (a) economic profit or political dominance; (b) desirability of bringing about conformity to values of donor group; and (c) ethical and religious considerations. This idea, that each trait has either a single function or at least some one function which overtops the rest, leads by extension to the idea that a culture can be subdivided into "institutions" where the bundle of traits which make up one institution are alike in their major functions. The weakness of this method of subdividing a culture has been conclusively demonstrated by Malinowski and his pupils, who have shown that almost the whole of a culture may be seen variously as a mechanism for modifying and satisfying the sexual needs of the individuals, or for the enforcement of the norms of behavior, or for supplying the individuals with food.[2] From this exhaustive demonstration we must expect that any single trait of a culture will prove on

[1] In any case it is clear that in a scientific study of processes and natural laws this invocation of free will can have no place.

examination to be not simply economic or religious or structural, but to partake of all these qualities according to the point of view from which we look at it. If this be true of a culture seen in synchronic section, then it must also apply to the diachronic processes of culture contact and change; and we must expect that for the offering, acceptance or refusal of every trait that are simultaneous causes of an economic, structural, sexual, and religious nature.

(6) From this it follows that our categories "religious," "economic," etc., are not *real* subdivisions which are present in the cultures which we study, but are merely *abstractions* which we make for our own convenience when we set out to describe cultures in words. They are not phenomena present in culture, but are labels for various points of view which we adopt in our studies. In handling such abstractions we must be careful to avoid Whitehead's "fallacy of misplaced concreteness," a fallacy into which, for

---

[2] Cf. Malinowski, *Sexual Life* and *Crime and Custom;* A. I. Richards, *Hunger and Work.* This question of the subdivision of a culture into "institutions" is not quite as simple as I have indicated; and, in spite of their own works, I believe that the London School still adheres to a theory that some such division is practicable. It is likely that confusion arises from the fact that certain native peoples—perhaps all, but in any case those of Western Europe—actually think that their culture is so subdivided. Various cultural phenomena also contribute something toward such a subdivision, e.g., *(a)* the division of labor and differentiation of norms of behavior between different groups of individuals in the same community, and (b) an emphasis, present in certain cultures, upon the subdivisions of place and time upon which behavior is ordered. These phenomena lead to the possibility, in such cultures, of dubbing all behavior which, for example, takes place in church between 11.30 and 12.30 on Sundays as "religious." But even in the study of such cultures the anthropologist must look with some suspicion upon his classification of traits into institutions and must expect to find a great deal of over-lapping between various institutions.

An analogous fallacy occurs in psychology, and consists in regarding behavior as classifiable according to the impulses which inspire it, e.g., into such categories as self-protective, assertive, sexual, acquisitive, etc. Here, too, confusion results from the fact that not only the psychologist, but also the individual studied, is prone to think in terms of these categories. The psychologists would do well to accept the probability that every bit of behavior is—at least in a well-integrated individual —simultaneously relevant to all these abstractions

example, the Marxian historians fall when they maintain that economic "phenomena" are "primary."

With this preamble, we may now consider an alternative scheme for the study of contact phenomena.

(7) *Scope of the inquiry I* suggest that we should consider under the head of "culture contact" not only those cases in which the contact occurs between two communities with different cultures and results in profound disturbance of the culture of one or both groups; but also cases of contact within a single community. In these cases the contact is between differentiated groups of individuals, e.g., between the sexes, between old and young, between aristocracy and plebs, between clans, etc., groups which live together in approximate equilibrium. I would even extend the idea of "contact" so widely as to include those processes whereby a child is molded and trained to fit the culture into which he was born,[3] but for the present we may confine ourselves to contacts between groups of individuals, with different cultural norms of behavior in each group.

(8) If we consider the possible end of the drastic disturbances which follow contacts between profoundly different communities, we see that the changes must theoretically result in one or other of the following patterns:

(a) the complete fusion of the originally different groups
(b) the elimination of one or both groups
(c) the persistence of both groups in dynamic equilibrium within one major community

(9) My purpose in extending the idea of contact to cover the conditions of differentiation inside a single culture is to use our knowledge of these quiescent states to throw light upon the factors which are at work in states of disequilibrium. It may be easy to obtain a knowledge of the factors from their quiet working, but impossible to isolate them when they are violent. The laws of

[3] The present scheme is oriented toward the study of social rather than psychological processes, but a closely analogous scheme might be constructed for the study of psychopathology. Here the idea of "contact" would be studied, especially in the contexts of the molding of the individual, and the processes of schismogenesis would be seen to play an important part not only in accentuating the maladjustments of the deviant, but also in assimilating the normal individual to his group.

gravity cannot conveniently be studied by observation of houses collapsing in an earth-quake.

(10) *Complete fusion* Since this is one of the possible ends of the process we must know what factors are present in a group of individuals with consistent homogeneous pat-terns of behavior in all members of the group. An approach to such conditions may be found in any community which is in a state of approximate equilibrium but, unfortunately, our own communities in Europe are in a state of such flux that these conditions scarcely occur. Moreover, even in primitive communities. the conditions are usually complicated by differentiation, so that we must be content with studies of such homogeneous groups as can be observed within the major differentiated communities.

Our first task will be to ascertain what sorts of unity obtain within such groups, or rather—bearing in mind that we are concerned with *aspects* and not classes of phenomena—what aspects of the unity of the body of traits we must describe in order to get a whole view of the situation. I submit that the material, to be fully understood, *must* be examined in, at least, the following five separable aspects:

(a) A structural aspect of unity The behavior of any one individual in any one context is, in some sense, cognitively consistent with the behavior of all the other individuals in all other contexts. Here we must be prepared to find that the inherent logic of one culture differs profoundly from that of others. From this point of view we shall see, for example, that when individual A gives a drink to individual B, that behavior is consistent with other norms of behavior obtaining within the group which contains A and B.

This aspect of the unity of the body of behavior patterns may be restated in terms of a standardization of the cognitive aspects of the personalities of the individuals. We may say that the patterns of thought of the individuals are so standardized that their behavior appears to them *logical.*

(b) *Affective aspects of unity* In studying the culture from this point of view, we are concerned to show the emotional setting of all the details of behavior. We shall see the whole body of behavior as a

concerted mechanism oriented toward affective satisfaction and dissatisfaction of the individuals.

This aspect of a culture may also be described in terms of a standardization of affective aspects of the personalities of the individuals, which are so modified by their culture that their behavior is to them emotionally consistent.

(c) *Economic unity* Here we shall see the whole body of behavior as a mechanism oriented toward the production and distribution of material objects.

(d) *Chronological and spatial unity* Here we shall see the behavior patterns as schematically ordered according to time and place. We shall see A as giving the drink to B "because it is Saturday evening in the Blue Boar."

(e) *Sociological unity* Here we shall see the behavior of the individuals as oriented toward the integration and disintegration of the major unit, the Group as a whole. We shall see the giving of drinks as a factor which promotes the solidarity of the group.

(11) In addition to studying the behavior of members of the homogeneous group from all these points of view, we must examine a number of such groups to discover the effects of standardization of these various points of view in the people we are studying. We have stated above that every bit of behavior must be regarded as probably relevant to all these viewpoints, but the fact remains that some peoples are more inclined than others to see and phrase their own behavior as "logical" or "for the good of the State."

(12) With this knowledge of the conditions which obtain in homogeneous groups, we shall be in a position to examine the processes of fusion of two diverse groups into one. We may even be able to prescribe measures which will either promote or retard such fusion, and predict that a trait which fits the five aspects of unity can be added to a culture with-out other changes. If it does not fit, then we can search for appropriate modifications either of the culture or of the trait.

(13) *The elimination of one or both groups* This end result is perhaps scarcely worth studying, but we should at least examine any material that is available, to determine what sort of effects such hostile activity has upon the culture of the survivors. It is possible, for example, that the patterns of behavior associated with

elimination of other groups may be assimilated into their culture so that they are impelled to eliminate more and more.

(14) *Persistence of both groups in dynamic equilibrium* This is probably the most instructive of the possible end results of contact, since the factors active in the dynamic equilibrium are likely to be identical or analogous with those which, in disequilibrium, are active in cultural change. Our first task is to study the relationships obtaining between groups of individuals with differentiated behavior patterns, and later to consider what light these relationships throw upon what are more usually called "contacts." Every anthropologist who has been in the field has had opportunity of studying such differentiated groups.

(15) The possibilities of differentiation of groups are by no means infinite, but fall clearly into two categories *(a)* cases in which the relationship is chiefly symmetrical, e.g., in the differentiation of moieties, clans, villages and the nations of Europe; and *(b)* cases in which the relationship is *complementary, e.g.,* in the differentiation of social strata, classes, castes, age grades, and, in some cases, the cultural differentiation between the sexes.[4] Both these types of differentiation contain dynamic elements, such that when certain restraining factors are removed the differentiation or split between the groups increases progressively toward either breakdown or a new equilibrium.

(16) *Symmetrical differentiation* To this category may be referred all those cases in which the individuals in two groups A and B have the same aspirations and the same behavior patterns, but are differentiated in the orientation of these patterns. Thus members of group A exhibit behavior patterns A,B,C in their dealings with each other, but adopt the patterns X,Y,Z in their dealings with members of group B. Similarly, group B adopt the patterns A,B,C among them-

[4] Cf. Margaret Mead, *Sex and Temperament,* 1935. Of the communities described in this book, the Arapesh and the Mundugumor have a preponderantly symmetrical relationship between the sexes, while the Chambuli have a complementary relationship. Among the Iatmul, a tribe in the same area, which I have studied, the relationship between the sexes is complementary, but on rather different lines from that of the Chambuli. I hope shortly to publish a book on the Iatmul with sketches of their culture from the points of view *a, b,* and *e out*-lined in paragraph 10. (See Bibliography, items 1936 and 1958 B.)

selves, but exhibit X,Y,Z in dealing with group A. Thus a position is set up in which the behavior X,Y,Z is the standard reply to X,Y,Z. This position contains elements which may lead to progressive differentiation or *schismogenesis* along the same lines. If, for example, the patterns X,Y,Z include boasting, we shall see that there is a Iikelihood, if boasting is the reply to boasting, that each group will drive the other into excessive emphasis of the pattern, a process which if not re-strained can only lead to more and more extreme rivalry and ultimately to hostility and the breakdown of the whole system.

(17) *Complementary differentiation* To this category we may refer all those cases in which the behavior and aspirations of the members of the two groups are fundamentally different. Thus members of group A treat each other with patterns L,M,N, and exhibit the patterns O,P,Q in dealings with group B. In reply to O,P,Q, the members of group B exhibit the patterns U,V,W, but among themselves they adopt patterns R,S,T. Thus it comes about that O,P,Q is the reply to U,V,W, and vice versa. This differentiation may be-come progressive. If, for example, the series, O,P,Q includes patterns culturally regarded as assertive, while U,V,W includes cultural submissiveness, it is likely that submissiveness will promote further assertiveness which in turn will promote further submissiveness. This schismogenesis, unless it is re-strained, leads to a progressive unilateral distortion of the personalities of the members of both groups, which results in mutual hostility between them and must end in the break-down of the system.

(18) *Reciprocity* Though relationships between groups can broadly be classified into two categories, symmetrical and complementary, this subdivision is to some extent blurred by another type of differentiation which we may describe as *reciprocal.* In this type the behavior patterns X and Y are adopted by members of each group in their dealings with the other group, but instead of the symmetrical system whereby X is the reply to X and Y is the reply to Y, we find here that X is the reply to Y. Thus in every single in-stance the behavior is asymmetrical, but symmetry is regained over a large number of instances since sometimes group A exhibit X to which group B reply with Y, and sometimes group A exhibit Y and group B reply with X. Cases in which group A sometimes sell

sago to group B and the latter some-times sell the same commodity to A, may be regarded as reciprocal; but if group A habitually sell sago to B while the latter habitually sell fish to A, we must, I think, regard the pattern as complementary. The reciprocal pattern, it may be noted, is compensated and balanced within itself and therefore does not tend toward schismogenesis.

(19) Points for investigation:

(a) We need a proper survey of the types of behavior which can lead to schismogeneses of the symmetrical type. At present it is only possible to point to boasting and commercial rivalry, but no doubt there are many other patterns which will be found to be accompanied by the same type of effect.

(b) We need a survey of the types of behavior which are mutually complementary and lead to schismogeneses of the second type. Here we can at present only cite assertiveness versus submissiveness, exhibitionism versus admiration, fostering versus expressions of feebleness and, in addition, the various possible combinations of these pairs.

(c) We need verification of the general law assumed above, that when two groups exhibit complementary behavior to each other, the internal behavior between members of group A must necessarily differ from the internal behavior between members of group B.

(d) We need a systematic examination of schismogeneses of both types from the various points of view outlined in paragraph 10. At present I have only looked at the matter from the ethological and structural points of view (paragraph 10, aspects a and *b)* . In addition to this, the Marxian historians have given us a picture of the economic aspect of complementary schismogenesis in Western Europe. It is likely, however, that they themselves have been influenced unduly by the schismogenesis which they studied and have been thereby prompted into exaggeration.

(e) We need to know something about the occurrence of reciprocal behavior in relationships which are preponderantly either symmetrical or complementary.

(20) *Restraining factors* But, more important than any of the problems in the previous paragraph, we need a study of the factors which restrain both types of schismogenesis. At the present moment, the nations of Europe are far advanced in symmetrical schismo-

genesis and are ready to fly at each other's throats; while within each nation are to be observed growing hostilities between the various social strata, symptoms of complementary schismogenesis. Equally, in the countries ruled by new dictatorships we may observe early stages of complementary schismogenesis, the behavior of his associates pushing the dictator into ever greater pride and assertiveness.

The purpose of the present article is to suggest problems and lines of investigation rather than to state the answers, but, tentatively, suggestions may be offered as to the factors controlling schismogenesis:

(a) It is possible that, actually, no healthy equilibrated relationship between groups is either purely symmetrical or purely complementary, but that every such relationship contains elements of the other type. It is true that it is easy to classify relationships into one or the other category according to their predominant emphases, but it is possible that a very small admixture of complementary behavior in a symmetrical relationship, or a very small admixture of symmetrical behavior in a complementary relationship, may go a long way toward stabilizing the position. Examples of this type of stabilization are perhaps common. The squire is in a predominantly complementary and not always comfortable relationship with his villagers, but if he participate in village cricket (a symmetrical rivalry) but once a year, this may have a curiously disproportionate effect upon his relationship with them.

(b) It is certain that, as. in the case quoted above in which group A sell sago to B while the latter sell fish to A, complementary patterns may sometimes have a real stabilizing effect by promoting a mutual dependence between the groups.

(c) It is possible that the presence of a number of truly reciprocal elements in a relationship may tend to stabilize it, preventing the schismogenesis which otherwise might result either from symmetrical or complementary elements. But this would seem to be at best a very weak defense: on the one hand, if we consider the effects of symmetrical schismogenesis upon the reciprocal behavior patterns, we see that the latter tend to be less and less exhibited. Thus, as the individuals composing the nations of Europe become more and more involved in their symmetrical international rivalries,

they gradually leave off behaving in a reciprocal manner, deliberately reducing to a minimum their former reciprocal commercial behavior.[5] On the other hand, if we consider the effects of complementary schismogenesis upon the reciprocal behavior patterns, we see that one-half of the reciprocal pat-tern is liable to lapse. Where formerly both groups exhibited both X and Y, a system gradually evolves in which one of the groups exhibits only X, while the other exhibits only Y. In fact, behavior which was formerly reciprocal is reduced to a typical complementary pattern and is likely after that to contribute to the complementary schismogenesis.

(d) It is certain that either type of schismogenesis between two groups can be checked by factors which unite the two groups either in loyalty or opposition to some outside element. Such an outside element may be either a symbolic individual, an enemy people or some quite impersonal circumstance—the lion will lie down with the lamb if only it rain hard enough. But it must be noted that where the outside element is a person or group of persons, the relationship of the combined groups A and B to the outside group will always be itself a potentially schismogenic relationship of one or the other type. Examination of multiple systems of this kind is badly needed and especially we need to know more about the systems (e.g., military hierarchies) in which the distortion of personality is modified in the middle groups of the hierarchy by permitting the individuals to exhibit respect and submission in dealings with higher groups while they exhibit assertiveness and pride in dealing with the lower.

(e) In the case of the European situation, there is one other possibility—a special case of control by diversion of attention to outside circumstances. It is possible that those responsible for the policy of classes and nations might become conscious of the processes with which they are playing and cooperate in an attempt to solve the difficulties. This, how-ever, is not very likely to occur

[5] In this, as in the other examples given, no attempt is made to consider the schismogenesis from all the points of view outlined in paragraph 10. Thus, inasmuch as the economic aspect of the matter is not here being considered, the effects of the slump upon the schismogenesis are ignored. A complete study would be subdivided into separate sections, each treating one of the aspects of the phenomena.

since anthropology and social psychology lack the prestige necessary to advise; and, with-out such advice, governments will continue to react to each other's reactions rather than pay attention to circumstances.

(21) In conclusion, we may turn to the problems of the administrator faced with a black-white culture contact. His first task is to decide which of the end results outlined in paragraph 8 is desirable and possible of attainment. This decision he must make without hypocrisy. If he chooses fusion, then he must endeavor to contrive every step so as to promote the conditions of consistency which are outlined (as problems for investigation) in paragraph 10. If he chooses that both groups shall persist in some form of dynamic equilibrium, then he must contrive to establish a system in which the possibilities of schismogenesis are properly compensated or balanced against each other. But at every step in the scheme which I have outlined there are problems which must be studied by trained students and which when solved will contribute, not only to applied sociology, but to the very basis of our understanding of human beings in society.