

Status Characteristics and Social Interaction

by

Joseph Berger

Bernard P. Cohen

Morris Zelditch, Jr.

Stanford University

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STATUS CHARACTERISTICS AND SOCIAL INTERACTION

1. Background and statement of the problem.

The purpose of the present paper is to study the ways in which status characteristics organize social interaction. The problem with which we are concerned is one of the older problems in sociology. By 1908 Simmel was already saying that, "The first condition of having to deal with somebody at all is to know with whom one has to deal" (Simmel, 1908; quoted from Wolff, 1950, 307, italics in the original). While one might know with whom one had to deal from direct knowledge of the particular individual, Simmel observed that one might also know with whom one had to deal from a knowledge of his status category (Simmel, 1908; in Wolff, 1959, 344-5). Twenty years after Simmel's Soziologie, Park already took for granted a conception of interaction in which an individual, on encountering another, classified the other in terms of status categories such as age, sex, and race, attributed to the other characteristics associated with his social type, and organized his conduct towards the other on the basis of such stereotyped assumptions (Park, 1928).

A considerable number of investigations in what is conventionally regarded as the "small groups" literature deal with this problem. Some typical findings are: Positions in the occupational hierarchy of a psychiatric hospital determine participation rates in ward rounds--the ward administrator participates more than the chief resident, the chief resident more than other residents, the most passive resident more than the most aggressive nurse (Caudill, 1958, Ch. 10). Positions in a B-26 air crew determine influence over decisions made by the group--pilots are more able to influence decisions than navigators, navigators more than gunners; and this is true even when the pilot's opinion is by objective standards incorrect; true, also, even when the task of the group has nothing much to do with the activities of B-26 air

crews (Torrance, 1954). In juries, it is found that sex and occupation determine participation, election to foremanship, and evaluation of competence as a juror (Strodtbeck, James, and Hawkins, 1958; Strodtbeck and Mann, 1956). In biracial work groups it is found that whites initiate more interactions than blacks, they talk more to other whites than to blacks, and even blacks talk more to whites than to other blacks (Katz, Goldston, and Benjamin, 1958; Katz and Benjamin, 1960). These findings are replicated in over a dozen investigations between 1950 and 1965 alone; in particular see, in addition to the above references, Croog, 1956; Heiss, 1962; Hoffman, Festinger, & Lawrence, 1954; Hurwitz, Zander & Hymovich, 1960; Leik, 1963; Mishler & Tropp, 1956; Zander & Cohen, 1955; and Ziller & Exline, 1958.

Our objectives are first, to examine what all this research adds up to; that is, to formulate a more general description of the phenomenon as it is regularly found in a variety of concretely different settings and circumstances. Second, to explain the results of this research; that is, to show them as consequences of some more general theory. For this purpose, part of the present paper is devoted to the construction of the required theory. Third, given this theoretical formulation, to review research designed to test, refine, and extend it.

2. Abstract empirical generalization of the results of research on the effect of status characteristics in decision-making groups.

While our problem is old, and the relevant research extensive, it is difficult to say what it all adds up to. The difficulty lies in two directions: First, there is no very precise conceptualization of the relevant variables. All these investigations involve status differences, but none of them provide any very precise notion of what a status difference is. They all involve some form of participation, prestige, or influence, but none of

them provide any very precise notion of how these things are related to each other. Second, the concrete differences in these studies are very great, so that it is difficult to decide just what systematic import they have. The status differences with which they deal involve in some cases formal positions in a hierarchy (chief of a service, resident, nurse; pilot, navigator, gunner); in some cases personal reputations (prestige as experts on mental hygiene); in some cases status in the community or society (occupation, age, sex, race). The dependent variable is sometimes participation rates, sometimes influence over decisions, sometimes perceptions of abilities, sometimes evaluations of performance. The greatest differences of all are in the task and interaction conditions investigated: From the estimation of the number of dots on a card to discussion of damage awards in a jury trial; from conferences among professionals to coalition games; from familiar tasks, intimately related to the purposes of the group (mental hygiene specialists holding a mental hygiene conference) to tasks utterly foreign to their purposes (air crews constructing a story from a projective stimulus).

Nevertheless, these investigations have a number of common elements. First, they all deal with some form of status difference. Furthermore, all the status categories employed in these investigations, however different in concrete detail, have at least two properties in common: (1) Differences in status always appear to imply differential evaluations of individuals. (2) Differences in status always provide the basis for inferring differences in one or more other capacities or characteristics possessed by the individual. The assumptions made about the individual on the basis of his status category appear to be of two kinds: Specific expectations are formed about the specific abilities relevant in the situation of interaction itself; often, also, more

general expectations are apparently formed about capacities of the sort that might extend over many distinct kinds of situations. For example, assumptions might be made, on the one hand, about the ability to solve a mathematical puzzle; on the other hand, about intelligence. (To fix terminology for our present purposes, a characteristic that is differentially evaluated and implies possession of other characteristics is a status characteristic; a status characteristic from which one infers very general assumptions about individuals is a diffuse status characteristic.)

Second, almost all of the aspects of interaction important in these studies can be conceptualized in terms of four kinds of observable behavior: (1) Individuals either give or do not give action opportunities to others; that is, they either do or do not distribute chances to perform, as when one individual asks another for his opinion. (2) Given an action opportunity, individuals either do or do not contribute a performance output to the interaction of the group. (3) Given a performance output, others evaluate it positively or negatively; given that they evaluate it positively or negatively, they either communicate a reward action to another or they do not. Finally, (4) as a consequence of exchanging views with respect to the task, it sometimes happens that one individual is influenced by another; that is, one individual changes his mind as a result of discovering a difference of opinion with another, or he does not. All four are highly intercorrelated: Bales, for example, found that those who initiate activity most frequently also receive activity most frequently and tend to be ranked highest by group members on the criteria of who had the best ideas, who guided the group discussion, and who demonstrated leadership (Bales, et al, 1951;

Bales and Slater, 1955). Strodtbeck found performance outputs highly correlated with influence (Strodtbeck, 1951). Therefore, though there are great differences from one investigation to another in which dependent variable is the focus of analysis, it is reasonable to regard them all as different behavioral consequences of one underlying structure and to regard them as related functions of that structure. (Collectively, these four kinds of interaction can be called the observable power and prestige order of the group.)¹

Third, though the tasks, settings, and interaction conditions in these studies are concretely very different, in all cases the individuals in the group are collectively oriented to a common task. Usually the task requires that the group make a decision; there is some belief that there is a right and a wrong, or a good and a bad decision; and the purpose of the group is to make the right, or good decision. In coming to the right decision it is typically the case that it is legitimate to use another person's opinion as the basis of one's own opinion if one believes that the other is right. Hence, one may say that members of the group are looking for the right or good answer, either from themselves or from others. (Our terminology will be: A task that is defined as having a right and a wrong, or a good and a bad answer, if the right or good answer is defined as "success" and the wrong or bad answer as "failure", is a valued task; a task in which it is either necessary or legitimate to use whatever opinion one believes is right, whether the opinion of another or of oneself, is a collective task. A group oriented to a collective, valued task is a task-oriented group.)

¹In some cases the dependent variable is not one of these behaviors, but is some behavior which can be shown to be dependent on them. For example, in Zander and Cohen (1955) the dependent variable is satisfaction with the group experience, which we interpret as due to action opportunities and reward actions received by the higher status individuals.

It is important to note some respects in which these investigations differ. While we propose to ignore differences in concrete details, they differ also in more abstract and general ways, and it is particularly in these more abstract differences that one sees the power of the generalization we hope to abstract from them. An investigation like Caudill's study of hospital ward rounds involves a status structure embedded in the formal organization of the hospital, and one that is immediately and obviously defined as relevant to what takes place in ward rounds. But Torrance's study of air crews shows that the formal status structure operates not only in respect to its established purposes (such as solving an air crew survival puzzle), but even in respect to a totally irrelevant task (constructing projective stories). Furthermore, Hurwitz, Zander, and Hymovitch (1960) show that informal status structures are as powerful as formally instituted ones in determining power and prestige orders. Thus, the effect of the status characteristic does not depend on formal sanctions and supports, nor on the access to resources that official position provides. Nor is it necessary that the status structure evolve out of the interaction of members of the group, for Strodtbeck shows the same effects though his juries are ad hoc. (Indeed, there is some evidence to show that categories like age, sex, occupation, education, and race work best when the group has not had a long history of interaction as a group [Leik, 1963]). Thus, in all these investigations there is a status structure, but it is sometimes formal and sometimes informal, sometimes has prior associations with the task of the group and sometimes not.

We propose to formulate what is common to these investigations in a single abstract empirical generalization which seems to us to summarize the principal findings in all such studies:

When a task-oriented group is differentiated with respect to some status characteristic, this status difference determines the observable power and prestige order within the group whether or not the status characteristic is related to the group task.

3. The problem of explanation and construction of a theory.

To this point, our analysis yields an abstractly formulated empirical generalization; our purpose now is to explain it. Our problem is to derive it from some more general theoretical formulation. To be useful, that is to increase our understanding of this phenomenon and provide a basis for refining and extending our knowledge of it, the theory used by this explanation should satisfy at least the following four requirements: (1) It should stipulate at least the sufficient conditions under which a status organizing process occurs. (2) It should specify what it is about status characteristics that determines behavior. (3) It should specify what behaviors in fact are determined by status characteristics. (4) It should describe the process by which status characteristics determine behavior. Hence, our purpose now is to construct a theoretical formulation satisfying these four requirements.

We will formulate this theory from the point of view of an actor, p , oriented to at least two social objects, himself, p' , and another, o . We assume p to be in the following situation: There exists a task, T , with at least two outcomes, T_a and T_b , which are differentially evaluated: One state is positively and one negatively evaluated. That is, one constitutes "success" and the other "failure". The individuals for whom T is a task are task-focused, that is, they are motivated to achieve the positively-evaluated state and avoid the negatively-evaluated state. The task is such that individuals facing the task are collectively-oriented, that is, it is both legitimate and necessary to take behavior of others into account. It can be assumed

that in order to accomplish T, that is in order to achieve the more positively-valued state, one must possess some given state of the characteristic C; C, in other words is instrumental to T. (We shall, for purposes of simplifying analysis, treat all characteristics as dichotomies. Hence the characteristic C, and all other characteristics, for example status characteristics, that we treat later, have only the states C_a and C_b . If they are differentially evaluated, then we may say that one is positively and one negatively evaluated.) Who possesses the positively or negatively instrumental state of C may not be known to p. Call a task situation having these properties S^* . We assume that in S^* the social objects p' and o are described by states of a diffuse status characteristic D and only by D. A characteristic is a diffuse status characteristic for p if it has three properties: First, p believes that it is better to possess one state of D than another; that is, the states of D are differentially valued. Second, p associates with the states of D one or more specific expectations for behavior. Thus, he may expect that college professors speak a pure form of English, or that Jews are very studious. The set of all such specific expectations associated with the state D_x we will denote γ_x . The states in γ_x , like the states of D, are valued, either positively or negatively. Third, p associates with each state x of D a general expectation state, GES_x ; for example, that people who possess the state D_x are smart, or moral. Where a specific expectation is one that is applicable to a defined situation or class of situations, for a general expectation no specified situation or class of situations is defined. The belief that officers are gentlemen is an expectation of this kind. GES_x is an evaluated state, and has the same value as the state D_x with which it is associated.

Because diffuse status characteristics play so central a role in our theory, we restate the ideas just given in terms of a formal definition:

Definition 1. (Diffuse status characteristic) A characteristic

D is a diffuse status characteristic if and only if

1. The states of D are differentially evaluated, and
2. to each state x of D there corresponds a distinct set γ_x of states of specific, evaluated characteristics associated with D_x , and
3. to each state x of D there corresponds a distinct general expectation state, GES_x , having the same evaluation as the state D_x .

The task situation S^* , then, is a situation in which there is a valued task T; there is a characteristic C instrumental to T; individuals are task-focused and collectively-oriented; and they possess the states of one, and only one, diffuse status characteristic D.

Status characteristics are not invariably brought into play simply by being present in the situation: An important theoretical task, therefore, is to characterize the class of social situations in which status characteristics do operate to govern what takes place. That is, we must formulate conditions under which it is in fact the case that the behavior of individuals in regard to each other is based on the specific and general conceptions that are associated with the status characteristic they possess. When it is true for a given situation that the behavior of individuals is based on the status-associated conceptions they have of one another, we speak of the status characteristic being activated:

Definition 2. (Activation) D is activated in S^* if and only if p attributes in S^* the states GES_x and/or the sets of states γ_x to p' and o which are consistent with their states of D.

By consistent we mean that the states have the same evaluation. Thus the positively evaluated general expectation state is consistent with the positively evaluated state of D.

We now place p in a situation satisfying the conditions we have formulated for S^* and state a condition sufficient to activate D in S^* . Note that the condition is sufficient, not necessary; that is, we do not preclude the possibility that other conditions might also activate D, and that these conditions might be much more general than those we state in assumption 1.

Assumption 1. (Activation) Given S^* , if D is a social basis of discrimination between p' and o in S, then D is activated in S^* .

By a social basis of discrimination we mean simply that p' and o possess different states of D. None of the pejorative implications of the term belong to our use here, nor is it even implied that p "discriminates" for or against someone in his actions. That he does so we intend to derive from other features of the situation; it does not follow tautologically from assumption 1.

If a status characteristic D has been activated in situation S^* there are two possible cases to consider: In the first, the state of the performance characteristic C that is instrumental to the task in S^* has been previously associated with some state of D. In other words, the state x of C is a member of the set γ_x that is associated with the state x of D. For example: A psychiatrist and a nurse are given the task of deciding which recent changes in the status of women generate helpful or harmful consequences from a mental hygiene point of view (Ilurwitz, Zander, and Hymovitch, 1960). In the second

case, the state of the performance characteristic that is instrumental to the task has no previous association with any state of D. In other words, a state x of C is not a member of the set of characteristics associated with any state of x of D. For example: The ability to construct a fantasy based on an ambiguous stimulus is not an ability conventionally associated with air force rank (Torrance, 1954).

In the first case, the activation of the status characteristic is sufficient to determine the assumptions p makes about the specific abilities of p' and o: P associates the state x of C with the state x of D; and has attributed to p' and o the states of C that p associates with their respective states of D. The definition of the situation therefore is a fairly straightforward matter.

In the second case, the way in which the structure of the situation comes to be defined is less clear. For if the characteristic instrumental in S* has no prior association with the status characteristics visible in it, how will differences in status imply anything for behavior? What is at issue is the relevance of the status characteristic in the particular situation; where by relevance we mean that if p believes o to possess the state x of D, then he expects that o also possesses the state x of C. Or put in other words, simply from a knowledge of the status characteristic they possess, p is able to form expectations about the behavior of p' and o in the situation S*.

The assumption we make about relevance is a strong one: But we believe that in this situation the burden of proof is on showing that the status characteristic is not relevant; in other words, that it becomes relevant unless p specifically knows, as a matter of prior belief, that it is not a basis for forming expectations about the characteristic C. It is possible,

of course, for prior belief to establish the independence of two characteristics: For example, p might have a well-formed expectation that athletic ability and academic status are independent. Given this belief, p will not be willing, nor believe himself able, to infer from the fact that p' is a professor and o a student either that p' is better than o or o better than p' as a basketball player. Two characteristics that are socially defined as independent are, in the language of our theory, dissociated. What we assume, then, is that the status characteristic must be dissociated from the task characteristic required in S^* if the status characteristic is to be irrelevant to it. Faced with a new task characteristic in a new situation, one about which p has formed no prior beliefs, nothing bars p from seeing the status characteristic as relevant. If nothing bars the status characteristic from being relevant, it will in our view become relevant; it will be used as a social basis for defining the new situation. (This property of D may be called its expansive property, and the process by which it defines new situations the burden of proof process).

In formulating our assumptions about this process, we take note of the fact that if a status characteristic is activated in situation S^* , its components will consist of a state x of D, which is an evaluated state; an evaluated set of specific characteristics γ_x ; and a state x of GES, an evaluated general expectation state. Given the conditions of our task situation and the activation of D, p possesses or has had attributed to him one set of these components, say D_x , γ_x , and GES_x ; o possesses or has had attributed to him a second set of these components, say D_x^- , γ_x^- , and GES_x^- . Furthermore, the two sets have different values. With respect to these components, we assume that:

Assumption 2. (Burden of proof) If D is activated in S^* and has not been previously dissociated from C; and if there is no other social basis of discrimination between p' and o ; then at least one of the components of D will become relevant to C in S^* .

This assumption is quite general, permitting a number of different mechanisms by which D becomes relevant to C: GES, D itself, or even one of the states in γ might become the basis for forming expectations in S^* . The important point is that if they have not been previously associated with the characteristic instrumental in S^* , but at the same time have not previously been socially defined as independent of it, then one or more of the components of the activated status characteristic become relevant bases for forming expectations in S^* .

That the components of D are relevant in S^* means that p makes assumptions about the performance he can expect from p' and o based on a knowledge of one or more of these components. Another way of putting it is that p assigns to p' and o some state of the characteristic C that is instrumental to performance of T as a consequence of the assumptions about p' and o that p feels are warranted by D. Such assumptions are here called performance expectations. A performance expectation is a general belief or anticipation about the quality of future performance outputs. Performance expectations are ordinarily in a one-to-one relation to beliefs about task ability. Those high in ability will be expected to perform well; those low in ability will be expected to perform poorly. Such expectations are important: For previous work shows that it is reasonable to explain the clustered inequalities that emerge in decision-making groups in terms of underlying differences in performance-expectations (see Berger and Snell, 1961; Berger and Conner, 1969). Therefore, explaining

inequalities in decision-making groups can be viewed as a problem in explaining how performance-expectations are formed, how they differentiate, how they change, or how they are maintained. In the case of equal status groups, i.e. groups not initially different in status, how they form and are maintained can be explained in part by certain features of the social situation of p -- that a decision is required, that disagreements emerge in the group, that resolution of these disagreements tends to create some broader and more enduring expectations about who, in the future, can be expected to be right or wrong about such matters. In the case of groups that are initially differentiated in status, however, there exists already a basis for forming such expectations: The status characteristic, D . P has already made some assumptions, based on D , about what p' and o are like; from these assumptions he makes some further inferences about what p' and o are like in this particular situation, even if it is a new kind of situation about which no prior assumptions are incorporated in D .

What expectations does p form? Assumption 2 claims that p expects p' and o to possess some state of C . It remains to say what state of C he expects this to be. The most reasonable assumption is that the formation of performance-expectations in the particular situation is consistent with whatever knowledge p believes himself already to possess about p' and o . By consistent we mean that all the evaluations of the components of the situation that come to be associated in the mind of p are similar. The components of the activated D (D_x itself, GES_x , and γ_x) are either positively or negatively evaluated. The states of C that are instrumental to T we can assume are also positively evaluated, because the outcomes to which they are instrumental are themselves positively or negatively evaluated. We assume p to behave in such

a way as to make the relations among all these evaluations as consistent as he can:

Assumption 3. (Consistency) If any of the components of an activated D are relevant to C, p will assign states of C to self and other in a consistent manner.

Given assignment of states of C to p' and o, we believe the behavior of p to be determined. The kind of behavior that concerns us we have referred to in section 2 as the observable power and prestige order. It will be recalled that this order is composed of four kinds of behavior: (1) action opportunities which are requests by one individual for activity from another, such as a question, or an inquiring look, offering an opportunity to make some sort of contribution to the task; (2) performance outputs, which are attempts to make a contribution to accomplishment of the task, such as providing suggestions, offering facts; (3) reward actions, which are communicated evaluations made of performance outputs or persons, as when one individual agrees with another, or praises another, or disputes the idea of another; (4) influence, which is a change of evaluation or opinion as a consequence of negative reward action by another. (Greater detail on the interaction process involving such behavior is given in Berger and Conner, 1969).

We say that position A is higher than position B in the observable power and prestige order if an actor occupying position A as compared to position B is more likely to receive action opportunities, more likely to make performance outputs (with or without being given action opportunities), more likely to have his performance outputs positively evaluated, and less likely to be influenced in the case of a disagreement with another. Further, the greater

the distance between positions A and B, the greater the difference in the likelihood of initiating and receiving these behaviors.

We now relate self and other performance expectation states to p's power and prestige position in the group. We do this by assuming that the higher the expectations an individual holds for self relative to other (the greater his expectation advantage), the higher his power and prestige position,

Assumption 4. (Basic Expectation Assumption) If states of C are assigned by p to himself and o consistent with the states of an activated D, then p's position relative to o in the observable power and prestige order will be a direct function of p's expectation advantage over o.

Because we are dealing with dichotomies, we can think of performance-expectation states as either high or low. Therefore, the performance-expectation state of p relative to o is one of four possible states: high-high, high-low, low-high, or low-low. The expectation advantage of p relative to o for these four possible states is positive for the state high-low, zero for the states high-high and low-low, and negative for the state low-high. Thus, if p holds a low-high expectation state while o holds a high-low expectation state in S^{*}, assumption 4 claims that they interact in the following manner: P is more likely to give o action opportunities than o will give p; p is less likely to make performance outputs than o; p is more likely to communicate positive reward actions to o than o is to p; and if there is a disagreement, p is more likely to yield to the influence of o than o is to p. (For more detailed development of reasons for making this assumption, see Berger and Conner, 1969).

From the concepts and assumptions of the theory of status characteristics and expectations states, the following result follows:

Basic Theorem . (Order-equivalence of Status Definitions) Given S^* , then p 's position relative to o in the observed power and prestige order will be a direct function of their relative states of D , provided any of the following is true in S^* :

- (1) If D is the only social basis of discrimination and has not previously been dissociated from C ;
- (2) if D has been activated, was not previously dissociated from C , and is the only social basis of discrimination in S^* ;
- (3) if D has been activated and any of the components of D are relevant to C ;
- (4) if D has been activated and states of C assigned to states of D in a consistent manner;
- (5) if D is a social basis of discrimination and states of D have been previously associated in a consistent manner with states of C .

This theorem claims, essentially, that the effect of a status characteristic is independent of the amount of status definition that has initially taken place in S^* . Line (1) is a situation that initially is only minimally defined; that is, there is initially no relation between states of D , states of C , and expectations for p 's behavior. Lines (4) and (5), on the other hand, are initially already maximally defined; that is, task-expectations are initially assigned to p ' and o that are consistent with states of D (line 4) or by cultural belief differences in task-expectation have previously been associated with status differences (line 5). The theorem claims the equivalence of these status situations: The distribution of action opportunities, performance outputs, reward actions, and influence is in all of them ordered in terms of relative states of D . The theorem does not claim that the magnitude

of the differences between high and low positions in the power-prestige order is necessarily the same in all cases; increasing amounts of status definition may strengthen the effect. But the order of the differences between high and low states of D is preserved. Furthermore, this effect does not depend on whether or not states of C were previously associated with states of D. In line (5) the theorem covers a case in which there is a prior association of D and C; but in lines (1)-(4) no prior association of D and C is assumed. Again, the theorem claims these situations are equivalent: The distribution of action opportunities, performance outputs, reward actions, and influence will be ordered in both cases in terms of relative states of D.

That the theory explains the results of previous experiments should be evident from lines (1) and (5) of the order-equivalence theorem. The only objection one might make to this claim is that the conditions stipulated by the theory are simpler than those found in previous experiments, so that it requires a good deal of interpretation of them to match theory to experiment. This objection is valid, and is one reason for subjecting the theory to more direct tests in section 4, which follows. But this objection aside, the results of these experiments follow from the concepts and assumptions of our theory in what is otherwise a fairly straightforward manner.

Furthermore, the theory as formulated satisfies the requirements we laid down for it at the outset: It describes in a precise manner what it means for status to organize interaction. It identifies the aspects of behavior that can be said to be organized by status characteristics; it identifies the properties of a status characteristic that can be said to do the work of organizing this behavior; it describes the kind of process that takes place;

it stipulates conditions sufficient for the status-organizing process to occur.²

4. Direct experimental tests of the theory.

While we argue that our theory enables us to explain much that is known about the status organizing process as it occurs in task-oriented groups this argument involves considerable interpretation of what is taking place in the wide variety of situations in which this process has been investigated. These experiments are typically more complex, involving more features than is necessary, according to our theory, to activate the status organizing process. This makes such experiments easily subject to several alternative explanations. Furthermore, they do not inform us in a systematic manner about the whole range of situations in which, according to our theory, status organizing processes will take place. It is thus incumbent on us to obtain more direct tests of our theory under conditions involving no more and no less than those stipulated by our theory.

In this section we describe two such tests. Both take place in a standardized experimental situation the techniques and procedures of which are designed to operationalize the conditions of the theory and the components of an observable power and prestige order.³

This situation has two phases, a manipulation phase and a decision-making phase:

²Note that the conditions given in the theory are only sufficient. No claim is made that any of them are also necessary. In their absence a status organizing process may or may not occur. For example, the theory does not imply that there is no status organization in situations that are not task-oriented.

³In this section we describe only experiments in which status information is manipulated. The experimental situation, however, was developed originally by Berger for the purpose of studying both the emergence and the effects of performance-expectations. See Berger, Conner and McKeown, 1969; or Berger and Conner, 1969.

In the manipulation phase, subjects are put into one or another expectation-state, either by testing their ability directly or by providing them with status information. S's are always of identical status. They are not permitted to see each other during the experiment, so that control over the status information they possess is complete. If both have the state D_x , each subject is informed that one of them is D_x but the other has some other state of D. For example, if both are Air Force staff sergeants, each is told that one is a staff sergeant and the other is a captain; or that one is a staff sergeant and the other an airman third class. Each subject assumes that the other subject is the one who possesses the other state of D.

In the decision phase, pairs of subjects repeat n identical decision-making trials, each of which has the following structure: Each trial requires a binary choice. The choice is made in three stages, the first of which is an initial choice between alternatives made independently by each subject, without knowing the choice of his partner. Subjects then communicate their initial choices to their partner, after which they each independently make a final choice. The next trial then begins.

Subjects are instructed to make what they feel to be the correct preliminary choice and, after having taken information from the other subject into consideration, to make what they feel is the correct final choice. It is repeatedly emphasized that it should be of no importance whether initial choices coincide with final choices, that using advice from others is both legitimate and necessary, and that it is primarily important that subjects make a correct final choice.⁴

⁴Various methods have been used to operationalize collective orientation. For example, sometimes it has been left to the instructions to emphasize the legitimacy of taking advice, sometimes subjects have been given scores as a team, and sometimes the two have been combined. For the procedures used in team scoring, see Berger and Conner, (1969).

The task consists of a sequence of almost identical stimuli, each of which is a large rectangle made up of smaller rectangles, some black and some white. The subject is to decide whether there is more white area or more black area in each rectangle.⁵ The stimuli are in fact so chosen that the task is ambiguous: The probability of a white-response for each stimulus is close to .50 and the decision on any given trial is independent of the decision on the preceding trial. However, the subject is told that in each case there is a correct response, and success at the task is defined in terms of a set of standards giving scores (number of correct responses) typically attained by subjects like themselves. The ability required by the task is described by the experimenter as "contrast sensitivity" and subjects are told it is not related to artistic or mathematical ability. In other words, an attempt is made to define the situation in such a way that the ability is one with respect to which they have no prior expectations.

Communication between subjects is completely manipulated by the experimenter. This is accomplished by an Interaction Control Machine (ICOM) consisting of subject-consoles, a host experimenter panel, and a master control unit. Each subject, partitioned off so that he is unable to see any other subject, sits in front of a subject-console on which he finds various buttons and lights. Decisions are made by pushing the buttons; information is communicated by observing the lights. All circuits pass through the master control unit, so that the experimenter is capable of manipulating communication from subject to subject.

⁵See Moore, 1965. Other tasks have been used (see, for example, Berger and Conner, 1969) as well as variants of this one (see, for example, Berger, Fisek, and Crosbie, 1970).

The structure of the experimental trial, together with the control exercised through the use of ICOn, makes action opportunities and performance-outputs of all subjects equal; all reward actions, that is, all communicated evaluations, and therefore all disagreements or agreements among subjects, are controlled by ICOn. A precise measure of the power and prestige position of the subject is obtained by studying the probability that one subject influences another. If the subject changes his final choice, he is said to make an O-response; if he does not change his final choice, he is said to make an S- or stay, response. The probability of an S-response measures the exercise of influence in the situation.

A post-session interview follows the manipulation and decision-making phases. This interview is used to eliminate subjects who are definitely suspicious, and claim to act on their suspicions; to eliminate subjects who have some other basis for differentiating themselves from their partner besides the status characteristic -- who, for example, manage to see the other subject, when the other is from a visible minority group; and to eliminate subjects who are unable to understand the instructions, or do not hear or understand the status manipulations of the experiment.

The first status characteristics experiment carried out in the standardized experimental setting described above was Moore's (1968). Moore found that subjects who believed that they had more education than their partner had a higher probability of an S-response, i.e. were less readily influenced, than those who believed they had a lower educational status. Furthermore, and perhaps more important, Moore found no significant difference between subjects for whom the **task ability** was already associated with the status characteristic and those for whom it was not.

For this experiment, Moore used 85 junior college students. In the case of 45 of them, Moore informed them that one of the two subjects participating in the experiment was from the junior college from which both in fact came, while the other was from a nearby high school. This created a high-low condition; that is, both subjects believed that they had the higher state of the status characteristic, while their partner had the lower state. In the case of the remaining 40 subjects, Moore informed them that one of the two subjects participating was from the junior college from which both came, but the other was from a nearby four-year private university, Stanford. This created a low-high condition. In addition, of the 45 high-low subjects, 22 were informed that it had already been found that those from the junior college consistently did better at the task they were to perform than subjects from the nearby high school. Similarly, of the 40 low-high subjects 20 were informed that it had already been found that those from Stanford consistently did better at such tasks. These two instructions experimentally created an association between the status and performance characteristics in the experimental situation. Moore found that if a performance-characteristic is previously associated with a status characteristic, and the status characteristic discriminates between p' and o , the probability that S yields to the influence of his partner is a direct function of his status. If the performance-characteristic is not previously associated with a status characteristic, but not dissociated from it, the probability that a subject yields to the influence of his partner is again a direct function of his status, and in fact to about the same degree. Thus, two of the predictions derivable from the theory are confirmed by this experiment.

The burden of proof assumption is perhaps the strongest assumption of the status characteristics theory, and it would be desirable if possible to isolate it for direct tests, independently of the theory's remaining assumptions. This in fact can be accomplished if (1) activation can be induced experimentally and (2) there is independent evidence confirming the consistency and basic expectation assumptions. For if we were to fail to find differences in the probability of an S-response between high-low and low-high subjects, and had ourselves assured that activation had taken place, then our failure could not be attributed to the activation assumption; nor, if we had independent evidence in favor of the consistency and basic expectation assumptions, could we attribute our failure to the remaining assumptions of the theory. Clearly it would be the burden of proof assumption that would require reformulation.

The same reasoning can in fact be extended to each assumption of the theory in turn: For example, if we experimentally induce both activation and relevance, any failure to find differences in the probability of an S-response between high-low and low-high subjects could be attributed only to a failure of either the consistency or basic expectation assumptions. But in fact, a good deal of earlier work confirms the basic expectation assumption; therefore, the difficulty must be in the consistency assumption if any difficulty is found at all.

This sort of reasoning led to the following experiment: One hundred and eighty Air Force staff sergeants were informed either that one of the two subjects participating in the experiment was a staff sergeant and the other was an airman third class; or else one was a staff sergeant and the other a captain. (In all cases the partner was said to be from a unit sufficiently

distant from the subject's own unit to eliminate direct command relations as a factor in the experiment.) Subjects were chosen on the basis of army general classification scores in such a way that their scores were about average; and 58 of them were told how the army general classification score of their partner compared with their own -- their own score being higher or lower, whichever was consistent with their relative rank. The purpose of this treatment was to experimentally induce activation. Another 57 were told not only their partner's score, relative to their own, but also that previous work had shown that individuals with higher army classification scores performed better in contrast sensitivity tests. The purpose of this treatment was to experimentally induce relevance. The remaining 65 subjects were told nothing except the putative rank of their partner. We made no effort to directly induce differences in performance-expectations. Sufficient confirmation had been provided by previous experiments to give us great confidence in the basic expectation assumption (see particularly Berger and Conner, 1969).

If all four assumptions of the theory hold, then the probability an S-response should be greater for subjects who believe their partner is an airman third class than for those who believe he is a captain, regardless of the amount of additional information S is given about himself and his partner. In Table 1 (see following page) we see that high-low subjects consistently have higher probabilities of an S-response than low-high subjects. Nor does the amount of additional information given materially increase the effect of the treatment in the case of low-high subjects -- i.e. subjects who believed their partner was a captain. More complete status definition has some effect in the case of the high-low subjects -- i.e. those who believed their partner was an airman third class. Possibly this reflects the greater doubt, expressed

TABLE 1

PROPORTION, MEAN NUMBERS OF S-RESPONSES, AND STANDARD DEVIATION

Condition*	Number of Subjects	S-responses		
		Proportion	Mean	Standard Deviation
Consistency: High-low	28	.88	33.5	4.7
Consistency: Low-high	29	.74	28.2	5.0
Burden of Proof: High-low	28	.82	31.1	3.3
Burden of Proof: Low-High	30	.74	27.7	5.9
Activation: High-low	31	.81	30.7	3.6
Activation: Low-high	34	.75	28.7	6.8

*Conditions are labelled according to the assumption directly tested by the condition, and putative air force ranks of p and o -- sergeant-airman (High-low) and sergeant-captain (Low-high).

by subjects in post-session interviews, that sergeants differed very much from younger enlisted men in ability; the further information serving, presumably, to remove such doubts.⁶ The basic results, nevertheless, provide confirmation for each assumption of the theory independently of the others.

Note that the two experiments just described test four of the five derivations summarized in the order-equivalence theorem. The Moore experiment tests lines (1) and (5); the Air Force experiment tests lines (1), (2), and (3).

5. Refinement and extension of the theory.

Further research on the theory of status characteristics and expectation states has been conditioned in large part by two purposes: First, to refine the theory, in the sense of increasing its precision. Second, to extend

⁶ For additional results and further analysis, see Cohen et al, forthcoming.

the theory, in the sense of increasing its generality. Both go beyond what is conventionally called testing the theory: To test a theory is to confirm or disconfirm some hypothesis that in a strict sense derives from it. The experiments described in section 4 are in this sense properly called tests of the theory. But for the most part, the research with which we are now concerned does not test hypotheses that in any rigorous sense derive from the theory. The theory, however, provides the basis for this research, in the sense that its problems come to be posed because of the theory, and the concepts and theoretical arguments employed to deal with these problems stem from the theory. Thus, the theory guides and organizes this research and its results show as modifications in the way the theory is formulated.

We will describe six further experiments, the six falling into three basic groups: The first group of experiments equates, as well as differentiates, the statuses of individuals. The second makes specific (as opposed to diffuse) status characteristics that are initially irrelevant relevant to a group's task. The third provides subjects with information about multiple statuses, some of which is inconsistent.

(1) Equating p' and o. The theory as originally formulated was concerned to explain the consequences of status differences on interaction. In formulating its scope, situations in which all individuals in the group were alike, as for example one finds in Bales' groups, were ruled out. No assumptions were made about whether individuals would form expectations for equal ability if they felt they were equal in status to others in the group; but it was tacitly supposed that, in any case, a status characteristic that did not discriminate between p' and o (such as sex in an all-male group) would not dampen the effect of one that did (such as educational differences in an all-male

group). Furthermore, in formulating the burden of proof process, the effect of the process was made to depend on the absence of any information discriminating between p' and o other than D itself -- for other information might be inconsistent with D or might already have defined the situation independently of D , both of which were beyond the scope of the theory. But in formulating this condition, it was again assumed that information equating p' and o would not inhibit the effect of D on the observed power and prestige order of the group.

These tacit assumptions about the effect of equal status are called into question by the results of an experiment by Seashore. The original purpose of Seashore's experiment was to study incongruent status situations. For this purpose, Seashore had white female junior college students work on the contrast sensitivity task with black female Stanford students. To isolate the effect of incongruent statuses, three control conditions were employed: (1) Subjects were informed that O was a white female Stanford student of the same age as the subject; (2) O was a white female junior college student of the same age as the subject; or (3) O was a black female junior college student of the same age as the subject. The relevant status information was communicated by allowing the subject to see, in filling out a form, the form previously filled out by O showing O 's name, age, sex, race, and school. Subjects were equated on all status characteristics not intended to produce differences in the behavior of the subject in the situation; for assumption 2 could be interpreted as claiming that the effect of the status characteristic would be inhibited only if other status information discriminated between p' and o .

Seashore found no differences between treatments (Seashore, 1968). While there had been a number of departures in procedure in the Seashore experiment,

any of which might have accounted for the difference between her results and previous results such as those described in Section 4, Cohen, Kiker, and Kruse reasoned that Seashore had activated statuses that equated subjects, and the effect of equating subjects was to reduce the effect of the differentiating status characteristic on the probability of an S-response. They therefore replicated her experiment, using as conditions: (1) White female junior college students who were informed that O was black, but who were given no other information about O; (2) or who were informed that O was black and of the same age as the subject; (3) or who were informed that O was a Stanford student, but were given no other information about O; or (4) who were informed that O was a Stanford student of the same age as the subject. This experiment confirmed the hypothesis that equating subjects reduces the effect of a differentiating characteristic on the probability of an S-response.

This result implies that for the burden of proof process to be maximally effective, not only must there be no other characteristic inconsistent with or prior to D, that also discriminates between p' and o; there must also be no other characteristic that equates p' and o. It should be observed that this does not imply, as would seem likely on first sight, that the activation assumption is similarly restricted in scope. For Seashore experimentally induced activation of equal status information, and it does not follow that if subjects are left to choose for themselves from multiple sources of status information that equal statuses will have the same effect. This remains to be seen from further experiments.

(2) Effect of other kinds of status elements. A specific status characteristic is one the states of which are differentially evaluated and from which one believes it possible to infer some other attributes of p' and o. It differs

from a diffuse status characteristic only in not implying any general expectation state. The theory as originally formulated does not deal with such characteristics; and, indeed, tacitly treats the general expectation state as the primary mechanism that brings about relevance of the diffuse status characteristic in situations never previously defined for p . While there is no evidence to disprove this assumption, there is evidence to show that under certain circumstances specific as well as diffuse status characteristics can be made relevant in situations to which they have no prior relevance.

Berger, et al, (1970) have shown that one can make a specific status characteristic relevant, even if it has no prior association with the characteristic instrumental to a task, if it is made the basis for allocating rewards to p' and o . This happens even though allocation of rewards on the basis of the irrelevant characteristic is made to look quite arbitrary. Subjects tested on meaning insight ability were told that, in a second experiment in which they were also participating, it was customary to give 25¢ per trial to subjects with high contrast sensitivity and 10¢ a trial to subjects with low contrast sensitivity, as rewards for their respective contributions to the group effort. As the experimenters were very pressed for time, they could not test subjects for contrast sensitivity; but because they wanted to keep the results for these subjects fairly comparable to other results they had been obtaining, they would pay the subjects on the basis of the only information they did know, the meaning insight scores they knew subjects had been given from a previous experiment in which it was known they had participated. Thus, there is a characteristic, C_1 irrelevant to the task; a characteristic, C_2 , instrumental to the task; and a reward associated with the ability that is instrumental to the task. When the reward is given to subjects on the basis of the irrelevant characteristic, it determines the probability of an S-response in the experiment.

A similar two-experiment design has been used by Freese to show that given three specific characteristics, say C_1 , C_2 , and C_3 , if subjects believe that C_1 and C_2 are positively correlated they make inferences about the task characteristics C_3 from C_1 . On the other had, if they believe C_1 and C_2 are inversely correlated they do not. Freese first tested subjects on their meaning insight ability, an intuitive ability that makes it possible for some individuals to know which of two non-English words is the same in meaning as a comparison English word. (The ability, of course, is artificially created by the experimenter; for details, see Berger and Conner, 1969.) They were then informed either that one could also infer if one had high meaning insight ability that one also had high social prediction ability or else that it was known that individuals with high meaning insight ability had low social prediction ability. (Social prediction ability is the ability to predict behavior in complex social situations.) The experiment then ended, but subjects were asked to participate in a second experiment in which the contrast sensitivity task was used. Meaning insight ability predicted the probability of an S-response for subjects in the contrast sensitivity situation if it was positively correlated with social prediction ability, but not if the two were negatively correlated.

These two experiments show that, under certain circumstances, other status elements of the situation as well as the diffuse status characteristic are capable of defining it; and they may go some way, too, to clarifying what it is about the diffuse status characteristic that makes it so relevant.

(3) Multiple-characteristic status situations. Where two or more status characteristics are activated in a situation, the possibility arises that they are inconsistent; it is about such situations that most theories of status

characteristics have been written (see, for example, Hughes, 1945 or Lenski 1956). It is typically assumed that such situations are tense and awkward, but it is not so clear how they are resolved. Does the individual define the situation with respect to just one characteristic, neglecting, suppressing, or denying the significance of the other? One might suppose this from a balance theory, in which inconsistency must in some manner be reduced. Or does the individual combine all the information made available to him, in a sense "averaging" it over all characteristics, forming expectations for self and other that are somewhere in between those formed if both characteristics are high or both low?

Two experiments by Berger, et al, show that subjects combine information rather than balance it (Berger, Fisek, and Crosbie, 1970). These experiments artificially construct two equally-weighted specific status characteristics, both of which are made equally relevant to the contrast sensitivity task. When they are made inconsistent, subjects are found to have a probability of an S-response lower than those who are consistently high, but higher than those who are consistently low (Berger and Fisek, 1970). Furthermore, a subject who is high on one characteristic and low on another has a lower probability of an S-response when his partner is high on both characteristics than when his partner is low on one but high on the other characteristic (and similarly for the obverse case), (Berger, Fisek, and Crosbie, 1970). This further reinforces the finding that a combining hierarchy is formed on the basis of inconsistent status information.

The significance of these two experiments is, of course, that they provide the basis for greatly extending the generality of the original theory;

for it now becomes possible, in fact, to extend the theory to situations defined by any number of characteristics.

6. Summary and conclusion.

The development of our knowledge of status organizing processes in decision-making groups can be summarized in terms of the following stages:

(1) The first stage was one in which an abstractly formulated empirical generalization was constructed from an analysis of the dozen or so investigations reported between 1950 and 1965 of the distribution of participation, prestige, and influence in decision-making groups that are initially different in age, sex, occupation, education, race or similar social categories: When task-oriented groups are differentiated with respect to some status characteristic, the differences between individuals in status determines the observable power and prestige order of the group, whether the status characteristic is previously associated with the task or not.

(2) The second is one in which a theory was formulated that explains this generalization. The theory explains it by attributing to status characteristics differential evaluations, differential specific expectations, and differential general expectations. These three properties are called into play when two or more individuals are committed to some outcome, must take each other into account in bringing this outcome about, and have no other or no prior basis for inferring who is better able to achieve this outcome. They are called into play even if no prior association exists between status characteristics and instrumental-task characteristics, just so long as nothing positively stands in the way of making a connection between the two. Becoming in this way relevant to the immediate task situation, expectations for

performance in the particular situation are formed that are consistent with the components of the status characteristic. Once formed, such performance-expectations are known to determine the distribution of opportunities to perform, the actual number of performance outputs, the likelihood that a performance output is positively rewarded, and the exercise of influence.

(3) The third stage has involved direct experimental tests of the assumptions made by this explanation. The logical structure of the argument makes it possible to test each of them independently of the other. These direct experimental tests have provided confirmation for the basic assumptions of the status characteristics formulation.

(4) The fourth stage has been one concerned with the refinement and extension of the theory. Further experiments show that: (a) Under certain circumstances, other status elements can become the basis for organizing the distribution of power and prestige in the group. (b) Given information about two relevant characteristics, subjects combine this information, even if it is inconsistent; creating a hierarchy of power and prestige that places inconsistent individuals between those consistently high and those consistently low. (c) Information that equates the status of subjects is combined with other information in the same manner; so that under certain circumstances, if subjects are equal in status this reduces the effect on the power and prestige order of status characteristics that discriminate between them.

(5) The fifth stage, now in progress, is concerned with organizing further work on the status-expectation process: This we believe involves reformulating the theory so as to take into account the results of experiments which were designed to refine and extend the theory. This stage in the

development of our knowledge of status-organizing processes is of course by no means the last: Given a theory that explains the experiments which were designed to refine and extend our earlier formulation, this more general theory in turn should become the basis for further experiments: Experiments designed to test it, and to provide information necessary to refine its structure and extend its scope.

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