ORGANIZATIONAL EVALUATION AND AUTHORITY*

by

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ABSTRACT

Authority systems in formal organizations can be analyzed in terms of the process by which the performance of organizational participants is evaluated. Authority is viewed as authorization to attempt to control the behavior of others, and rests in four different kinds of authority rights which embody components of the evaluation process. Authority systems are defined in terms of the distribution of these rights among participants.

The theory specifies certain problems which, if they arise in the evaluation process, render the authority system incompatible with participants' achievement of satisfactory evaluations. Incompatible authority systems are postulated to be unstable and to remain so until the incompatibility is resolved. A set of indices is developed for the identification of unstable systems. This theory is the basis of a current study of authority systems in five organizations.

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This paper presents (1) a conception of authority and authority systems, and (2) a theory predicting the instability of certain kinds of authority systems. Empirical studies designed to explore the utility of the conception and to test hypotheses derived from the theory are presently under way in a number of organizations. In a forthcoming monograph and later papers, we shall discuss the operationalization of our concepts and report empirical findings.

The conception of authority presented here is based on the process by which performance evaluations of organizational participants are made. This conception is separately emphasized in this paper because we believe it will prove to be useful as a descriptive and analytic tool, independent of the theory. Our intent has been to develop a formulation which is sufficiently abstract to be applicable to a large variety of concrete systems in many types of organizations and specific enough to be useful in guiding the collection of empirical data.

The theory locates certain inconsistencies and deficiencies in the ways in which the performance of an organizational participant is evaluated which render the authority system incompatible with the participant's achievement of his personal goals. This incompatibility is predicted to be a sufficient condition for internal pressures for change in the authority system--in short, for instability of the system.

Both conception and theory are limited in scope to organizations which fulfill these conditions:

1) Organizational sanctions are distributed, at least in part, on the basis of evaluations made of participants.

2) Evaluators who influence the distribution of organizational sanctions attempt to base their evaluations, at least in part, on the performance of organizational tasks by participants.

3) Participants place some value on the evaluations of their task performance made by these evaluators.

The first and second conditions delineate the kind of organizations to which this conception of authority applies. The first condition excludes organizations in which sanctions are distributed independently of any evaluations of participants. (For example, all rewards are distributed equally among participants.) The second condition excludes organizations in which, although sanctions may be distributed on the basis of evaluations, no attempt is made to base these evaluations even in part on how well or how poorly participants perform in organizational tasks. Thus, this condition excludes organizations in which evaluations are based entirely on status characteristics (such as ethnicity or seniority) or on other non-performance criteria, even though in some cases these criteria may be related to per-formance. We believe, however, that these conditions exclude very few organizations, at least in industrialized societies.

The third condition provides the motivational base for the theory. While this condition does not require that participants place some value on the organizational sanctions themselves, it does require that they value the performance evaluations made of them by those who influence these sanctions. If performance evaluations were inconsequential to participants, they could smile at negative evaluations and could hardly be expected to become con-cerned about inadequacies in the way performance evaluations are made. (A

rich boy working as a lark, for example.) We believe this condition, like
the first two, is not very limiting. In an organizational context, most
participants value their performance evaluations because at least some of
the attendant sanctions are important to them. Furthermore, performance
evaluations often possess symbolic value of their own, in part because of
their importance to the development and maintenance of self-conception.[2]

Although based on the work of literally dozens of predecessors,
the conception described here contains some elements of novelty. We shall
discuss comparisons with previous perspectives after defining our concepts,
then complete the presentation of the theory.

Authority as Authorized Control

We employ in this paper a concept of authority which is defined in
terms of authorization to engage in certain control attempts. One participant
has authority over another to the extent that his control attempts are
"authorized"--i.e., would be supported by the organization. A participant
who is authorized to perform a given control attempt over another is said
to have an authority right over the other with regard to that attempt. We
identify four different kinds of control attempts, which when authorized
constitute authority rights.

The process by which the performance of organizational participants
is evaluated plays two major roles in this concept of authority. First,
its importance is seen in the types of control attempts upon which we focus.
These control attempts, and hence the authority rights themselves, are
chosen to embody the major components of the evaluation process: allocating,
criteria setting, sampling, and evaluating. These four rights are not
separated as a logical exercise. They are often assigned in various com-
binations to different participants. (The superintendent may allocate the

job, engineers may set the criteria for acceptable tolerance limits, fore-
men may select the sample to be evaluated, and inspectors may be the
evaluators.) Also, each of these rights can become a locus of problems
in the authority system. Although other rights can be constructed within
the general definition of an authority right, we consider this set
sufficient for the analysis of most authority systems.

The second major role of the evaluation process in this concept of
authority is that authorization stems from <u>significant evaluators</u>--those
whose evaluations influence the distribution of organizational sanctions.
By definition, <u>A</u> is said to have an <u>authority right</u> to exercise a given
control attempt over <u>B</u> with respect to a given task to the extent that:

1) the significant evaluators of <u>A</u>, if aware that <u>A</u> was
   attempting this kind of control over <u>B</u>, would not nega-
   tively evaluate <u>A</u> for making the attempt, and

2) the significant evaluators of all participants whose
   compliance is necessary for the success of <u>A</u>'s attempt to
   control <u>B</u>, if aware of noncompliance to the attempt, would
   negatively evaluate those not complying.

Note that this general definition allows for varying degrees of
authorization. <u>A</u> has an authority right to the extent that he is not nega-
tively evaluated by significant evaluators for attempting control, and to
the extent that others are required by significant evaluators to comply with
his attempts. <u>A</u>'s authorization is incomplete if, for example, some
evaluators require, while others prohibit, compliance with <u>A</u>'s control
attempts. Later we shall consider problems arising from incomplete
authorization.

Authority Rights

Now we can define four authority rights by applying the above general
definition to each of the kinds of control attempts. The first criterion
in this general definition of an authority right applies consistently to <u>A</u>

for each of the authority rights. Under the second criterion, the partici-
pants whose compliance is necessary for the success of $\underline{A}$'s control attempts
vary according to the specific authority right under consideration and must
be specified in defining each right. In these definitions, and throughout
the rest of the paper, "evaluator" and "evaluation" refer only to <u>significant</u>
evaluators and evaluations.

To assign a goal is simply to give an individual the task of
attempting to achieve that goal. An <u>allocating right</u> is the right to assign
an organizational goal to a participant. (A typist is told to type a manu-
script.) $\underline{A}$ has the right to allocate to $\underline{B}$ to the extent that: (1) $\underline{A}$ would
not be negatively evaluated for allocating, and (2) $\underline{B}$ would be negatively
evaluated for noncompliance with $\underline{A}$'s allocation.

Allocations vary in the amount of discretion they permit the re-
cipient in performing the task. To facilitate our discussion, we shall
identify two polar types on this continuum. Thus, tasks may be allocated in
two ways:

> (a) by <u>direction</u>, in which the particular performance operations
> to be carried out are specified, leaving the performer
> minimal discretion in determining how to proceed (an
> engineering draftsman is given detailed instructions for
> preparing a blueprint of a mechanical component); and

> (b) by <u>delegation</u>, in which only the characteristics of the
> desired end-result are specified, with the performer allowed
> to make the decisions on how to proceed (the draftsman is
> given much discretion in preparing the blueprint).

It is quite possible for occupants of a given position to have the
right to allocate a given task only by directive or only by delegation.
(Private physicians may be authorized to allocate to resident physicians in
a hospital only by delegation, while the residents are authorized to allocate
certain medical routines to clinical clerks only by directive.) Approximations
of these two types of allocations can usually be distinguished empirically,

but it should be recognized that rarely if ever are they perfectly represented. Directives cannot be detailed enough to specify completely all operations of the performance to be carried out; some decisions are always left to the performer. Thus, even the typist told to follow a standard format in the preparation of letters may still be allowed to determine which sheet of paper to use and the order in which the letters are to be prepared. Likewise, delegations do not usually allow the performer absolute discretion, although, if genuine, they will allow him considerable latitude in approaching his task. Many allocations sound like delegations to a naive observer, but because they occur in the context of an understood set of "standard operating procedures," they are in fact directives. For example, when an intern is told by a resident to "Bring this patient's fever down," he may know from past experience that he is to carry out precisely a set of established procedures. Misunderstandings among participants can occur in these and similar situations, directives being mistaken for delegations and vice versa. Such misunderstandings can cause problems at the time when task performances are evaluated, a point we amplify in a later section.

A _criteria-setting_ _right_ is the right to specify those performance properties to be considered, their weights or relative importance, and the standards to be used in determining a performance evaluation. Holders of this right, therefore, are authorized to determine which properties of the performance of another will be considered and what evaluation is merited by any given level of performance. (For evaluating a manuscript typist, the criteria-setter may decide that, with no errors, a speed of at least forty words per minute is necessary for an evaluation of "good," and a minimum of sixty words per minute is required for "excellent.") $\underline{A}$ has the right to set criteria for $\underline{B}$ to the extent that: (1) $\underline{A}$ would not be negatively evaluated for setting

criteria, and (2) $\underline{B}$'s evaluators would be negatively evaluated by their own evaluators for failure to use $\underline{A}$'s criteria in evaluating $\underline{B}$.

An outcome of a task performance is the actual end-result of a performance, in contrast to the desired end-result, defined by the goal. A performance evaluation may be based on (1) assessment of the characteristics of the performance of the task operations or on (2) assessment of the characteristics of the task outcome. In either case, information on the actual performance or the outcome must be obtained. A sampling right is the right to select aspects of performances or outcomes which will be observed to provide information for an evaluation. (For sampling a manuscript typist's work, the sampler decides to inspect every fourth page.) $\underline{A}$ has the right to sample $\underline{B}$'s performance to the extent that: (1) $\underline{A}$ would not be negatively evaluated for sampling, (2.1) $\underline{B}$ would be negatively evaluated for not allowing the observations specified by $\underline{A}$, (2.2) the evaluator would be negatively evaluated if he did not use information from the sample specified by $\underline{A}$ in evaluating $\underline{B}$, and (2.3) when the person actually taking the sample is not $\underline{A}$ himself, that person would be negatively evaluated if he did not take the sample $\underline{A}$ had specified.

An evaluating right is the right to decide how the level of performance is to be inferred from the sample and to apply the criteria to arrive at a performance evaluation. (On the basis of number of completed pages, a count of errors in the sample, and the criteria that accuracy is a primary and speed a secondary consideration, the evaluator judges the manuscript typist's work to be excellent.) Since, as noted earlier, we are speaking only of evaluations which are significant, participants holding the evaluating right are authorized to make performance evaluations which are considered in the distribution of organizational sanctions. $\underline{A}$ has the right to evaluate $\underline{B}$ to the extent that: (1) $\underline{A}$ would not himself be negatively

evaluated for evaluating $\underline{B}$, (2) the sampler would be negatively evaluated if he did not provide necessary information on the sample to $\underline{A}$ for evaluating $\underline{B}$.

Authority Systems

We refer to an authority right which is regularly exercised by one participant over another as an <u>authority link</u> between the two. The sum of all authority links connecting two participants constitutes, by definition, an <u>authority relationship</u> between the two. (For example, a project supervisor may exercise all four rights over an engineer working on the project, and the engineer may exercise the right to evaluate technical aspects of the supervisor's performance.)

The constellation of all authority relationships of a participant--both with others over whom he exercises rights and with those who exercise rights over him--with respect to a given task constitutes his <u>authority system</u> for that task. `(For example, the following relationships may constitute the authority system of a resident physician in a teaching hospital with respect to diagnoses of patients assigned to his service. His Chief Resident exercises the rights of allocating patients to him and of sampling and evaluating his diagnostic performance. Certain faculty members exercise their rights to set criteria, sample, and evaluate him. The resident himself exercises all four rights over interns, and also exercises the right to allocate tasks necessary to his diagnoses to nurses and laboratory technicians.)

In addition to examining an individual participant and his relevant authority system, we may also analyze authority as it is associated with positions. A <u>position</u> is a location within an organization whose occupants share a common organizational title and are members of the same organizational

context. (Occupants of the position of quarterback on the first string of the varsity football team; nurses aides on the Pediatrics Ward, for example.)

An authority link is _structural_ at a given position if the link is associated with the position itself, rather than with only particular occupants of the position. There need not be a complete correspondence between the relationships associated with a position and those associated with a particular occupant of that position. Exceptional competence, stupidity, or charm of a given occupant may produce discrepancies between his authority system and the system usually associated with the position. (A particular quarterback may not be authorized to allocate plays due to his inability to detect weaknesses in the opposition's defense, although other quarterbacks are not so restricted.) Authority relationships and systems are structural at a given position to the extent that the links comprising them are structural at that position. The set of structural links for a given position, i.e., that portion of occupants' authority systems which is structural, constitutes the _authority structure_ at that position. Although more inclusive units of analysis can be constructed from these concepts, in this paper we define systems and structures from the perspective of a focal position and task.[3]

Comparisons with Previous Conceptions

At this point, it is appropriate to state the ways in which the concept of authority we develop in this paper is similar to and departs from some previous conceptions. Because for an authority right to exist those subject to its exercise are expected to comply in order to avoid negative evaluations, and ultimately, negative sanctions, some may argue that we are studying power rather than authority. But our approach emphasizes the extent to which a participant is allowed by others in the organization

to exercise control. We have stated that $\underline{A}$ has authority over $\underline{B}$ to the extent that he is authorized to perform specified control attempts over $\underline{B}$. In essence, $\underline{A}$ is authorized to the extent that significant evaluators permit him to attempt the control and require the compliance of others with the attempt. This definition makes it clear that we are concerned only with a particular kind of power: that which is authorized by other organizational participants. Authorized power, reflecting the interests of interdependent organizational members, tends to be circumscribed in its domain and regulated in its exercise. In short, we propose to study authority systems as the distribution of authorized power across persons or positions in organizations.

This view of authority may be compared with those of two influential organizational theorists, Max Weber and Chester I. Barnard. Weber[4] focused attention on the motivations of the subordinate group in his definition of an authority system as a legitimate power system: a system in which differences in power between $\underline{A}$ and $\underline{B}$ are justified by a set of beliefs which define the exercise of control by $\underline{A}$ and its acceptance by $\underline{B}$ as appropriate. Weber proceeded to show in his justly famous typology how differing systems of beliefs--traditional, charismatic, or legal--provide the bases for different kinds of authority structures.

Basing the definition of authority on the concept of legitimacy permits the investigator to explore the various kinds of "resources" upon which authority may rest. Many investigators have reported that perceived legitimacy may be a function of the technical competence or the interpersonal skills of an individual, as well as of his occupany of an organizational position. One perhaps unanticipated consequence of interest in the resources upon which authority rests has been a tendency to take the formal authority structure as given and to focus attention exclusively on departures from it

as embodied in informal arrangements. Approaching the study of authority from our perspective of authorized power facilitates consideration of both informal and formal authority, i.e., of both systems and structures.

From our point of view, legitimacy, if defined as the amount of congruence between the norms of subordinates and the distribution of power, is an important variable affecting the operation of an authority system. But legitimacy, in this sense, is not used by us as the defining criterion of authority. We wish to be able to speak of illegitimate authority systems as well as of legitimate ones. A given subordinate may acknowledge that his superior may exercise certain rights over him, and be supported by the organization in their exercise, and yet believe that his superior should not have been accorded those rights. That is, B may acknowledge A's rights and still question their legitimacy. Empirically, our conception, if applied in terms of the perception of participants, places emphasis on the question, "Does B believe that A has authority rights over him?" but at the same time permits the question, "Does B believe that A should have authority rights over him?"

Some evidence for the utility of this distinction between legitimacy and authorization comes from two experimental studies of authority. In the first, Raven and French[5] reported that whether or not a superior was perceived to be the legitimate occupant of his office (elected to office vs. usurping office) did not affect the degree of public conformity exhibited by his subordinates. In the second, Evan and Zelditch[6] found that variations in the perceived competence of the supervisor did not significantly affect subordinates' felt obligation to obey. The compliance reported in these experiments was little affected by the manipulation of perceived legitimacy and may be interpreted to rest on perceived authorization. In the Raven and French experiment, authorization could stem from the inaction of the experimenter, who did not attempt to control or remove the usurper,[7] and in the Evan and Zelditch study, from the presumed organizational support for the supervisor's decisions.

This is not to argue that legitimacy is an unimportant variable in the study of authority. We shall suggest below that perceptions of legitimacy have an important effect on the ways in which subordinates attempt to resolve incompatibilities in the authority system.

In some respects, our concept of authority is similar to that developed by Barnard.[8] Barnard's view that authority resides in the authenticated "authorized communications" from an office appears to be consistent with our approach. Barnard recognizes the importance of sanctions to participants through his emphasis on orders being acceptable to subordinates only if they are consonant with their personal interests. We would only add that if the distribution of sanctions is perceived to be affected by the evaluation process, then this is one important reason why evaluations themselves can become important to participants.

While our formulation is consistent with that of Barnard in these particulars, there are some important differences in the two approaches. Unlike our approach, Barnard's view of authority contains elements of legitimacy which supplement his concern with authorization: his "zone of indifference" argument places emphasis on what orders subordinates will accept automatically. The two approaches are also put to a different use. Barnard uses the distribution of sanctions (incentives, in his terms) in order to explain the continued participation of members in the organization. We also focus on the distribution of sanctions, as determined by the evaluation process. However, rather than emphasizing exclusively the decision to participate, we wish to account for one source of instability of authority systems which regulate the day-to-day behavior of participants.

One important feature of our view of authority which differentiates it from previous conceptions is its emphasis on the extent to which authority rights may be task-specific. A's authority rights over B may be limited to

a specific task. In complex organizations, it is possible for an individual subordinate to participate in a large number of authority systems. For example, the authority system in which an intern in a teaching hospital participates for the task of developing a therapeutic plan may depend on the manner in which the patient was admitted to the ward. For some patients, the intern reports to the patient's private physician; for others, he reports to an attending physician assigned to the ward. For other tasks, such as the clinical instruction of medical students, the intern may participate in still another authority system under the Chief Resident, and so forth. Non-task-specific concepts of authority encourage the investigator to over-simplify what in reality are very complex authority systems.

The close relationship between the evaluation process and authority which we emphasize has been implicitly recognized by many students of organizations, although to our knowledge it has not heretofore been systematically examined. Some investigators have described evaluation systems designed to improve managerial control and have detailed how such systems can go astray.[9] Others have examined the difficulty of establishing valid and reliable criteria for the evaluation of professionals. Vollmer[10] has investigated the difficulty in evaluating the performance of research and development personnel; and Freidson and Rhea[11] have studied problems in the evaluation of clinic physicians by their peers and the consequent difficulties in control by the professional group. Also of interest to us is the work of Jaques[12] who has empirically explored the notion that responsibility can be measured by the length of time between successive evaluations by a superior. These studies, together with many others, indicate that we are not alone in recognizing the importance of the evaluation process for the study of organizational behavior.

Incompatibility of Authority Systems

Our scope conditions indicate that the theory applies only to authority systems in which focal participants attach some importance to the evaluations made of their performance by evaluators who influence the distribution of organizational sanctions. Given that a participant values performance evaluations, we make the important assumption that: the participant will attempt to maintain -- both achieve in the present and insure for the future -- evaluations of his performance at a level which is satisfactory to him.[13]

The minimal level of a performance evaluation which is satisfactory to a participant is, by definition, the participant's acceptance level with regard to that evaluation. An individual's acceptance level may change over time. Acceptance levels also may differ among participants; some may be satisfied with a rating of "fair," while others are satisfied only with "excellent." Moreover, the particular level of evaluation which is satisfactory to the participant being evaluated need not be the same level which satisfies the evaluator. Some participants may have expectations for themselves which are higher than those their evaluators hold for them, while others may be satisfied with low evaluations even though their evaluators are dissatisfied.

An authority system can be labeled either compatible or incompatible with the ability of the participant to maintain evaluations of his performance at a level acceptable to him. If a particular aspect of an authority system acts to prevent the participant from maintaining his evaluations at or above his acceptance level, then an incompatibility is said to exist within the system.

Authority systems are incompatible to the extent they contain these incompatibilities. Thus, a compatible system does not prevent the participant from maintaining evaluations of his performance at his acceptance level. But, an authority system is incompatible if the set of exercised rights is either incomplete or contains conflicting elements in a way which causes the system to

prevent the participant from maintaining his evaluations at a level satis-
factory to him. Systems may also be ranked by degrees of incompatibility.
In general, the more frequently incompatibilities occur for the participant,
and the more important to him are the evaluations which cannot be maintained at
a level acceptable to him, the greater is the incompatibility of the system.

If a given system is structural, then the structure may be compatible
for some occupants of the position and incompatible for others because, as
mentioned above, individuals may have different acceptance levels. For instance,
a given structure may thwart maintenance of evaluations at the level of
"excellent," but allow maintenance at the level of "good." Such a structure
is incompatible only for individuals with a very high acceptance level, thus
perhaps being incompatible for only a few occupants of the structure. An
authority structure is incompatible to the extent that occupants of its focal
position are subjected to incompatibility.

Sources of Incompatibility

The theory identifies four sources of incompatibility which can be
categorized as: 1) contradictory evaluations, 2) uncontrollable evaluations,
3) unpredictable evaluations, and 4) unattainable evaluations. These four
sources are expressed as four types of incompatibility.

Type I: Contradictory Evaluations

> An authority system is incompatible if it places the participant
> in a situation in which the receipt of one performance evaluation
> at least equal to his acceptance level necessarily entails the
> receipt of another performance evaluation below his acceptance level.

This type of incompatibility is produced by a contradiction or mutual
inconsistency between the evaluations of two different evaluators, or
between two different evaluations by a single evaluator. The participant
finds that doing the kind of work required to receive one evaluation high

enough to satisfy him necessarily involves incurring another evaluation low enough to make him dissatisfied. This problem may occur during the evaluation of a single task or of two or more tasks. (An individual may be negatively evaluated for not working fast enough; yet if he were to increase his speed, he would be negatively evaluated for not working carefully enough. Or, evaluators may expect a participant to perform mutually exclusive tasks simultaneously.)

This incompatibility may also occur when an individual receives evaluations both on his performances leading to an outcome and on that outcome itself. In this case, the contradiction may occur between the kind of performances which are allowed and the kinds of outcomes which are expected. Such a contradiction frequently occurs when a participant is allocated a task by directives but evaluated on the basis of a sample of outcomes. In this case, an individual may be expected by an evaluator to achieve results that are impossible to achieve by following the particular course his allocator has directed. For this reason, a participant who receives allocations by directives is more likely to be subjected to an incompatibility of this type if outcomes of the participant's performance are sampled rather than the performance itself.

The more routine the task, the more likely that criteria-setters will clearly understand and agree on what can be expected of participants, and also the easier it is for the sampler to decide on samples which are representative; thus, the probability of Type I incompatibility is reduced with more routine tasks.

Complexity of the system also increases the probability of Type I incompability. The more differentiated the authority system (i.e., the greater the extent to which each of the rights are separately held) and the greater the number of participants exercising rights in the system, the greater

is the chance of failure in coordination.[14] (For example, different allo-
cators may allocate conflicting tasks to a participant. If this conflict is
not considered by the evaluators, the participant may be unable to avoid
receiving an evaluation which is unsatisfactory to him.)

Type II: Uncontrollable Evaluations

> An authority system is incompatible if it places the participant
> in a situation in which he receives evaluations below his acceptance
> level for performances or outcomes he does not control.

This incompatibility occurs when the outcomes which serve as a basis
for the evaluation of a participant are not, from task to task, a regular
function of that participant's performances. Therefore, to the extent that
these uncontrollable outcomes are used as a basis for the evaluation of the
participant's performance, he will be unable to control his evaluations through
his performance. An incompatibility is formed if this lack of control results
in the participant receiving evaluations below his acceptance level.

The most obvious and simple instance of this failure occurs when an
unsatisfactory performance is noted and the evaluation is wrongly assigned to
a participant who neither performed the task nor had authority rights over the
participant who did. (A nurse may be negatively evaluated for lack of courtesy
shown by an admitting clerk.)

Interdependence may be another source of Type II incompatibility.
Interdependence is present, by definition, when more than one participant con-
tributes to a common outcome which is used as the basis for evaluation. If
evaluated outcomes are produced interdependently, they may be related only
irregularly to any given participant's performance; therefore, that partici-
pant may not be able to maintain his evaluation at his acceptance level because
he cannot control the outcomes on which it is based. A competent decision-
maker may be prevented from maintaining evaluations satisfactory to him due to

incompetent implementation of his decisions by others over whom he lacks
authority rights. (An automobile designer is negatively evaluated for the
poor appearance of the final product, which is, in fact, the result of
inferior workmanship.) Conversely, a participant who implements another's
faulty decision may be incorrectly blamed for an unsatisfactory outcome.
(The workmanship is blamed for poor appearance, although the design is at
fault.) Interdependence does not produce incompatibility if the participant
has sufficient authority rights over the other contributors to control their
common outcome; nor will there be incompatibility if the performance of others
is of such quality that the participant is not prevented from maintaining
evaluations satisfactory to him. In summary, given interdependence, the
probability of Type II incompatibility increases to the extent that evaluations
are based on outcomes rather than performance, particularly for those partici-
pants who have no rights over those with whom they are interdependent.

Attributes of the task may also produce Type II incompatibility. All
tasks may be considered to involve the overcoming of some type of resistance.
Someone or something must be overcome. The resistance may be offered by
nature, or by another person or group. (A problem must be solved. A tunnel
must be dug through rock. A company must produce a better product than its
competitors.) If the resistance to a given task is known to be relatively
constant from performance to performance of that task, then the task is
regarded as _inert_. (A mile is to be run along the school track. Bills are
posted in a ledger.) But, if the resistance is known to vary from performance
to performance, then that task is considered to be _active_. (The general must
capture a city. An election must be won.)

In order to evaluate the outcome of a task performance, the evaluator
might employ standards which criteria-setters have determined by examining
outcomes achieved by other performers on tasks believed to be similar. In the

case of inert tasks, a valid inference to the quality of the performance can
be made directly from comparisons of the outcome achieved relative to outcomes
obtained by others on similar tasks. Active tasks, however, produce diffi-
culties in the evaluation of performance, because the variability of the
resistance complicates the problem of inferring the quality of performance
from the nature of the outcome.[15] The outcome of a good performance need not
be victory and often is defeat. (The patient may die, even though the
operation was performed well.)

We can divide active tasks into two categories based upon the degree
of knowledge concerning the resistance to be overcome. First, even though the
resistance is variable, it is sometimes possible to have specific knowledge
about it for a particular task performance. (The strength of the opposition
meeting the general in a given battle is known. A tunnel is dug through strata
of known composition.) The evaluation of each task performance can thus
validly be based on the assessment of the outcome, if one also considers the
resistance encountered in that particular task.

In the second category of active tasks, the resistance encountered in
a single performance is unknown, but there is some knowledge of the distri-
bution of resistance over a succession of performances. This knowledge permits
evaluators to take a probabilistic approach to the evaluations of these
active tasks. The proportion of successful outcomes can be compared to the
results of other performances under like circumstances. (The death rate for
all births provides a valid measure of obstetrical performance, but only if
the sample and comparison group do not differ in the assignment of difficult
deliveries.)

Thus, given active tasks, the probability of Type II incompatibility
increases to the extent that evaluations are based on outcomes rather than on
performances, unless the resistance is considered, or probabilistic

interpretations are made. Professionals employed by organizations are
usually allocated more active tasks than are non-professionals. The pro-
fessional, therefore, seeks direct measures of the quality of performance; or,
if results are used, he demands probabilistic approaches to comparable out-
comes.[16]

Type III: Unpredictable Evaluations

> An authority system is incompatible if it places the participant
> in a situation in which he receives evaluations below his acceptance
> level because he is unable to predict the relationship between
> attributes of his performance and the quality of the evaluation.

The relationship between evaluation and performance may be unpre-
dictable because the participant has inadequate knowledge of how the evaluations
of his performance are made. This incompatibility occurs when the participant
has insufficient or incorrect information about the properties, weights, and
standards by which he is evaluated, and therefore is unable to adjust his
performance to maintain evaluations satisfactory to him. Those being evalu-
ated need not, of course, know all the details of the evaluation process, but
only enough to be sufficiently able to predict evaluations form their per-
formance so that they can make the adjustments in their behavior necessary to pro-
duce acceptance evaluations. The extreme case of this type of incompatibility
occurs when the occupants of a position act upon false information about the
criteria used in their evaluation. (University faculty may be told and may
act on the belief that community service, teaching, and research are all taken
into account in the evaluations made of them, when, in practice, community
service is not considered at all.) All those conditions which impede communi-
cation between the participant and his evaluators tend to increase the
probability of Type III incompatibility.

Unpredictable evaluations may also be produced by an irregular re-
lationship between the participant's performance and the evaluations he

receives. To the extent that the sampler takes samples which are not repre-
sentative of performance, the relationship between a performance and the
evaluation of that performance will be irregular. Thus, those organizational
conditions which increase the probability of unrepresentative samples also
increase the probability of Type III incompatibility. For example, the more
frequently a participant's performance is sampled, the less the probability of
Type III incompatibility.

Type IV: Unattainable Evaluations

> An authority system is incompatible if it places the participant
> in a situation in which the standards used to evaluate him are
> so high that he cannot achieve evaluations at his acceptance level.

This incompatibility occurs when the participant lacks the necessary
facilities to be able to perform at a level which criteria-setters require if
he is to achieve evaluations at his acceptance level. Therefore, no matter how
hard he tries, he cannot achieve evaluations satisfactory to him. Facilities
may refer to a certain level of skill or training, or they may refer to
physical equipment, such as tools.

Facilities may also refer to authority rights themselves. If a par-
ticipant is evaluated on his ability to control the performance of others, he
must have sufficient rights and sufficient authorization to achieve the control.
If participants are missing important rights, or if authorization is incomplete,
the participant may find it impossible to achieve the degree of control
necessary for the evaluations he considers satisfactory. (A university de-
partmental chairman may be expected to insure good teaching, but may lack
important rights, such as the sampling right, over his faculty.) Thus, for a
participant who is evaluated for his control over another, the greater the
number of authority rights and the greater the degree of authorization of those
rights, the less the chance of Type IV incompatibility.

The problem of unattainable standards sometimes occurs when a participant is new to a job but is expected to perform at the same level as more experienced participants. Also, it is more likely to occur if a task has been newly developed, and if tasks similar to it have not been performed often enough to allow criteria-setters to know what levels of performance can reasonably be expected.

Active tasks pose special problems for setting standards for the evaluation of outcomes. When the resistance varies, the evaluator requires knowledge of either the relation between specific degrees of resistance and the outcomes, or knowledge of the frequency distribution of outcomes generated by past performances of the task in similar contexts. In either case, the development of standards for outcomes of active tasks requires a larger sample of outcomes from the comparison population.

Incompatibility Produces Instability

Instability refers to the state of a system. By definition, a system is unstable to the extent that it contains internal pressure for change. Highly unstable systems. are, in short, in an "explosive" state and, as such, are highly susceptible to change. Stable systems do not contain internal pressures for change and, therefore, will change only as a result of external pressure.

We have assumed that participants will attempt to maintain their evaluations at or above their acceptance levels and have identified four ways in which an authority system can be incompatible with the focal participant's ability to succeed in this attempt. Participants so thwarted can be expected to be dissatisfied with the system and, therefore, are likely to engage in coping responses in an attempt to resolve the incompatibility. Some of these reactions to incompatibility represent the development of internal pressures

for change within the system. Thus the central proposition of the theory is
that incompatible systems are unstable.

The theory does not establish that compatible systems necessarily are
stable, for there are many other factors which may lead to system instability.
For this reason, the theory cannot be advanced as a general explanation of the
instability of authority systems. Incompatibility is considered to be a
sufficient but not necessary condition for instability.[17]

There are a number of ways in which the instability of a system may
become evident. We specify a set of responses by the focal participant which
can be used to indicate pressures for change in the system. We refer to these
responses as indices of instability, and believe the set to represent a
sufficient variety of indices so that if a system is instable, the instability
will be indicated by the regular occurrence of at least one of them. The
indices are: dissatisfaction with some component of the system or with the
system as a whole, expression of dissatisfaction with the system to others
in the organization, suggestion to others in the organization that the system
be changed, and noncompliance with the exercise of any authority right as a
consequence of dissatisfaction with the system.

The interrelation of these indices is complex. If instability is
indicated by one index, the probability of its being indicated by another may
be changed. (The use of suggestions by the participant may reduce his use of
noncompliance as a vehicle for effecting change in the system.) But independent
of this interrelationship, it is expected that the greater the instability, the
greater is the probability that each index is present and the greater its
intensity. Thus, we make the empirical prediction that the greater the
incompatibility of an authority system, the more likely and intensely are
participants to be dissatisfied, and to express dissatisfaction, suggest
changes, and fail to comply with the exercise of authority rights.

There are a number of factors which influence the instability produced by incompatibility. One set of factors influences the form which instability will take in a particular system. For example, it is expected that occupants of positions with relatively high status in the organization will be more likely to respond to incompatibility by suggesting redefinition of the system components than will occupants of positions lower in status. Similarly, the absence of institutionalized mechanisms of appeal reduces the probability of suggestions for change.

A second set of factors influences the amount of instability produced by incompatibility. For example, we expect there to be a "compositional effect"[18] in groups in which a large number of participants are subject to incompatibility. To the extent that a participant interacts with others in systems similar to his own who are subjected to incompatibility, that participant may begin to perceive a threat to his own ability to continue to maintain his evaluations above his acceptance level. Even though he is not now thwarted by his system, he comes to believe that he may be so thwarted in the future, and is likely to begin reacting against his system. Also, in attempting to change his system a participant who is subjected to incompatibility may succeed in enlisting the aid of others who are not themselves so subjected. Such compositional effects amplify the instability produced by a given amount of incompatibility.

The Resolution of Incompatibility

The instability activated by incompatibility can be expected to persist until the incompatibility is resolved. One resolution is for the participant to leave the system, either by moving to another system or by leaving the organization altogether, as would be indicated by high turnover rates. Another resolution is for him to reduce his acceptance level to that which

can be maintained in the authority system as it is presently constituted. (An incompatibility which produces an evaluation of 'poor" may be resolved by the individual changing his acceptance level to accept an evaluation of "poor" as satisfactory to him.)

We are particularly interested in the resolution process which is activated by incompatibility when the participant neither leaves the organization nor lowers his acceptance level. In this case, resolution can be achieved only by reorganizing the system, either by changing the existing authorization or by changing the exercise of one or more of the existing rights. Thus, the theory would predict that newly emerging systems, and existing systems in which incompatibilities develop, continue to "search" through various distributions of regularly exercised rights until a compatible system is achieved.

This process is influenced by variables which affect the degree to which attempts to reorganize will be successful. For example, incompatible authority systems which are perceived as legitimate are expected to be less likely to provoke attack and to be more resistant to attacks which do occur than are systems perceived as illegitimate. However, it is also expected that incompatible systems are more likely to become illegitimate than are compatible systems, therefore becoming more subject to attack and less resistant to change. The probability of success of attempts to change the system is also related to the degree to which the tactics utilized by participants succeed in causing others in the system to be subjected to incompatibility. (As an example of this contagion of incompatibility: if a participant resorts to noncompliance to relieve his own situation, he places others in an incompatible position to the extent that this noncompliance causes the others to receive evaluations below their acceptance levels.) Superiors are expected to be more hospitable to negotiations aimed at reorganizing the authority system if they are so thwarted. In the final analysis, it may be possible to argue that, in an authority system which endangers one man's evaluations, no man is safe.

FOOTNOTES

[1]Our collaborators on the project are Joseph Berger, Santo F. Camilleri, Bernard P. Cohen, and Morris Zelditch, Jr. We are indebted for suggestions to: Kathryn U. Barchas, Patricia Barchas, Marjorie J. Seashore, James C. Moore, and Thomas R. Burns.
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[2]S.F. Miyamoto and Sanford M. Dornbusch, "A Test of Interactionist Hypotheses in Self-Conception," American Journal of Sociology, 61(1956), pp. 399-403. Also L. G. Reeder, G. A. Donohue and A. Biblarz, "Conceptions of Self and Others," American Journal of Sociology, 66(1960), pp. 153-159.

[3]This conception has characteristics which can readily be modified for other analytic purposes. (a) As we have indicated, other authority rights can be identified (e.g., the right to select personnel for occupancy of a given position). (b) A similar authority system model could be based upon evaluators whose significance is defined in terms of perceived importance of their evaluations to participants, whatever their influence in the distribution of organizational sanctions. Finally, (c) more inclusive authority systems and structures can be identified across positions or tasks.

[4]Max Weber, The Theory of Social and Economic Organization, translated by A. M. Henderson and Talcott Parsons (New York: Oxford, 1947).

[5]Bertram H. Raven and John R. P. French, Jr., "Legitimate Power, Coercive Power, and Observability in Social Influence," Sociometry, 21(1958), pp. 83-97.

[6]William Evan and Morris Zelditch, Jr., "A Laboratory Experiment on Bureaucratic Authority," American Sociological Review, 26(1961), pp. 883-893.

[7]For a discussion of the analyzed effects on subject behavior of the role played by the experimenter, see Theodore M. Mills, "A Sleeper Variable in Small Groups Research: The Experimenter," Pacific Sociological Review, 5(Spring, 1962), pp. 21-28.

[8]Chester I. Barnard, The Functions of the Executive, (Cambridge, Mass.: Harvard University Press, 1938).

[9]See Joseph S. Berliner, Factory and Manager in the USSR, (Cambridge, Mass.: Harvard University Press, 1957); Peter M. Blau, The Dynamics of Bureaucracy, (Chicago: University of Chicago Press, 1955); and Melville Dalton, Men Who Manage, (New York: John Wiley and Sons, 1959.)

[10]Howard M. Vollmer, Applications of the Behavioral Sciences to Research Management: An Initial Study in the Office of Aerospace Research, (Menlo Park Calif.: Stanford Research Institute, November, 1964.)

[11]Eliot Freidson and Buford Rhea, "Processes of Control in a Company of Equals," Social Problems, 11(1963), pp. 119-131.

[12]Elliot Jaques, The Measurement of Responsibility, (Cambridge, Mass: Harvard University Press, 1956.)

[13]Alternative motivational assumptions could be considered in a similar theoretical framework. The participant's desire to have his evaluations be appropriate -- i.e. accurately reflect the skill and effort he invests in his task performance -- is an assumption which may be added in future formulations.

[14]This reasoning provides a rationale for the "unity of command principle" of the traditional school of administrative management; incompatibility of Types II and IV is relevant to the traditional "responsibility and control principle."

[15]Under Type IV incompatibility, we shall discuss the effect of active tasks upon the setting of standards.

[16]Everett C. Hughes has noted the probabilistic orientation of professionals in Men and Their Work (Glencoe, Ill.: The Free Press of Glencoe, 1958), p. 91.

[17]It should also be clear that we are not studying effectiveness. Our empirical studies may uncover some degree of association between effectiveness, incompatibility, and instability, but effectiveness or productivity are not variables in our current theory. Indeed, a more effective structure may permit and encourage a higher level of certain behaviors indicative of instability, such as expression of dissatisfaction or suggestion of changes.

[18]James A. Davis, Joe L. Spaeth, and Carolyn Huson, "A Technique for Analyzing the Effects of Group Composition," American Sociological Review, 26(1961), pp. 215-225. See also Peter M. Blau, "Structural Effects," American Sociological Review, 25(1960), pp. 178-193, Blau and W. Richard Scott, Formal Organizations: A Comparative Approach (San Francisco; Chandler Publishir Company, 1962), p. 101, and Paul F. Lazarsfeld, and Herbert Menzel, "On the Relation between Individual and Collective Properties," in Amitai Etzioni, ed. Complex Organizations: A Sociological Reader (New York: Holt, Rinehart and Winston, 1961), Chapter 16.

REFERENCES

Barnard, Chester I. The Functions of the Executive. Cambridge, Mass.: Harvard University Press, 1938.

Berliner, Joseph S. Factory and Manager in the USSR. Cambridge, Mass.: Harvard University Press, 1957.

Blau, Peter M. "Structural Effects," American Sociological Review, 23 (1960), 178-193.

Blau, Peter M. The Dynamics of Bureaucracy. Chicago: University of Chicago Press, 1955.

Blau, Peter M. and W. Richard Scott. Formal Organizations: A Comparative Approach. San Francisco: Chandler Publishing Company, 1962.

Dalton, Melville. Men Who Manage. New York: John Wiley and Sons, 1959.

Davis, James A., Joe L. Spaeth, and Carolyn Huson. "A Technique for Analyzing the Effects of Group Composition," American Sociological Review, 26 (1961) 215-225.

Evan, William, and Morris Zelditch, Jr. "A Laboratory Experiment on Bureaucratic Authority," American Sociological Review, 26 (1961), 883-893.

Freidson, Eliot and Buford Rhea. "Processes of Control in a Company of Equals," Social Problems. 11 (1963), 119-131.

_____. "Knowledge and Judgement in Professional Evaluations," Administrative Science Quarterly, 10(1965), 107-124.

Hughes, Everett C. Men and Their Work. Glencoe, Ill.: The Free Press of Glencoe, 1958.

Jaques, Elliott. The Measurement of Responsibility. Cambridge, Mass: Harvard University Press, 1956.

Lazarsfeld, Paul F. and Herbert Menzel. "On the Relation between Individual and Collective Properties," in Complex Organizations: A Sociological Reader Amitai Etzioni, editor. New York: Rinehart and Winston, 1961, Chapter 16.

Mills, Theodore, M. "A Sleeper Variable in Small Groups Research: The Experimenter," Pacific Sociological Review, 5 (Spring, 1962), 21-28.

Miyamoto, S. F. and Sanford M. Dornbusch. "A Test of Interactionist Hypotheses of Self-Conception," American Journal of Sociology, 61 (1956), 399-403.

Raven, Bertram H. and John R. P. French, Jr. "Legitimate Power, Coercive Power, and Observability in Social Influence," Sociometry, 21 (1958), 83-97.

Reeder, L. G., G. A. Donohue, and A. Biblarz. "Conceptions of Self and Others," American Journal of Sociology, 66 (1960), 153-159.

Vollmer, Howard M. Applications of the Behavioral Sciences to Research Management: An Initial Study in the Office of Aerospace Research. Menlo Park, Calif: Stanford Research Institute, November, 1964.

Weber, Max. The Theory of Social and Economic Organization. New York: Oxford University Press, 1947.