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ABSTRACT

Comparative information from field notes of four studies of long-term treatment institutions form the basis for developing propositions about decisions made under conditions of uncertainty. These propositions fall under the general rubrics of decision making when action involves danger, when decisions are made to control clients' or subordinates' behavior, and when a choice must be made between alternatives. The propositions are illustrated with examples taken from the four studies.

In conducting a program of therapy and management of inmates of long-term treatment institutions, the staff is faced with many situations in which the efficacy or outcome of their actions are highly uncertain. Yet, they cannot avoid taking action so long as they hold a given position in the institution. Even putting off action is a decision with consequences for the parties involved. This paper is an effort to empirically develop some regularities or "principles" of staff decision making in situations of uncertainty.

The information on which induction of these principles of decision making is based is part of the author's earlier studies of tuberculosis treatment and management (Roth, 1963) and the conduct of a rehabilitation program for the physically disabled (Roth and Eddy, 1967). To the bodies of observational field notes from these two studies I later added detailed ongoing field notes from two other studies in which I

did not participate: An investigation of two psychiatric treatment programs by Anselm Strauss and his associates (Strauss et al., 1964) and a study of social rehabilitation of the inmates of two training schools for delinquent youth conducted at the School of Social Work, Columbia University. Note that, although there are four studies involved, these represent field work undertakings of major proportions in ten different institutions by nine senior researchers plus a number of assistants.

Comparative studies using other people's work typically rely on published writings as the source of the comparative materials. The weakness of such sources is that they represent authors' distillation of a mass of information and explanatory possibilities. In the process of distilling their information, much of what they have learned must be ignored and that which is utilized is framed in certain explanatory schemes. Thus, in an observational field study, much of the original information is lost. Having access to such field notes means that a broader range and spectrum of information is available. Of course, even field notes represent a selective perception of the investigator's total experience, but not nearly as restricted a selection as the published work. In order to take advantage of the greater breadth of data in original field notes to make my comparisons, I limited my study to those bodies of research whose raw notes were available to me.

In coding the field notes, I made use of analytic characteristics which, from my previous experience and reading, appeared to have useful explanatory value. The procedure consisted of reading all the notes and coding instances of staff decisions and actions in situations of recognized uncertainty. (Other aspects of these studies were coded at the same time.) The various incidents were then compared with an eye to finding similar patterns, especially across the different treatment programs. Although propositions based on a series of examples constitute crude explanatory formulations, they can serve as generalizations which may be tested on other bodies of detailed observational data.

The coding procedures and comparisons between institutions produce a series of conditions and strate-

gies which typify the actions of the staff in dealing with uncertainty. A simple listing of these conditions and strategies has the virtue of keeping the organization of generalizations close to the information in the field notes--a minimal leap from observational data to conclusions and thus more justifiable for a preliminary examination.

The following propositions were developed in this manner:

When action involves danger

1. When in doubt, play safe.

Those in charge of a treatment program usually consider conservative treatment the safest path for everyone concerned. Thus, if the patient is a borderline case of tuberculosis, you treat him as if he had tuberculosis. If it is a choice between a diagnosis of tuberculosis and cancer, you treat him as if he had cancer because that disease requires more urgent treatment. If you are not sure about the effect that a leave of absence from an institution may have on the inmate, do not give him a leave. If you are not sure how much rest is good for the patient, give him more rest. If you are not sure whether it is safe to discharge a person from an institution, keep him there longer. If a patient is suspected of being suicidal, keep him under strict observation and isolate him from potentially injurious materials. Such observations fit in with Scheff's notion of medical bias toward pathology, but seen from a different perspective (Scheff, 1963).

Of course, other forces, especially pressure from the inmate, oppose this tendency and often modify it. Also, there are some cases in which this principle of giving more of a good thing is obviously not applicable; for example, giving more than the optimal amount of a medication may result in serious toxic effects.

2. Immediate and well-known danger takes precedence over a less certain and more distant danger.

A good example of this principle is the controversy about radiation hazard in X-ray diagnosis and the extent to which X-ray screening for tuberculosis and cancer should be curtailed to avoid this hazard.

Most experts in clinical work believe that X-ray diagnosis should be continued on a large scale, including the use of X-rays for screening and survey purposes. They argue that they know that X-rays can uncover many cases of tuberculosis, cancer, and other diseases and are a valuable aid in evaluating treatment, whereas the hazard from radiation is much less certain and in any case is a danger which would affect our population only some time in the future. This future and uncertain danger appears much less frightening than the more immediate and better-known danger of serious diseases. In much the same way, the danger of violence by an inmate of a hospital or training school or prison is usually considered more important to deal with than the more remote and uncertain effects that suppression of his aggressive behavior may have upon his psyche and his relationships with others.

3. The greater the fear, the greater the inconveniences which one is willing to go to in order to reduce the danger.

A ready example here is hospital personnel efforts to protect themselves against contagious disease. New employees in tuberculosis hospitals had a high level of fear of the disease and went to considerable trouble to wear protective clothing and to enforce the boundaries of contaminated and uncontaminated areas. After they had been employed for a period of time, this fear decreased greatly and much less care was taken to protect themselves. Protective clothing continued to be worn when it did not entail much trouble (such as one change of clothing to do an hour or two of work), but was not worn when it represented relatively great inconvenience (changing clothes for a task which took a minute or two). When hospital personnel are caring for patients with a disease that inspires great fear (e.g., gas gangrene), the precautions taken are far more elaborate and inconvenient than when they are taking care of other contagious diseases which inspire less fear (e.g., measles).

Whenever there is potential danger in the caretaking and treatment tasks, the response of the staff may be conceived of as a balance between fear and inconvenience. This balance lends itself to some degree of managerial manipulation. Fear levels may be delib-

erately heightened as a way of inducing compliance with inconvenient protective procedures.

When decisions are made to control clients' or subordinates' behavior, the control is more likely to be exercised when:

4. The behavior is conspicuous.

Tuberculosis hospital personnel attempted to control the activities of the patients and enforce a given amount of rest. In practice, they were most likely to control or restrict those activities which were most obvious to the casual observer and to overlook those activities which blend into the background of ward routine.

In the psychiatric hospital, personnel, especially students and new nurses, judge patients mainly by their overt attention-getting acts, whereas if a ward is "quiet," everything is assumed to be all right. The patient who makes a "nuisance" of himself receives the most attention, if only to develop plans to get rid of him.

In the training schools, drunkenness and failure to carry out assigned tasks are almost sure to be noticed and to be punished. The more subtle and disguised forms of aggression among inmates is often overlooked.

5. The behavior can be objectively defined or measured.

In the tuberculosis hospital, patients cannot be forced to rest by simply presenting them with a general philosophy of the desirability of rest. However, rest can be enforced to some degree if it is defined in terms of specific time periods when the patient must be in bed. Control of recreational activities is another difficult matter for hospital staff. They can control certain of such activities more precisely when they can define them in terms of occupational therapy materials which the patient uses or time periods when card games or other games are allowed or not allowed.

In the training school, social workers find treatment plans difficult to define and objectify and thus these plans are often subverted by the nonprofessional cottage parents. The social workers sometimes attempt controls through administrative rulings

which are easier to enforce. Thus, cottage parents can be fired for drunkenness, for overt homosexuality, for leaving the inmates unattended. They can also be required to report any hitting of inmates and thus account may be kept of one aspect of their disciplinary methods.

In psychiatric hospitals, nurses' notes tend to concentrate on concrete events which are easy to measure; for example, the number of patients off the ward for any reason, physical injuries and illnesses, transfers, medications given, visitors, daily census. There is little noted about the more subtle aspects of patients' behavior. Nurses' aides want to know mainly what privileges a patient is allowed; for example, who is allowed off the ward, because they will then know what specific behavior to watch for.

A failure to do the well-defined tasks are most likely to get one into difficulty. Thus, a night nurse is criticized for failure to copy doctors' orders, order drugs, put labels on syringes. No comment is made about how she interacts with patients since this has not been directly observed and cannot be defined or readily inferred from the outcome. In the same way, nurses and psychiatric residents put pressure on therapists for prescriptions on how they should react to specific behavior of patients rather than being told what general attitudes to take. Some doctors' orders are more enforceable than others. Thus, if the doctor orders a specific medicine, one can complain to higher authorities if the medication is not given. If the doctor orders "contact" with patients, it is virtually unenforceable because it is so difficult to define.

6. The end point of the control effort can be comprehended.

This is another aspect of objective definition, but in terms of a temporal definition. When staff members can see that their control efforts will lead to some kind of successful conclusion in a given period of time, especially a relatively short period of time, they are more likely to maintain the control effort than if the end is indefinite or stretches out into the distant future.

In tuberculosis treatment, there is an effort to organize therapy in terms of specific time periods

after which progress is assessed, usually with an eye to taking some definitive action, such as discharging the patient from the program or placing him/her on a different activity level. There are chemotherapy "protocols" with standardized dosages for standardized time periods with patients' compliance closely monitored. There is excisional surgery with standardized stages of recuperation during which patient activities are specified. Patients who are not on such definite programs of therapy (usually because the therapy has been tried and has not been successful) are given less specific advice concerning activities and are less closely monitored.

In the rehabilitation program, retraining with a leg prosthesis was pursued by physical therapists in a quite different manner for young people than with old people. With the young it was assumed that functional learning would take place quickly and would be complete by a specified time measured in weeks. The patients had a program of frequent training sessions which they were held to strictly. In the case of older people, both the time period and the outcome were in doubt and the training was therefore not considered "worth" much effort. Training sessions were more widely spaced and patients were less likely to be pressured to participate if they wanted to be excused from some sessions.

In the training schools, academic courses and vocational training with definite end points had coercive requirements for attendance and participation. In contrast, "counseling"--where the time was open-ended and the outcome uncertain--was typically pursued in a haphazard manner, the scheduling of sessions depending largely on what time the social workers felt they could spare from more pressing (often better-defined) duties.

7. Violations of the rules and procedures leave tangible evidence of being obeyed or disobeyed.

Nurses' aides in a hospital are more likely to do those cleaning tasks where the result is readily noticeable to those who supervise them and are less likely to do those cleaning tasks where the results are not likely to be noticed. In the psychiatric hospital, the failure to give a medication order is

easily detected, the giving of "personal contact" is not, and therefore the latter is less likely to be attended to. In the rehabilitation program, failure to turn and massage spinal cord injury patients often led to the development of decubiti ulcers which would lead to criticism of the nursing staff by the physicians. On the other hand, failure to deal with the emotional upsets of patients by nurses would not evoke such criticism unless there was some tangible outcome, such as a suicide (even then the connection was not likely to be made).

In the training schools, when the social workers are short of time to do all of their work, they first do those things which provide tangible evidence to their supervisors--reports to the courts, reports to supervisors, attending staff meetings. On the other hand, they can more easily put off interviews with inmates which leave no evidence or which will not come to the attention of their superiors. Cottage parents do not want to report discipline problems when they can help it, but they must report those which leave visible evidence; for example, bodily injury to the inmates, damage to school property.

When a choice must be made between alternatives

8. Select that action whose effects are more readily quantifiable.

This was already indicated in the discussion of the control of patients' activities in tuberculosis hospitals. There is a tendency to define patients' activities in readily quantifiable terms, primarily in terms of length of time in which certain activities may be carried on or the time periods in which they may be carried on. There is also some definition in terms of materials used in these activities. In a psychotherapy program, "contact" with patients may be prescribed in terms of specific amounts of time to be spent with patients and thus an effort made to define the therapeutic relationship in readily measurable quantities. This implies greater control over subordinate staff activity than would prescriptions not based on definite amounts of time.

The rehabilitation program too favors modalities which can be readily quantified. Physical therapy is measured in time periods of training sessions or in

the repetition of specified exercises a given number of times. Occupational therapy is measured in terms of the products produced, social work in part through counseling sessions of a given length of time at regular intervals.

9. Select the action whose effects can be more sharply defined.

In tuberculosis diagnosis there has been a constant press for sharper definition. For example, one of the factors which made for uncertainty in interpreting the Manteaux skin test was the variability in the manner in which the test material was injected under the skin of the subject. Some tests developed later attracted much initial attention because they standardized the manner of injection.

In controlling the contagiousness of tuberculosis in a hospital setting, it was easier to define solid boundaries rather than air masses. Thus we found contagion controls largely in terms of rooms, doors, and floor territories even though this does not correspond closely to the implications of research on the transmission of the disease.

In psychiatric institutions we find that improvements in hospital programs are often defined in terms of reduction of the patient population. Nurses' aides' definitions of the patient's condition is more in terms of observable behavior than in terms of psychiatric categories; for example, tidy versus untidy, walking versus infirm, working versus idle. Ward personnel are more likely to take action with respect to patients engaged in disruptive behavior where they can bring about some obvious control of that behavior than they are in the case of patients who are depressed where they are much less likely to produce clearly-defined results. The more immediate action for possible suicide is removing potential weapons rather than concentration on bringing about changes in the patient's self-perception.

10. Apply oneself to satisfy the more routine scheduled demands first, the unusual or irregular later.

We find ward personnel doing things like making beds, taking temperatures, giving baths, and doing the scheduled cleaning tasks first. Later, if they have time, they may do some cleaning which is not regularly

scheduled and may do certain favors for patients. These latter tasks can be expanded or contracted relatively freely, but the former ones must be done before they go off duty and will get them into trouble if they are not done.

In the training schools and in the rehabilitation program social workers carry out their clerical routines and produce their written reports first. Counseling and therapeutic interviews are done later if there is time.

Hospital night nurses always make a point of getting the paper work routines finished first; the non-scheduled patient care work comes second. The daytime nurse too tries to see that all of the routine tasks are completed and concerns herself with personal contact with the patients only insofar as time is left for this.

11. If you must guess, be consistent in your guesswork.

When you make some decisions concerning privileges for patients when you have only a vague notion of what the effect of your decisions will be, at least follow a consistent pattern which applies to all patients of a given category. Thus, in a given hospital, leaves of absence to patients in given categories are of the same length and come with the same frequency. The time from one reference point in a treatment career to another is much the same for all patients. Thus, the staff is relieved from arguing the question of fairness as inmates compare experiences with decisions of the staff.

Such consistency of decisions is even more important in the training schools. There is a common assumption that inconsistencies will be "taken advantage of" if the decision varies from case to case. Staff develop standard routines for decisions to use when they are challenged.

In the chronic hospital settings medications for the control and relief of subjective symptoms are also likely to be standardized. Since prescribing for such symptoms (usually under pressure from the patient) involves much guesswork concerning result on the part of the physician, there is no reason to vary from case to case (except as an empirical follow-up--if one medi-

cation is not effective, try another or a different dosage).

12. Put off choice and accumulate more evidence.

If there is uncertainty in diagnosis, try to reduce the uncertainty by piling up more evidence. Thus, in a tuberculosis hospital, if several series of sputum tests give contradictory results, give still more tests with the hope that they will finally give a consistent result. If chest X-rays and clinical signs point to the possibility of either cancer or tuberculosis, give more tests which may be positive for one or the other of these diseases and hope that they may be differentiated. The same principle is served by such practices as dual reading of X-rays in which it is hoped that the pathology missed by one expert will be picked up by another.

In the rehabilitation unit, when the staff could not make up its mind about discharging a patient, they would keep putting off the decision meeting after meeting and accumulate more information and order more patient evaluations. The hope was that the further information would tip the balance in the direction of a given discharge plan.

Generally speaking, an institutional staff member faced with uncertainty first acts on the basis of such a principle as those summarized above, and <u>then</u> explains his action in terms of treatment technology, professional ethics, or general moral values.

It would be useful to place the points made in this paper in a more general context of making decisions under uncertainty in a wider scope of human activity. And of course, there <u>are</u> writings which appear to use these same concepts (or at least some of the same words). Similar questions have been posed in the case of economic decisions and international power strategies (Schelling 1960) and in diplomatic maneuvering (Zartman 1977). It has also been the object of psychological experimentation (Janis and Mann 1977).

The problem is, as I compared the institutional data available to me with the published analyses referred to above, I could detect no similar categories or explanations. This may be a deficiency of synthesis on my part and thus awaits the interest of someone with greater capacity at such a task. It may mean

that the empirical data in the several areas are of such a different order that they are not comparable. Or perhaps we have been led astray because the same words and phrases are being used to describe quite different phenomena.

Grand-scale comparisons aside, how else might one proceed from here?

Most obviously, it would be possible to examine other long-term treatment settings to see to what extent and in what ways the decision behavior of staff matches or does not match the propositions posed in this paper. I would urge in such a case that the kind of information be similar; that is, derived from intensive observation over a period of time. Those involved in human services practices can draw materials from their daily experience for this purpose.

To enlarge the scope of comparison, one might examine other settings in which one group (institutional staff, professionals, managers) exercise control over another group (inmates, clients, employees) but where there is often considerable uncertainty about the effect of decisions made by the controllers. The farther one moves from the empirical settings considered in this paper, the more likely it is that issues and propositions different from (not necessarily contradictory to) the list I have posed will appear.

At another step removed, one can examine arenas which do not involve direct control over, or service to, individuals in an organizational setting. But then one is dealing with arenas such as broad economic planning or international diplomacy where I have already acknowledged failure to find links to the situations I am most familiar with. I therefore believe such steps are best left to others.

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