

Notes on the Teaching of Behavioral Science in the
Sloan School of Management

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In this truncated overview on the teaching of organizational behavior at the Sloan School, I will confine my remarks to only the two-year Master's program and within this framework, only discuss one course -- titled barbarously "Human Factors in Management". In part, this is because Human Factors represents the core behavioral science curriculum for Master's students (i.e. the one and only required course produced by the Organizational Studies group at MIT) and, in part, because the class itself stands as a ready ersatz for describing and illuminating the intellectual and instructional shifts the curriculum has undergone since the school was founded.

The discussion to follow is organized along an unfolding historical dimension. The reasons for this chronicle-like approach are threefold. First, buried in the developmental history are several themes which become apparent only when seen across time. Second, one can only appreciate (or, for that matter, evaluate) what is being done at present in light of what has gone before. And third because it seemed simply a nice way to proceed.

Prior to 1952, the few management-oriented courses offered at MIT were given within the Department of Business and Engineering Administration, a part of the School for Humanities and Social Studies. Such a course had either a strong economic or technical flavor and will not be considered here. In 1952, the department -- enlarged and expanded -- became the Sloan School of Industrial Management (note: the Alfred P. Sloan School of Management label was adopted in 1964) and began building an autonomous curriculum. We begin our historical trace then during this early period.

(1952-1955) A specialized, problem centered and skill oriented management curriculum represented the initial thrust of the school -- and to a certain extent has been a continuing tradition. Although practical management skill courses (i.e., "Principles of ...") were provided (e.g. Leo Moore taught several courses in this most broad of areas), human behavior in organizations was for the most part examined only in the context of such classes as Personnel Administration, Labor-Management Relations, Industrial Management, Administrative Theory and Practice and the like. The faculty consisted primarily of labor economists and labor relations specialists such as Paul Pigors and Doug Brown. In the Spring of 1954 however, a new faculty member, Doug McGregor, offered an advanced graduate seminar in Administration and in the fall, Al Rubenstein taught a graduate

seminar on the management of innovation in research and development organizations. Both courses were essentially seminars for Ph.D. students and had little effect on the Master's curriculum. The real intellectual forerunner to the present day Human Factors course was a Social Psychology class given in the Spring of 1955 by McGregor and Alex Bavalas. Primarily a survey course focusing on research findings and theory, the class was taken by 15 graduate and undergraduate students.

(1956-1958) The next fall, under a most Rodgerian directive, Edgar Schein inherited the Social Psychology course (with 24 students now enrolled) and the following year (1957) the course became a formal and required portion of the Master's curriculum for the fifty-odd first year students in the program. The class was designed originally to present a broad survey of the method, theory and research concerns in social psychology. However, over the next two years, interest in the applications side of the material grew in importance while the focus on customary concerns of the subject decreased. The goal by 1958 was in fact 'to integrate and apply behavioral science knowledge in order to meet the needs of the practicing manager.' No mean task when one realizes that the course was (and still is) a one semester, one time only exposure to the area for most of the students.

In teaching the class, Ed began in 1956 with a traditional lecture-discussion format, occasionally using film and demonstration experiments to punctuate certain aspects of the curriculum (i.e., intragroup conflict cases such as "storm windows"; role playing exercises around superior-subordinate relationships; and the recreation of some communication network experiments). But by 1958, structured small groups were utilized as a sort of off-and-on laboratory in which students (assigned on a rotating basis to various group roles such as chairman and recorder) met to perform experiments, analyze cases and importantly to examine their own behavior while carrying out certain tasks. The beginnings of the present group emphasis were apparent therefore by 1958.

It is also important to note that in parallel to the development of the Social Psychology course, an unabridged laboratory course for Sloan Fellows -- called Human Behavior in Organizations -- was also being taught by various combinations of the faculty including Schein, McGregor, Warren Bennis, Tom Lohdal and Milton Shaw. This inter-personal laboratory utilized differing models of the training group -- formulating certain applied techniques which were useful also in the Social Psychology small group sessions. Thus, the carryover into the regular Master's curriculum of the distinct "practical" flavor of the Sloan Fellow program was established -- and, although to a lesser degree, the two courses still connect.

(1959-1962) Just as Schein had begun to move toward less formal presentations through the use of on-going small groups, Don Marquis took over the class in 1959 and moved back toward a survey and research orientation. While the particular material remained much the same, the format was primarily lecture-discussion. Yet, Marquis, an experiential psychologist in thought and action, also emphasized student participation in numerous experimental studies conducted by class members as well as faculty. Team teaching in Social Psychology also became the standard procedure in the core course with most of the faculty contributing at some time or another throughout any one semester. Indeed, by 1962, team teaching was the rule.

(1963-1964) Swinging from Marquis's research emphasis, Bennis in 1963, reorganized the curriculum around a more explicit consideration of certain applied issues. The course name was changed -- to Psychology and Human Organizations -- and although Social Psychology remained a part of the class offerings, it was no longer required, the new course took its place. The small group became the focus of Psychology and Human Organizations meetings -- students were divided formally at the beginning of a semester into sections which represented sort of permanent laboratory groups. Lectures were delivered on a weekly basis (with the class meeting en mass) but the fundamental push of the course was toward analyzing various psychologically-framed concepts in section meetings.

Dave Berlew taught the course in 1964 to about eighty students and edged the class further into the training group mode. Disenchantment with the traditional classroom was more or less rife and a kind of interpersonal clinic began to develop (these were messianic times!). Lectures were shortened, small group sessions lengthened. And issues surrounding individual and organizational change became the focal concerns with the sections providing an interpersonal laboratory to test experientially the various developing theories. In a sense, what Schein had begun on a limited basis in 1957-1958 became the modus operandi for the course in 1964.

(1965-1967) Dave Kolb -- along with (in order of appearance) Bill McKelvy, Irvin Rubin, Tom Allen and again Don Marquis -- took over the class in 1965 and promptly Psychology and Human Organizations was restructured to resemble the former Social Psychology course. However this approach and format was not to be. By 1967, the organization of the class has again shifted back toward the group model with the corresponding de-emphasis upon the formal presentation of material and an emphasis upon the discovery by students of concepts via laboratory workshops. The class size had grown to its present number -- around one hundred students per term -- and management in a very real sense represented a major faculty concern. Roughly dividing the course up evenly between content sessions (lectures) and process sessions (laboratory sections), Kolb developed a course model which allowed for student-teacher interaction and student-student interchange.

(1968-1971) In 1967, Bennis, then head of the Organizational Studies group, suggested that it might be possible to "instrument" the class. In collective terms, the "instrumented" course could perhaps realize the objectives of self-managed learning systems (i.e. student directed and controlled learning -- a topic of some concern and interest) and provide a stimulus to link together the conceptual variables discussed in the lecture-discussion portions of the course to the rather free-flowing and wide-ranging interpersonal experiences unfolding in the small group laboratories. Not incidentally, an "instrumented" course might also prove cost-effective. Rubin, who in 1968 was in charge of the class, began to develop a set of learning tools (i.e., exercises, experiments, simulations, etcetera) which had proved pragmatically useful in the past -- i.e., they worked in the sense that students both liked and learned from them. These tools would become the basis for the course in 1970 and 1971, however only the beginnings of the "instrumented" course were visible in 1968 and Rubin followed much the same format Kolb had established the year previously.

In 1969, the name of the course was changed once again -- to the current title, Human Factors in Management. Again the name change signalled a somewhat radical departure in the structure and content of the class. The Labor Relations group of the Sloan School (represented by Quinn Mills, Doug Taylor and Charles Myers) joined the Organizational Studies faculty to provide a joint course which would presumably integrate both points of view regarding the "management of human resources in organizations." The experiment lasted one term (for reasons related to both process and content) and although the new label stuck, the interdisciplinary effort fell by the wayside.

The following year, Human Factors, under Rubin's guidance, was fully student directed and controlled -- i.e., "instrumented". The faculty (primarily Rubin, but assisted by Kolb and James McIntyre) acted as process observers in the small groups and assisted students outside the classroom. But, in general, the faculty attempted to keep a low profile. The requirement for the course was a series of learning papers written by each student providing a running account of his or her experiences in the laboratories and providing an opportunity to utilize the concepts uncovered by the student in the assigned readings. The result of this approach became the Kolb, Rubin and McIntyre Organizational Psychology: An Experiential Approach textbook and reader and was used as the basic structure for the course the following year.

While the manifest content of the developed material -- the conceptual outline, sequencing of topics, exercises and readings -- represented a major step toward the effective integration of the theoretical and experiential prongs so long a tradition in the course; it was the "learning theory" itself which represented the most significant advancement in the history of the class. Thus, for the first time, a considered conceptual (and, to some degree, empirical) frame of reference supported and guided the organization of the course. providing an explicit rationale for the various activities.

(1972-) In 1972, under George Farris, the class shifted considerably back toward a more content oriented perspective. Thus, the Kolb et. al reader was used as supplemental material and only about half the textbook-workbook was covered. Farris's altered Human Factors course reflected in part the attention the environment has played of late in organizational theory as well as perennial faculty anxiety over student familiarity and understanding of the theory and specific applications of such. The new structure included more formal lectures (content) and less experiential activities (process).

In 1973, the presentation of course material -- which normally builds up from the issues surrounding the individual in the organization to those concerning the organization in the environment, ala Leavitt's (1969) Managerial Psychology -- was inverted. The class began by considering the contextual surround of organizations and worked down the variable ladder to eventually consider the individual in the organization. The results of this approach were mixed but enough excitement was generated to continue the approach -- at least one more time.

II

A number of themes run through this brief cinematographic account. They can be viewed usefully in terms of three dimensions -- those arching themes which have remained relatively constant over the years (Synchronic); those themes which have altered in importance (Diachronic -- Reversible); and those themes which have evolved in one direction across time (Diachronic -- Irreversible).

Synchronic

The most consistent feature of Human Factors has been its very inconsistency. The course has always had a strong experimental, in-flux character, reflecting both the independence of the faculty and the broad, non-directive administrative policy. Course development has been therefore somewhat disjunctive, rejecting the incremental, generation-to-generation serial approach.

Since the early Social Psychology days, interest has been maintained in generating student participation on a regular basis as class input. Whether it was to discuss required readings or to develop process observation skills, small groups have been the key to engender student participation. Thus the division of Human Factors into smaller sections rarely larger than fifteen students each has been a consistent feature of the class -- with the frequency of these section meetings waxing and waning across semesters, but always present.

Relatedly, to personally engage students in the analysis of their own behavior has been a traditional aspect of the course. An attempt has always been made to help class participants gain self-insight into their own developing career objectives, management styles, personalities and so on. Also group interaction and dynamics have been a content focus of Human Factors. Thus, to originate, structure and test interpersonal data inside the classroom has been both a means to generate student participation and engagement as well as an end of the curriculum itself.

As a logical extension of the above features, team teaching has been a rather standard characteristic of the course. Whether primarily a faculty member and a team of graduate students or a flexible core of faculty members moving in and out the the classroom, student activities have been coordinated by a variety of persons over any one term.

Finally, the content of the course has always maintained -- since about 1958 -- a distinct applied orientation. The emphasis has been concrete as opposed to abstract. Consequently skills and abilities (managerial issues) have been the specific foci of the class within the wider, more general context of theories and concepts (behavioral science issues). Similarly, the applied thrust has implied also a direct consideration of change -- at various levels such as individual, group, organizational and societal. Following a most Lewinian dictum, the approach toward developing student understanding of a given pattern of social action has been to examine the problematic nature of changing that pattern.

Diachronic -- Reversible

The most conspicuous of the themes outlined in the historical overview was the regular modulation of course objectives from the content areas to process concerns or from cognitive to affective orientations or, to put it still another way, from conceptual to experiential theory generation. Thus, while both laboratory groups and lecture sessions were utilized on a continuous basis, the prominence of each format has vacillated considerably from semester to semester.

Within the broad oscillating theme, several sub-themes are readily apparent. For example, responsibility for grading has shifted back and forth from the students to the faculty -- the more open and group-oriented the class, the more non-threatening and de-emphasized the grading policy (i.e., the less faculty controlled). Responsibility for course assignments has switched from the individual to the group and back again. Also, shifts between "teaching" and "training" orientation are distinguishable -- the "training" format emphasizing the direct acquisition of abilities with student's learning based on the first-hand and experiential; and the "teaching" format concentrating on a more general picture of the organizational world with students' learning based on the indirect and vicarious. The tradeoff here has seemed to involve primarily the range of topics covered -- teaching covers more topics but in less depth, and training covers fewer topics but in greater depth. And even within the small groups, this pendulum-like swing is discernable. For example, one semester permanent (homogenous) groups work in leaderless, unstructured environments and the next semester shifting (heterogenous) groups work in a task-structured, controlled environment (e.g. T-groups vs L (learning) - groups).

While there has been a relatively stable focus upon issues around individual and organizational change, the manner in which these issues have been presented has alternated from the descriptive to the normative and visa-versa. Hence at times the course has embodied the somewhat prescriptive, "this-is-the-way-it-should-be" orientation and at other times embodied a more restrained (although still predictive), "this-is-what-happens-if-you-do-such-and-such" orientation.

These shifts probably reflect less of an insecurity than they do an explicit recognition of varied and sometimes incompatible course alternatives and objectives. There is no one method to present behavioral science material to management students. Thus what is ignored in one semester is an object of some concern in the next. For it seems that as soon as movement in one direction begins to slow down or coalesce around one mode or goal, a reaction builds and enthusiastic movement away begins. Of course developments in the larger theoretical fields of organization theory are influential in this regard. But it would seem that Human Factors has its own dynamic insofar as teaching-learning processes are involved.

Diachronic -- Irreversible

Perhaps the most important trend overtime has been the growing recognition that the teaching style and course content of the class are intertwined irrefutably. In other words, the manner in which the material is presented determines to a large extent the content received by a learner. For example, process observation skills can not be taught with any effectiveness simply from a lecture platform, the actual discovery and use of such skills is demanded. Similarly, Theory Y cannot be taught in a Theory X classroom nor can organizational-environmental interrelationships be demonstrated within one small group. Thus the old adage of practicing what one preaches is becoming more and more the natural mode of the course.

Increasing attention has also been given to the necessity of tying a set of personal experiences to the material presented in the class. The gulf between affect and cognition is not as wide as some would believe and it has become almost a credo of sorts in Human Factors that if students are to

internalize new knowledge, explicit recognition must be given to drawing out and capitalizing upon student "gut" reactions toward the material -- they must see, hear and feel that the material is relevant. And if such "gut level" feelings are not forthcoming, new ways must be discovered to create learning environments which will stimulate bridging experiences -- to tie thought and emotion together by challenging the student to apply behavioral science concepts in innovative situations. In essence, the bridge between what William James called "knowledge about" and "knowledge of" must be built if learning is to be both complete and useful. Thus attachment to the formal presentation of knowledge per se has decreased while commitment to the demonstrated use of such knowledge has increased. It is, for example, of little importance whether or not a student can recall the names and theoretical rationales involved in the Hawthorne experiments (or indeed even the Hawthorne experiments themselves). But it is vitally important that the student be aware and cognizant of the everyday implications of those experiments.

At a more specific level, the role of the culture and environment in shaping organizations and individuals within organizations is becoming a more important facet of the course. Reciprocally, the psychologically-oriented (micro) view of individuals is giving ground. While individual processes such as perception and motivation are still covered, the course is moving slowly toward a more contextual or contingency perspective. Certainly trans-situational issues remain a focal point, but they occupy less and less class time than in previous years.

Relatedly, the ethical and moral dilemmas faced by individuals in organizations (and organizations in the environment) are receiving more attention. Although experiential work designed specifically to illuminate these concerns is difficult to develop, some progress has been made. For example, conflict and competition exercises have been utilized to highlight perceptual distortions and intra/intergroup dysfunctions. And discussions and exercises around Milgram's obedience experiments, Schein's brainwashing materials and Zimbardo's prison simulation (as well as the ubiquitous Watergate revelations) have provided provocative if disturbing perspectives on the use of power and authority.

More importance is being placed on the public sector. Interest in governmental organizations and institutions has developed from students and faculty and represents a distinct future trend. In fact, next year, a special section of Human Factors will be developed for (and by) students indicating preference for public sector management.

Finally, an interdisciplinary approach to the study (and practice) of management seems a necessity for the future. With the increasing importance of multinational organizations (confronting anthropological issues), the increasing examination of the structural/situational determinants of behavior (raising sociological questions) and the increasing recognition of the role power and the exchange plays in the making of policy and decision (highlighting political science concerns), a basic behavioral science course must respond by widening its mandate and challenging the students to come to terms with not only the "how" aspects of management but also the "why" and "what will happen" implications of management as well.

III

Attached are several documents which further situate the Organizational Studies group at MIT and denote the various behavioral science courses available within the Sloan School. The first document is a quick description of corporate faculty interests. The second is a recent subject/instructor listing and the suggested "track" sequence for Master's students in organizational studies. The third document is a course syllabus for a recent Human Factors in Management class included to provide a bit of texture to the foregoing wordpicture.