# Organizational Structure and Dynamics

It is useful in a somewhat abbreviated context here to outline several relevant issues in organizational analysis. I will first discuss two general classes of literature, smart organization theory and organizational memory. I will then propose a cautionary perspective in a section of potential qualitative differences of public bureaucracies. Following this cautionary perspective are several specific sections on intelligence and decision-making processes in bureaucracies. For a recent general collection of relevant articles and bibliography, see *Technology Review* (1979).

## Smart Organization Theory

Research on how to build, staff, and operate smart organizations has been growing in the managerial and organizational literature (R & D management, organizational development). There are 19 theories in this area which seem especially useful to the study of government learning and decision making. They are arranged below under people theories; organizational-process theories, and culture formation theories.

- <u>People Theories</u>. Theories which postulate greater organizational intelligence as a function of people in the organization and how they relate to each other include: (1) creative individual theory - the theory there are a small number of innovative individuals who can make and stimulate major policy or product breakthroughs and that the problem is to find and hire them (Chandler, 1962, Chap. 6); (2) *interpersonal chemistry theory* - the hypothesis that organizational efficiency and/or effectiveness comes because specific people just mesh and work well together as a team (McGregor, 1966); (3) *new blood theory* - the idea that resources are needed to continually hire skilled new people who bring fresh ideas or first-hand knowledge of what other people are doing (this is perhaps especially important in areas of rapid policy or product change); (4) *role constellation theories* - the

argument that a mix of skills and age, that is, good administrators, good mid-career researchers, good support staff, and bold young researchers, are all needed for unsolved (and heretofore unsolvable) problems, along with gray heads (experience) to provide a sense of memory, perspective, and advice. Sundquist's (1978b) proposal for boundary-spanning roles and skills (e.g., salesmanship) to maintain an open, innovative system also receives strong agreement in the literature (Roberts, 1968, 1977); (5) *peer competition theories* - contrary to the strict interpretation of Taylorism, designing redundant work units with peer competition may increase motivation and reduce error (Landau, 1969/1978); (6) *impact opportunity theory* - the hypothesis that the best new people gravitate to important problems where the action is, so being concerned with such problems should lead organization to attracting people who will help; (7) *leadership theory* - the belief that when top leadership is no longer satisfied with the status quo and promotes search for innovation, it is more likely to occur (March & Simon, 1958, Zaltman, Duncan, & Holbek, 1973 pp. 153-186).

_____- Organizational-Process Theories. Theories which relate intra-organizational functioning to the policy or product innovation process include: (8) *critical mass theory* - organizations need enough people working together on a problem to be intellectually self-stimulating and self-sustaining (the number is unclear) (H. Levinson, 1972); (9) *heterodoxy theory* - belief that a diversity of viewpoints, backgrounds, and skills in research increases creativity and enhances the probability of organizational success; (10) *environmental competition theory* - the hypothesis that learning occurs more rapidly in highly competitive fields by changing processes internal to organizations (e.g., Niskanen, 1979); (11) *communication flow theories* - a diverse body of literature that proposes innovation rates are increased by particular patterns of communication and by networks of institutions and intra-institutional structures that create and support them; as well, there is an argument that much innovation (as well as intelligence and sophistication in the sense defined in this

chapter) is embedded within the changing quality of communication (Allen, 1977; Tushman, 1979; Westin, 1971); (12) *specialized group process technology theories* – the alleged advantage to those groups which use brainstorming, Delphi, synectics, etc. (e.g., Stein, 1974, Vol. 2); (13) *administrative structure theories* – the alleged advantage of standard organizational units to handle R & D responsibilities; (14) *rational technology and analytic-decision theories* – organizations which commit heavily to advanced rational analyses (systems modeling, operations research, PPB, evaluation studies, etc.) are said to learn more rapidly; (15) *money theory* – the more money and other resources the better.

_____ - Culture Formation Theories. These theories can be seen as extending what Barnard (1938) originally discussed as the integration of formal and informal organizational behaviors (and relevant environmental characteristics) in the molding of a particular set of bureaucratic routines, values, understandings, identities, and worldviews (Kaufman, 1960; Packenham, 1973) to create and sustain organizational cultures and subcultures (Fine & Kleinman, 1979). The study of organizational culture and norms is not well developed, but it is perhaps crucial to understanding bureaucratic learning if the findings of Argyris (1967), Argyris and Schon (1978), and the report of Coleman, Campbell, Hobson, McPortland, Mood, Weinfeld, & York (1966) generalize across federal agencies. Culture theories include (16) *optimum norm theory* – the belief that certain organizations create cultures and climates especially conducive to research; these are typically thought (in America) to be open, egalitarian, problem-oriented rather than status or career centered, and achievement cultures rather than ascriptive cultures; (17) *newcomer theory* – the hypothesis that major innovations come from new, fresh, typically small firms; (18) *technology theory* – the view that technology creates culture, for example, that new technologies drive R & D processes and change organizations in their wake (see below, pp. 123-124) and create professionalism which increases innovation; (19) *synergistic harmony theories* – the extent to which organizational design practices align individual risks and incentives with those of the

organization (Argyris & Schon, 1978; Cherns, 1977; Mohr, 1973; Wildavsky, 1978).

Organizational Memory

Apart from literatures seeking to describe smart organizations, another key aspect of learning is usable memory (Deutsch, 1963). Many informants suggest that poor organizational memory is the critical problem in Washington: Bureaucracies aren t designed to learn, just to solve problems in the in-basket. There are too many transitions and too few personnel with long-term experience, and those who remain don t really care about acquiring what you call organizational memory. Certain features of Washington life reduce concern for memory, among them: (a) the belief of new political elites (and perhaps of younger people) that world problems continue only because they have not yet been in power (Etheredge, 1978; Heclo, 1977); (b) subjective overconfidence of those in power (see above, pp. 29-30); (c) short-term time horizons; and (d) activist (as opposed to contemplative) orientations (better to spend time and use power in activism and learning from experience than to waste time studying the past). Perhaps the most crucial of these is the overconfidence and ignorance calibration problem, the difficulty people have in assessing what they might learn from better memory.

The typical practice follows the gray head theory. Many agencies deliberately make efforts to keep people whose personal memories of top-level issues extend back 20 years or more. Historical offices, even if they exist and are more than archival, are not designed to codify experience by useful analytic categories (crisis decision behavior, negotiating with the Russians, implementation). In foreign policy, the British Foreign Office once made it routine practice to consult historians in policy deliberations, but this has not been an American practice.

The central opportunity here is institutional - designing long-term, usable, retrievable

systems for executive departments. The potential benefit is there, since generic problems will probably be around a long time: in forty years, we will likely still be negotiating SALT (VIII), worrying about economic development, inflation, poverty, energy, food policy, health costs (still out of control), crime prevention, and so on. The key intellectual challenges are conceptual. The first is selecting the problems; since not everything can be studied, priorities must be set. The second problem is how to codify experience to learn useful lessons; this will be especially challenging because, in a sense, developing intelligence and sophistication involves learning later what you should have noticed originally. That is, we may already have sufficient experience in human history to learn everything we want to know about human behavior - if we only knew how to read our experience. But we need not lament inadequate records for the last 2,000 years. Today there are thousands of large organizations with good or poor learning records (including state and local governments), thousands of people who are passing through government public schools, crime rehabilitation, alcoholism, and drug programs, and so on. If we could simply figure out how to understand everything going on now, we could specify completely the conceptual requirements for a first-rate bureaucratic memory encoding and retrieval system. We have not yet created this intelligence, so the best frame is probably to think of the memory design program as itself a learning agenda (see May, 1973, on current memory inadequacy; see also Berninger & Adkinson, 1978; Cermak & Craik, 1979; Krippendorff, 1975).

## Qualitative Differences of Public Bureaucracies

Shifting our emphasis slightly, the following discussion is much in the spirit of a cautionary note. Almost all organizational amid industrial psychology (in the United States) has been derived from the private, profit-making business sector. Certainly almost all the empirical validation work has been done here. There are some signs of change - M. D. Cohen and J. G. March (1974) have completed a study on college presidents, there have

been some macrolevel investigations of managerial structure in federal bureaucracies (e.g., Beyer & Trice, 1979), and of job satisfaction and other variables in the military (e.g., Berger & Cummings, 1979; Fiedler, 1967) - but the conventional mode is still the analysis of the profit-making firm (Cyert & March, 1963; Likert, 1961; March & Simon, 1958). One of the major ideas in organization theory, beginning with the work of the Yale Technology Project and the Tavistock Institute study of the British coal industry, is the neo-Marxist analysis that the mode of production, the technology employed by an organization (broadly defined), determines its internal structure, the way people treat each other, and much else (e.g., Gillespie & Mileti, 1977). How might the mode of production of the executive branch be different in ways that could make for qualitative differences in applicable theory? It is an empirical question, but some likely candidate variables are the following:

A. Frequent turnover of high-level political personnel, specialized recruitment patterns for these positions, and the potential for shortfalls of personnel preparation and poorly orchestrated transition processes (Heclo, 1977).

B. Budget funding and program decisions determined by political processes involving multiple constituencies rather than the market.

C. Multiple, sometimes poorly specified, sometimes conflicting internal and external goals in the executive branch (Halperin *et al.,* 1974), and the (perhaps necessarily) frequent symbolic or psychodrama nature of activity (Edelman, 1964; Mohr, 1973).

D. The scope and magnitude of congressionally mandated department responsibilities (agencies far larger and more diverse than most private businesses).

E. The absence of a market system for performance feedback.

F. The monopolistic or oligopolistic character of the federal government and hence the absence, in many areas, of competition (Sapolsky, 1968).

G. Special professional codes, loyalties, and norms among public servants (Miles, 1978; Mosher, 1968).

H. The legitimate role of ideology for prescription and evaluation.

I. In foreign policy, the considerable absence of formal legal restraint in policy choice.

J. The capacity to use regulation and law as policy tools.

K. The important place of the news media in monitoring performance and setting agendas.

L. The use by interest groups of the magnitude of expenditure rather than efficiency as a criterion for evaluation, and the liberal view that efficiency concerns are niggardly antihumanitarian.

M. The special concerns of government to effect major change in thought, feeling and behavior of both individuals (e.g., crime, poverty, education) and political and organizational systems (e.g., economic development, state welfare systems, nuclear deterrence of Russia) rather than simply providing a product or service.

N. Special legal restraints and political processes characteristic of relationships with public-employee unions.

O. Right of public access, under the Freedom of Information Act, to most internal documents.

P. The special salience of political news stories and the high profitability of books revealing inside detail, especially that of a controversial nature.

Q. Conflict of interest regulations.

R. Special legal restrictions on individual initiative and flexibility, on processes of Civil Service hiring, firing, and promotion, and on contracting, that make public bureaucracies more akin to true bureaucracies in Weber s sense.

S. Special motivational attractions to certain areas of federal employment (Etheredge, 1978; Meltsner, 1976).

T. The low margin of victory typical in American electoral politics, giving special salience to small, highly mobilized groups (i.e., the power of special interests ).

U. The special power of key congressional committees and key individuals on Capitol Hill.

For other lists of variables, consult Drucker (1978), Rapp (1978), and Fuchs (1968).

Intelligence Functions and Decision-Making Processes

There is not yet a theory of policy formation and learning which predicts more (or less) intelligent and effective outcomes. Indeed, George (1972) is almost alone in proposing a normative model for multiple-advocacy decision processes (see also Destler, 1972; Kling,

1978; Thibaut & Walker, 1975, 1978). There is a substantial, though largely descriptive, literature on presidential advisory systems, chiefly analyzing foreign policy (see George, 1980; Greenstein, Berman, Felzenberg, & Licltke, 1977; Hess, 1976; Pious, 1979). Overviews of the issues are provided by Lasswell (1971, 1975) and Dror (1971).

In considering organizational intelligence and decision-making processes, I will briefly focus here on four issues: institution creation strategies, the use of social science research in aiding the analysis of organizational behavior and substantive problems, professionalization and its possible impact on organizational culture and decisions, and contract evaluation research and the nuzzle of its unrealized capacity as a feedback device.

    - <u>Institution Creation Strategies</u>. A common approach to minimizing error and increasing intelligence in policy formation is the design of bureaucratic structures or routines which are seen as inherently superior to the old. This is usually termed reorganization or organizational development (Beer, 1976; Harmon, 1975; Warwick, 1975). The central idea is the rearrangement of how things get done (formally or informally).

In major federal agencies, the last fifteen years have seen the establishment of assistant secretaries for planning and evaluation (or their equivalents) in almost all agencies. They have not been systematically studied and evaluated. Examples of learning routines (or at least work and political routines) include Administrative Procedures Act notices and hearings, impact statements, circulation of draft proposals within government (usually including, for major issues, congressional, press, and legal specialists), varied policy information provided to interest groups (either directly or through news leaks), the annual OMB budget analysis and review (supplemented by *ad hoc* task forces and the deployment of special assistants to cover high-salience issues), and informal networks idiosyncratic to

agency personnel. As well, there are agencies or programs whose primary job is information (e.g., CIA, DIA, NSA, Census Bureau).

Beyond these standard institutions and practices for in-house thinking, the federal government has developed seven additional institutional designs to aid learning; (1) standing interagency working groups; (2) high-level layerings in specialized councils and staffs within the executive office of the president (the Council of Economic Advisers has traditionally had a major role, OSTP has grown in importance, and the National Security Council staff has now evolved into a miniature State Department); (3) federally run research institutes (e.g., for health, education, energy, and nuclear weapons); (4) endowed think tanks with contract research supplements (e.g., Rand Corporation in its early years); (5) scientific, peer review grant programs (e.g., National Science Foundation); (6) contract research with consulting firms; and (7) advisory councils and commissions, sometimes with mandated participation for various groups (see Lipsky & Olson, 1977). The relative effectiveness of these alternatives has not yet been assessed.

_____ - Use of Social Science. The use of social-science research in policy formation is the subject of a growing analytic literature (e.g., Andersen, 1977; G. D. Brewer, 1973; Greenberger, Crenson, & Crissey, 1976; Lynn, 1978; National Research Council, 1978-1979). Efforts to provide a general theory and estimate usage rates are at a preliminary stage (Caplan, 1979). If the definition of use is decisive policy impact from single studies, then estimates of low usage common in the literature are probably correct. But it would be hard to conceive of policy discussion or decision making in Washington without modern social-science concepts and research methods; they are simply taken for granted, dramatically so in the case of economic theories and concepts. Questions more relevant than current usage rates arc: What important studies that should have an impact are not used? What specific capacities for policy-relevant knowledge from social science are

underutilized?

_____ - <u>Professionalization Trends</u>. Existing research suggests that increased professionalization leads to a more cosmopolitan organizational identity, to the use of more extensive and varied sources of information, to greater interest in and receptiveness to new ideas, to less suppression of negative or troubling information, and to higher rates of innovation in firms with higher proportions of professionals (e.g., Greenwood, 1966; Wilensky, 1967; J. Q. Wilson, 1966). Becoming a professional probably involves being socialized into a learning frame and legitimation system (Berger & Luckmann, 1967) locating the individual within an historical progression (from less competence in the past to the promise of increasing competence in the future), and a commitment to learning and to adopting new potentials for increased competence (Colvard, 1961; Krause, 1971; Moore, 1970). Professionalization of government service (Mosher, 1968) may include advanced training in research skills, a critical attitude toward received authority, legitimation of an identity as an investigator, a sense of craft, a sense of ethics (Grundstein, 1962), and a preference for scientific rational problem solving over symbolic politics or moralism. It might also create a sense of security, not only in peer support, but also because professional certification may increase job mobility and because one aspect of professionalization is expert agreement and support against unreasonable performance standards (if the economy goes into recession the economic adviser is not personally discredited if his colleagues do not know the answer either).

Undoubtedly there will turn out to be other professionalization effects as well: stubborn autonomy, independent political power, occasional resistance (probably often healthy) to political control or subservience, in-group ethnocentrisms, trained incapacities so some professionals will not recognize truths until they are officially recognized within their literature and expressed in its specialized jargon, and so forth.

Not all professional training is the same: the classic British aristocratic model of learning Latin and Greek, the common-law heritage from Blackstone, Bentham, and Mill, and the role models of Plutarch (how men with high character and noble virtues made wise judgments and benefitted their people while men of dissolute personal morals or overweaning hubris brought defeat) have given way to cost - benefit analysis and pragmatic discussions of why sunshine laws, PPB, or ZBB will not work. The technocratic, managerial version of civil-service preparation is increasingly the American alternative, although with what trade-offs is not clear.

- Performance of Contract Evaluation Research. Federal agencies have in the last decade attempted to monitor more closely the impacts of policy decisions (see F. Katz & B. Danet, 1973). Various technologies of analysis have been developed and applied, but there is apparent consensus that program evaluation studies conducted through contract research are typically abysmal and useless. Knowing why would be fruitful. The following fourteen theories appear in good repute: (1) competitive bidding reduces quality, especially because lower salaried (or at least lower competence) people do the work (G. D. Brewer, 1973); (2) lack of high professional standards, integrity, and competence by consultants; (3) covert pressure from agencies which dilutes critical findings in the interest of maintaining good relations; (4) lack of evaluation criteria specified by Congress in legislation; (5) the belief that evaluation studies are not significant in the political process and hence, no one cares or pays much attention; (6) explicit agency decisions that studies are solely adversarial weapons (that is, that evaluations can only hurt them politically and not help them), de- liberate decisions to undercut the process; also the intentional commissioning of studies to discredit programs or embarrass a competitor; (7) inadequate overview competence by agency contract monitors; (8) undersupply of social scientists able to do first-rate research; (9) pressures for fast turnaround from agencies and the political process ( You want it bad, you get it bad ); (10) inadequate critical scrutiny of evaluation studies by Congress; (11) low

salience of evaluation in activist organizations like HEW [HHS - ed.]; (12) low salience of evaluation research at the presidential level; (13) lack of routine competition (evaluations of evaluations) by competitive contract consultants; (14) the belief that evaluation studies are captured by the agency being evaluated, through selective distortion of information or other techniques.

There are two further problems with evaluation studies. First, they are not integrated and cumulative. Government programs fall into some obvious categories: demonstration projects; federally mandated procedures, citizen participation requirements (Denk, 1979) and formula match grants with various reimbursement rates to torque state and local systems; use of supply interventions versus demand interventions (building public housing directly or providing vouchers to individuals, running public school systems or providing vouchers); use of regulations versus economic incentives; behavioral change programs aimed at foreign governments; personal change programs aimed at individuals; and so forth. Unfortunately for analytical and learning purposes, this type of cross-agency grouping does not occur in designing a long-run research strategy to develop theories of program effectiveness. Second, evaluation studies are not yet behavioral (Etheredge, 1976a). That is, they are not designed to provide a high yield of information or to explain why programs do not work for some people or some cases, and thus are likely to be resisted because they have a low probability of being constructive (i.e., agencies feel they arc doing the best they can, are acutely aware of their vulnerability to criticism, and see little gain from this first generation of evaluation studies).