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CULTURAL ORGANIZATION: FRAGMENTS OF A THEORY(U) ALFRED
P SLOAN SCHOOL OF MANAGEMENT CAMBRIDGE MA
J V MAANEN ET AL. NOV 83 TR-25-QNR N00014-80-C-0905

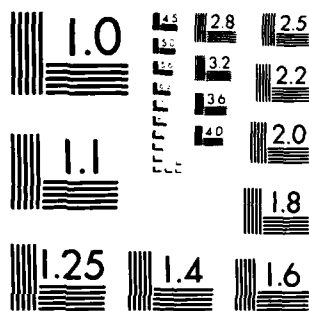
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER ONR TR 25	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Cultural Organization: Fragments of a Theory		5. TYPE OF REPORT & PERIOD COVERED
AUTHOR(s) John Van Maanen & Steven Barley		6. PERFORMING ORG. REPORT NUMBER MIT WP 221-12H
7. PERFORMING ORGANIZATION NAME AND ADDRESS Sloan School of Management Massachusetts Institute of Technology 50 Memorial Drive Cambridge, MA 02139		8. CONTRACT OR GRANT NUMBER(s) N00014-80-C-0905 NR 170-911
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research Organizational Effectiveness Group (Code 452)		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Office of Naval REsearch Resident Representative MIT -- E19-628		12. REPORT DATE November, 1983
		13. NUMBER OF PAGES 38
		15. SECURITY CLASS. (of this report) Unclassified
		16a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release: distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Organizational Subcultures Ideological differentiation Segmentation Contracultural processes Importation Career filters Technological innovation Conflict		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
Although organizations are often said to have cultures, it is perhaps more accurate to conceive of organizations as collections of subcultures. This paper first proposes an abstract model of organizational subculture defined in terms of 1) structural constraints of time and space, 2) an interactional matrix, 3) collective understandings, 4) a transformation of socially shared into individually held knowledge and belief. The model is given particularistic substance by drawing on data from a number of organizations and occupations. Finally, social mechanisms likely to spawn organizational subcultures are outlined.		

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S/N 0102-014-6601

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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ONR
N00014-80-C-0905

NR 170-911

Massachusetts Institute of Technology
Sloan School of Management
Cambridge, MA 02139

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September, 1983.

TR-24 Schein, Edgar H. "Organizational Culture: or, If Organization
Development Is Culture Change, Is That Possible and/or Desirable?"
Invited presentation: Distinguished Speaker in Organization
Development, Academy of Management Annual Meeting, Dallas, Texas,
August 16, 1983.
September, 1983.

TR-25 Van Maanen, John, and Stephen R. Barley "Cultural Organization:
Fragments of a Theory." Presented at Academy of Management Annual
Meeting, Dallas, Texas, August 16, 1983.
November, 1983.



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1. A&I	<input checked="checked" type="checkbox"/>
2. TAB	<input type="checkbox"/>
3. Abstracted	<input type="checkbox"/>
4. Identification	
5. Description/	
6. Subject Codes	
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John Van Maanen and Stephen R. Barley
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ONR TR-25
November, 1983

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- o This research is sponsored by:
Chief of Naval Research,
Psychological Sciences Division,
Organizational Effectiveness Research,
Office of Naval Research, (Code 452),
Arlington, VA 22217
under Contract Number N00014-80-C-0905; NR 170-911.

ABSTRACT

For many social scientists, culture serves as a partial explanation for how it is people actually are able to do things together. The concept seems particularly useful when the explanatory paths of individual-based psychology or structural sociology prove weak or ill-conceived. The view of culture we present here is currently an exceedingly tentative and ragged one. It is being worked out, however, to mediate between what we regard as the all too deterministic and categorical models of the behavior in and of organizations set forth by the so-called macro organizational theorists, and the too voluntaristic and person-centered models of the micro organizational theorists.

Our narrative (as implied by the title) is intended more to convey a theoretical perspective on culture in organizations than to present a definitive theory. However, we do feel that the time is at hand to begin specifying and formalizing the use of this terribly ambiguous term.² There is no better way to do so than to speculate on the origins of culture. Thus we begin by describing a very general model of cultural development, and move on to apply this model to organizations and the emergence of subcultures within them. We conclude by suggesting where the model takes us.

Cultural Organization: Fragments of a Theory¹

John Van Maanen and Stephen R. Barley

M.I.T.

M.I.T.

Traditions³

Intellectual roots for the study of culture are found in the disciplines of anthropology and sociology. In anthropology, however, the close description of remote, relatively self-contained, and rather small societies is often of more professional interest than is the spinning of theories to account for the presence of specific cultural forms. In most anthropological studies it is usually sufficient to indicate the presence of culture by identifying and elaborating on such matters as the totems, taboos, signifying codes, rituals, child rearing practices, work and leisure styles, standards of behavior (and characteristic deviations), forms of relationships, and so on, that are elicited from informants or observed in situ among members of a given group. With these descriptions in hand, certain cultural forms are shown to integrate the focal society, at the same time differentiating it from others. As documented in the anthropological archives, whether a group's practices are similar to our own or spectacularly alien, culture always provides an embracing, complete, and largely taken-for-granted way of life for those subject in time and space to its dictates.

Associated with the anthropological use of culture to account for widely varying patterns of human thought and action is a loose, underlying set of assumptions about the origins and articulation of a given culture. While the model is historically vague and piecemeal in construction, it is useful for our purposes. In crude form, culture is simply the ways particular groups of people (tribes, bands, families, societies, etc.) choose to meet situationally specific problems (food, shelter, clothing, reproduction, human relations, etc.). Culture is the result of group problem solving. Form follows function in this analysis, but over time functions seem always to give way to form. Social innovation is not so much a matter of individual accomplishment as it is a matter of changing group standards.

As an analyst moves away from the tiny, preliterate tribes living in remote and sparsely populated regions of the world toward groups of people living in fragmented, mobile and highly industrialized societies, the kinds of collective actions required of groups in their respective environmental compartments change drastically. Lost are the predictability, simplicity and social order of a less complicated society, where all members know what every other member does, or at least, should do. Instead of an all-embracing "design for living," contemporary societies involve their members in many such designs.

Enter now sociology and its concern not only for one culture, but for cultures among cultures. Where all societies have culture, only heterogeneous societies have subcultures. The origins of subcultures have, however, the same basic form as their simple-society counterparts. Different groups in a society face different problems and, in attempting to overcome, or at least cope with these problems, these groups develop different solutions.

The issue is, of course, enormously complicated but, nonetheless, the bare bones of a general developmental model can be built on the above considerations. In what follows, the term 'group' is used quite flexibly to refer to virtually any size collective, be it a society, ethnic enclave, family, dance band, or, as will be important later, an organization or some of its segments.

A Model

Four conceptual categories are involved in our model. First, there is a set of variables to locate a group in time and space. These are essentially structural variables that position a group relative to other groups within the domain of analysis (i.e., a society, region, school, work organization, etc.). Such variables suggest the kinds of problems members of a given group are likely to face. The relative status and role of the group among other groups are illustrative in this regard. If specified completely, this variable category would identify the physical setting in which the group operates, the routine and dramatic problems faced by the group, and, above all, the expectations, demands, and social organization of other groups who have an interest in the conduct of the focal group's members. In short, the problematic situations faced by groups are not randomly generated, but reflect a group's historical and current position in the existing social and material world.

Structure is not everything however, although it does allow the culture-mongering analyst to move with some confidence to the second variable category which we label "the interactional matrix." The interactional matrix can be assessed in terms of a sociometric network or a blockmodel, and can be described in terms of such variables as centrality, density, clique formation,

or structural equivalence.⁴ Based on a group's structural position, communication patterns among individuals within and without the group emerge. When the ratio of within group to without group communication is high, a frame of reference or collective point of view is likely to develop among the membership on those problems associated with the group's structural position as well as its internal functioning. To Americans, for example, food is as much an issue of concern as it is to other national groups. We must regularly consume some or we die. Yet Americans do not regard such things as dogs, grasshoppers, or worms as belonging to the same category as pork chops, apple pie, or orange juice. Other groups do. If interaction is sustained and relatively intense, situations and problems come to be collectively assessed and defined, and such definitions stick.⁵

Not all problems (and their typical solutions) are so neatly defined, of course, but those that are represent the stuff of which culture is composed. The third conceptual category of the model concerns, then, the "collective understandings" that characterize a group. The crucial condition for the emergence of collective understandings is (again) effective interaction among people sharing similar problems of adjustment. For some groups, notably those that have been around for long periods of time, collective understandings cover an enormous range of problems, as is the case with an isolated tribe at the Amazon headwaters whose culture provides a solution set for virtually any problem a member can conceive. For other groups, collective understandings are severely limited, as is the case when a group of strangers rides for a brief moment in an elevator together, knowing only how far to stand from one another, which way to face, and, at times, who is to push the buttons. It is true that a particular elevator culture might emerge if, for example, the lift suddenly breaks down between the fifth and sixth floors. But, unless

extraordinary circumstances attend to such a breakdown, the culture and collective understandings that come from the mutual interaction necessary to first define the problem and then act on it would not persist beyond the freeing of this little group of captives.

The first three variables of the model -- structural position, differential interaction, collective understandings -- reside within a sociocultural level of analysis. They have a conceptual existence above and beyond that of the individual actor and can be examined, perhaps patterned analytically, without direct recourse to individual behavior or belief. Indeed, individuals may well be fully unaware of the collective understandings characterizing the group unless such understandings are pointed out to them, or their use fails to produce the expected results. Moreover, collective understandings usually precede individual actors in the sense that people moving into certain situations normally find others on the scene who have already defined the situation (or accepted one) and, if the newcomer is to interact in the setting, it is the pre-existing definition that is to be learned and respected (Van Maanen, 1979).

Nevertheless, individuals do vary in their knowledge, recognition, and acceptance of the collective understandings characterizing a group within which they participate. Because individual members are allocated different roles within a subculture, their knowledge of the culture's rules, perspectives and rituals is shaded in different ways, and shaped by slightly different interests. Individuals vary, too, by their participation in the building of such understandings. While groups of interacting individuals are necessary to invent and sustain a culture, the shared understandings that come to characterize the culture can be carried only by individuals. The group has no mind within which the cultural solutions or problem solving routines can be

stored. Thus, the fourth variable cluster in the model revolves around the individuals who make up a given group and takes account of their respective attitudes, values, skills, current interests, backgrounds, learned and inherited behavior patterns, and so forth. A complete developmental model must contain a psychological and social psychological component if the individual's attachment to and support of the collective understandings marking the group are to be deemed relevant. This seems particularly crucial in contemporary societies where individuals are members of many groups, each more or less competing for a person's attention and commitment. Whereas group problem solving theories may be sufficient to explain cultural variations among similar groups facing similar situations, different individual responses within and to a given culture require both a social and a personality psychology.⁶

Several qualifications are now in order. First, the model is highly interactive. Structural variables do not, for example, solely determine the problems groups face. Similar groups may have very different histories and internal interaction patterns; thus they will read situations in unique ways. Interacting members of a group selectively attend to their environments, experiment with different frames of reference, and constantly alter, usually in small ways, the collective understandings (culture) within which they work. Altered perspectives may lead to new interaction patterns, hence influencing the group's relative position to other groups.

Second, our definition of culture as "collective understandings" covers much ground. It is, however, simply a shorthand reference to a symbolic and semiotic perspective on the manner in which expressions and events are given meaning by members of a particular group. In our view, the world is composed of signs that are essentially devoid of meaning until they are noticed and

defined by a particular collectivity (but not without difficulty, occasional conflict, or, at times, considerable ambiguity).⁷

Third, the model is both structuralist and interactionist in intent. Theories that posit the overriding import of the structural positioning of groups (e.g., its social class designation or status among groups) on the collective understandings held by members discount the potential autonomy of a culture shared by interacting persons. A mechanical relationship between structure and meaning results that denies the active, ongoing, and always problematic character of interaction. On the other hand, theories that treat meaning systems as socially constructed are surely correct insofar as they go. But such theories jump right into the middle of a culture building process, and fail to specify why a given interaction pattern has been established in the first place.

Fourth, it is important to keep in mind that culture as defined here is symbolic, ideational, carried by people, and represented by the norms and rules they can be shown to adhere to and by which to judge others. Thus the culture of a society, or that of a group within a society are not qualitatively or quantitatively different. The culture of the group is not smaller than that of the society. All we can say with assurance is that the group that enacts this culture is smaller than the society. This culture is not miniature or partial, not better or worse, not stronger or weaker than any other culture; it is merely different in some or many respects. For example, the cultures carried by residents of the Lower East Side of Manhattan, an East Los Angeles barrio, or a posh bedroom suburb like Beverly Hills will be constructed in similar ways and, for each, will serve similar sense-making ends, even though many of the respective understandings embedded in the three cultures will be quite different.

This last point is also important for another reason. By and large, the collective understandings of one group, as illustrated by their standards of behavior, special language, symbols of honor, cautionary tales, and so on, are unknown to members of other groups. If they are known, such collective understandings are typically looked down upon or otherwise thought of as separating and segregating one group from another. Culture differentiates between groups while integrating within. What is shared is, perhaps, part of a common culture held by both the observer and the observed. Yet what is not shared is what distinguishes one from the other. An individual in this society is simultaneously a member of many groups, each with its own more or less distinct culture. The understandings one relies on for guidance in a given situation will depend, however, on an almost infinite variety of matters. Some of these matters will sometimes be relevant to one or another culture in which membership is claimed. Other times, people may follow a highly individualistic scheme or a situationally unique logic related in, at best, remote and obscure ways to the collective understandings of a particular group. All behavior is culturally relevant, but the particular relevance of a particular culture to a particular person, at a particular time, may be hard to locate.⁸ This point is a crucial one as we now move to put our general model to work in the wonderful world of organizations.

On Organizational Subcultures

If we transpose our general model to now consider work organizations as the social unit of concern, the variable clusters must be recast slightly. Structural position becomes akin to the organizationally sanctioned distribution of rights and obligations of its members. Work roles are obviously a major element of such a distribution within organizations since

each role involves a particular bundle of characteristic tasks and is associated with higher or lower status, relative to the other roles in the organization. From the structural characteristics of the organization also come many of the routine problems faced by organizational members. Some of these problems exist by design, and hence are tied to the formal purposes of the organization. Other problems come about incidentally, as predictable but largely unintended problems of the organizing process itself.

The structural order of an organization obviously helps shape the pattern of interaction among the members (and, to a degree, between members and outsiders). Differential interaction patterns among the membership may arise from proximate physical locations, the sharing of similar tasks, the nature of the work plan, historical accidents or seemingly random events, the contrasting social attributes of the members, the demands made on some members by others, and so forth. The sources of sustained interaction among certain members are many, but to the degree some members interact more frequently with other organizational members sharing common problems in the organization, the potential for an organizational subculture is born. Solutions to these problems include various cooperative actions made possible by collective understandings. Such understandings do not come about magically, of course. They must be worked out by people, as well as supported and shared by others within the given group.

Special motives represent the final aspect of the general model, since those sharing problems who are in effective interaction with one another must still see the relevance of collective understandings to their own individual aims and interests in the organization. Such special motives may be especially difficult to develop in segments of organizations which seemingly operate on the principle that one gets ahead only at the expense of others.

anticipatory socialization of the membership (Hastings and Hinings, 1970; Engles, 1970).⁸

More commonly, however, organizations, by design, differentiate the membership into relatively insulated role- and position-specific niches. Sometimes these niches contain few participants, sometimes they contain many. Sometimes the opportunities and motives for intensive interaction among those who share problems will be present, sometimes they will not. Subculture will flow from these considerations. From our perspective, organizational culture is but a rendering across subcultures of what is common and what is distinct. If only one subculture exists by definition, members who share in this subculture possess the organizational culture. If no subcultures exist, if all members of the organization are essentially ungrouped and interactionally estranged, the organization itself will have no culture to speak of except those atomized collective understandings individuals bring with them to work from elsewhere.

For our purposes here, we will define an organizational subculture as a set of organizational members who: (1) interact regularly with one another; (2) identify themselves as a group within the organization that is distinct from other groups; (3) share a set of problems commonly defined to be the problems of all; and (4) routinely take action on the basis of collective understandings unique to the group.

In this sense, an R&D scientist may fulfill the organizationally defined R&D role, a role known to and supported by most others in the organization. Yet this scientist may also take part in the R&D subculture, wherein the group specific understandings of the R&D role worked out with colleagues are either unknown to others in the organization outside of R&D, or, if they are known, belittled, or at least held in sharp contrast with the way other groups are

thought to behave in the organization. Of course, some collective understandings will exist in R&D that exist elsewhere in the organization. These understandings would not, however, represent a measure of the group's distinctiveness. Indeed, across subcultures there must be some commonalities in outlook if there is to be any basis for interaction or cooperation among groups. We need not build twelve foot barbed wire fences around organizational subcultures by definitional fiat.

Subcultures might be represented graphically by drawing small circles that cluster and overlap as collective understandings in one group approximate those of another. The degree to which the small circles approach the shape of a larger, hypothetical one, the more descriptively accurate it is to speak of an organizational culture. The less such circles look like a larger one, the more spread out and mutually exclusive they appear, the greater the cultural pluralism and separation among subcultures. In this view, subcultures in organizations may embody a shadow-like organizational culture. If there is much overlap and tight clustering, subcultures can also be said to carry an organizational culture.

It is now appropriate to edge modestly toward more concrete matters and examine some of the ways subcultures in organizations arise. Six sources of subcultural formation are discussed below. They range from the exogenous and almost purely structural sources to the endogenous and almost entirely interactional sources. Covered also are sources much discussed in the organization literature (e.g., segmentation) to some much less discussed (e.g., contracultural movements). Our purpose is not to be exhaustive (itself a thankless and probably impossible task), but rather to illustrate from a variety of angles the model we have thus far developed.

1. Segmentation: Although the phrase "organizational culture" is a relatively recent addition to the organizational theorist's glossary, the idea that cultural processes are important for understanding organizational phenomena has a venerable history. For example, Dalton (1959), Gouldner (1954), Selznick (1949), and Blau (1955) were all explicitly interested in how member interpretations, values, and behavioral rituals helped shape the manner in which organizational tasks were performed. From their close analyses, portraits emerged of organizations beset by conflicts of interest between subgroups possessing alternative ideologies and interpretive systems.

Cultural processes, at least as they are pictured in these early field studies, are forces that segment rather than unify organizations. Even in the more pragmatic and managerially focused writings of Lawrence and Lorsh (1967), cultural understandings in organizations such as shared time frames and perspectives on interpersonal relations are viewed as differentiating, not integrating mechanisms. While discussing the so-called "dysfunctions of bureaucracy," Merton (1957:201) suggests just how and where certain subcultural forms emerge in organizations.

Functionaries have a sense of a common destiny for all those who work together. They share the same interests, especially since there is relatively little competition insofar as promotion is in terms of seniority. In-group aggression is thus minimized and this arrangement is therefore conceived to be positively functional for the bureaucracy. However, the esprit de corps and informal social organization which typically develops in such situations often leads the personnel to defend their entrenched interests rather than to assist their clientele and elected higher officials.

In a more general vein, numerous theorists have written that the historical elaboration of organizational forms in both industry and government

is premised on the notion of technical rationality.¹⁰ Such a rationality refers to the conviction that tasks are most effectively (and economically) performed when analyzed and executed in line with the canons of scientific and technological models of action, and when entrusted to experts trained to execute the tasks parsimoniously. The belief in benefits to be reaped from the rationalization of work arrangements has justified a host of familiar, interrelated organizing strategies: functionalization, specialization, automation, professionalization, standardization, and specification.¹¹

By and large, each strategy obtains the imputed benefits of efficiency and productivity by segmenting the work force. These strategies also promote subcultural possibilities. The large organizational niches created by functionalization foster domain-specific identities that distinguish employees by the area of the organization to which they are attached. Specialization narrows the population of employees who can be said to do the same type of work and, hence, differentiates sectors within functional areas. Professionalization brings together employees with professional identities and ideologies that set them apart from other employees. Automation creates groups of employees devoted to specific machines while together, automation, specification, and standardization unevenly deskill employees and increase the probability of differentiation based on proximity, shared working conditions and work stratification. To the extent that such segmentation is accepted by most members of the organization as natural and appropriate, differentially interacting role clusters emerge, and subcultural proliferation -- with each area gradually developing its own language, norms, time horizons, and perspectives on the organization's mission -- should be expected.¹²

This rough sketch of some quite common organizing strategies belies the assumption that organizations are unicultural systems and supports the

contention that cultural processes in organizations generate separation as well as cohesion. Moreover, when members of a group in an organization come to possess a "consciousness of difference" as expressed in their day-to-day interaction, control over the work performed on their own turf effectively passes to those who do the work. By rationalizing work, increasingly managers must rely on what Starr (1983) calls their "coercive authority" over segments of the work force (i.e., power to reward and punish) rather than on any "cultural authority" they might otherwise claim as fellow members of a common culture (i.e., power to define and lead).¹³

2. Importation: Subcultural formation in organizations is not always a matter of routine and gradual segmentation. Acquisitions and mergers are obvious examples of the swift creation of subcultures. Of course, the acquired or merged may undergo task, role, and status shifts that may, in turn, create new problems for members of a particular group to face. Interaction patterns within and between groups may also change, repositioning the group relative to other groups so that old loyalties vanish and new patterns of commitment and obligation appear. But, to the degree an acquisition or merger leaves intact the previous order with its more or less established intergroup structure, new subcultures are simply added to the enlarged organization, and the process appears similar to colonization. The power of the colonized to maintain a separate presence within the more heterogeneous background might even be strengthened since the distinctiveness of a given subculture may become even more pronounced.

Aside from acquisitions and mergers, subcultural variation spreads as groups with occupationally specific cultures are added to organization charts. Williamson's (1975, 1981) notions on transaction costs provide one rationale for this form of subcultural importation. In skeletal form,

Williamson suggests that organizations alter their structure when the costs and uncertainties of engaging in an exchange relation with certain groups outside the organization outstrip the costs of providing the desired resources internally. In the case of skills rendered by a particular occupational group, structural inclusion becomes more likely to the extent that the occupation's services are seen as potentially evolving into "organizationally specific assets."

A nice example of apparently just such a process is provided by the current growth of in-house legal staffs in large corporations. Chayes, Greenwald, and Winig (1983:85-87) argue that an internal legal staff not only saves a corporation impressive sums of money in legal fees (Xerox is said to have reduced its annual legal expenses by \$21 million), but also that certain forms of legal work rapidly become organizationally specific assets:

"effective anticipatory law requires a degree of involvement and knowledge of the corporation's business rarely found outside the company . . . lawyers who lack business appreciation tend to err on the side of caution. They feel responsible when a suit is brought, but don't when productivity declines, market shares decrease, or profits dwindle."

Another view of the importation process is provided by institutionalization theorists who argue that bringing certain specialists into organizational domains is often simply a matter of structural mimicry (DiMaggio and Powell, 1983; Meyer and Rowan, 1977). Particularly in organizations marked by diverse goals, unclear technologies, and slight or ambiguous feedback on the organization's relative performance, managers are quite attentive to what similar organizations are up to at any given time. If it appears that other organizations are bringing in members of a specific occupation, or are bringing in members who possess distinctive attributes,

managers in the attending organizations will also move to import similar sorts. The motives that support such actions are no doubt multiple but, for some managers at least, an underlying motive seems to be the simple desire to display to their counterparts that they, too, are modern, progressive, and fully up to date on current practices (and, by implication, so are the organizations of which they are a part). Ritualistic modeling appears to explain the recent spread of school psychologists and school health professionals, at least among California districts (Rowan, 1982).

Occupational groups may also be foisted on an organization by outside agencies. Organizations may welcome mandated importation and the possible creation of a new subculture within its boundaries. Police agencies, for example, are called upon periodically to take part in some state or federal crime related programs such as those designed to curb drug traffic. These programs often include funds and legal provisions that encourage police departments to institute new or expand existing narcotics operations. Since the creation or strengthening of the narcotics bureau entails higher levels of funding and manpower, police agencies typically are eager to accept the governmental mandate (especially when there is money attached and few constraints on its provisions). Other governmental interventions may be accepted more grudgingly by organizations. Although equal employment, occupational safety, and environmental protection legislation may be importing of new occupational groups within organizations, the initiative is often resented by both public and private organizations. As is apparently the case with new EEO offices, positions may be created but they will be isolated, marginal positions in the organization, with little if any potential for allowing a viable subculture to form about them.

3. Technological Innovation: In work organizations, technological

innovation typically is cast as a process that progressively robs the members of various occupations of their expertise by embodying the manual and cognitive skill of a worker in the design of machines (Braverman, 1974; Novel, 1977; Haug, 1977, 1975; Wallace and Kallenberg, 1982). Evidence supporting this view is simply too strong to dispute its pertinence in certain organizations and industries. It would be an empirical and ideological mistake, however, to claim that all technological advances lead to deskilling, the separation of conception and execution, and increasing alienation among workers of all types. Technological innovation should not be equated with automation, nor should automation itself be understood as unilaterally alienating (Blauner, 1964; Shepard, 1971; Hull, et al., 1982). Whereas certain types of technological change, particularly those incremental innovations that seek to simplify existing technologies, may lead to the demise of some organizational subcultures, other technological advances may actually empower old subcultures or create new ones. In this regard, the rise of computer-based medical imaging technologies is instructive.¹⁴

Until the late 1960's, the work of radiology departments in large hospitals consisted primarily of the production and interpretation of standard radiographs (X-rays) and a few fluoroscopic procedures such as the barium enema and barium swallow. Except for slight gradations in personal skill, few differentiations could be made among either the radiologists or the technologists who staffed a hospital's radiology department. However, with the coming of nuclear medicine, the invention of the gamma camera, and the use of computers to capture, transform, and display image data, a new family of medical technologies was developed. During the 1970's, two new computer based modalities, ulytrasound and CT-scanninning, gained widespread acceptance and use. These technologies (and others) require both radiologists and

technologists to gain new skills in order to operate the machines and interpret their outputs.

Each technology essentially expands the number of anatomical features that can be "imaged" and the range of diseases that can be diagnosed. But, each may also generate a new organizational subculture, particularly among the technologists. For instance, as selected X-ray technologists are trained in the new modalities they adopt new labels and new occupational identities as sonographers, nuclear medicine techs, or CT-techs. Not only do the members of these groups cease to call themselves X-ray techs, they also begin to view X-ray work pejoratively. As one might expect, the negative opinions of their work are returned in kind by the X-ray techs.

When compared to the X-ray technologists in a given hospital, sonographers, nuclear medicine techs, and CT-techs are considerably more autonomous, have greater prestige, and are more likely to interact regularly with radiologists and other physicians in their day-to-day work. Moreover, since the technologists who operate the new modalities typically know more about the technology than the average radiologist (not to mention the average physician), they are more likely than other technologists to become involved in the process of diagnosis and interpretation. While a referring physician would never ask an X-ray tech to read a film, such requests are routinely made of sonographers and CT-techs. Finally, as if to institutionalize their recently acquired status, the technologists who operate the newer machines are currently in the process of developing their own, quite restrictive, occupational associations.

4. Ideological Differentiation: Technological innovation, importation, and segmentation provide for structural shifts that create interactional opportunities that, in turn, spawn contrasting belief and interpretive

systems which characterize organizational subcultures. Structural formation may also come about in reverse order as continuing interaction within a subculture itself leads to eventual structural differentiation. Subcultures may arise within subcultures as members develop competing ideologies regarding, for example, the nature of their work, the appropriate methods to use, the correct stance to take toward outsiders, or the way to treat various clients. Moreover, many in the organization may be unaware of the development until it has proceeded well along its path.

Schisms in academic departments and research institutes frequently begin when members start to distinguish themselves on the basis of differing paradigms. Although one or more competing paradigms may arrive with the employment of new members, a new paradigm may also arise out of a sequence of events within a department, and splinter groups may form. To the extent that a new group is able to train graduate students or market its paradigm to academics at other institutions, a "school" or, in our terms, a subculture, may form (Crane, 1972). Occasionally, antagonism between proponents of the competing paradigms becomes so intense that the members of the two camps cease to communicate and become, for all practical purposes, two subcultures marked mainly by their scorn for each other.

Sometimes subcultural variation can be traced to the very ideology that initially served to set the subculture off from others around it. In his research on the Israeli probation system, Kunda (1983) argues that the doctrine of "authoritative treatment" secures for probation officers a place among the other occupational groups that have an interest in shaping the moral career of juvenile delinquents in Jerusalem. But within probation work itself several camps are to be found, each with unique interpretations for what "authoritarian treatment" means in practice. Some probation officers

underscore the authoritarian side of the doctrine, thus emphasizing the quasi-police functions of their office. Other officers take treatment as a primary function, and hence regard their therapeutic chores as most critical. In the absence of clear-cut criteria for effective performance, time itself seems to be a crucial independent variable pushing toward subcultural elaboration.¹⁵

5. Contracultural Processes: Closely aligned with ideological differentiation is a process of subcultural formation we label contracultural. Whereas ideological differentiation results primarily from intragroup relations in which members reposition themselves relative to others in the group, contracultural schisms develop out of dismal relations between individuals across various groups. Contracultural movements gain momentum as previously ungrouped organizational members sense a shared stigma.¹⁶ Such stigmatization, when it is seen as pervasive, may eventually become the mark of membership within a deviant organizational subculture.

Most organizational subcultures are marked by collective understandings that promote acquiescence to the group's organizational position. While these understandings are typically unknown outside the group (at least in any detail,) they nevertheless shape the behaviors of the subculture member so that he or she does not lose status or offend others in the organization. In a contracultural movement, however, behavior that is explicitly forbidden or viewed as highly improper by outsiders is sanctioned within the group. Hence gaining status within a contracultural movement is accompanied by a loss of status outside the group as members forfeit the goodwill and respect of others in the organization.

Nonconformity is the price of membership within a contracultural movement. Furthermore, the collective understandings carried by parties to

the movement promote visibility since they center on the relations members have with outsiders. Whenever the normative system of a group contains, as a primary element, a theme of overt conflict with, and general disregard (or disdain) for what others in the organization do or think, a contraculture may become more than a movement; it may come to exist as a subcultural type. It is important to recognize, however, that the norms of a contraculture can be understood only by reference to the relationships the group maintains with their surrounding audiences. As a pure type, a subculture does not require intensive analysis of intergroup relations since the collective understandings that mark the membership do not stem primarily from their interactions with outsiders, but stem rather from their interactions with each other.

Perceived or real deprivation is the characteristic sentiment in a contraculture. If the rewards valued by others in the organization cannot be achieved by those in a particular group, such rewards (and the means typically enacted to achieve them) will be discounted and their importance denied within the group -- if, indeed, a group comes to exist.

Kanter's (1977) description of immobile office workers provides a good illustration of a contracultural movement well advanced. Thwarted in their desire to achieve higher status and increased responsibility in the organization, "stuck" office workers sought to block and make difficult the efforts of others. Negativism, malicious behavior, and non-utilitarian values were rewarded within the near group of other "stucks," especially when the targets of such posturing were outsiders. "Working to rule" as expressed by factory operatives is another example, as is Ditton's (1977) splendid telling of the "fiddle" as worked by bread truck drivers in London. Blocked ambitions, poor training, inadequate rewards, impersonal management, inadequate resources or equipment, and out-of-reach performance standards are

all conditions that encourage contracultural movements and the rituals of resistance that define them.¹⁷

6. Career Filters: Organizational incentive schemes that intend to link the personal ambitions of organizational members to the goals of the employing firm sometimes also promote subcultures as an unintended consequence. One interesting manifestation occurs as people move toward the higher ranks of organizations. In particular, individual ambition may be frustrated because the higher a person moves, the more difficult it may be for the climber to know what is desired by others in terms of performance. In doubt as to just what is expected, and therefore somewhat fearful to stand out from the crowd, managers in some organizations come to resemble one another the higher they climb.

Kanter's (1977) memorable phrase "homosexual reproduction" captures some elements of just such a process. She uses the phrase to describe how the like-minded and like-skilled come together to form timid managerial enclaves or subcultures within organizations. The conformity among high level managers described by Kanter rivals that of the hypothetical "organization men" made sport of by business commentator W. H. Whyte (1956) almost thirty years ago.

In a more analytic vein, March (1980) argues that the accuracy of performance evaluations in organizations varies inversely with the rank being evaluated. The higher we move in an organization, the more problematic and hence ambiguous the performance appraisal. "The joint result is," writes March (1980:21) ". . . the noise level in evaluation approaches the variance in the pool of managers." In effect, promotions may represent successive filters that screen managerial applicants at each level on roughly the same attributes. Since each filter reduces the pool, attributional variance is continually reduced.

Progressive screening seems, then, to increase the basis for cooperation and effective interaction among those at the top of an organization. Diverse subcultural formation within ranks is perhaps only possible at the lower levels of organizations and not at the upper levels where a general managerial subculture would be predicted. In fact, what is so glibly called the organizational culture by many observers of the business scene may simply be the collective understandings that define the subculture of the carefully chosen few. We would expect such understandings to trickle down with at least as much difficulty as they trickled up.

Cultural Clashes in Organizations

We have sought in this paper to suggest some theoretical reasons for the presence and proliferation of subcultures in organizational settings. We have also suggested that structural ironies and normative tensions among groups are facts of life within organizations, although, because of pluralistic ignorance and inattention, special circumstances are usually required to activate subcultural conflict. Intergroup squabbles in organizations are certainly not unknown, but normally they are situationally centered and, hence, specific to the working out of current issues and role definitions.

A good example of the latent nature of much cultural conflict in organizations is provided by Bailyn (1982). Her research shows how various groups of scientists, engineers, and managers, as well as those more or less uncommitted and ungrouped leaders of a high status industrial research organization are able to handle what she calls the "inner contradictions of technical careers" without undue organizational disruption. The working out process is not without its serious human and organizational costs, but subcultural battles are, by and large, subtle and ambivalent, carried on below

the surface of everyday life in the studied organization, and only occasionally coming to light in situationally contained instances.

Consider now another example of subcultural collision as observed in the radiology departments studied by Barley (in progress):

Prior to the arrival of the body scanners, there were, in both hospitals, clear distinctions made by radiology technologists among themselves. X-ray techs generally resented sonographers, specials techs, and head scanner techs, not simply because their pay was higher, but because theirs was not 'dirty work' and because the radiologists accorded them greater prestige. However, conflict between the various technologists remained quiescent before the arrival of the body scanners since all techs (aside from the head sonographer) were required to pull duty assignments in the main department . . .

Once the body scanners arrived (for different reasons in both hospitals), special techs were assigned less frequently to the main department, and CT-techs were absolved of X-ray responsibilities. Moreover, the scanner operations began to preoccupy the radiologists' attention and, as a result, all technologists saw the radiologists as less concerned with the older modalities. The boundaries between the various technological subunits solidified, and subcultural identities became apparent. X-ray techs began to complain more frequently about their work. Sonographers and specials techs deplored the privileged treatment given CT-techs and began to protest more loudly about being assigned to X-ray. CT-techs began to derogate X-ray work as well as the lofty attitudes of the sonographers and specials techs who, in turn, concluded that CT was mere button pushing. Seemingly, the only common ground was that members of each technological subculture blamed the 'bosses' and the radiologists for the perceived inequities of their respective situations and each, therefore, began to press hard their individual claims with whomever would listen. In response, administrators haphazardly attempted to respond to subcultural pressures; but, since honoring one group's claim involved affronting another, administrative actions made matters worse."

Once latent tensions between organizational subcultures are activated, the character and outcome of the ensuing conflict depends on a host of variables, not the least of which are the political clout possessed by a group, the opportunities that arise to exercise such clout, and the conditions that shape each group's position vis a vis the others in the organization.¹⁹ We now consider quite swiftly some of these matters as a way of underlining the importance of subcultures for understanding organizational actions, and as a way of noting just how subcultures can (and can not) control their own destinies. We use the above radiology dispute to anchor our discussion.

One dimension along which organizational subcultures vary is whether similar subcultures exist in other organizations. For subcultures surrounding particular occupations this is a crucial matter. All else being equal, members of organizationally widespread subcultures, whose members are currently in demand, are more apt to obtain favorable resolutions of conflict. Dispersed subcultures provide members with career opportunities outside the confines of a single organization (Van Maanen and Barley, forthcoming). All the technologists of our above illustration were relatively mobile although, at the moment, the CT-techs have perhaps the strongest job market locally.

Another dimension of apparent importance concerns the prominence of a particular subculture within the organization. Such prominence may have several sources. Centrality in an organization's workflow correlates with a subgroup's power since groups in key positions are able to regulate the overall quality and quantity of work the organization produces (Hickson et al., 1971; Crozier, 1964). Members of a subculture may also gain prominence to the degree they are seen by others as irreplaceable. Such a perception may

be fostered either because the members have gained valuable organization-specific knowledge, or because certain types of work are held in high regard by others for what are essentially symbolic reasons. In our example, CT-techs enjoy a measure of prominence beyond that of the other groups because the machines they operate are new, expensive, and require high usage rates to justify their purchase by the hospital. CT-techs also gain proverbial status points because there is still an aura of mystery attached to the scanner's technology.

Finally, members of a subculture not only approach their work in particular ways, but also approach those who witness their work in mannered yet typical ways. Subcultures provide members with characteristic style (Hebdige, 1979). For example, Schön (1983) argues that city planners have viewed themselves differently over the years: as "policy analysts," as "designers," as "advocates," as "regulators," as "administrators," as "mediators." Each stance involves a qualitatively different relationship with managers, engineers, architects, developers, and other groups. Matters such as loyalty to the employer, conflict with others, and the amount of control planners seek over their work depend in important ways on what role frame and characteristic style they enact in a particular period.

In the two radiology departments, CT-techs held quite different understandings of their roles. In one hospital, the techs viewed themselves as "employees," while in the other hospital the technologists saw themselves as "experts." In the first setting, the CT-techs often refused to accept full responsibility for an examination and would always check with a radiologist before dismissing a patient or processing images. These technologists lamented the absence of standard operating procedures upon which they could depend when in doubt. At the second hospital, attempts to establish

procedures or to require the technologists to consult with radiologists before making routine operational decisions were met with great resistance. Here, the CT-techs were bound to each other, not to the larger unit. In the first hospital, on these matters the "employee" techs oriented themselves to the department as a matter of course. Yet, as might be expected, the "employee" orientation gained technologists little autonomy while the "experts" often operated the scanner without a radiologist present and have managed, to date, to keep administrators at bay.

Comment

Louis (forthcoming) proposes that organizations be viewed as "culture bearing milieu." Over the course of this essay we have raised another question: how many cultures can an organization bear? We think the answer is many. There are some sound theoretical reasons to expect many, and we have suggested a number of places to look for them. Yet the formation of a subculture provides no assurance of longevity, nor does its mere presence indicate great influence in the organization. There is no guarantee that the life of a subculture will be a long one, or that its members will have much voice in the organization, individually or collectively. What is guaranteed, however, is that if we wish to discover where the cultural action lies in organization life, we will probably have to discard some of our lofty platitudes about the organizational (high) culture and move to the group levels of analysis. It is here where people discover, create, and use culture, and it is against this background that they will judge the sort of organization of which they are a part. It is here, also, that they may come together or come apart. Our advice to fellow culture vultures in the field is to study cultural organization as a way of getting at organizational culture.

Notes

1. This paper is written for the Academy of Management Annual meetings in Dallas, Texas, August, 1983. The context is a symposium called "Many in One: Organizations as Multicultural Entities." Since no one has yet read this paper, there are no famous people to thank and, hence, we have no way to show readers the smart company we keep. Partial support for the writing is provided by: Chief of Naval Research, Psychological Sciences Division (Code 452), Organizational Effectiveness Research Programs, Office of Naval Research, Arlington, Virginia, 22217, under Contract Number N00014-80-C-0905: NR 170-911.
2. This is not to say we are likely to be very persuasive in doing so. Anthropologists have been trying for almost a century to nail down the notion of culture with little success (Kroeber and Kluckhohn, 1952). In fact, Williams (1976) claims culture is "one of the two or three most complex words in the English language." This has not, however, stopped many practical theorists from using the term in evaluative ways. Phrases like "culturally disadvantaged" and "culturally deprived" litter the trade journals of education, social work, and criminal justice. What is usually implied by the use of these phrases is that the culture supposedly in need of enrichment is not the culture of those who would handle the enriching, although the enrichers are convinced that it should be. Some of the same strains of moral entrepreneurship slip into the organizational literature by the use of such phrases as "weak cultures," "loose cultures," or "thin cultures." Often what is to be strengthened, tightened, or thickened is a culture distinct from that carried by the managers of organizations. Salaman (1979) gives an intriguing analysis of the hidden ways management uses culture as a control device. Others are explicit about management's desire to "capture the norms" of work groups and are positively unapologetic about it (see, for example, House, 1976; Pondy, 1978; and Beyer, 1981). Nicholson (1982) provides a sharp reminder in this regard by noting that management is severely limited if it seeks to control its own culture, for "management is itself a component of culture and therefore logically subordinate to it." Management may indeed help shape or control other cultures, but there are obvious constraints on what it can do with cultural forms of its own -- at least consciously.
3. In this section and the next, we provide few citations to legitimize the "traditions" or the "model" presented in the text. Any textbook in anthropology or sociology would do. The characterization on the origins of cultural forms is a fairly straightforward and well established one, perhaps embellished here and there with a bit of our own bias. It is not so much that we wish to lay claim to originality, but simply that the materials are presented in such an abstract manner that few students of culture could dispute what is said (beyond definitional dispute). The model is not an empirically derived one, but an analytic one designed to order and categorize rather than define and measure. Moreover, far more elaborate treatments within the general framework presented here exist. While these treatments can and should be empirically and logically scrutinized, we have neither the space nor the inclination to do so here. An interested reader might pursue Becker

(1982), Peterson (1979), Fine (1979), Schwartz (1972), and Arnold (1970) for similar (but far more detailed) views on cultural and subcultural formation.

4. A large literature is accumulating on network analyses of social systems, especially organizations. The interested reader is referred to the following works: Burt (1980), Alba (1973), Alba and Kaduskin (1976), White, Boorman and Breiger (1976), Boorman and White (1976), Knoke and Kulcinski (1962).
5. As the ethnosemanticists have pointed out, these definitions may be a little ragged around the edges (Spradley, 1979; Goodenough, 1981). In line with our example in the text, Americans may sometimes be somewhat ambivalent about food classifications themselves, as the recent folk panics about dog eaters in California and dog food eaters in senior citizen groups suggests. More to the point, our stance toward culture leans toward the cognitive, thus we emphasize the institutionalization of social knowledge. What starts out as an ad hoc conception or social routine in a group may wind up as a hard, coercive fact as it is passed from generation to generation (Berger and Luckman, 1966). For a strong materialist critique of our position, see Harris (1981) who is, incidentally, quite good on the consumption of human food.
6. Schein (forthcoming) takes these matters much further than we do here. He is right to do so. Schein also points to the crucial matters of group dynamics as a way of understanding cultural processes. The importance of intragroup processes is obvious since significant cultural variations are visible among groups with very similar socioeconomic backgrounds, current situations, and social histories (Schwartz and Merten, 1968; Fine and Kleinman, 1979). A marvelous example of the relevance of group dynamics to cultural studies is given in Orthe's (1963) woefully neglected study of differing student subcultures at the Harvard Business School.
7. This semiotic perspective is given full treatment by Barley (forthcoming). Good use of the perspective is made by Hebdige (1979) in the examination of deviant youth groups on the fringes of the music scene in London. A general statement on its role in organization studies is provided by Manning (1979).
8. This is not to suggest that people are consumers of culture in the sense that when faced with a problem they go mentally shopping about for a stored away culture that will best meet their immediate needs. While people may indeed become members in good standing of a variety of groups, they do so largely in invisible and unconscious ways. By and large, the solutions they adopt to problems of their concern will be ones that are considered acceptable to those others on whose goodwill and cooperation they are dependent. Most of the time we do not have to think either long or hard about just who these others might be. Mandatory reading in this regard is Shibutani (1962) on "reference group theory."

9. Another way to think about how organization culture might be studied is to return to the model for a moment. An analyst might start first, for example, with a set of organizations within what population ecologists regard as a domain. By plotting the transactions (interactions) of these organizations, predictions could be made as to which organizations might shape a culture and which might not. Size is, of course, a massive confounding variable in this approach since, for large organizations, within-group to without group communication ratios will be high. Yet to the degree this suggests one reason cultures of large organizations are likely to be dissimilar, studies of organization culture gain another justification.
10. Silverman's (1970) "social action" framework draws on just these studies for examining organizations as complex, conflictual "systems of meaning."
11. The structural elaboration of organizations in line with "technical rationality" is well argued elsewhere (Chandler, 1962; Blau and Scott, 1962; Mintzberg, 1979; Edwards, 1979; Miles, 1980). Our discussion draws liberally from this literature. The Weberian doctrine of "technical rationality" is given a close look by Schön (1983).
12. Some may be surprised to find professionalization listed among the practices usually associated with bureaucratic forms of organization. Although professionalization frequently has been portrayed as hostile to bureaucratic controls, current arguments (both empirical and theoretical) suggest that professionalization is but one form of market control (See, Larson, 1977; 1979; Benson, 1973; Montagna, 1970; Goldner and Ritti, 1967). Nor is there much evidence to suggest that professions themselves are particularly distressed when working in highly bureaucratized settings (Glaser, 1964; Bailyn, 1980).
13. We must be careful not to push segmentation too far as a harbinger of subcultures. Individuals on the receiving end of segmentation strategies may wind up working in quiet desperation on isolated and senseless (to them) tasks which are, to their knowledge, performed by no one else of similar rank and station in the organization. This is, of course, the Marxian prototype for the alienated. Moreover, segmentation strategies may be intended to break up existing subcultures of far greater worth and value to the individual than whatever ones, if any, emerge to replace them (Van Maanen and Barley, forthcoming). Yet our purpose here is merely to note that the consequences of the pursuit of technical rationality in organizations are often more than meets the eye.
14. This process is a thematic matter in another paper of ours, a paper we regard as the flip side of this one (Van Maanen and Barley, forthcoming). Instead of organizational cultures and subcultures, we examine occupational ones. How to bring these two analytic domains together is the wave we currently ride. It is a bone cruncher.
15. This and the following references to radiology are drawn from Barley's (in progress) field study of radiology departments in two community hospitals.

16. Size, too, is a variable on which cultural variation depends. Small groups will usually find it more difficult to fragment than large ones since, in small groups, people must see each other frequently. At least a front of "getting along" must be maintained, even if people detest one another. In this regard, we are perhaps treating Kunda's (1983) careful work a little too casually because the probation office he studied was a small one, and the groups we have labeled subcultures here are really just emerging. The contrasting views on probation work did indeed exist in this office, but there were only a few officers clearly falling in one camp or the other. Most probation workers operated in the gray area between the poles and used the authoritative or therapeutic orientations in strategic rather than committed ways. Were the organization to experience rapid growth, one or the other orientations might give way, or full-bodied subcultures might develop that were routinely antagonistic to one another. True too, as Kunda suggests, the instrumental value of an internally contradictory ideology (although not necessarily seen so by insiders) may continue to serve probation workers quite well and, at the same time, allow the office to remain flexible in its dealings with other groups who might threaten whatever autonomy probation officers have thus far managed to carve out.
17. By stigma, we mean nothing characterological or otherwise attached to the person or persons per se. In this regard, we follow Goffman (1963) and see stigmatization as a labeling process in which the labeled learns how to play a social role. Becker (1963) has also covered these matters in depth.
18. There are, of course, ironies associated with contracultural movements. Foremost among them is the fact that by engaging in ritual resistance the expectations of the dominant groups are confirmed. Thus, when workers peg production at low levels, managers regard it as just another instance of worker laziness or recalcitrance. Willis (1977) provides a tidy analysis of this sort of process when he asks the question "why do working class kids get working class jobs?"
19. This is to say that subcultural clashes in organizations are typically triggered by specific events and thus are contained by the run of such events. Conflict of a sort that might bring forth the deeper divisions among groups is, therefore, muted. In this view, cultures are not so much latent (Becker and Geer, 1960) as are the circumstances that might reveal them.
20. Benson (1973) is good on these matters. In particular, he suggests that internal organizational changes of the sort that threaten the current distribution of pay, prestige, authority, and autonomy are what triggers conflict and, thus, brings subcultures and subcultural identities out of the closet. During such periods the relative power of these groups is on display, often in raw form.

References

- Alba, R.D. A Graph-Theoretic Definition of a Sociometric Clique. Journal of Mathematical Sociology. 3, 1973, 113-126.
- Alba, R. D. and C. Dadushin The Intersection of Social Circles: A New Measure of Social Proximity in Networks. Sociological Methods and Research. 5, 1976, 77-102.
- Arnold, D. A Process Model of Subcultures. In D. O. Arnold (ed.) The Sociology of Subcultures. Berkeley: Glendessary Press, 1970, 112-118.
- Bailyn, L. Resolving Contradictions In Technical Careers; or What If I Like Being An Engineer? Technology Review. 85, 1982, 40-47.
- Bailyn, L. Living With Technology. Cambridge, MA: MIT Press, 1980.
- Barley, S. R. The professional, the semi-professional, and the machine: new imaging modalities in radiology departments. PhD dissertation in progress, Massachusetts Institute of Technology.
- Barley, S. R. Semiotics and the Study of Occupational and Organizational Cultures. Administrative Science Quarterly. (forthcoming, 28, 4, 1983.)
- Becker, H. S. Culture: A Sociological View. The Yale Review. 71 (summer), 1982, 513-527.
- Becker, H. S. The Outsiders. New York: Free Press, 1963.
- Becker, H. S. and Geer, B. Latent Culture. Administrative Science Quarterly. 5, 1960, 303-313.
- Benson, J. K. The Analysis of Bureaucratic-Professional Conflict: Functional Versus Dialectical Approaches. The Sociological Quarterly. 15, 1973, 376-394.
- Berger, P. L. and Luckman, T. The Social Construction of Reality. New York: Doubleday, 1966.
- Beyer, J.M. Ideologies, Values, and Decision-Making in Organizations. In P. C. Nystrom and W. H. Starbuck (eds.) Handbook of Organizational Design, Volume 2. New York: Oxford University Press, 1981.
- Blau, P. The Dynamics of Bureaucracy. New York: Wiley, 1955.
- Blau, P. and Scott, W. R. Formal Organizations. San Francisco: Chandler, 1962.
- Blauner, R. Alienation and Freedom. Chicago: University of Chicago Press, 1964.

- Boorman, S. A. and White, H. C. Social Structure From Multiple Networks II. Role Structures. American Journal of Sociology. 81, 1976, 1384-1446.
- Braverman, H. Labor and Monopoly Capital. New York: Monthly Review Press, 1974.
- Burt, R. S. Toward a Structural Theory of Action: Network Models of Social Structure, Perceptions and Action. New York: Academic, 1982.
- Burt, R. S. Models of Network Structure. Annual Review of Sociology. 6, 1980, 79-141.
- Chandler, A. D. Strategy and Structure. Cambridge, MA: MIT Press, 1962.
- Chayes, A. H., Greenwald, B.C., and Winig, M. P. Managing Your Lawyers. Harvard Business Review. 61, 1983, 84-91.
- Crane, D. Invisible Colleges. Chicago: University of Chicago Press, 1972.
- Crozier, M. The Bureaucratic Phenomenon. London: Tavistock, 1964.
- Dalton, M. Men Who Manage. New York: Wiley, 1959.
- DiMaggio, P. J. and Powell, W. W. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. The American Sociological Review. 48, 1983, 147-160.
- Ditton, J. Perks, Pilferage and the Fiddle: The Historical Structure of Invisible Wages. Theory and Society. 4, 1977, 39-71.
- Edwards, R. Contested Terrain. New York: Basic, 1979.
- Fine, G. A. Small Groups and Culture Creation. American Sociological Review. 44, 1979, 733-745.
- Fine, G. A. and Kleinman, S. Rethinking Subculture: An Interactionist Analysis. American Journal of Sociology. 72, 1967, 489-502.
- Glaser, B. G. Organizational Scientists. Indianapolis: Bobbs-Merrill, 1964.
- Goffman, E. Stigma. Englewood Cliffs, NJ: Prentice-Hall, 1963.
- Goldner, F. H. and Ritti, R. R. Professionalization as Career Immobility. American Journal of Sociology. 72, 1967, 489-502.
- Goodenough, W. Culture, Language, and Society. Menlo Park, CA: Benjamin Cummings, 1981.
- Gouldner, A. Patterns of Industrial Bureaucracy. New York: Free Press, 1954.
- Harris, M. Cultural Materialism. New York: Crowell, 1981.

- Haug, M. Computer Technology and the Obsolescence of the Concept of Profession. In M. Haug and J. Dofny (eds.) Work and Technology. Beverly Hills, CA: Sage, 1977.
- Haug, M. The Deprofessionalization of Everyone. Social Forces. 8, 1975, 197-213.
- Hebdige, D. Subculture: The Meaning of Style. London: Methuen, 1979.
- Hickson, D. J., Hinnings, C. R., Lee, C. A., Schneck, R. E., and Pennings, J. M. A Strategic Contingency Theory of Interorganizational Power. Administrative Science Quarterly. 16, 1971, 216-229.
- House, R. J. A 1976 Theory of Charismatic Leadership. In J. G. Hunt and L. L. Larson (eds.) Leadership. Carbondale, IL: Southern Illinois University Press, 1977.
- Hull, F. M., Friedman, N. S., and Rogers, T. F. The Effects of Technology on Alienation from Work. Work and Occupations. 9, 1982, 31-57.
- Kanter, R. M. Men and Women of the Corporation. New York: Basic, 1977.
- Knoke, D. and Kulinski, J. H. Network Analysis. Beverly Hills, CA: Sage, 1982.
- Kroeber, A. L. and Kluckhohn, C. Culture: A Critical Review of Concepts and Definitions. Cambridge, MA: Harvard University Press, 1952.
- Kunda, G. The cultural context of occupational ideology and identity: The case of probation officers. Unpublished paper. Sloan School of Management, MIT, June, 1983.
- Larson, M. S. Professionalism: Rise and Fall. International Journal of Health Services. 9, 1979, 607-627.
- Larson, M. S. The Rise of Professionalism. Berkeley: University of California Press, 1977.
- Lawrence, P. R. and Lorsch, J. W. Organization and Environment. Boston: Division of Research, Harvard Business School, 1967.
- Louis, M. R. Organizations as Culture Bearing Milieu. In G. Morgan, L. R. Pondy and P. Frost (eds.) Organizational Symbolism. Greenwich, CT: JAI Press, forthcoming.
- Manning, P. K. Metaphors of the Field. Administrative Science Quarterly. 24, 4, 1979, 660-671.
- March, J. G. How We Talk and How We Act. David D. Henry Lecture, University of Illinois, Urbana, IL: Sept. 25, 1980.
- Merton, R. K. Social Theory and Social Structure. Glencoe, IL: Free Press, 1957.

- Meyer, J. W. and Rowan, B. Institutionalized Organizations: Structure as Myth and Ceremony. American Journal of Sociology. 83, 1977, 340-363.
- Miles, R. H. Macro-Organizational Behavior. Santa Monica, CA: Goodyear Publishing Co., 1980.
- Montagna, P. D. Professionalization and Bureaucratization in Large Professional Organizations. American Journal of Sociology. 74, 1968, 138-145.
- Nicholson, N. Organizational Culture, Ideology and Management. Paper presented to the NATO International Symposium on Managerial Behavior and Leadership Research, St. Catherine's College, Oxford. July, 1982.
- Nobel, D. F. America by Design. New York: Oxford University Press, 1977.
- Orthe, C. Social Structure and Learning Climate: The First Year at the Harvard Business School. Boston: Division of Research, Harvard Business School, 1963.
- Peterson, R. A. Revitalizing the Culture Concept. Annual Review of Sociology. 5:137-166. Palo Alto, CA: Annual Reviews, Inc., 1979.
- Pondy, L. R. Leadership as a Language Game. In M. W. McCall and N. M. Lombardo (eds.) Leadership: Where Else Can We Go? Durham, NC: Duke University Press, 1978.
- Rowan, B. Organizational Structure and the Institutional Environment: The Case of the Public Schools. Administrative Science Quarterly. 27, 1982, 259-279.
- Salaman, G. Work Organizations: Resistance and Control. London: Longman, 1979.
- Schön, D. A. The Reflective Practitioner. New York: Basic, 1983.
- Schwartz, G. Youth Culture. Reading, MA: Addison-Wesley, 1972.
- Schwartz, G. and Merten, D. Social Identity and Expressive Symbols: The Meaning of an Initiation Ritual. American Anthropologist. 70, 1968, 1117-1131.
- Selznick, P. TVA and the Grass Roots. Berkeley: University of California Press, 1949.
- Shepard, J. M. Automation and Alienation. Cambridge, MA: MIT Press, 1971.
- Shibutani, T. Reference Groups and Social Control. In A. Rose (ed.) Human Behavior and Social Processes. New York: Houghton Mifflin, 1962, 209-226.
- Silverman, D. The Theory of Organizations. New York: Basic, 1970.

- Spradley, J. P. The Ethnographic Interview. New York: Holt, Rinehart and Winston, 1979.
- Starr, P. The Social Transformation of American Medicine. New York: Basic, 1983.
- Van Maanen, J. The Self, The Situation, and The Rules of Interpersonal Relations. In W. Bennis, J. Van Maanen, and E. H. Schein (eds.) Essays in Interpersonal Relations. Homewood, IL: Dorsey Press, 1979.
- Van Maanen, J. and Barley, S. R. Occupational Communities: Culture and Control in Organizations. In B. Staw and L. L. Cummings (eds.) Research in Organizational Behavior. Greenwich, CT: JAI Press, forthcoming.
- Wallace, M. and Kallenberg, A. L. Industrial Transformation and the Decline of Craft. American Sociological Review. 47, 1982, 307-24.
- White, H. C., Boorman, A., and Brieger, R. L. Social Structure from Multiple Networks I. Blockmodels of Roles and Positions. American Journal of Sociology. 81, 1976, 730-780.
- Whyte, W. H. The Organization Man. New York: Simon and Schuster, 1956.
- Williams, R. Keywords: A Vocabulary of Culture and Society. London: Fontana, 1976.
- Williamson, O. E. The Economics of Organization: The Transaction Cost Approach. American Journal of Sociology. 87, 1981, 548-577.
- Williamson, O. E. Markets and Hierarchies. New York: Free Press, 1975.
- Willis, P. Learning to Labor. New York: Columbia University Press, 1977.

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