

DRAGON

DRAGON is the SCOS journal,

so that it will deal mainly with the subject of Organisation Symbolism. It will give priority to articles – case-studies or theoretical expositions – which consider the organisation as a human and social group within which we see the development of phenomena outside the precincts of classical systems analysis; beliefs, myths, rites, heroes, sagas, and so on. These new concepts usually coincide with the introduction to organisation study of disciplines formerly remote from it: linguistics, history, psychoanalysis, anthropology, etc.

DRAGON publishes working papers,

consonant with a research area that is constantly evolving and which emerged simultaneously in several different conceptual "broths". Its aim is the rapid circulation of concepts and factual material. An important goal is to assist in formulating a common approach to the organisation enabling comparison between different cultural perceptions. At a later stage, DRAGON will provide other services: lectureship invitations, researcher exchanges (working and living accommodations to accompany research assignments), and so on.

DRAGON is a vehicle for instant communication,

between members of SCOS and their associates. By publishing in first-draft or working-paper form, the authors indicate that they will welcome comment as to content, style, references, and so on. Therefore, DRAGON should be used by contributors, readers and commentators alike with this in mind. Increasingly greater space will be set aside for readers' letters and comments. Consonantly with this, amended versions of earlier articles may be published at short notice. It is also understood that contributors remain free to publish revised versions of their papers in other journals of more established academic reputation.

JOIN SCOS BY CONTACTING BARRY TURNER AT EXETER
Department of Sociology, University of Exeter
Armory Building, Rennes Drive, Exeter Ex 4 4RJ - (England)

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DRAGON EST REPRODUIT PAR L'ECOLE POLYTECHNIQUE (FRANCE)
POUR LE CENTRE DE RECHERCHE EN GESTION DE L'ECOLE POLYTECHNIQUE (PARIS)

E D I T O R I A L

by Vincent Dégot

About a year ago, when we first launched DRAGON, we said there would be as few constraints as possible concerning the presentation of articles, each contributor being responsible for the material aspects (quality of typing, arrangement of text, referencing system, etc) of his own paper. We did, however, suggest that a standard length of about twenty pages should be observed.

Experience has shown that both readers and contributors would be happier if this emphasis were reversed, so that we will now:

- welcome contributions of between 10 and 50 pages, given that symposium papers can sometimes be quite short, whereas some subjects need to be expounded at considerable length. In other words, a more flexible policy in this respect;
- less flexibly, expect contributors to take more pains over the material presentation of their papers, making them more attractive and easier to read. In the era of the word-processor, this should not prove too much of a burden. The following guidelines are put forward to this end:
 - the first page of each article to be headed, in the top left-hand corner, by the title in capital letters. The author's name (surname in capitals) to be placed immediately below the title. No address or institution of origin to be indicated, and no résumé of contents (but particulars of author to be given to the Editor separately). The text proper to start about one-third down the page;
 - as we intend that all articles shall start on a right-hand page, it would help us to avoid blank pages if all papers fitted into an even number of pages;
 - page numbers to be pencilled in only, as they have to be changed for publication;

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- contributors to use whenever possible international standard paper format A.4 (21 x 29.5 cm), rather than the 21x27 cm size still common in some countries.

Owing to the wide range of typefaces now available, an attempt at standardisation in this direction would be unlikely to succeed. When DRAGON prints a sufficient number of copies, we will consider recomposing all articles, but this would necessitate introducing a proof-reading stage, thereby making the whole publishing process more cumbersome. Assuming that contributions are properly presented in the first place, no clear advantage would be derived to offset the drawbacks.

It goes without saying that your suggestions as to the presentation and content of DRAGON, whether for publication or not, will always be welcomed.

On a more fundamental issue, we are considering setting up an Editorial Board for DRAGON, with responsibilities along the following lines:

- determining editorial policy - periodicity, selection criteria, publication of special issues, and so on;
- promoting DRAGON more actively in certain countries, possibly including the reviewing of papers written in languages other than English or French, to avoid unnecessary translation costs;
- enhance DRAGON's role as a forum for scientific controversy, which has not been noticeably achieved thus far.

In the first instance the Board might be made up from

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among the officers of SCOS, who already hold periodical meetings.

Further information on this point will be issued following the meeting of the SCOS board to be held at the end of November.

(Question: Why wasn't an Editorial Board set up in the first place ?

Answer : Because DRAGON would never have seen the light of day if this had depended on getting a large number of people to agree on essential points. Now that DRAGON does exist, we can set about making the necessary improvements as we go along)

Before closing, I would like to refer to the publication of Manfred Holler's letter in issue N°6. In the first place, my editorial was not intended to offend or decry; I wished merely to pass on an expert opinion concerning the challenge represented by DRAGON. I readily admit that it was gratifying to award myself a small satisfecit, but "honni soit qui mal y pense".

ADVANCE NOTICE AND CALL FOR CONTRIBUTIONS

Sixth Conference on Education and Development in Organisations

REDISCOVERING DEVELOPMENT:

The Future in Practice

University of Lancaster

15th - 18th September 1987

The aim will be for people to exchange and explore their latest ideas and practice. We are particularly interested in contributions which address the future of development practice in the light of the major challenges facing organisations such as:

- * The Management of Culture
- * The Quest for Quality and Excellence
- * The Transferability of Practice
 - Internationally
 - Between Service and Manufacturing Sectors
 - Between Public and Private Sectors

Sessions may be: - workshops
- papers
- demonstrations
- case studies
- etc.

and will be of 1½ or 3 hour duration.

We assume that contributors will attend the whole conference as full participants. The total fee, including meals and accommodation is £240 for non-contributors. Contributors will be able to attend at a concessionary rate of £195.

Would anyone wishing to offer a contribution please complete and return the attached reply form, preferably by March 7th 1987.

Any queries should be directed to the conference secretary:

Christine Dytham
Centre for the Study of Management Learning
Gillow House
University of Lancaster
Lancaster LA1 4YX. Tel: (0524) 65201 ext. 4854/4698

or

Conference Organisers: Richard Boot, Steve Fox, Mike Reynolds and Robin Snell

REDISCOVERING DEVELOPMENT:

The Future in Practice

Reply Slip (please return by March 7th 1987)

I would like to offer a contribution at the 6th Lancaster Conference

NAME ADDRESS:

TEL:

THEME OF SESSION:

Please give a brief description of your contribution below:

FORMAT OF SESSION:

LENGTH OF SESSION: 1½hrs ☐ 3hrs ☐ (please tick box)

Please return to:
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and Robin Snell

SUBSCRIPTIONS

Dear Reader,

As you probably know by now, we have decided to reduce to six the number of issues of DRAGON for 1987.

Consequently, the subscription fees have also been turned down to 400 FF for this year.

If you have not yet get rid of those fees, please do in the following way:

- send a personal check to DRAGON - Vincent DEGOT (the adress is on the front cover of DRAGON) in French Francs (because the banks are charging a lot to change any foreign currency);
- if it is easier (but only in that case) for your institution to send this amount directly to DRAGON Bank account, the references are: DRAGON - Vincent DEGOT, Account n° 000 5 05375 1 4, Société Générale, Agence G Saint Michel, 27, Bld Saint Michel 75005 PARIS.
- at the same time send me back a copy of the invoice you probably already have, or write me a note to ask for one if necessary.

Thank you in advance for supporting DRAGON and SCOS.

Do not hesitate to spread the name of DRAGON around you and tell anyone interested in becoming a subscriber to get in touch with DRAGON'S editor.

Vincent DEGOT

Marking Time on the Cultural Calendar

by

James W. Fairfield-Sonn

ABSTRACT

In this article one cultural change effort is examined using a combination of historical, contextual and processual analyses. When viewed from these various perspectives, some of the complex nature of cultural engineering becomes more apparent. In addition, it becomes evident that to study the dynamic nature of cultural change additional research methodologies, such as the cultural calendar discussed in this article, will need to be developed and employed.

Prior to 1982, "corporate culture", broadly defined as a set of values, beliefs, assumptions and symbols that define the way a firm conducts its business, was only rarely used as an orienting perspective to explain how organizations function (Jacques, 1952; Turner, 1971; Pettigrew, 1979; Whorton and Worthley, 1981). In that year, however, the publication of Peters and Waterman's In Search of Excellence as well as Deal and Kennedy's Corporate Cultures served to establish the viability of the perspective in both the academic world and the popular press. Soon thereafter, a flood of articles and books appeared examining various facets of the construct from several different perspectives (Smircich, 1983). Moreover, many of these works held

An earlier version of this paper was presented at the 1986 Standing Conference on Organizational Symbolism in Montreal. The author wishes to express thanks to Patricia Geist and Diana Stork for helpful comments on drafts of this paper.

out the promise of explaining how corporate culture is related to variation in firm performance.

While no landmark study has yet been produced to clearly establish a relationship between corporate cultures and organizational performance (Barney, 1986), the sheer volume of work on the hypothesized relationship seems to have convinced many practitioners and researchers that in some way the relationship must exist. Accordingly, when a firm's management is less than completely satisfied with their performance increasingly they ask how can our culture be changed - and quickly, while researchers are laboring hard to find some answers. Thus, a second wave of research on corporate culture, this one devoted to cultural engineering, has begun.

If the research on cultural engineering reported in the collection of articles by Kilmann et.al. (1985) and presented at the 1986 Standing Conference on Organizational Symbolism in Montreal are accurate indicators, though, cultural engineering is proving to be a complex and very difficult phenomenon to study. Accordingly, individuals who desire and espouse quick-fix solutions such as those seen in Blanchard and Johnson's The One Minute Manager (1982), will soon be disappointed with this approach to management. On the other hand, individuals who prefer to adopt a more historical, contextual, and processual approach as illustrated by Pettigrew's The Awakening Giant: Continuity and Change in ICI (1985), can look forward to a rich and rewarding opportunity for basic and applied research.

Following in the Pettigrew tradition then, the intent of this article is to illustrate several points about the complex nature of cultural engineering by examining one ongoing cultural change effort. In dealing with some of the history of this endeavor, which has been underway for four years, three points

will be emphasized. First, events are more readily understood when viewed as a historical development where periods of dramatic action are interspersed with episodes of seemingly minor or no action (Sui, 1978; Greiner, 1972). Second, the actions taken and their consequences need to be understood and evaluated in light of the context where the activities occur (Schwartz and Davis, 1981). Third, the on-going cultural evolution, which may appear to be somewhat random and at many times may be hardly noticeable, in fact, can be made more understandable by monitoring some key dimensions of organizational life through the use of a diagnostic process model (Fairfield-Sonn and Jorgensen, 1986).

In developing these points, first the company, and then its new Education Center, which is the focus of the analysis, will be described. Next, a diagnostic process model for understanding some of the changes in the roles trainers played in the Center will be outlined. Then, key periods in the cultural evolution of the Center will be detailed and analyzed.

The Company

As noted in its 1985 annual report, the Reliable¹ corporation, "is one of the world's largest multi-line insurance and financial services institutions. Through its four customer-oriented groups, the Reliable and its subsidiaries and affiliates offer a wide range of products and services,

¹ A fictitious name has been given to protect the firm's identity.

including property and casualty insurance, life, accident and health insurance, annuities, pension and investment management services, private placement loans, financial planning, mutual funds, trust services, cash management, home and commercial mortgages, real estate development, individual retirement accounts, Keough plans, and stock-brokerage clearing and execution." In 1985 the firm's total revenues were \$14.6 billion(U.S) and its assets amounted to \$41.6 billion(U.S).

The Education Center

In 1985, when the Reliable announced the creation of a new Education Center, the headline of the company newsletter read, "Not Just Another Pretty Space". To the outside world this slogan may have appeared to be merely a clever pun. Observers closer to the project, especially those involved in the Center's creation and interested in corporate culture, however, recognized the phrase could be interpreted on a number of deeper levels.

To begin to appreciate some of the surplus meaning in this phrase, it is helpful to note that historically the Reliable had been organized around several powerful departments with a relatively small corporate staff. Thus, contrary to prevailing practices, this new Education Center would combine a small corporate training and development group with several departmental training groups and centralize them at one location near the corporate headquarters. This move raised a number of questions within the organization, such as:

How would the status of corporate training and development change?

How would the focus and style of programs change?

What role would the Education Center play in training the future leaders of the organization?

How would the professional identity of the various groups change?

How would the department training and development groups be integrated and coordinated within the Center?

Would the new Education Center become a microcosm of the politically decentralized Reliable or an experiment in centralized corporate level activities?

Thus, the creation of the new Education Center raised a number of technological, structural, and political questions that would influence the culture of the Center. At the same time, the potential for the Education Center to play a key role in modifying the culture of the larger corporation was becoming evident to line and staff members of the firm as well as to some outside observers of the company.

A Diagnostic Process Model

To more readily understand how the corporate and department trainers roles evolved in the new Education Center, it is useful to step back and recognize what tasks trainers are typically responsible for and some of the ways these tasks can be performed. Specifically, trainers are usually given responsibilities: to teach proper attitudes and behaviors; to provide work related and general knowledge; and to assess and develop employee competencies. Given this charge, training groups are advantageously positioned to act as catalysts for culture change. In practice, some of these groups are indeed highly innovative. Yet, other training groups serve different functions such as guardians of the status quo, rebels, or merely as servants fulfilling the wishes of others.

To explain some of this variance in role performance, a parsimonious model based on two key factors is proposed here for consideration. The two independent variables in this model are desire to promote cultural change and organizational power within the firm. It will be suggested here that the interaction of these variables yield a four cell matrix of roles. These roles, as alluded to above are innovators, rebels, guardians, and servants. See Figure 1 below:

Figure 1
Training Group's Roles

		Organizational Power	
		High	Low
Desire to Promote Cultural Change	High	Innovators	Rebels
	Low	Guardians	Servants

As the above matrix indicates it is the interaction of desire to promote cultural change and organizational power which predicts the role the group will play. Operationally, these variables are defined as follows. Desire to promote cultural change refers to degree of appreciation group members have for the power of cultural elements such as myths, symbols, rituals, and code language to influence the way activities are organized and conducted inside the firm (Fairfield-Sonn, 1984). It is thought that this dimension is

primarily effected by the professional and work background of the group members. In addition, however, it is equally important to note group members desire to learn about and engage in cultural engineering. The second independent variable, organizational power, refers to the groups's formal reporting relations, informal political ties, size of operation and budget as well as physical location (Mintzberg, 1983; Salancik and Pfeffer, 1977).

The interaction of these two variables then will yield four generic roles as noted below.

Innovators: The combination of high desire to change the culture and high organizational power provides the group an opportunity to act as a source of new ideas and directions for the organization.

Rebels: Given a high degree of desire to change the culture but low organizational power, the group will in all likelihood be viewed as a source of irritation, agitation, and challenge to prevailing wisdom.

Guardians: If the group has significant organizational power, but is unsophisticated in the means of bringing about cultural change or not interested in engaging in it, then the traditional staff will pursue a course designed to maintain old ways of doing business. Moreover, their position will allow them to act as a significant source of restraint over the introduction of new ideas.

Servants: If the group is accorded only a minor place in the corporate hierarchy and is manned by unsophisticated staff members, then little action will be forthcoming from the group beyond the taking and executing of orders from those outside of the group.

A Case Study

To illustrate the dynamic nature of cultural change through the use of historical, contextual and processual analyses, we turn now to one case study. Specifically, the intention here is to move towards a deeper understanding of how one training group is currently being culturally transformed even as it attempts to play a larger role as cultural catalyst for the organization it serves.

The primary focus of this analysis is on the Reliable's new Education Center. As will soon become apparent, however, it is impossible to comprehend the actions which are taken there without reference to the influence of the larger corporation on the group itself.

The data for the case study was collected over approximately a one year period of time through semi-structured interviews with employees of the corporation and by participant observation while the author served as a consultant to the group on one training program. To organize the discussion of how the introduction of new personnel, new goals, and new programs led to the creation of subcultures within the increasingly powerful training group, extensive use will be made of the diagnostic process model. Specifically, the model will be used to focus attention on 7 critical periods in the group's life. These periods, which span the years from 1983-1986, were chosen because of their significance to the cultural evolution of the group. That is to say, using a cultural calendar, each period marks a time of discernable cultural transition for the group. In describing each of these periods, the author has also provided period titles in an effort to capture the essence of the activities which took place during each time frame.

Period 1. Early 1983 "Arrival of the change agent". The origin of the Center can be traced back to the hiring of a new Director for the corporate training and development group. Fully two year prior to the official launching of the Center a new Director was hired from outside of the company who appreciated the need for Reliable's becoming more innovative and market driven rather than product driven. This individual came from a highly competitive financial services background, which was strikingly more aggressive than the conservative insurance atmosphere of Reliable. What this "maverick" took charge of was a small corporate training and development group comprised of approximately a dozen guardian and servant minded instructors. Perhaps more importantly, his senior managers instructed him to try to develop more relevant and rigorous training programs. See Figure 2 below:

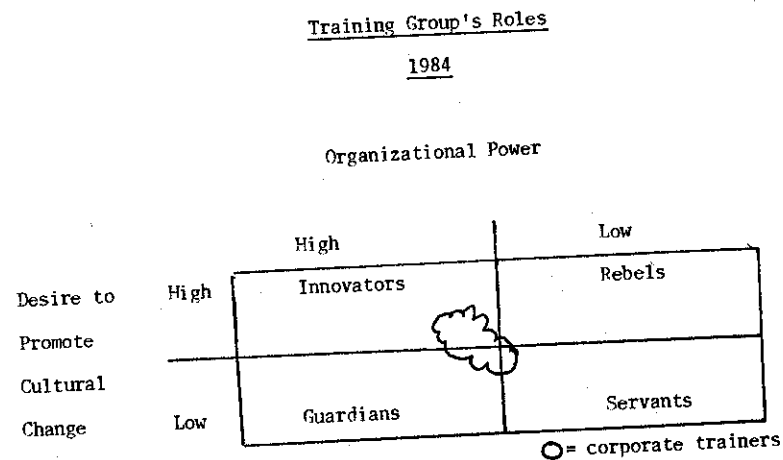
Figure 2
Training Group's Roles
1983
Organizational Power

		High	Low
Desire to Promote Cultural Change	High	Innovators	Rebels
	Low	Guardians	Servants

○ = corporate trainers

Period 2. Mid 1983-Mid 1984. "Building an innovative team". Soon after his arrival, the Director with the support of senior management began to actively hire more innovative instructors and program development staff members. By the end of a year long recruiting effort these new instructors, who were viewed as critical for the Director to win a base of support for his new ideas, had swelled the size of the group to roughly 35 members. Their addition, moreover, shifted the balance of sensibilities of the group towards an innovative posture by the sheer force of their superior numbers. See Figure 3 below:

Figure 3



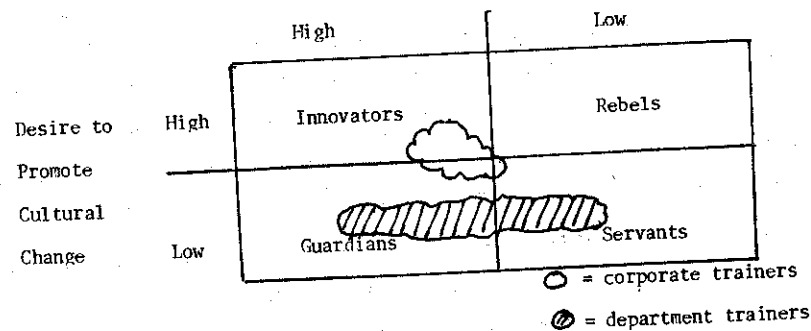
Period 3. Mid-1984. "Documenting the need for change". To justify a radical repositioning of corporate training and development in the Reliable evidence was needed to justify a new role for the group. Much of the

justification was provided by an in-depth needs assessment prepared by a new staff member. Armed with the document, a movement towards a more centralized activity was launched by the new Director.

Period 4. Early 1985. "Dramatic success and the group's loss of leadership as catalysts for cultural change". To demonstrate the innovative role corporate training could play in the corporation, a seminar series for senior corporate executives called the "Top 100" was begun. The task of the program was to bring outside experts in to critique Reliable's plans for the future. Undoubtedly, the most successful session was conducted by a senior banking executive from New York City who plainly detailed why Reliable could not obtain their objectives with their current structure. Subsequently, this executive was hired to put a new structure in place. This overall corporate reorganization, however, soon dramatically eclipsed the magnitude of any change efforts being led by corporate training and development and attention was shifted to corporate wide alignments, which shook the very foundations of Reliable's traditional way of doing business. Thus, the success of the program resulted in the corporate training unit's loss of its place as a primary change agent within the firm.

Period 5. Early 1985. "New Center opens". With much fanfare, the new, multi-million dollar, high-tech, Center was opened. Along with the launching came the arrival of approximately 100 trainers from the newly reconstituted departments. Since the new instructors were primarily from the guardian and servant school of thought and far outweighed the new breed in numbers, a cultural schism developed within the Center between the corporate and the department trainers. See Figure 4 below:

Figure 4
Training Group's Roles
 1985
 Organizational Power



Period 6. Latter 1985. "New products do not materialize".

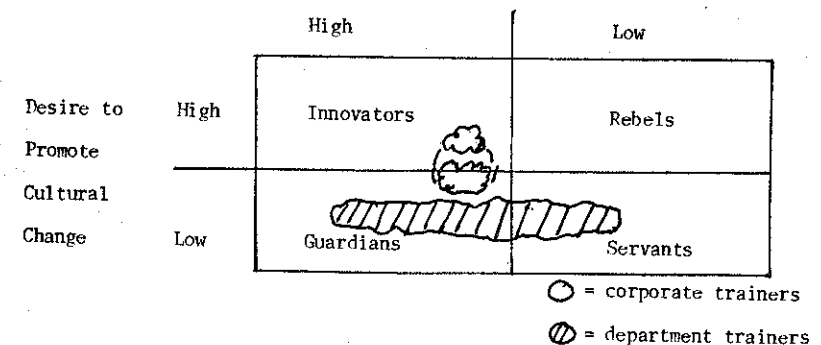
Notwithstanding the intensity and desire by the corporate staff, they were not able to create the new products for the company which they had hoped would establish their reputation as innovators. This inability to capitalize on the momentum they had generated led to a further reduction in their organization-wide visibility as change agents.

Period 7. Early 1986. "Renewed effort". At mid-year 1986 three activities signal an attempt by the group to recapture its waning position as catalysts for change. First, a new executive has been hired from a major manufacturing firm, who will be above the National Director of the center. This individual's charge is to take firmer control over executive succession planning and organizational development efforts. Second, a promising values

analysis project has been initiated to identify the current cultural position of Reliable as reflected in the company's internal and external publications. This analysis, in turn, may provide the basis to launch another effort at redirecting the cultural focus of the organization. Third, in lieu of new products, the group is revising the performance appraisal system for the company in such a way that it will reward behaviors and attitudes of employees desired by the Education Center's leaders.

The combination of these efforts will, hopefully, allow the group to obtain a position of greater prominence as cultural catalysts. Meanwhile, within the Education Center a more sharply defined separation is appearing between the highly innovative corporate program developers and the corporate instructors who increasingly act like their guardian brethren from the line departments. See Figure 5 below:

Figure 5
Training Group's Role
 1986
 Organizational Power



Discussion

The intent of this article was to explore some of the complexities and realities of cultural engineering by adopting historical, contextual, and processual perspectives. In this instance, attention was focused on the growth of a highly innovative corporate training and development group which led to the creation of a new Education Center within a rather conservative firm. In reviewing the historical development of this Center, it becomes evident that cultural change is possible, but it may not occur without persistence, frustration, and a willingness to address unanticipated consequences of one's own actions as well as the resistance of others.

In reviewing the events which took place, several poignant lessons emerge. First, even well managed change efforts can produce unanticipated consequences that must be addressed. For example, the group's most innovative program, called "Top 100", prompted a total corporate reorganization, which dramatically eclipsed in importance the Center's own efforts to promote change. Second, much of the group's potential impact as change agents depended upon the creation of the Education Center. Yet, ironically, the consolidation of the relatively small group of innovative corporate trainers with a much larger number of conservative departmental trainers in the same building may inhibit further attempts at innovation because further change is seen as politically less desirable by the numerically superior number of department trainers (Lawler and Bacharach, 1983). Third, as a consequence of consolidating all the trainers together tension is already mounting within the corporate group around what roles members of this subgroup will adopt. This issue is seen in the emergence within the corporate training group of two

subcultures - one highly innovative and the other espousing a guardian mentality (Alderfer and Smith, 1982). How this tension will be resolved is an open question at this time.

On a broader level of discourse, however, this work is also about the importance of marking time on a cultural calendar as well as by Julian calendar time. In discussing the emergence, maintenance, or challenges to existing corporate cultures (Fairfield-Sonn, 1985) it is clearly important to anchor the discussion with references to the passage of days, weeks, months, and years. Yet, as work progresses on corporate culture and reference is increasingly made to such phenomenon as organizational sagas (Clark, 1972) or how mythological events can explain everyday organizational occurrences (Wolf, 1979), it will become important for researchers and practitioners to develop more uniform and reliable ways to express what phenomenon they are describing (Whorf, 1956). For example, in the case study there were periods of dramatic action and quiet building periods. It would be useful if these periods and others could be consistently classified in the same way by independent researchers. In this instance, the author attempted a first step towards this goal by trying to capture the essence of the activities which occurred in each period with time frame titles. Hopefully, as work on cultural engineering continues to be enriched through the use of more historical, contextual, and processual approaches an even richer vocabulary will be established to describe different cultural periods. If such a classification system does emerge to mark time on the cultural calendar, all future work on corporate culture and cultural engineering will be better for it.

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THE EXISTENTIAL APORIA OF "POST - MODERN" MIND

On doubts upon a meta-theoretical option

Wolfram Burisch

Shifting modes of significance

Whenever particular people congregate who feel obliged to emphasize at the same time both their coherence and their individual identity, they tend to execute a specific mode of liabilities and conjectures, that gives no room for hesitation or interrogation. The stage is occupied by common convictions, and it permits a confined cadence only to interludes. Actors involved in the scenario do not complain about any restriction of their personal performance, though. What they fear instead is a menace off-springing from an hostile environment, which may bear a catastrophe, in case the particularity of the congregation, as such, should become disregarded. Warding off any doubts about its "unique spirit", and defending an "eternal essence" of the substituted conjectures, the individual is obsessed by the fiction of receiving share for his engagement one day. - Provided there are shares to allot, if at all.

Obsessions with these characteristics are well-known throughout occidental history. Frightened by means of an apparant inevitability, the separate individual tries to escape from an unmerciful prospect, and becomes subject to the allurements of grace on the other side, or of glamorous awards in the next period of material development. In any case, the particular

is due to acquiescence not only in certain aspects, but in a hermetic conception as well. On the pretence of indicating the symptoms of tomorrow, if necessary, the structure of the present is affirmed and vindicated. - Ever since this mechanism has been empirically proved, it sustained its attraction.

This brief reminder would be entirely redundant if there was not the impression that symbolism occasionally becomes misinterpreted on the fatal premises of current conceptual trends. One of these signes is under the banner of "post-modernism", and its seems to be of widely-held subliminal popularity, next to cynicism. But, however diffuse it may seem, a social presentation of mind must be subject to an acknowledgement of its history. For cultural emissions are not independent entities. Although they may be only fashionable, on the contrary, they reflect a state of society. And they appeal to it in a manner, that, in the case of "post-modernism", could shake at the roots of existential orientation: Because it does not hesitate to deal with the "meta-theoretical" contention that the process of reason has come to an end. By this it implies the promise of an optional being, as well as a subcutaneous horror of accidentalness.

Precisely for that reason, it becomes of vital importance to illuminate the terms of the "post-modern" option: in order to make a deliberate discourse on the conditions of social being with reference to nature and possible technology on the one hand; and to explain the significant impact of this assumption on social relations on the other. For the contemporary mental apparatus is prepared to take the abstract, contrary to the historically concrete, for granted; assigned technology instead of conceived future. It is not the communicational reality that gets acknowledged as an orientation, but a repretation of it. In consequence, technological rationalism becomes an entity of its own.

Under these auspices an endeavour after imaginative aims or particular solidarity built from the bottom up must seem to be almost embarrassing. For actual procedures, controlled by something other than reason, are indifferent to both yesterday's idea and the future after next. - Therefore not by chance, symbolism is in danger of becoming apparently confounded with a "commerce of significances".

Backwards and forwards across the Atlantic

An investigation of "meta-theoretical" implications of a concept carries along a number of doubtful assumptions itself: On the one hand, it imputes the very presence of distinctive theoretical levels, -presumably a hierarchy of these. On the other hand, it insinuates its own superiority in comparison with the explored "different approach". In order to compare, however, a unit of measurement must be provided, a hierarchy of theoretical levels submitted, that could be only something "essential": in so far as one is "closer" than the other. Hence "essentialism" and "superiority" tend to congruence, against a theory that does not accord with such a professional order, but rather immanent notions, and therefore become suspicious of criticism. This suspicion, however, arises from real grounds: the care of power and commerce.

Actually, the blurred "post-modern" option is evasive against any attempt to be dealt with as subject of commerce. One of the reasons for that is to be found with the rebuff to all kinds of conclusion in as far as a specific shaping is concerned. This posture indicates both its initiation with architecture, arts, and semiotics in distinction to "neo-classicism", and its pretension to a peculiar "anarchism", against the trend of structural rationalism. Precisely because of this corporate rationalism, "post-modernism" abstains from any kind of commitment that could turn out embarrassing. Therefore it refuses any kind of formal confession as well. Altogether the most eminent act of "post-modernism" is to renounce reason, in both social history and human rationality. Not to treat with irony: the return of intellectual innocence may be presumed.

As if that innocence were to be found at any rate, however, the intellectuals "after modernity" kept on searching for it across the Atlantic. And on both sides of it they grasped some set

pieces in order to form a constituent body from their "tentative option". Since the fall of man started with philosophical considerations, the "semiotic" interpretation argues, the resurrection of innocence must be set in force prior to that. The "science of sciences" intends to make forgotten all the faults of a speculative philosophy. With regard to this target, however, the "New World" appears less "spoiled" than the ancient one. Starting with the "post-industrial" American society, therefore, the fashionable intellectuals could assume a rather stable political background.¹

Nevertheless, the story of European post-modernism portrays dramas of individual confusion and mania. Abrupt interchanges of statements and coalitions, ending up with a departure from the post-modern option on the whole, were not restricted on the sphere of French culture.² On side of the British and the German one they have not really forced their way through, since the juxtapositions of post-modern elaborations and political tendencies must be striking: Although the post-modern option refuses any historical preoccupation, its practised opportunism is obvious. Thus arises the suspicion of a similarity to the cynical position; - and forces the "post-modern" to a theoretical apology.

For the cynic does not hesitate to recompense his isolation with shares of power. According to its interpretation divorced from historical marginalities, however, the intellectual posture must remain "esoteric". If it does not want to get disqualified as a discourse, the induced interests must be disposed for communication. That is no problem at all with a critical concept: Since it does not deny being engaged against oppression. It sharpens, on the contrary, its applied methodology in order to conserve or to transform the premises of social life. Without a precisely entitled connotation, however, methodology becomes an alienated goal in itself, which installs a marbleization

between the stuff and the actors. By that the handling man however defined is condemned just to react. - The "post-modern", rather, has to decide whether he wants to jeopardize his "innocence".

At this point, already, the American and the European "post-modernists" must be distinguished; although there will be something quite important to learn from the Americans later. "In the very beginning", however, all of them - and that marks the only congruency between the different modes of conceptualization - substitute a state of "purity; antecedent to 'the fall of man'". That should not be misunderstood in the European case as a curious paradise, although some of the fashionable writers deal with the "Apollonian" and the "Dionysian" in a nearly frenetic manner. The repetition of myth, as well as a heroic oath on a one-sided explanation of Nietzsche, ought to cause both a detestation of reason and a contestation of one's exempt position. So it is not in vain that the "post-modern" claims to an élite.³

So far this mode could be interpreted in terms of psychoanalysis; especially since the "post-modern anarchism" does not really differ from other moods by which the uneasiness of culture gets complained of. Furthermore, this entire attitude is brought forward always exclusively by a small number of privileged individuals, who traditionally constitute the clientele of psychoanalysis anyway. But its effects get dispersed through the phantasmagoria of "the individual's society". This "individual", however, designed by the economics of supply, is basically divergent from the European idea of "the social subject" with abilities of its own. A collision between these different concepts is inevitable; and it should not get reduced to an academic interlude. For it would be of post-modern arrogance to "solve" the problem of social interests ex cathedra. The "post-modernist" clings to this posture in consequence of his

"meta-theoretical" postulates: In the absence of reason a discussion on existence cannot be worth-while. With the same argument the other way around the Critical Theory is blamed for interfering with social requirements.⁴ This situation is characteristic of a meta-theoretical double-dealing: One gets charged with a cause that the other one professedly is not interested in. This apparent contradiction, however, has a specific background: Following its own conviction, Critical Theory cannot transplant its perceptions into the minds of others. And it would not try to persuade a person against its interests. But it can work up the procedure and results of positivistic research. Since positivism assumes to mirror reality, it focuses on the obvious destination of that as well. Consequently, Critical Theory can contrast actual performances with contextual demands in order to reveal existential interests. In this way, there develops a kind of cooperation between positivism and Critical Theory indeed; although, due to its concept of determination, positivism can produce neither scientific surprises nor meta-theoretical claims.

By the rather simple means of positivism, however, the American part of the "post-modern beginning" can be explained as well: The American "pre-history" does not begin with a mythical origin, but with the "Pilgrim Fathers". This basic difference to the European history of empires cannot be overestimated, because it influences the entire concept of history, reason, and, above all, nature. The American "handling man" - according to the bible he must be of male character - is a creature of directive faith. His superordinate formation is controlled by a prescribed target, which will never finally be reached throughout his existence. He is always driven by an excitement that remains an abstract; and, in his situation of permanent transitoriness, the active man reproduces the absurdity of Sisyphos' existence without being aware of that. From time to time - not time of expressive events,

but of commercial continuity - he may get recompensed. The awards, however, are other than substantial qualities: capital and grace, which are, thanks to Calvin, interchangeable.

Having a look at the consanguine American Social Sciences, one must state that they are characterised by such a concept of man, almost totally. But it is not this embarrassment which marks the crucial point with some specific mode of narrow-mindedness: It is the monstrous phenomenon that this fictive "anthropology of individualism" deals with a "product of the American society"; although it must be seen to have a confessional import; - including racism, and all the other consequences.

But the capitalist society blockades the insight of its confessional conditioning. Not by chance: because, even without having studied the theory of Karl Marx, by this fact everyone could perceive the conditioning of social reality through means of consciousness. Consequently, a change of mind is apt to effect the social processes as well. To give expression to this idea, however, may be more dangerous than an open class-struggle, which can be suppressed by capital and arms. Therefore, only the idea of conditioning actual developments gets strangled as a "revolutionary menace", specifically by means of methodological stigmatization. - That makes sense with a unilinear positivism: It is obviously frightened at an "evil" from outside of its own system only, and views the different with a highly suspicious eye.

Provided a European "post-modernist" had seriously gone to America in order to find there the "essentials" of social being, he would return somehow split between a cynical internalization of applied Social Darwinism with its blue-eyed optimistic touch, and the courage to resist resignation. For Talcott Parsons, and other functionalists, have indirectly confirmed what the early Wilhelm Reich had already perceived before: That the relation

between the modes of production and the cultural connotations attached to these is one between different but interdependent variables.⁵ The option for one of these is nothing more than an outflow of opportunism. None of them, however, constitutes an origin or another kind of genuine outreach. The only assumption that seems to be reliable, to a certain extent, is the rule of an entity named "power". The only constancy of that, however, is its transitoriness.

Following positivism, power is the result of an individual's or group's handling of a given structure, which has to be approved by patterns of culture and beliefs. These, in return, provide the methodological means by which an equilibrium is maintained, which reproduces the circuit of power. When it comes to the point of rule, however, the apparent equilibrium runs into a unilateral relation: Superiority is with those who obtain the resources, the means, and - above all - the method. That is, the method to keep the majority away from knowledge. Superiority, though, rests upon ignorance on the other side. That ignorance, however, was by no means destined to be a "natural" one.

The "meta-theoretical" struggle between rationality and faith

When Francis Bacon in 1623 stated that "science itself is the power" he unconsciously provided one of the most grievous misunderstandings of purpose in the history of human reason: Bacon wanted to mediate the perception according to the argument that men could control nature by following its experienced example. His intention was a communicational act, "a happy wedlock", between the two of them, human reason and the kernel of matters. What most after turned out, however, was the

opposite - a submission of nature to the means of despotic dominion. Exploitation and violation, instead of mutual agreement, became institutionalized technologies. Knowledge decayed to opinion - "information" in the contemporary terminology - in bondage to economic and military arbitrariness. - Precisely the conditions that Bacon had hoped to overcome in concrete.⁶

From the Renaissance's experimental approach, however, the physical tools were perforce absolved. These tools are, of course, "rational" in a specific sense: Their methodological application - consequence on paradigms - follows a "logic" of its own. This logic in procedure, however, is not an universal one. The rules attached to it are the ones of an established power-system; and the structure of that may vary according to the conventions of its proponents. But under no circumstances the methodological tools will experience fundamental shiftings, or even exercise their own dissolution. So that a social order, which reflects positivism as the "methodological reality" itself, is not prepared for the appreciation of basic doubts, - as would be due to a perception of history.

For history cannot be understood as a mere interchange of cultural appearances, economic preferences, or political animosities - all superstructural issues - on the surface of the same permanent distribution of the means of production, or the domination over these and their dependents. Social orders are not given by nature, which is not very peaceful at all, but constructed by a growing consciousness, which tends to realize particular interests. As long as there does exist a hierarchical distribution of power, which blockades an overall communicational agreement, there will be an open or covert struggle to push society forward onto the level of a different historical quality.

There have been explored, however, two mechanisms by which this process may become interrupted or oppressed, and which do not

differ in their ultimate effects: One is to declare a specific group of people as being responsible for the interests of the entire society. The other is indoctrination, according to which the basic demands for a human society are already - apart from temporary flaws - fulfilled. - In these cases, indeed, there is "no need" for history.

In a certain respect, and without sarcasm, Karl R. Popper dealt with mechanisms like these in a sophisticated manner: On one hand, he had used his experiences with the roots of European historicism, which was an indicator of a trembling social order. From that he was afraid of political doctrines, which were apt to gather the masses, after philosophy only offered visions of apocalypse. On the other hand he was persuaded of the need for a kind of confession on the people's, even the scientists' - side. Its conclusion - which could be defined a meta-theory - was to offer an option between faith in either history or rationality.⁷ He bet on the popularity of the "rational goals of the West" and won with the Cold War. Even the later "revolutionist act" of Thomas S. Kuhn, who returned to the "classical" perception of paradigmatic relativism, could not really disturb the business of positivism.

The political atmosphere, however, by which Poppers's equation of faith with rationality was justified, has basically changed: Since Europe went back to preferring reflection to a warfare of dogmas, and has - although in a rather repressive manner - surmounted historicism, the United States is condemned to enjoy its paradise almost all by itself. But that is, by far, not a condition to become sarcastic about. Thus it causes - and for that reason it must be debated - lots of confusion on the other side, for which "post-modernism" was an indicator:

The Americans' posture could be interpreted as a shortcoming of the obsession to be elected as "the chosen people". That is what the preachers, despite of all the cruelties and colonialism,

distribute. The people elected, by an afterthought, Christ, plug into the historical Jesus from Nazareth, priorivise subjektivty, though it ignores processes of the objective.⁸ Such a mentality, blocked by phrases of praise, is bound to suspend any idea of enlightenment. Since mind is restricted to being a recipient of information, destined from somewhere else, it has lost the ability to grasp any concepts of responsibility: Issues of power and paroles of faith become identical.

But these auspices have been neglected in Europe for a long time. Reason on the one hand, and Christianity on the other, occasionally incorporated, were taken for granted habits. Historically, however, enlightenment as a continuous process of resistance against institutionalized power-structures, the first being Christian domination. Only with enlarging industrialization - and partly its governmental consequences as well - this act of controversy at times became focused on the relations of production and technology.

In the meantime the religious communities took resourceful advantage of the division of labour: They tried to take in the spare time, the inclination, and the desires that were not engaged with the production process. Such a stable agreement could remain, however, just as long as there were no tendencies of mutual influence to be stated. In reality that meant a per-sistant struggle between rationality and faith underneath, which inclined to the side of material prosperity. Gradually, rationality in a sense of "technological progress" became a value as such. But this faith in progress is completely independent from, if not inimical to, the Christian creed. In this respect the reminiscence of the churches' fight against reason and their prevailing coalitions with power were not completely extinguished in Europe. - Because of this recollection progressism and faith are not interchangeable there; history has performed the important role of a judge.

However, all the attractiveness of faith in progress is about to expire on the side of Western Europe: For a long time a pretentious progress has started to damage the human interests of survival for which it was initiated. And as the human being is an integral of both conscious mind and social nature, it cannot do harm to one part of that without consequences to the whole. Since the damages caused by technology became obvious, however, the entire procedure of production and consumption has to be reconsidered: within the substantially reflected traditions of European culture, which are not attached to holism.

Although the expropriation of technological faith became an obvious process, as it were "official", there is no reason given for apocalyptic rumour, however. Lots of people, of course, will not accept that development for themselves anyhow: They give preference to the "individualistic view" - "it will meet with the others, but not with me" - of fate, hazard, cynicism, or spiritualism; or they may return to the embrace of churches as well. But, except for particular individuals, the phenomenon of an exhausting progress is not a catastrophe at all: Because the idea of technological rationality, ever since the enlightenment, was to watch and to restrain natural resources, not to exploit or to destroy them. In as far as the objective situation must be recovered with full realization of responsible consciousness the means for that have been prepared with a lasting development of reason. - From this point of view, the "Pilgrim Fathers" have retired from the Old World before the modern was really conceived.

In reverse, one may argue, the Europeans are late for the chance to participate in the power that became the essential after modernity. Considering the clutches of the Europea "post-modernists", their devotion to neo-conservative "Western goals", this seems to be conclusive: They have to see through really threatening terms of existence then, in order not to slip back into the temptation of cynicism. For the European grammar spells power in more than one version.

The contemporary cynic has gone through the experience of empirical power; and he became, in the absence of any other ends, acquainted with it. Limited by the evidence of formal rationality he betrays the system by obeying its prescriptions for his own sake. What this implies, is that the power he submits to, is structurized, transitory, and without any specific legitimacy. The awards offered by it make demands for an equivalent of pragmatism without theoretical pretension. As he is claiming some "persistent values", however, the "post-modern" must avoid, by any means, becoming confounded with such a straight cynical expression.⁹ Especially in America that would draw on him the disdain of Christian shapeliness moreover: which remains the most particular social persuasion whatsoever; and which can be, under no circumstances, in favour of egocentrism. Finally, the discretion of post-modernism comes to an end with exactly those standards of "normality" which seem to be over-ruled by the extension of rationality.

Christian beliefs are elementary to socialization on both sides of the Atlantic. And, provided there is no block through hierarchical access, they educate to personal responsibility in action. It causes, however, a tremendous difference in respect to responsibility, whether the belief is understood as a popular instruction in a metaphysical sense, or whether it warrants self-determination to each social existence. Because propositions of "good conduct" would interfere with a theoretical discourse from the first. To make this possible, inversely, theoretical efforts throughout history were permanently challenged to mind the traps of piety, rationalization, and inquisition. Recallable cruelties that were committed under the consolidated emblem of "Christ" and "purity" have made the senses become more acute, in order to suspect propositions of "the good", "the essential", or "the eternal". Hence there has developed a critical concept of historical being: From a distant Testament to an existentialism of resistance¹⁰; from individual resistance to terms of a theology

of socialism¹¹; from a methodology of exploitation to the reason of social responsibility¹². Along the path of humanity these approaches have in common a concept of theory, that is to abolish self-styled power.

A suspicious apology of power

The critical demand on a theory rests upon its ability and purpose to confront the actual, with the possible firmly kept in mind. This means, in concrete, to compare very existence with its latent facilities and not too settled matters. Critical Theory itself incorporates practice by doubting any certainties like essentials, being permanently reminiscent of the hitherto contradictory developments, and remembering the basic necessity for responsible changes.

Of course, this cannot be achieved by means of cultural or social engineering; because these are business-like, preformulated, and bring forward issues of reproduction only. Vital demands, passions, and sensitivity, however, become open rather by the antagonistic, the indirect, the ashamed, the disappointed. Rationalizations and apathy, as well as occasional fashion, merely mediate initial interests in part: The code of signals must be broken, in order to let submission and suppression become aware.

With reference to power, both cynicism and post-modernism, though they are anxious to keep distance from each other, unwillingly are about to come close with their definitive uncertainty. The cynic interprets the given resources as a matter-of-course; in the meantime, although with an expression of disdain, he bothers to get sufficient of them. Therefore, he puts aside all mental reservations. The post-modernist, instead, after he has got rid of a reasonable orientation, does not hesitate to

invent various means to cover his position. Because, according to his presumption, the alteration of means is a proof of his theory of convenience: The effect, if obscurity finally becomes an end as such. Both of them, the cynic as much as the post-modern - observed with a critical conception - leave outside their efforts "something ruling". In regard to this "something", the cynic is in a passive, the post-modern in an optimistic, mood; whereas, analytically seen, both moods can turn out contrary. - Whatsoever they both intend to be presumably close to that "ruling", they are anxious to loose contact as a precaution.

In so far as no obvious changes seem to have occurred since C. Wright Mills stated: "But to know that the top posts of modern social structures now permit more commanding decisions is not to know that the elite who occupy this posts are the historymakers. We might grant that the enlarged and integrated economic, military, and political structures are shaped to permit command decisions, yet still feel that, as it were, 'they run themselves', that those who are on top, in short, are determined in their decisions by 'necessity', which presumably means by the instituted roles that they play and the institutions in the total structure of society."¹³ So to speak it is not evidently wrong to strive for power, in order to use or to abolish it for reasonable historical purposes. But the one who pleads for empirical power has to open the pragmatic implications, theoretical references - and, provided these are assumed, meta-theoretical confirmations - to a deliberate discussion. Otherwise, one must suspect a lack of legitimacy together with a stubborn neglect of responsibility for the future.

To avoid such a suspicion the cynic refers to a philosophical tradition, by which he infers a significant hint at the same time: The "classical" cynic, Diogenes from Sinope, above all, from whom the name is borrowed, resolutely raised the matter of

the relation between power and nature. And he set forth that the struggle for power is nothing other than a contingent position in a fight for one of the two sides of the same coin. Considerations of a substantial existence come off a loser by this, especially since the temporary "winner" cannot really enjoy the gain, but has to dedicate it to the rituals of an idolated civilization, which has overwhelmed the unredeemed senses.

The contemporary cynic therefore abjures divine cults. But he does not disavow being dependent on the crumbs of a functional power-structure. Along with his resignation, he anticipates, ironically speaking, the "meta-theoretical failure" of the "post-modernist": For the last-mentioned insists on his "originality", puts forward his "Dionysian will", and, moreover sacrifices a mythical power. By the splitting of rationality, nature, and sensitivity, historical reason loses a joint drive and an aim. By declaring the absence of reason, however, the post-modern option receives its justification only. Therefore, it must turn out paradoxically conservative: In order to preserve the conditions, which it has contributed to, from reason. Far reaching perspectives get replaced by an "optimistic moral" of the present, which conversely cannot be made answerable. Whatsoever occurs in the connection of technology with nature, a monstrous epidemic of self-deception is being spread: That incidents become just "explained" as outfall-symptoms of human fallibility. Technological methodology, ruled by a superior power, is perfect; human existence, instead, with its sensibility, feelings, and longings obviously became redundant. - Contempt of the human is the prize with which "individuality" becomes distinguished.

Of course it seems "natural" under these conditions of victimization, then, if men are striving for something "permanent": Since they do not get enlightened on the mechanisms of depravation. The more remote a goal is drawn up, the more delivered

up to arbitrary figuration it becomes. Ever since, therefore, it has been the means of oppression to pretend obscure "origins" and "ultimates": in order to conceal the means. By these means the mechanism of staring at the unforeseen, instead of intending the next step towards emancipation, has been internalized as almost "natural". But those "theories" dealing with a "mythic origin" wipe across the conflicting issues of nature and social inclination purposely. Because otherwise, to proceed with caution, they were in danger to lose their own security. Worse yet, one could attest that their "incorporate status of superiority", their "meta-theoretical" one, is an usurpation itself; and at the same time a commercial for the residing system.

With regard to this, there must be quoted the necessity of any transitory mode to shape informations as though they were "the truth". Referring to the subsequent phenomena, the "post-modern" informational society is also named "the therapeutic" one: Men get moulded into easily taking on trust any information. Erased from men's memory are the permanent contradictions, the doubt of certainties, and the recall of future aims. - So long as the "power" of the "post-modernists'" option remains unquestioned.

Precisely at that point, however, the post-modern delimitation comes to collapse: Although the subjects altogether may get subordinated to an obscure power, and become "individuals" in a sense of recipient's attitude, the world of concrete things - processes of nature - will not come to a deadlock. Only a faith, which had regarded nature exclusively as a resource of exploitation, could fall into the density of a standstill. And, in fact, it must have been economic attraction that tempted European minds with the "post-modern" infection: Since enlightenment, modernity, was initiated through the dialogue with nature, it cannot be exhausted with the introduction of rational

methods, which fail the dialectic of the objectives themselves: The "nature" of technique is different from the active one; it is not qualified for communicational sensitivity. Technological means equal the means of power: They expire at the top of a hierarchy.

From there, the post-modernists try to escape an exposition by flying into pragmatic controversies or an élite's sensationalism. After they found out that they could not face the cynic's straightness, they needed someone from the republic of letters to build a bridge for their scientific mind. And actually, without sarcasm, positivism and a theory of critical perception together could bring about that: For, jointly, they are not obliged to mythic origins or doubtful designation. Of course, as a rule, the positivistic methodology serves a particular system, to which it is attached. In the meantime, however, it is not fortified at all against the antagonisms embodied in it. Hence, it mediates access to critique as well, since, indirectly, positivism lays open the means of an unjustifiable power.

This insight refers to Mills' observation on the suspicious fact of a hermetic establishment: Almost everybody assumes a something called "power", and lots of people claim to participate in it, but hardly anyone risks signifying the necessity of it. Of course, one assumes, it must have been constructed somehow, as there must be resources provided for an access to it. Nevertheless as in bondage, the overwhelming majority takes power as if it were granted eternal: not unlike religious observance. Strange to say, however, even Social Scientists do not dare to use Marx' terminology of conceptual analysis any more, although the capitalist system itself will not pretend basic changes since then. For the post-modern that may serve a pretext to compensate his aporia by an apology after all.

In the meantime, positivism has precisely described how the absolution of power from consciousness could get managed with success. Daniel Bell, amongst others, reveals it as a kind of political hypnotism resting upon simple, but effective, mechanisms of stigmatization: As a first step, the mentality of "the others" was denounced as an "ideological" one. That confirmed a tradition of abusing the term "ideology"; and kept one's own way of thinking as "pure". This "purity", with the next step, became equated with "objectivity"; the "objectivity" of technological methodology, of course. So, finally, the "necessities of facts" - "the objective power" - was created; their implication is supposed to suppress any expression of critical consciousness.

On their way to the "post-industrial" society, however, the positivists have found out that the "necessities of facts" by no means are absolute: For they are consequences of producing-procedures. But these are products of political decisions again, which have to be responsible, for reasonable legitimacy.¹⁴

By that course of positivistic argumentation the significance of conscious social conditioning reappears. Bell, who is careful not to present the "post-industrial" society as an ultimate one, delegates it to an educated political culture. Whatever that may be: it cannot be constituted by a "meta-theoretical" end only, although the ones concerned with that should not be overlooked for their aporia. In respect of cultural autonomy, however, the conscious resistance against a complex power of the abstract has to be reinforced.

Significant symbols to regain

Capitalistic societies on a highly industrialized level suffer from a lack of educational coherence. For an economic system of supply isolates the individual as consumer and makes it incapable of jointly liable communication. Under these conditions "demons", as the case might be displayed "a grace" or "an evil", cotton up to satisfy a long-felt want. The projecting demon of the present, nevertheless, figures an abstract force, that is to say, a styled power, which gets conceived a mythical entity, instead of being detected as a constructed susceptible performance.

Concerning symbolism, with these auspices, it must not only produce a reflex, a "tautogorical mirror", of whatsoever is extant anyhow. It cannot ignore neither the actual incidences, the limits of technological rationality, or the subtle necessities, as they are expressed by an arbitrary cynicism and a fatal post-modernism, of course. But an oath on superstitious grounds does not remedy just consoles hypocritically - existential intimidations on one side. And an attentive holism calms virtual antagonisms as if they were prospects of an arising felicity on the other. Symbolism, in contrast, ought to comprise both the past and the future as a present project for active communication.¹⁵ That is, in fact, even obliged to become combative where it meets with paranoic deception.

A commercial transmitted by several US-American television-stations presented a childlike drawing of the land, a family, a house, some trees, the Star-Spangled-Banner, - and the sun. Against a threatening missile, the objects, all together, including the sun, are covered by a "protective shield". And a blissful child is grining at the blessing of the "Strategic Defense Initiative". - This drawing reveals an encyclopaedia of the closed mentality of its producers. Not to mention its assumed consumers mentality. Above all, however, it tells tales of an expressive perversion of symbols.

For ever the sun has been the reality of warmth as the symbol for Enlightenment. Who ever intends to usurp it, however, can never have comprehended that. And for the same reason the so-called "initiative" turns out its contrary: Following a prejudice, according to which history appears a mere prolongation of exempted and vindicated power. Reasonable, however, it becomes initiated by a mediating co-operation between the interdependent items of social subjects and environmental conditions; within which men need the sun as nature. Referring to a historical realization, therefore, spontaneous symbolism unceasingly signifies the very beginning of existential particularity.

Adnotes:

- 1 A "science of sciences" was initiated by the linguist Ferdinand de Saussure and his Swiss school for a "binary theory of language" (*Cours de linguistique générale*, 1916). But almost at the same time Charles Sanders Peirce had constructed the "triad semiotic". - At an international congress in Paris in 1969 both approaches came to a compromise for the first time; which, however, rested on the surface only.
- 2 Almost all of the popular post-modernists have contributed to the French literary journal "Tel Quel", founded in 1960. It reflects the explanations of the entire orientation.
- 3 Obviously they disregard the fact that Friedrich Nietzsche treated precisely such an option of fashion with irony (*Die fröhliche Wissenschaft*, 1882).
- 4 E.g. Raymond Reuss, *The Idea of a Critical Theory*, Cambridge/Mass. 1981.
- 5 *Charakteranalyse*, Wien 1933. - Later, after the experience of immigration, Reich as well returned to a kind of essentialism (*The Orgon Energy Accumulator*, Rangeley/Maine 1951).
- 6 "In Praise of Knowledge". *Miscellaneous Tracts Upon Human Philosophy. The Works of Francis Bacon*. Ed. Basil Montagu. London 1825. Vol. I.

- 7 Karl R. Popper, *The Poverty of Historicism*, London 1957.
- 8 The name of Christ is an apotheosis; it stems from the Greek word "ὁ χρίστος", that means "the unctuous".
- 9 It may be remarkable that the traditional British version of pragmatism is barely noticed by the post-modernists: Presumably because it is not assured by the admirable power of the Empire any more.
- 10 Albert Camus, *L'Homme révolté*, Paris 1951.
- 11 Paul Tillich, *The courage to be*, New Hampshire 1952.
- 12 Hans Jonas, "Technology and Responsibility: Reflections on the New Tasks of Ethics", in: *Social Research* 40/1, 1973; "Responsability Today: The Ethics of Endangered Future", in: *Social Research* 43/1, 1976.
- 13 C. Wright Mills, *The Power Elite*, New York 1959, p. 24.
- 14 Daniel Bell, *The End of Ideology*, New York - London 1960; *The Coming of Post-Industrial Society*, New York 1973; *The Cultural Contradictions of Capitalism*, New York 1976.
- 15 Ernst Bloch, *Das Prinzip Hoffnung*, Frankfurt/M. 1959, pp. 129 f.

EXPERTISE AS A HANDICAP: the professional, social, and organizational skills of EDP specialists versus management USERS.
Jacques F. BRISSY

1. Complementary skills at work: the case of EDPs and USERS.

The proper design and implementation of a new EDP system involving the cooperation of EDP specialists and management USERS require more than skilful people on both sides. Their respective skills must be complementary to each other. Generally speaking, one might say that skill can never be seen in isolation of the overall division of labor in the organization. However, the work of a solderer can be performed in isolation. It may be consequential for others, but it does not require the joint intervention of others in order to be done.

In contrast, the creation and implementation of management-oriented EDP systems require collaboration, cooperation, communication, coordination of skills of different natures, which must be COMPLEMENTARY to each other to insure effectiveness. It is not enough to know one's job. In a sense, you must know the job of others too, enough of it at least to allow profitable exchanges.

EDP specialists are experts in their fields; they are professionals characterized, among other things, by a distinct technical expertise in dealing with computers. Such a "professional expertise" is rarely a problem, but it may not be sufficient, as we will see below. In addition to a) "professional skills" (as adequate expertise to carry out assignments from the technical point of view), one should take into account: b) "social skills" (as the capacity to communicate actively with people who lack similar professional skills, in order to describe, explain, translate the technical matters in a language or form accessible to others and c) "organizational skills" (as the capacity to situate one's work in relation to broad organizational objectives and specific end-users needs).

The assessment of "professional", "social", and "organizational" skills can be made very simply by identifying the PROBLEMS arising from the specific division of labor between EDPs and USERS, revealing the incapacity or difficulty of one or both groups to cooperate effectively.

Very briefly, the research findings (1) indicate, after a preliminary analysis (2):

- 1) that USERS should be blamed for the majority of the problems arising from the division of labor between EDPs and USERS. This is testified by EDP specialists as well as by management USERS themselves;
- 2) that it is so because USERS are not familiar enough with EDP technicalities;
- 3) that it is so mainly because EDPs a) lack "social skills" and "organizational skills" and act more like professionals in their ivory tower.
- 4) that it is mainly so when organizations overstress the technical aspect of skill in their recruitment policy, and favor professional autonomy for EDP services, encouraging the "ivory tower" effect which results in a one-sided communication process.

(1) Research findings based on field observations, informal interviews and self-administered questionnaires for EDP specialists and USERS as well, in various U.S. organizations. For this paper, only two firms will be used. They will be referred to below as the "Petroleum Co." (324 EDP and 57 USER questionnaires) and the "Telephone Co." (286 EDP and 113 USER questionnaires).

(2) In appendix, one will find a brief description of the actual and ideal division of labor between EDPs and USERS at major steps of a project, indicating that there is a considerable agreement between EDPs and USERS in their testimonies concerning the quantitative aspect of the division of labor. This paper is devoted to an analysis of the qualitative aspect: not the amount, but the nature of the involvement of each group.

Table 1. List of problems that could arise between EDPs and USERS.

Now we'd like to learn about some possible problems that could arise between EDP specialists and users of EDP services. Please check the appropriate box in the righthand column to indicate how often the listed problems arise in your company.

THIS IS A PROBLEM:

	Always	Often	Sometimes	Seldom	Never	
	(1)	(2)	(3)	(4)	(5)	
Users are not familiar enough with EDP technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:18)
Users do not have clear objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:19)
Users do not define their needs adequately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:20)
Users do not have the facts they need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:21)
Users do not communicate their priorities among projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:22)
Users do not understand EDP terminology ("jargon")	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:23)
Users lack systematic EDP training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:26)
EDP department lacks adequate expertise to carry out assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:27)
EDP personnel don't understand broad, longterm corporate objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:28)
EDP personnel don't understand specific user objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:29)
EDP personnel don't clearly explain technological capabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:30)
EDP personnel don't adequately describe design options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:31)
EDP personnel are not accessible when information is needed by users.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:32)
EDP personnel are more interested in "state of the art" technology than in providing what users want.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(2:33)

2. Complementary skills at work: the frequency of problems.

These data consist of information gathered from the participants themselves concerning problems that could arise between EDP specialists and USERS of EDP services, working on a common project. To be found in Table 1, is a list of 14 problems, of which 7 are problems to be blamed on USERS, and 7 to be blamed on EDPs.

Table 2. Frequency of problems in both firms, according to EDPs and USERS.

according to the testimony		Frequency of problems			
		USER makes problems		EDP makes problems	
		yes ^a	no ^b	yes ^a	no ^b
Petroleum Co.	of USER of EDP	58.0 51.4	42.0 48.6	33.9 18.1	66.1 81.9
Telephone Co.	of USER of EDP	49.6 55.1	50.4 44.9	25.9 23.1	74.1 76.9

a : "always or often"

b : "sometimes, seldom, or never".

- 1) All agree that most problems are USER generated (53.5% of the time), rather than EDP generated (25.2% of the time). This is so in both firms, and accerted by EDPs and USERS as well.
- 2) On the average, considering 100 problems, two-third (68.9%) of these problems are to be blamed on USERS, and only one-third (31.3%) on EDPs.
- 3) The percentages above vary slightly according to kinds of participants. The evaluation by EDP goes up to 72.2% of USER generated problems, as compared to 64.4% of USER generated problems according to USERS themselves. Relatively speaking, each type of participant tends to be more lenient with himself, and more severe with the other.

4. The same percentage again varies very slightly from one firm to another:

<u>Evaluation by</u>	USER	EDP	<u>Total</u>
	generated <u>problems</u>	generated <u>problems</u>	
USERS of the Petroleum Co.	63.1%	36.9%	100%
USERS of the Telephone Co.	65.7%	34.4%	100%
EDPs of the Petroleum Co.	74.0%	26.0%	100%
EDPs of the Telephone Co.	70.5%	29.5%	100%

5. Referring to Table 2, one sees that at the Telephone Co., there is a large agreement between USERS and EDPs concerning the total frequency of problems (75.5 vs. 78.2). In contrast at the Petroleum Co. USERS perceive much more problems (91.9) than EDPs (69.5), mainly because the latter do not consider themselves to be a source of problems (only 18.1 of problems to be blamed on them).

3. Complementary skills at work: the nature of the problems.

3.1 USERS generated problems: the views of USERS.

Three items are more frequently cited by USERS as being a real source of problems on their side (see Table 3 below).

Table 3. Most important problems because of USERS.

	This is always or often a problem at Petroleum Co. at Telephone Co.	
- USERS are not familiar enough with EDP <u>technology</u>	70.2%	63.3%
- USERS lack systematic EDP <u>training</u>	62.5%	62.4%
- USERS do not understand EDP <u>terminology</u> ("jargon")	57.9%	56.0%
Average of above	63.7%	60.6%

- 1) Each of these 3 items reveals ignorance or insufficient competence with EDP specialism on the side of the USERS. At least, this is what they say of themselves: their own confession.
- 2) At the Petroleum Co., these 3 items are responsible for roughly 3/4th (71.6%) of all USERS problems. At the Telephone Co., this is less than 2/3rd (62.4%).

3.2 USERS generated problems: the views of EDPs.

- 1) Again in Table 4 below, the same 3 items are at the top of the list. Consequently, the image of EDPs corroborates the image of USERS. Both groups agree in their diagnosis that lack of competence in computer matters is responsible for most problems to be found on the USER side.
- 2) One will observe that in the Petroleum Co., from the point of view of EDPs these are not such a problem as they are in the Telephone Co., because it will be reminded, they see fewer problems generally speaking.

Table 4. Most important problems because of USERS.

	This is always or often a problem at Petroleum Co. at Telephone Co.	
- USERS are not familiar enough with EDP <u>technology</u>	56.5%	62.3%
- USERS lack systematic EDP <u>training</u>	53.3%	62.0%
- USERS do not understand EDP <u>terminology</u> ("jargon")	56.4%	60.9%
Average of above	55.4%	61.7%

3.3 EDPs generated problems: the views of USERS.

Table 5. Most important problems because of EDPs.

	This is always or often a problem <u>at Petroleum Co.</u> <u>at Telephone Co.</u>	
LACK OF SOCIAL SKILLS:		
- EDPs do not clearly explain technological capabilities	42.1%	30.8%
- EDPs do not adequately describe design options	42.1%	37.4%
LACK OF ORGANIZATIONAL SKILLS:		
- EDPs do not understand broad, long term corporate objectives	54.4%	25.2%
- EDPs do not understand specific user objectives	43.9%	23.4%
- EDPs are more interested in "state of the art" technology than in providing what users want	47.4%	29.0%

3.4 EDPs generated problems: the views of EDPs.

Table 6. Most important problems because of EDPs.

	This is always or often a problem	
	<u>at Petroleum Co.</u>	<u>at Telephone Co.</u>
LACK OF SOCIAL SKILLS:		
- EDPs do not clearly explain technological capabilities	22.5%	29.2%
- EDPs do not adequately describe design options	21.0%	34.8%
LACK OF ORGANIZATIONAL SKILLS:		
- EDPs do not understand broad, long term corporate objectives	29.5%	30.2%
- EDPs do not understand specific user objectives	22.2%	23.2%

N.B.: The last item "state of the art" does not appear in Table 6., as in the EDPs view, in contrast to the USERS view, this is rarely the problem (7.6% at the Petroleum Co. and 14.2% at the Telephone Co.).

For now, it is sufficient to stress:

- 1) that lack of social and organizational skills are always or often cited as the main source of problems on the EDP side. Lack of professional skills (technical competence) is rarely or never a problem. These views are shared, at different degrees by USERS and EDPs as well;
- 2) At the Petroleum Co., each group complains more about lack of organizational skills than about lack of social skills. At the Telephone Co., it is the reverse;

4. Summary and conclusions.

In summary, and generally speaking (not considering firm differences now), one observes:

- 1) that most problems (about two-third) arising in the communication process between EDPs and USERS are problems to be blamed on USERS;
- 2) that most of USERS generated problems arise from their relative ignorance of computer matters. The USER image and the EDP image agree on that point. However, such problems are mainly important in the USER image and not quite so important in the EDP image;
- 3) that most of EDP generated problems are related to lack of social and organizational skills, never to lack of professional skills. This is so in the USER image, and in the EDP image as well. However, this is overstressed in the USER image while EDPs tend to partly denied that fact.

The general considerations above should be qualified. Indeed, some interesting differences are to be found between the two companies. In a nutshell, the severity of problems on both sides (USERS and EDPs) is greater at the Petroleum Co.. It is in this

firm that a possible communication gap becomes really apparent. All the tendencies identified so far are intensified at the Petroleum Co. and less active at the Telephone Co..

- 1) At the Telephone Co., the diagnoses of USERS and EDPs tend to agree with each other on the total frequency of problems, and on the respective responsibilities of each group for such problems. In contrast, at the Petroleum Co., the two images differ. This is where USERS perceive a) a greater amount of problems; b) a greater amount of USER generated problems (more than at the Telephone Co., and more than in the EDP image at the Petroleum Co.), c) a greater amount of EDP generated problems (more than at the Telephone Co., and more than in the EDP image which tends to overlook EDP generated problems). At the Petroleum Co., USERS see problems everywhere, while EDPs think that all is going fine.
- 2) At the Petroleum Co., USERS insist mainly on their lack of computer skills, responsible for three-fourth of their problems (this is only two-third at the Telephone Co.). EDPs on the other side, do not look at it as such a big problem.
- 3) It is at the Petroleum Co. that EDPs really lack social and organizational skills, in the view of USERS. This is also where EDPs will not acknowledge the fact: the frequency of problems related to lack of social and organizational skills is only one-half in the EDP view of what it is in the USER view;
- 4) USERS at the Petroleum Co. complain more about EDP's lack of social and organizational skills than their colleagues at the Telephone Co.. These images for EDPs are completely reversed.

In summary, the USER at the Petroleum Co. sees everything as problematic because he feels guilty of ignorance in computer matters; EDPs are only good at that, lacking social and organizational skills to carry on their job effectively. In contrast, the EDP at the Petroleum Co., proud of his professional skills, looking at the situation from his ivory tower, tends to deny problems of all kinds.

In this paper, we pointed out a number of difficulties encountered in the communication process between USERS and EDPs while working on a common project. We have seen that such difficulties are not necessarily inevitable. Indeed, the Telephone Co. enjoys a much better position in comparison with what was observed at the Petroleum Co.. Is there a good reason for that? Is it possible to provide at least a tentative explanation for the observed firm differences?

The response is affirmative, and unexpected: skill is a handicap. More precisely: high professional skill is more a nuisance than a help if not accompanied with sufficient social and organizational skills. There seems even to be an inverse relationship: the higher the professional skills, the lower (comparatively) the social-organizational skills. This is mainly so when EDPs are highly-trained professionals, technically, working in an organizational setting favoring both centralization and autonomy for the EDP Department. This is the situation we encountered at the Petroleum Co..

1) Highly trained professionals.

At the Petroleum Co., as compared to the Telephone Co., EDPs have a higher education, are younger, better paid, participate regularly in professional meetings, subscribe to professional journals, and are more active in terms of publications.

2) Centralization and autonomy.

At the Petroleum Co., as compared to the Telephone Co., EDPs are allowed to work in their ivory tower. They report ultimately to their own superiors in the EDP Department, not really to the client USER. This encourages them to evaluate their own performance according to their own professional standards; service to the USER or to the organization as a whole is accessory. The USER is dependant, he must rely more or less blindly on their willingness to "officiate."

At the Telephone Co., EDPs report primarily to their client. Hired for the job, the computer professional looks at himself as a subordinate, whose performance will be evaluated by the USER. This is not at all a "doctor-patient" relationship, as it is at the Petroleum Co.. They are more attentive to USER needs, and organizational implications. They are loyal and competent servants trying to please their masters.

In conclusion, a policy recommendation suggested by our findings implies:

- that professional skills should not be defined restrictively in terms of technical competence;
- social and organizational skills are equally important and are more operative in the case of decentralization and subordination than in the case of centralization and autonomy.

Appendix: quantitative aspect of the division of labor between EDPs and USERS

Figura 1. Actual involvement of EDPs and USERS at major steps.

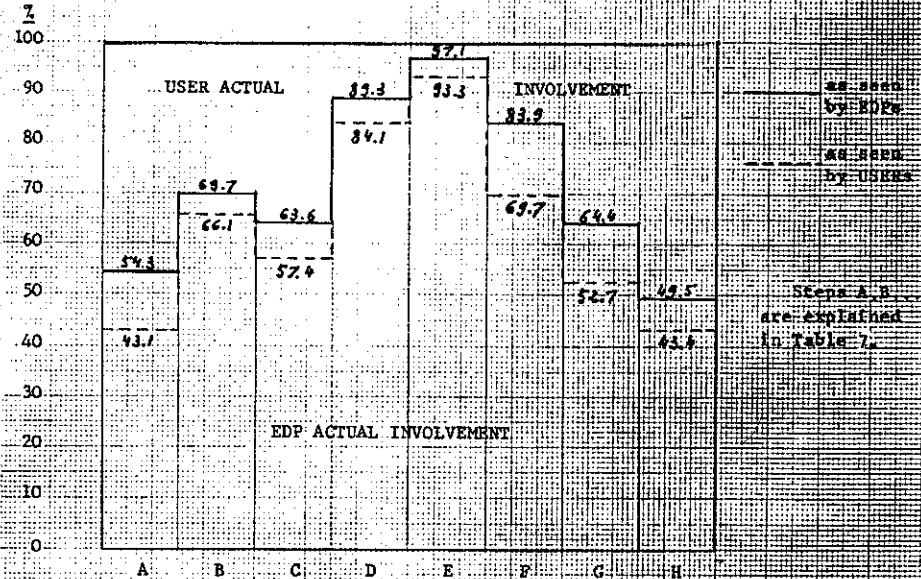


Figure 2. Ideal involvement of EDPs and USERS at major steps.

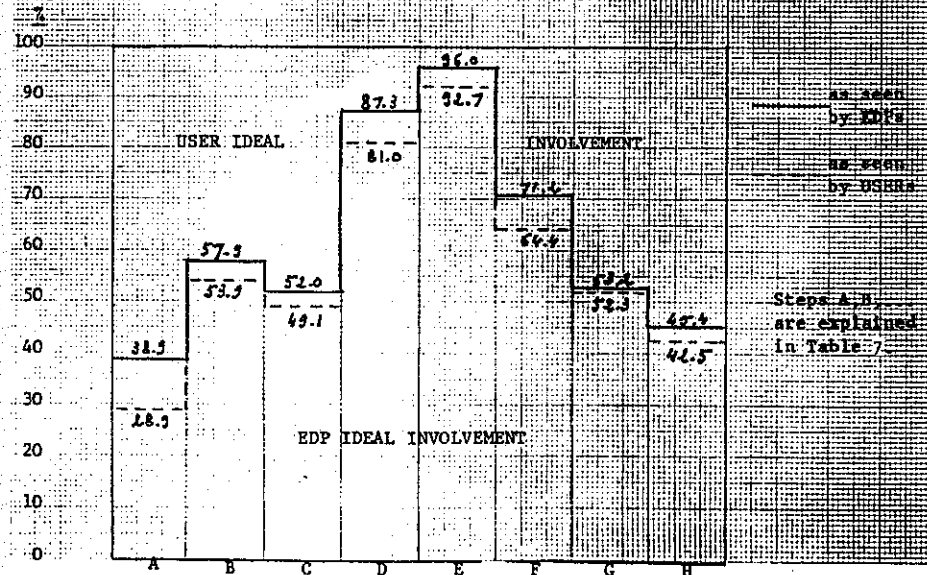


Figure 3. Actual vs. ideal involvement of EDPs and USERS, as seen by EDPs.

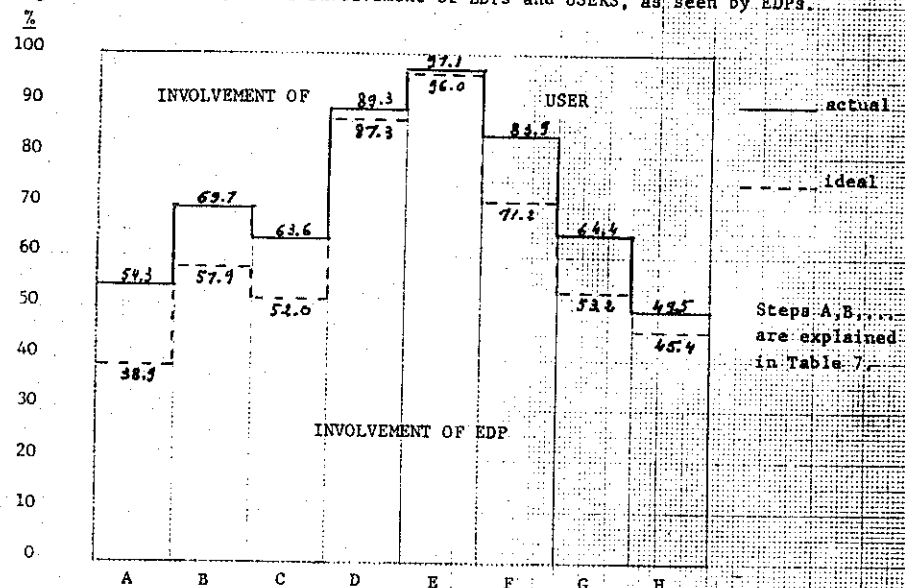


Figure 4. Actual vs. ideal involvement of EDPs and USERS, as seen by USERS.

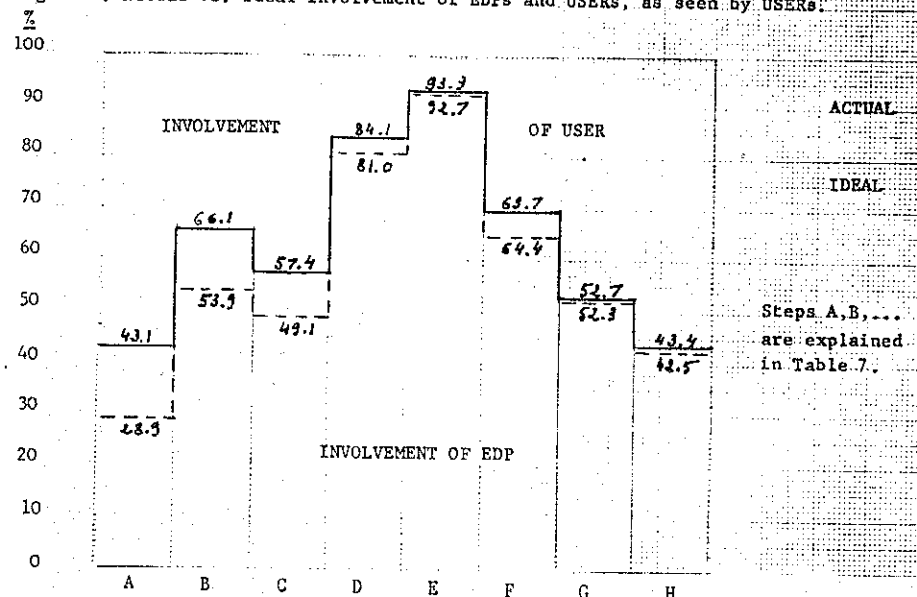


Table 7. Division of labor between EDPs and USERS at major steps.

	<u>ACTUAL</u>		<u>IDEAL</u>		
	Percent involvement at each step PRESENTLY:		Percent involvement at each step SHOULD BE:		
	EDP Dept.	User	EDP Dept.	User	
A. Definition of system requirements	____%	____%	____%	____%	(2:39-50)
B. Development of rank- ordered list of design options	____%	____%	____%	____%	(2:51-62)
C. Development of detailed system external specifications	____%	____%	____%	____%	(2:63-74) (2:80 <u>2</u>) (3:1 <u>1</u>) (3:2 <u> </u>) (3:3-5 <u> </u>)
D. Design of system internal specifications	____%	____%	____%	____%	(3:6-17)
E. Programming	____%	____%	____%	____%	(3:18-29)
F. Conversion and system testing	____%	____%	____%	____%	(3:30-41)
G. Implementation (training, procedure guides, equip- ment installation, etc.)	____%	____%	____%	____%	(3:42-53)
H. Post-installation review of system	____%	____%	____%	____%	(3:54-65)

(3:66-79
BLANK)
(3:80 3)

"NATURE HATH NO OUTLINE

BUT IMAGINATION HAS"

PIPPA CARTER and NORMAN JACKSON

Department of
Management Systems
and Sciences,
University of Hull.

Presented at

STANDING CONFERENCE ON ORGANISATIONAL SYMBOLISM

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ABSTRACT

This paper summarises some research which sought to construct an analogue of the research process using a crossword puzzle, in order to demonstrate the effect of the researcher on his/her subject matter. One of the outcomes of this investigation was evidence of the construction of boundaries and rules by the respondents. We argue that these are processes for reducing environmental variety as a means of promoting psychological comfort. We identify certain types of boundary or rule formation, namely, methodological reductionism, whereby the respondent deliberately circumscribes what may count as legitimate information; creation of rules of conduct; experiential constraints; - and dissonance resulting from disconfirmation of boundaries. Finally, we suggest the symbolic nature of these boundaries.

WHY CROSSWORDS ?

In social science we are constantly exposed to the debate about objective versus subjective understanding. In particular, there seems to be a healthy body of opinion which understands social facts as unambiguous entities which can be observed and interpreted unequivocally by any competent observer. Social scientific knowledge can be seen correctly as empirically unambiguous, social facts exist and can be discovered, tested and replicated in a manner comparable to that of the natural sciences. In opposition to this Cartesian separation of observer from observed, our belief is that social facts and inferences are observer-dependent, ie., what and who the observer is has a profound influence upon what is observed, and upon understanding of it. In consideration of the debate, it occurred to us that a study of the research process itself might illuminate some of the issues.

The influence of subjectivity is difficult to test in a real life research situation, due to the dynamic and nebulous content of this reality. However, we felt that if a situation could be achieved where all the situational variables could be held constant, then differences due to the individual researcher could be demonstrated. It

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- * This work was originally undertaken for the Doctoral Programme at Manchester Business School. Since then it has been extended and further developed at Aston Management Centre. Apart from the theoretical aspects offered in this paper, crosswords appear to have a high potential for usage as teaching aids for research methods, and have already been used as aids in teaching decision making processes.

occurred to us that, perhaps, an analogue of the research situation could be constructed using a crossword puzzle.

If we could get a group of researchers, (doctoral students and full time researchers), to undertake an appropriate, and identical, crossword, then, if there were differences in the way the problem was addressed, these differences must be inherent in the people themselves, and not in the problem which they faced. Furthermore, if these differences were significant, this might highlight significant aspects of the research process.

Our objective, then, was to look at the effect of different people taking the same information for the same purpose. If the objectivist argument holds, the same results will ensue. If it does not, differences in outcome would have to be explained by reference to the individual doing the work, not by reference to the material. It must be emphasised that we were not concerned with correct, or incorrect, solution of crosswords, but only with handling of information (ie., process not content).

At the same time, we were interested in what happens when individuals are presented with a situation in which there are no rules/limits. People were asked to attempt the crossword, record the sequence of insertion of answer, and not to collude with anyone else who was doing the crossword - no other instructions were given. We anticipated that people would create some, task-orientated, rules - eg., not being given a specific time limit, that they would impose one. However, results showed that the rule building process was very extensive, and more complex than merely task-orientated. In fact, the symbolic rule building proved to be more extensive than the task-orientated rule building. This aspect has warranted further consideration.

Characteristics of the Crossword

Prima facie, the crossword clearly satisfies the condition of identical information. (All respondents were asked to do the same crossword). As a medium, the crossword also exhibits a number of characteristics found in the research process. For example, the components are structurally inter-related; it is structurally incremental, rather than sequentially incremental; the components are not discrete, and are understandable only in the context of some or all of the other parts; the answer is an interpretation of the clue (information). The information available to solve the problem is, furthermore, scattered, and is of three types and source, the clue representing fairly discrete information, and the grid representing a context for that information - the third element is the solver.

The analogy is further enhanced by its apposition in terms of process as well as content. The successful solver needs to create a synthesis between received information and environmental context, as does the researcher. As in research, the information given is partial only. The clues may be definitional or associational. An answer may sometimes spring purely from the juxtaposition of content and context, possibly without reference to the clues. The partial information can also influence selection of options - this may lead to incorrect solutions, the discovery of whose incorrectness depends upon total completion of the puzzle/problem. Such options have full legitimacy until additional information and/or understanding proves them incorrect. The crossword clues can, in fact, be seen as having a marked resemblance to the "clues" of a research problem. They are indicative, outward signs, requiring interpretation for conversion to a solution, through the medium of the solver.

It should be noted that this interpretation of the similarities between crossword puzzles and research is at a surface level. However, it would be interesting to argue a deeper, procedural relationship - ie., a common approach to all situations which demand understanding of the unknown.⁽¹⁾

Although it was felt intuitively that the crossword problem would illuminate the issues with which we were concerned, there are a number of manifest limitations on the analogy with the research process. The most striking is that the crossword has an obvious finite boundary, unlike any problem in social science. Secondly, the information needed to solve the puzzle is given, and need not be sought out. Thirdly, what is given is the minimum required for complete solution. Fourthly, and perhaps most importantly, there is only one correct solution, both to individual clues and to the whole crossword. This last, however, could even be seen as advantageous, since the correct solution was not a matter of value judgement - it enabled a reduction in ambiguity, both for the respondents and for us. It might also be seen as a highly rigorous test of the interpretative process of research, because of this single solution characteristic. It did mean, though, that the solver knew that there was a correct answer, and often knew when he/she had got it, and could thus dispose of that aspect of the problem. Also, it was not possible to consider the aspect of perseverance with a more usual research problem. The existence of a single correct solution may have been a spur or an obstacle to perseverance with the crossword.

(1) See, eg., Carter, P., and N. Jackson: "Crosswords and Management Thinking." *Creativity and Innovation Network*, Vol. 10, No. 4, 1984.

In spite of these limitations, it was still felt that it was a useful analogy. The limitations apply to the crossword as a problem. The fact that there is only one correct solution was not significant since the concern was not with correct solution, only with the process of usage of information. As long as a respondent put in some answers, whether or not they were correct, the exercise could be put to good use. It was only if a respondent did not attempt the crossword that it became difficult to discuss - though it might have been significant.

VARIETY ATTENUATION

We have argued elsewhere⁽²⁾ that people employ, consciously or otherwise, attenuators to reduce the complexity of their environmental variety to a level which is psychologically comfortable. It was suggested earlier that a process of symbolic rule creation manifested itself in the course of this research. What is meant here by 'symbolic rule creation' is attempts on the part of the solver to close the system within which he/she is working - which we suggest is a form of such attenuation. However, this is only one of several forms of attenuation found. Other attempts to limit the problem were manifested, and can equally be seen as attempts to attenuate variety.

One can define environmental variety as the existence/recognition of alternatives and contradictions. Thus, a basic way of reducing variety is, clearly, to

(2) See Jackson, N., and P. Carter: "The Attenuating Function of Myth in Human Understanding." *Human Relations*, Vol. 37, No. 7, 1984.

eliminate some or all of the alternatives and contradictions. Some closure attempts are obviously able to be described as imposing boundaries. Others, such as rules, are, we would argue, merely a different form of boundary. Boundaries are means of reducing complexity. The process of bounding the problem is multi-dimensional, as the following will illustrate.

Methodological Characteristics of Solvers

It became obvious from the data collected that it was possible to group the solvers into different methodological types. The typology is based upon what the solver considered to be the most legitimate and important source of information available to them in solving the problem. This clearly implies exclusion, or underplaying, of other information. The methodological types represent examples of the most generalised boundary formation.

- (1) TYPE A: The emphasis of this method is that the next clue should interlock with a previously solved one. It is characterised by a preliminary scan of the clues, followed by a concentration on the intersecting letters achieved from this. The method tends not to be systematic, although quartering of the puzzle is common - quartering can only apply to this method, in fact, since it requires awareness of the grid, rather than of the clues. This method appears to offer benefits of increasing certainty of answers, since they are already partially solved - ie., it reduces variety in potential answers, particularly where a first letter has been achieved. However, it restricts

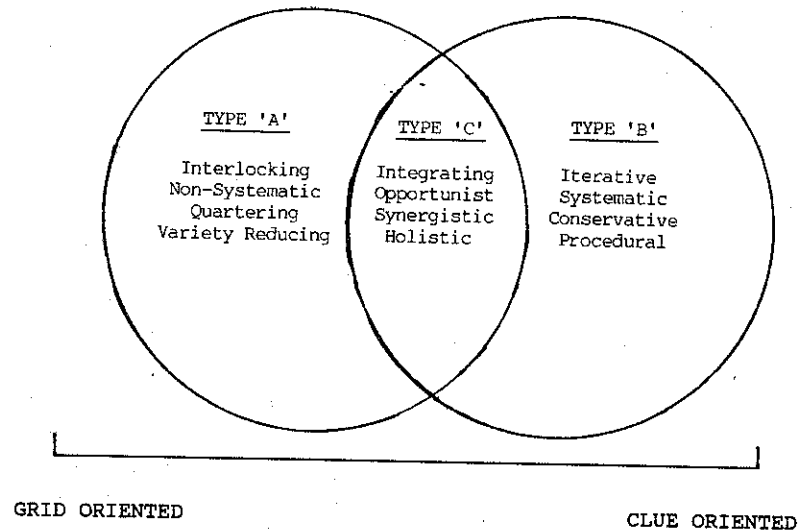
the options of the solver by focusing on the grid to a greater extent than on the clues. It is a solution orientated method, rather than information orientated.

- (2) TYPE B: The characteristic of this method is a concentration on the clues, the given information. It is typically very systematic and orderly, and proceeds by repeated scans of the information. In some cases this method became so highly procedurally orientated that the solver would not insert an answer out of order of scanning, even though the answer suggested itself by the completion of an interlocking clue.

Both Type A and Type B are methodologically constrained.

- (3) TYPE C: The emphasis here is upon using both sources of information for solution of the problem - ie., the clues and the grid. Starting with a scan of the clues, it then tends to proceed fairly opportunistically, wherever the possibility of an answer is suggested. The method uses a synergistic balance between the clues and the letters, and utilises implied information as well as actual information, such as probable letter combinations.

These types are depicted diagrammatically below.



REPRESENTATION OF TYPOLOGY OF SOLVERS

Types A and B are classic examples of attenuation of variety. Type C does not appear to be similarly attenuated - ie., Type C solvers do not appear to attenuate in that particular dimension.

It is not being suggested that the respondents fall into categories of pure type. They have been grouped for analytic convenience into the types which preponderated in their methods. Although each completion sequence was unique, it appears that each respondent followed some sort of pattern.

There were strong suggestions in the material gathered that there is a significant difference in approach between researchers and doctoral students. Unfortunately, the size of the sample is too small to be able to say anything firmly about this, but the indications are that, by increasing sample size, a significant difference would be found. The most prominent point concerns methodological rigour. The researchers were considerably more procedurally orientated than the doctoral students, who were less methodologically conscious, and more widely scattered between the three types. A possible effect of this methodological orientation can be seen in the completion rates - the researchers had a much lower proportion of completed answers, but had no incorrect answers. It would be interesting to conduct a longitudinal study to see if, as doctoral students do more research, they gradually move towards the more procedural approach of the researchers, and whether this is an inevitable tendency, or part of the research syndrome.

The significance of these boundary impositions is that they appear to be in response to psychological needs to reduce variety in potential sources of information, and in potential methods of problem solution, and exist prior to the problem - that is, they are problem-solving characteristics, rather than being inherent to the solution of this particular problem.

Rules as Boundaries

Another way to understand attenuation is to think in terms of boundaries. Boundaries are devices for excluding external variety, signifiers of what is relevant from what is not (eg., in the same way that estate boundaries signify what is yours from what is someone else's). A simple example of such boundary formation is the perception of

physical boundaries to the problem, which can also be related to the previous comments on methodological types. Thus a boundary may be perceived to exist around the grid, or around the clues, or, more realistically, a single boundary to exist which encompasses the whole problem, symbolised by the sheet of paper.

The boundary question is, however, more extensive than this. It appears that attitudes to boundaries are extremely varied, both in terms of problem (physical) boundaries, or of discipline boundaries, ie., a boundary on what it is legitimate to call a problem (rules), the construction of a boundary of rules representing a closure of the system. Both of these forms can have profound influences on the research process, especially in limiting perceptions.

When briefing the respondents, the aim was to introduce as few constraints as possible. It was requested only that they should record the sequence of inserting answers, and that they should not consult anyone else who was doing the crossword - this last was simply to avoid as much as possible collusive answers which would distort the results. On the one hand, it was hoped to minimise the importance of crossword solution. On the other, it was hoped to discover the extent to which solvers turned to references as aids to solving the problem (as would be done with a real life research problem).

Three patterns emerged. Some people asked for extra rules, such as "permission" to use dictionaries, or a time limit. Where sought, clarification was given as non-committally as possible. The second case was respondents who did not ask for rules, but constructed their own. For example, rules were made up about who could be asked for help. Some such rules became known at the debriefing interviews, but it is unlikely that all such rules would be surfaced. The third

case was of those who made no rules, complying with the request as made, without requiring further clarification.

It is interesting to note that, having constructed these rules, respondents often then broke them. Attitudes to "admitting infringements of the 'rules'" varied, some people being totally open about it, others being very coy indeed. (See also below).

The implications of such closure for the research process are manifold, but perhaps the most salient is the element, (conscious or unconscious), of reductionism. The constructing of boundaries and the limiting of potential sources of information is highly reductionist, both in terms of simplifying the problem, and of reducing environmental turbulence. The fact has been highlighted that much reductionism is not in fact deliberate, but results simply from psychological discomfort, on the part of the researcher, with the uncontrolled variety of the actual problem.

Backgrounds

Backgrounds can be seen as experiential boundaries. The past is a primary attenuator of the present. A feature which was particularly highlighted was the relevance of previous experience to problem solution, and the extent to which individuals bring their previous experience to bear on problems. Awareness of use of previous experience was varied. In some cases the solution to a clue was specific, and could not be constructed or guessed if it was not known. A particular example was the clue 'Fat from wool: Lanolin'. In several cases getting the correct answer was consciously related to previous experience. Some respondents who had no problem spelling 'dissect' related it to a background in

biology (see next section). Reference to previous experience was also used to reduce ambiguity in some cases. For example, the clue 'Contrary to the law' had two possible answers, 'Illegal' and 'Illicit'. Two respondents who had a legal background were conscious of basic differences of meaning between these two words - to them there was only one answer. However, one of these respondents also actually created ambiguity in response to the clue 'Settlement', by assuming that it was a reference to a legal settlement.

The relevance of this feature to the research process is twofold. In the first place, the uniqueness of each individual approach to the problem can be seen, at least in part, as a function of previous experience, which clearly has a strong influence on perception of the problem. In the second place, previous experience can be seen as a double-edged sword - while enabling clarification in some instances, it can also create obstacles to understanding by limiting perceptions.

Dissonance

Sometimes, however, people over-attenuated the environmental variety, by over-constraining their understanding of the problem. This created a certain amount of dissonance, resulting from the psychological effects of disconfirmation of boundaries. Such dissonance can be related to the research analogy in two major ways.

The dissonance occurred in three particular forms. The first of these was connected with spelling. One word, (Dissect), in particular was commonly misspelt, but misspelling was only reluctantly accepted as the sole possible explanation for the obvious answer failing to fit the grid. The second form of dissonance was connected with

interpretation of the clue. In one particular case, (Grand old lady: Matriarch), the obvious answer was felt not to be an answer to that particular clue, because of shades of meaning. A reluctance to insert the answer although known was, in some cases, hardly overcome. The third form of dissonance related to the clues themselves. Again, one particular clue, (One who gets trodden on: Door-mat), was felt to be a poor clue to the answer, although the answer was correctly inserted.

In a crossword situation such dissonance must either be resolved or the crossword left incomplete - ie., the situation forces a resolution of some kind because the "facts" are immutable. This is not the case with research. In the research process such dissonance would manifest itself as an unwillingness to accept that one's interpretation did not fit the facts. The other case is refusing to accept that the facts do actually lead to the answer that has been achieved. Because of the fluidity of social science research subjects, such dissonance can survive lack of resolution, though inevitably distorting results. The fact that such dissonance occurred in the crossword project is analogous to the rebuttal of the 'observer neutrality' assumption. It was apparently important that solvers should feel comfortable with what they were doing, rather than that they should observe the rigour of the compiler's information/solution set. The perceptions of the solvers called apparently immutable information into question, trying to change reality to fit the individual's understanding of it.

THE SIGNIFICANCE OF RULES

A number of ways have been suggested in which people introduce restrictions, (not always conscious), on their

freedom of action, and it has been argued that this is a means of attenuating the environmental variety. This attenuation of variety appears to be in order to provide some points of reference whereby the individual can locate himself/herself vis a vis the problem. Boundaries/rules can in fact usefully be seen as symbols for eliminating contradictions. It is as if the boundary or rule is a road sign which precisely indicates which way to go. The person erects the sign/symbol, and then stands back to read it, as if it has been given. In the metaphysical landscape of the mind, in the absence of topographical referents, the individual provides his own points of reference, which then achieve the temporal constancy of landmarks. Thus, such rules and boundaries represent attempts to close an open system, to delineate an undelineated problem, by legitimating action, and reducing variety. They are multi-dimensional closure procedures.

It is an interesting aspect of the rule creating behaviour observed that, having created the rules, people then broke them. This provides a strong confirmation of the inescapable need for rules, boundaries, etc., as referents, as means of locating the individual. It might be imagined that in a situation where the rules are self-created, when they prove to be over-constraining, they would simply be changed. However, this was not the case. The rules were, instead, temporarily violated. Once rules are established, modification is a long term process, and the intrinsic value of such symbols can be seen as their relative permanence. A landscape which is constantly changing is of little use for orientating oneself within it. Conversely, a featureless, stable, landscape is equally unhelpful. Breaking the rules rather than changing them is a common feature of everyday behaviour, eg., people who go on diets and break the rules by eating a cream cake, rather than redefining the rules to allow eating of cream cakes. Similarly with games.

Such symbols as rules and boundaries only provide security by their relatively permanent nature. People draw psychological comfort from their existence. If they are so fluid as to be easily changed then they are not useful as security mechanisms - as with national boundaries. Also as with national boundaries, repeated violations may ultimately lead to redefinition. To change the rules is to increase environmental variety, and thus risk. To break them is to retain the security of the boundary, but gain the advantage of temporarily increased discretion. (The previously noted aversion of researchers to breaking their methodological rules, which can be seen as a low risk/high security strategy, resulted in high accuracy, but low completion rates.) It is, in a military analogy, the occasional sortie into enemy territory, as opposed to the longer term redrawing of the front line.

NOTES

Methodology

The crossword was administered to a mixed group of about 20 doctoral students and researchers. Each respondent was approached separately, asked to attempt the crossword, to record the sequence of entry of answers, and not to collude with other people doing the crossword. No other instructions were given. When the respondent had finished with, (though not necessarily completed), the crossword, they were individually and informally debriefed, at which time we tried to discover rules, rubrics, patterns of solution, use of aids, etc. It was at this stage that we discovered the occurrence of rule-breaking behaviour, sometimes through indirect channels.

Our target group included a number of people whose first language was not English. Some unanticipated aspects arose which required them being treated as a separate sub-group, and thus their contribution is not included in this paper. However, it does warrant further consideration, since it transpired that, where English is a second language, differences in symbolic meaning are accentuated.

Results

To attempt to understand the variety in the subject group in terms of handling and processing information, we undertook a small amount of analysis of the order of completion (see Appendices 1 & 2). Given the sample size, we do not make any quantitative claims from this, except concerning the extremely high level of inter-individual variety in processing and interpreting the given information. If the analogy holds good for research, it can be argued from this that all researchers will differ as to what they see as relevant information, and how they interpret it.

The research has been fully written up elsewhere. Details are available from the authors on request.

APPENDIX 1

NOTES ON ENTRY MATRIX FOR FIRST TEN CLUES ANSWERED (APPENDIX 2)

VARIETY

Horizontal Axis - the 26 possible clues
(12 across clues, 14 down clues).

Vertical Axis - the order of entry of first ten clues answered.

This gives a 260 cell matrix (26 X 10)

If there was no variety in either the first ten clues answered, or the order in which they were answered, there would be 10 cells filled. If there was maximum variety there would be 130 cells filled, ie., 10 clues x 13 respondents.

The degree of variety present is indicated by the fact that 98 cells are filled.

Alternatively, if one uses, as an indicator of variety, the notion of variety points, - so that 10 cells filled would be zero variety, 11 cells filled = 1 variety point, 12 cells filled = 2 variety points, 15 cells filled = 5 variety points, etc. - then the maximum number of variety points possible would be 120 (130 cells filled). Using this measure we have 88 variety points, or nearly 75% of the maximum possible variety.

DOWN CLUES BIAS

If the 130 responses were uniformly distributed between across and down clues, then, having corrected for there being more down clues (14) than across clues (12), we would expect 60 across answers, and 70 down answers - ie. approximately 17% more down than across.

However, as indicated by the matrix, there were in fact 50 across answers and 80 down - ie. 60% more down than across.

APPENDIX 2

ACROSS CLUES										DOWN CLUES														Total	
1	8	9	10	11	13	15	18	21	22	23	24	1	2	3	4	5	6	7	12	14	15	16	17	19	20
1	1	1	1	2	1			1			3				1	1	1					1			
2				1				1			1									1		3	1		
3		1		1				2		1	3				2	1		1				1			
4										1	1			1	4			1		1				1	2
5	1		1	1	2		1	1						1		1		2		1			1		
6														1	1	2			5					3	
7	1						4							1	1		1	1	1	1		1			
8			2					1						1	1	2			1	1		1	1		
9			1	1				1	2					2	1		1	1				1	1	1	
10	1	1	1					1			1					1	1								
Column Totals	4	0	3	7	5	4	0	6	9	1	3	8	8	7	6	8	6	4	6	2	11	0	2	8	6
Total Across										Total Down														80	
Total Responses										Total Responses														130	

MATRIX SHEWING ORDER OF ENTRY

NB No. in cell indicates frequency of clue/entry position coincidence, eg, 1 across was entered first on only one occasion - 14 down was entered sixth on 5 occasions. Blank indicates no entry.

MATRIX SHEWING ORDER OF ENTRY

OF FIRST 10 CLUES FOR

EACH OF 13 RESPONDENTS

D	O	R	M	A	T	P	R	S
O	W	A	E	A	R	N	E	S
M	E	N	O	R	C	A	I	P
E	U	S	P	E	N	N	A	N
D	E	P	T	H	O	T	I	C
R	M	A	T	R	I	A	R	C
I	A	N	R					
A	C	C	O	R	D	I	N	G
V	O	I	N	P	L	E	B	S
I	L	L	E	G	A	L	R	L
D	O	O	A	W	E	S	O	M
L	A	N	O	L	I	N	S	P
Y	Y	D	D	I	S	S	E	C

ACROSS

- One who gets trodden on (4-3)
- Foretaste - serious (7)
- Balearic isle (7)
- Tapering flag (7)
- Profundity (5)
- Grand old lady? (9)
- Proportionate or conditional (9)
- The people (5)
- Contrary to the law (7)
- Inspiring dread (7)
- Fat from wool (7)
- Cut in pieces, anatomically (7)

DOWN

- Rounded, like St Paul's (5)
- Confess (3,2)
- Kingcup (5,8)
- Where they tried to put the Dormouse (3-3)
- Instrument for publications (8-5)
- Mend - go! (6)
- Pain in the side - may be dropped! (6)
- Boy's name (4)
- Crustacean or apple (4)
- Greedily (6)
- Settlement (6)
- Away from the sea (6)
- Run away (with) (5)
- Piece of linen or paper (5)

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Burkard Sievers

Work, death and life itself*

I would like to share some thoughts with you which have become more and more central for me during the last couple of years; they refer to the relationship between work, death and life itself as it is underlying both our contemporary practice in organizations and work enterprises as well as the predominant organization and management theories (Sievers 1984, 1986 a - d). For me it has become increasingly evident that this interrelationship of work, death, and life, i.e. the fact that we as human beings - despite our continuous attempts to reach immortality - are inevitably mortal, has to be addressed, explored and further elaborated for a better understanding of what symbolism, in general, and organizational symbolism, in particular, is or can be about.

I am glad that in comparison to previous SCOS-conferences, on the occasion of this workshop we will have the opportunity to spend more time to explore whether and to what an extent these assumptions will be accepted and shared. Thus, the assumption that organizational symbolism has fundamentally to deal with the kind and extent to which people in their organizations, workers, managers and social scientists alike, are capable of and allowed to deal with their own as well as with their contemporaries mortality as a constituent fact of their lives and work - or whether it has to be neglected.

* Presentation at the SCOS-Workshop: 'Towards a metatheory of organizational symbolism?', Hull, 27. - 30. 8. 86

At the end of my introduction I would like to give you an example how an artist is dealing with the relatedness of work, death and life itself by presenting you a song from a record.

So far as our employing enterprises as well as our management and organization theories are concerned we have got more and more used to the societally shared conviction that neither the work people are doing is relating to their lives nor that our life in general is related any more to death. Collectively we have displaced death out of our lives. Mortality which in previous times has been regarded as a constituent part of human existence has been reduced into a critical episode, a certain point in time, as the end of our lives which then even is supposed to happen instantly, preferably when we are asleep. Death has, as Norbert Elias (1985) so convincingly has demonstrated it in his recent book 'On the loneliness of the dying', become an a-social event. Death itself as well as the dead body have to be isolated and hygienically hidden. As long as we are not unexpectedly confronted by a catastrophic accident, like e.g. Chernobyl, it seems that our societal displacement of death is the predominant strategy through which we try to get rid of death and through which we let human mortality fall into oblivion. The fictions we commonly share about our non-mortality seem to be so convincing that they even could be described as 'con-fictions'.

But it also is obvious that through our common neglect of death and mortality our life is losing its frame. It seems to me that birth and death inevitably give the frame to one's life through which it then gets meaning (cf. Bateson, 1972; Goffmann, 1975; Lawrence, 1985). By

neglecting this frame of our life we are mistaking its reality in a similar way as one would mistake a picture as the reality it stands for. By ignoring the frame of a picture, e.g. of a face, a landscape or a ship, one finally would misplace its meaning into the analysis of the quality of its colours and brush-works.

The predominant strategies through which we in our contemporary western work enterprises seem to maintain and to perpetuate this split between life and death are at least twofold. There is on the one hand the split between work and life in that sense that we are increasingly concerned about the quality of working life or a humanization of working life with no further regard to a man's or a woman's life which obviously covers a longer space than the forty or so hours of a week or the forty to fifty years of one's life time. In comparison to the work life itself then is left as a topic for medicine, ecologists or other disciplines.

On the other hand the splitting between life and death further becomes enforced and concealed at the same time through the fundamental split in our employing institutions between those at the top and those at the bottom. It seems to me that through this predominant split among workers and managers mortality as a constituent quality of human existence becomes extinguished.

In an attempt to understand why participation in organizations, despite its widespread propagation, very often seems to fail or to be avoided the analogy of Greek mythology came to my mind (Sievers, 1986a). Besides the fact that the Greek mythology is an ongoing attempt to legitimize the change from the original matriarchy towards

the patriarchy as a consequence of the ancienne invasion into the mediterranean peninsula (Borneman, 1985) the Greek mythology seems to be characterized by another fundamental dynamic which can be described as an ongoing quarrel over immortality among the gods and men. Although these gods and goddesses in general were regarded as being immortal whereas the ephemeral mortals were supposed to end their lives in the Hades, this boundary very often was not very impermeable. On occasions gods tried to kill each other and especially those human beings who, like Hercules, had been procreated by one of the gods together with a mortal woman often were preoccupied their whole lifetime by gaining immortality in order to reach a seat on the mount Olymp.

The relationship among gods and the mortals was primarily patterned through extermination or rape and seduction on the one side and through fraud or hard work on the other side. Hercules who through accomplishing his twelve works finally reached immortality is one example whereas Tantalos or Sysiphus, for instance, tried to defraud the gods of their immortality by either stealing nectar and ambrosia, the fruits of immortality, from the gods dinner table or by putting Thanatos, the angel of death, into chains. And, as we all know, both Tantalos and Sysiphus failed to let their contemporary mortals take part in this divine immortality, they finally were damned to endure endless torments and never ending fruitless work.

This quarrel over immortality in Greek mythology seems to me also to give a meaningful analogy for a better understanding of the predominant pattern of the relationship among managers and workers in our contemporary work enterprises. As it seems to me our enterprises have

taken over the function of the ancienne city (Brown, 1968; Dunne, 1965; 1975) the bigger companies, in particular, tend to symbolize our accepted contemporary notion of immortality. Despite the fact that some of them may go bankrupt again and again, they are built on the underlying assumption that they will exist forever. And according to the underlying splitting it are the managers who by devoting their lives to the permanent growth and survival of the enterprise continuously try to prove their own immortality. At the same time, those at the bottom, the workers, even seem to be defrauded of their mortality as they increasingly are converted into production means, tools, coqs, dead-wood or scrap. And to the extent that workers are perceived and treated like things they are also regarded as non-mortals (cf. Ziegler, 1982).

What I try to state and to elaborate here may for some of you appear as too abstract, theoretical or as a kind of 'science fiction'. It therefore may be appropriate to elucidate what I am describing by two recent examples. The other week a friend of mine who is involved as an organizational consultant in what is commonly called a rationalization project, i.e. the dismissal of a certain part of the workforce of an enterprise, told me that he has questioned the responsible managers whether there were no other possibilities than just to provide some 300 workers with the obligatory compensation and letting them join the countless other unemployed. When he suggested that, for example, at least for some of them this money could be better used to help them, in setting up their own business, the immediate answer he got was: "That is ridiculous! You do not seem to realize that the reason we are dismissing these particular people is that they are scrap anyway. We are happy that we found this occasion to finally get rid of them!" -

The second example is from the literature. Odiorne (1984), for instance, in his recent attempt to apply portfolio-analysis to human resources management does not hesitate to label the workers of the two lower squares of the portfolio as working horses and dead-wood. I cannot but being reminded of Boxer, the old working horse in George Orwell's *Animal Farm*; it also raises the question for me, what else can one do with dead-wood than to burn it?

These two cases seem to me to be very explicit examples of the high degree of contempt (cf. Miller, 1981) which appears to be inherent in many of our contemporary organizational cultures. This dimension of the quality of working life, however, seems to be persistently hidden in the present best selling soap operas of entrepreneurial excellence.

It occurs to me that in our attempts towards a theory or even a metatheory of organizational symbolism we have to consider these psycho-social dynamics more seriously for they are an outcome of the fundamental split in our contemporary work enterprises. In our concern for symbols and symbolization we should not lose sight of the actually ongoing tendencies and processes of diabolization (Sievers, 1986c). I am using the word diabolization in contrary to symbolization which in its Greek origin as 'diaballein' means to separate, to split, to fragmentise in comparison to 'symballein' which means to relate, to put together, to unite.

From such a perspective it occurs to me that in the western world, in general, but in the majority of our organizations, in particular, we face an increasing diabolization of mortality. We have somehow diabolized human mortality and displaced it into the atomic bomb for

the atomic explosion has become the ultimate threat through which either the vast majority of the world population or mankind in general may be extinguished. We seem to have got used to ignoring our own potential individual implosion which we as human beings carry through the fact that we inevitably are mortal and, therefore, must die. As we are individually and subjectively less and less capable of bearing our own or anyone else's mortality we attempt to objectify our individual mortality into the thinghood of a bomb. We tend to deny the significance and meaning of mortality for our quotidian life via reification.

Objectification processes in our organizations are often linked with diabolization. Objectification can, as Berger and Pullberg (1966) have put it, be understood as the destruction of the former unity between man and his work or between the producer and his product. Referring to what I have stated earlier about the fundamental split in our organizations between those at the top and those at the bottom and the inherent tendencies to diabolize mortality in the case of managers into immortality and in the case of workers into non-mortality, it also appears to me that our conceptualization of objectification has to be extended. In addition to the commonly used notion of objectification as alienation or reification through which people and their subjective experiences are turned into things, there obviously exists a second tendency of objectification through which people are turned or turn themselves into gods or, to use a recent example from the debate about organizational culture, into heros. In comparison to reification this process of objectification can be called deification. No matter whether the outcome of such an objectification is goods or gods, it exempts men and women from their basic human quality: morta-

lity.

Both reification and deification are the contrary of symbolization; these objectifications are, in my impression, the predominant processes in our contemporary organizations through which we diabolize mortality and, therefore, lose sight of any meaningful relatedness between work, death, and life itself.

Before I finish this introductory presentation, I would like to add one further thought to the theme of our work session. It is becoming increasingly important for my own attempts to conceptualize the context of organizational symbolism. It is a thought on the nearly total obsolescence of wisdom as a concept in our employing institutions as well as in our organizational literature. It occurs to me that especially what is regarded as leadership in practice as well as in theory seems to an enormous extent to be nothing else than a perpetuation of immaturity (cf. Sievers, 1986b). Although there is an increasing concern to reestablish a notion of meaning in the context of organizational culture (e.g. Smircich, 1983; Smircich, Morgan, 1982) it is obviously hard to find too many further leading considerations than, for instance, that one that Peters and Waterman (1982) are stating that excellent employing institutions have to provide money and meaning for their employees. It is my impression that most of the management and organization literature on meaning appears to be meaningless because it is intended to symbolize meaning on the background of a diabolized mortality. These are attempts to offer meaning for life by simultaneously neglecting its frame through death.

It somehow appears as if on a societal level we are also displacing

wisdom. Instead of regarding wisdom as a human quality which, similar to maturity, potentially all human beings are capable of and which as such can be applied to our social life and work in organizations (cf. Winnicott, 1950), we more and more tend to put wisdom into the wheel-chairs of those people who because of their age and their social role no longer are supposed to have a reasonable impact on our lives.

If one, however, shares the opposite conviction that leadership in our organizations has necessarily to include a management of wisdom, such a view then requires further leading conceptualizations. In order to understand what wisdom can be about I found a statement by Joseph Campbell (1973), the great American mythologist, very valuable. He stated that every human attempt of institutionalization has to take two basic considerations into account: the inevitability of individual death and the survival of the social order. This twofold realization may offer us a meaningful imagination of what wisdom can be about. Bringing wisdom back into our institutions, in general, and into our work enterprises, in particular, would, therefore, mean maintaining the dialectical realization that every member is inevitably mortal and that the institution itself is supposed to survive, and is, therefore, hopefully immortal. In comparison to the ongoing attempts to diabolize immortality and mortality, i.e. to split it, wisdom then can be regarded as the symbolization of immortality and mortality. To the extent that an enterprise is capable of managing wisdom in such a sense through its mature members this means that its leaders are, potentially, agents of wisdom. If a corporate culture contains and symbolizes such a wisdom the leaders of the enterprise can be regarded as mortal agents of immortality.

The following is a song by Donovan called 'Goldwatch Blues' (words and music by Mick Softy). It was given to me as a record from one of my undergraduate students as the outcome of her attempt to connect our seminar session on work, death, and life itself to her own experience:

1. I went up for my interview on the fourth day of July.
First old man he questioned me until I nearly cried.
Made me fill in forms until I shook with fear
About the colour of my toilet role and if my cousin's queer.
Chorus: "Here's your gold watch and the shackles for your brain
And your peace of paper t'say you left here sane.
And if you've a son who wants a good career
Just get him to sign on the dotted line and work
for fifty years."
2. He asked me how many jobs I'd had before
He nearly had a heart attack when I answered "Four"
"For jobs in twenty years oh this can never be."
We only take on men who work until they die".
Repeat Chorus
3. He took me outside to where the gravestones stand in line
"This is where we bury them in quickstone and in lime,
And if you come to work for us on this you must agree
That if you're going to die, please do it during tea-break".
Repeat Chorus
4. This story that you heard you may think rather queer
But it is the truth you'll be surprised to hear
I did not want no job upon the board
I just wanted to take a broom and sweep the bloody floor!
Repeat Chorus

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CULTURE AND RATIONALITY

Vincent DEGOT

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INTRODUCTION

Rationality - within the meaning given by Weber to the word when speaking of "rational by finality" (1), and under the "adaptation of the means to the ends" definition given by D. Landes (2) - is closely linked to the emergence and subsequent development of the capitalist enterprise in at least three complementary ways (to which fuller treatment is given later on):

- firstly, in connection with the appearance among the social values of the rationalistic attitude embodied in newly-emerged social groups;
- secondly, concerning the adoption of techniques and procedures supporting a rationalistic approach to management based on business forecasting, comptrollership, decision criteria, and so on;
- thirdly, in relation with the rationalistic image given to the business corporation by the first intellectual disciplines to make it their concern, with macro-economics foremost among them.

In other words, the corporation emerged under the stimulus of a rationalistic ideology, developed with the assistance of increasingly rationalistic techniques, and gave rise to a body of theory in which it is depicted as optimising profits through the rational deployment of its resources.

These various aspects of corporate rationalism took shape for the most part during the 19th Century. According to Landes (3) and Wren (4), it was only towards the end of that century that

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studies were first devoted to the organizational machinery of the corporation. It appears that the specialists who undertook empirical research in this field were rapidly brought to recognise the fact that the corporation was not such a rationalistic universe as had been thought. Looking back, it can be said that many of the corporate organization theories (a description we apply to a very wide range of study, going from organization sociology to industrial psychology) formed part of a constant effort to reconcile variegated reality with a theoretical and rationalised model. As will be more fully discussed in later pages, this attempt followed two main lines of approach:

- on the one hand, by seeking to retain the original economic framework by postulating that the deviations from the standard type of rationalistic corporation resulted merely from behavioural anomalies caused mainly by psychological factors;
- on the other hand, by formulating models of a distinctive kind which brought the deviations into the theory and sought to identify principles which need not obey the dogma of rationalism.

In terms of these two trends, which will later enable us to draw up a classification of past theories, corporate culture research seems most closely related to the second approach; although, to the extent that our definition of corporate culture (as given on a later page, and in agreement with that of many other specialists) is accepted, this new line of inquiry implies an attempt at a systematic description and construction of the relationships between theoretical rationality and empirical reality. This leads us to

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view the corporation as the seat of events which are - going back to Weber's concepts - "rational by value" in terms of the cultural dimension.

Culture is thus a concept which needs to be related to the concept of rationalism in the strict sense, for three special reasons:

- firstly, owing to the fact that rationality can be considered as a kind of zero point on the scale of cultural assessment,
- secondly, when we consider that the cultural concept is often regarded by corporate staffs as a kind of "pseudo-rationality",
- finally, because the cultural element makes a functional intervention between the full facts (assuming the total information postulate of economic theory) and the facts as perceived and contributing to decision-making, it can thereby lead to "defects of rationality" which may be subsequently recognised as such.

With a view to examining the various aspects of the links between rationalism and culture, we will now construct a framework of analysis of a rather general kind by considering the following issues in turn:

- the specific history of the corporation. We consider the factors which have brought us to regard the corporation as the expression of an intellectual rationale. We then show how those same factors have impelled the corporation to shape its social environment in a way conducive to its own rationalised ways of working and how, in return, those

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ways became increasingly dependent on factors of a different order (cultural and sociological);

- corporate theory. In the absence of a historical perspective, of a reference point in time from which they could measure their distance from their object of study, most corporate theories have contributed more to the process of change within the corporation than to an explanation of its development. We give a summary classification of the various theoretical approaches, setting out the limits within which they have been content to move;
- a corporate culture theory. Emphasising the dimensions which are significant at individual corporation level, but also in relation to the historical term and to the overall social system, we present a model which escapes the above criticisms and takes account of the historical factor;
- culture seen as a pseudo-rationality. Our model, while affording a description of the overall development trends, is also applicable to examining local situations of practical interest. We give two examples of such applications, showing how cultural values can replace rationalistic principles;
- a time-related approach. The evaluation of social institutions like the corporation means that we must develop an epistemological approach which encompasses the historical dimension, meaning one leading to theories whose postulates are "indexed" on the time factor.

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1 - The Specific Nature of the Corporation

Within the limits of this paper, we will do no more than outline and illustrate a thesis which forms the logical basis of our demonstration. A thorough justification of that thesis would require specialised research undertaken from a standpoint which has thus far received small attention.

There are three theoretical levels which can be considered relevant to the study of the machinery of the corporation:

- the level of the individual worker in the corporation,
- the level of the corporation as an organisational entity,
- the level of the corporation as a social institution.

These three levels are in fact interdependent, as is shown by the model to be described in Part Three of this paper.

However, earlier theories usually limit their scope to the area circumscribed by the individual worker and the organisational entity.

In the following few pages, we intend to show how the impact of the corporation considered as a social institution has varied in the course of time.

Allowing our assumptions to be true, it is hard to support the idea that the corporation is the expression of some intransigent rationality, which is not to say that such a concept may not have been relatively valid at particular points in time. In fact, we will attempt to convey the idea that the development of industrial capitalism has been sustained by some formal characteristics of the corporation which to some extent justify describing it in terms of a standardised and rationalistic model. However, the very principle

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underlying the development process was bound to alter the position of the corporation in relation to the rest of the social edifice, and thus to challenge the balance of the rationalistic model itself.

1.1 - The standardised and rationalistic model

Without wishing to revive controversy concerning the link between the Protestant ethic and the spirit of free enterprise, it must be said that - in France, at least - the increase in the number of enterprises was most related to the emergence at the top levels of Society of the new social groups often referred to under the general heading of the "professional middle classes" (5). The front-door arrival of this new bourgeoisie was accompanied by a change in the rules of the game which - according to Elias (6) - governed the terms of competition between the dominant (or sociologically significant) classes of society. Under the Ancien Régime, a striving for prestige, in the context of the Court Society and the rules of precedence, ruled over the relationships between the three dominant social powers: the Crown, the titled nobility, and the "noblesse de robe". After the Revolution, this role was taken over by a striving for the prestige conferred by material possessions.

In the early times, those of the "capitalists", the enterprise was no more than a pawn in the game opposing the rival fractions of society. Later, it came to play the game on its own account, and competition took the form of rivalry on the marketplace between corporate entities and individual entrepreneurs. This economic competition was radically different from the earlier rivalry for prestige, in that it required the qualities of business sense and efficiency which represent one of the first tangible expressions of rationalism (7): victory in the business arena implies the devising

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of better solutions than the competition in terms of product design, marketing strategy, organisation, and so on.

In the fields both of business management and business theory, there is a connection between efficiency and acumen which introduces the notions of maximum and optimum. In practical terms, the best enterprise is the one which has found better solutions than its competitors; in terms of the ideal theoretical typology, it is the one which has found the best solutions possible (the ideal often leading to the extreme). This identification is accentuated when mathematical reasoning is introduced at the two levels:

- in practical terms, investment option criteria lead to the adoption of projects tending towards optimum return,
- on the theoretical plane, the optimum allocation of resources is determined by reference to models which tend towards equilibrium.

The fact that the mathematical tool is mainly relevant to revealing or investigating extremes reinforces the link between the rational and the optimum. Then, the relationship is further accentuated due to a false perspective induced by a historical reminiscence - that of natural selection: in the business competition, enterprises deviating excessively from the optimum line are gradually eliminated, which impels the surviving businesses to tend increasingly towards the rationalised standard ideal.

The above considerations are designed to convey the idea, rather than to demonstrate, that the fact of regarding the rationalised standard ideal as the proper model was not entirely misguided. Businesses which did so, while being in their day relatively marginal in relation to certain processes forming the structure of society in general, are portrayed in the writings of Walras, Cournot, Zola, and others.

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1.2 - The corporation seen as a social institution

In the course of time, the status of the corporation in relation to society has gradually evolved to the point where it now emerges as the social institution which shapes the whole social pattern. We will now see that this focalising process is consistent with the continuing development of the initial concept of the corporation as an expression of the rationalist ethic. This trend, which could be described as the rationalisation of society, is particularly visible in two directions:

- firstly, with regard to what we term the process of "industrial civility". In describing the emergence and systematic formulation of standards of polite manners, Elias (8) drew a parallel between the restraining and inhibiting of personal feelings on the one hand, and the appearance of larger and more contrasting social structures on the other. Modern societies rely on an ability to operate through long lines of action comprising increasingly large numbers of interlinked individuals. This implies that the individuals concerned must behave in foreseeably "normal" ways, which are precisely the ways resulting from the assimilation of the rules of polite social intercourse. It seems possible, to a large extent, to transpose this reasoning directed to the social life of the 16th Century, to the process of development of the corporation (in both size and numbers) throughout the 19th Century. If it is to work properly, a corporation must employ people who have assimilated set ways of behaviour in many fields, where the common denominator is that the consequences for the corporation of each individual's action are foreseen by him or her; and this has led to a change in the relationship with time (9), a moral and social revaluation of worker status, and similar developments.

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It can thus be said that, in securing the assets enabling it to operate in the most rational possible way, i.e. the workers best suited to its requirements, the corporation has - as a social institution - performed a kind of educational, or rather, civilising, function with regard to its environment, the result of which has been the extension of its own values to society as a whole (they can be seen at work in government offices, hospital management, and so on). This is the set of values to which we refer under the label of "industrial civility", borrowing the concept from Elias.

- secondly, with regard to specialisation. Weber and many others have related the development of the capitalist enterprise to that of mathematically-based techniques enabling it to be managed as efficiently as possible; by costing, forecasting, auditing, and so on. The development and deployment of these techniques implies the training of specialists who gradually assume specific functions within the corporation. This in turn has led to the emergence of a body of new professions, each with its own training background and career connotations. As a result of these two specific assets, the new professions have gained particular status within the corporate chain of management, and then within the social hierarchy by comparison with that of other professions already established there. Gradually, the numbers of such specialists increased and their influence grew. Up to then, the bourgeois class had been formed mainly by capitalists, officials, and members of the liberal professions (doctors, lawyers, teachers, etc). The newcomers acquired social positions corresponding to their academic records, salary levels, and so on, and finally came to form whole sociological groups which gradually gained recognition independently of particular corporations: technicians, management executives, and so on.

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The corporation, for its own technical purposes, has thus contributed to social stratification, and the relative situations of the traditional strata have been readjusted to take account of this new social structure.

Along the same lines, many other examples could be quoted of the way in which the corporation has impinged on society as a whole: new areas in the fields of legislation, welfare, public services, and the like, have been opened up in response to corporate requirements but later extended to cover the whole social structure.

1.3 - The shift in the balance

Up to now, we have tried to show that, following a process that could be described as the pursuit of corporate rationalisation, the very nature of the corporation itself has evolved: at the same time as it generated new rules of behaviour and engendered new social segments, the corporation became increasingly caught up in the net it was weaving, as some of the latter's elements devolved outwards and created a back-lash of influence. Owing to this, corporate management is gradually aligning on new ways of reasoning which are no longer strictly rationalistic: having become the focal point of society, the corporation is no longer just a base for optimising capitalist profits, but is also a meeting place where all sections of society combine or compete with each other.

Here again, we turn to the work of N. Elias who, in a most enlightening text (10), showed how the three components of the ruling class under the Ancien Régime (the Crown, the nobility and the "noblesse de robe"*) combined and competed within the subtle rules of an absolutist Court. He describes the

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Court's gradual conquest of social supremacy, and explains why its institutional status changed when, under Louis XIV, it became the pivot of the social balance. Once more, we can transpose many of the elements involved in this process to the case of the corporation: even though a single institution, the Court, is replaced by France's present 250,000 enterprises of all kinds, the principle is the same when we consider the corporation as a single institutional entity which (until recently, at least) came to be the pivot of our social structure, to the extent that it was the determining factor underlying social rank and ways of life.

Given this shift towards the centre of the social structure, we must adopt a different concept of the corporation whereby deviations from the rationalised norm are no longer considered as resulting from the accidental interference of unorthodox individual behaviours. A single corporate model must leave room for different kinds of logical process: economico-organizational, sociological, and cultural. In Part Three of this paper, we attempt to develop a theory which reconciles these three types of reasoning.

However, this structural shift also raises the problem of a discipline which has grown up mainly around the rationalised behaviour model comprising the corporation: economics. It is true that the latter science displays an optimising attitude still present in the business ethic. It can be considered that the corporate theories developed since the start of the 20th Century correspond to a transitional phase between the economic-based and rationalised corporation model originating in the previous century, and the socio-cultural model we describe later in this paper.

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2 - Corporate Theory

In earlier papers (11), the author advocated a classification of existing theories according to whether they focused mainly on individual behaviour (such as individualistic theories based on a psychological model) or on the behaviour of the corporation as an entity (such as holistic theories considering the corporation as a system). The emphasis carried by this paper is of quite another kind, particularly in view of the historical perspective already referred to. We now maintain that the various theories put forward were addressing the obvious disparity between the theoretical and rationalised corporation model, and the factual observation of corporate behaviour. These theories followed one or other of two approaches which represent two types of solution to this problem:

- firstly, theories which attempt to revert to the initial model, making only minor adjustments whose common feature is that they restrict the range of the variable factors left out of the rationalised model. These we will refer to as Utopian theories;
- secondly, those which attempt to produce an empirical model of the corporation. They seek to build up specific laws founded on observation and experiment, and we will refer to them as Realist theories.

Our aim in describing these two approaches is to establish the connection between them and our own model. The latter addresses the same problem, that of explaining the disparities referred to above, but is based on a socio-historical analysis of the causes of those disparities, so that it deliberately makes room, alongside and on the same footing as organisational logic, for two quite different kinds of logical components.

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2.1 - Utopian theories

This heading covers theories which dress up their basic mannequin (the individual or the corporate entity as the case may be) using models decorated with operational procedures possessing a high degree of orthodoxy in relation to rationalistic theory. Two examples are given below:

- the first example refers to what we have called an "individualistic" theory. The "imported" model concerns the individual, since the case in point is that of an attempt to describe the employee in terms of a scale of satisfactions running from a lower level of aspirations (food, security) to a higher one (recognition) activated, so to speak, by the former.⁽¹²⁾ From the image thus constructed, it is possible to infer the employee's motivation levers: desire for job security, for consideration, or whatever. It follows that if certain elementary aspirations are not satisfied, there may be no point in expecting workers to subscribe to the corporate ambition. On the other hand, however, it may also follow that the corporation offers opportunities that are fully consonant with ^{higher} employee aspirations: such as a desire to participate in a team effort, or to fulfil personal potential. If this type of configuration obtains (which depends both on the overall economic situation and on the prospects of the company concerned), employee behaviour will be compatible with successful operation of the corporation. This theory thus describes the conditions in which the rationalistic model may be verified against the odds. If a corporation both offers opportunities and satisfies basic needs, then we are back with the rationalistic model proper, since its employees' behaviour is normal and foreseeable therefrom.
- our second example concerns a holistic theory. Some commentators (13) have defined the corporation as a special

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form of the system, taking the latter as itself defined in the General Theory of Systems. Consequently, the corporation must obey the basic laws which govern all systems. These laws are of the same nature as some of those applying to the physical realm, which do not necessarily have the same linear implications as those of the conventional corporate model; they may be recursive, but are rationalistic in essence. Such concepts as equifinality and negentropy are examples of this. In relation to the initial rationalistic theory, which is basically linear in effect, one of the limitations of this approach is that it is hard to formulate in mathematical model terms owing to the recursion inherent in some processes.

In between these two throwbacks to rationalism, one postulating limits to validity and the other employing laws which, although rationalistic, are of a different nature, there is a third approach which has the advantage of reconciling the holistic and individualistic options: the model described by March and Simon in "Organisations" (14). Their theory is based on a homological relationship between a behavioural profile of the employee and a behavioural profile of the corporate entity: both employee and corporation react to environmental stimuli in accordance with coded response keys, these being developed mainly through apprenticeship and leading to typed responses. A special feature of the latter is that they are not optimal responses, but meet minimal criteria, which leads to the expression "limited rationalism". This approach makes it possible to reconcile employees' varieties of experience with the nature of their corporate function, and more especially with the kinds of decision they are called upon to make. These decisions, given that they are consonant with minimal criteria, can be entered in quantitative models.

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2.2 - Realist theories

These contrast with the theories just discussed in that they do not attempt to dress up the individual or the corporate entity using formal clothing, but are concerned to describe their behaviour by reference to the findings of observation and experiment.

First of all, let us take the realist variation on the individualistic theme. Although it focuses mainly on a particular type of worker, it can be considered that the Taylorist ethic provides a very good illustration of this approach (15). Unlike the Utopist theories, it concerns only the individual as a worker and makes no attempt to dissertate on human nature in the broad sense. Furthermore, it does not claim that its findings are of universal import: Taylor established empirical relationships between the sum of work performed, the extent to which the work is prepared, the way in which the work is remunerated, and so on, on the basis of shopfloor observation and experiment. Then, extrapolating his findings, he formulated assumptions as to the most efficient way of organising factory operations. Taylor's approach was to a large extent a rationalistic one, even if it lacked a strictly scientific basis, but the things he tried to describe and bring under control were not necessarily of a rational order, notwithstanding the closely calculating attitudes he attributed to the workers he observed. These attitudes were merely the emanation of his own interpretation, and did not constitute part of a general theory of behaviour.

Then, we have the realist version of the holist approach. This is expressed in a body of essentially comparative studies, a good example being what has been called the contingency theory (16). On the basis of surveys directed to fairly large samples (fifty or so corporations), the data being processed using sophisticated mathematical techniques,

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relationships are established between the performance of a corporation, its internal structural characteristics, the technology it employs, and the market trend. This approach thus reveals certain correlations, which it then attempts to generalise by identifying their logical justification. The explanation is not necessarily a rational one in the strict sense, since it may be the outcome of an organisational form of reasoning. For example, it may be found that when the market is unstable, medium-sized undertakings with less rigid working and management procedures are the most efficient. The idea of structural flexibility is foreign to the classical economic theory which has it that more accurate forecasting is the only road to avoiding uncertainty.

Between these two extremes, we once more find a theory which endeavours to reconcile the individual and the corporate models. I am referring to the work of the Tavistock Institute concerning socio-technical systems (17). We cannot be absolutely certain that this is a truly "realist" theory, to the extent that it is based on a model of the individual which owes much to the concepts of the psycho-analyst (meaning that it is in no way a forecasting model), and on a model of the corporation which combines a systems approach with a psycho-analytical concept of group dynamics (the early works of Freud concerning the unconscious mind can justify this combination, which is even more appropriate from a Jungian standpoint). We thus again find a relatively homological "structural" link between the model of the individual and that of the corporate entity. If we count this theory among the realist models, it is because of the non-rationalistic nature of the underlying psycho-analytical connotation, together with its own "open-ended" character: it forms a framework for interpretation, rather than for prediction, so that it is capable of being associated with other factors.

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3.3 - The body of theory

Our twofold classification of corporate theories is summarised in the following table:

Theory	Utopian	Realist
	Systems approach (Katz & Kahn)	Contingency theory (Aston Group)
Holistic		
Holistic and Individualistic	March & Simon	Tavistock Institute
Individualistic	Human Relations (Maslow)	Taylorism

From this presentation it can be seen that the relationship with rationalisation, whether or not it is integrated in an approach, is the frame of the body of theoretical output. Two other points also emerge: virtually no attention is paid to collective factors that are not strictly of a corporate kind, such as sociological variables; and, reciprocally, the notion of the corporation as a social institution is not put forward by the theorists. In other words, the corporation is entirely transparent in relation to sociological factors; it neither affects nor is affected by them:

- according to the individualistic models, the behaviour of the individual is not influenced by any rules of conduct that are merely the extension to the corporation of general sociological tenets;
- as concerns the holistic models, they do not try to relate the existence of these internal social rules to deviations from the rationalist norm.

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In the final analysis (and this to some extent upsets the typology - holistic/individualistic - formerly sponsored by the author), responsibility for malfunctioning seems invariably awarded to the human factor; either it is isolated and manipulated to fit in with set patterns, or it is pushed into a corner of some more general pattern where it loses its specific influence.

In the following pages, we attempt to show that by integrating the cultural element (and the social structure) within a corporate model, we provide a conceptual framework accomodating both the individual and the corporation. This same framework also throws light on an apparently paradoxal process: as and when the corporation gradually achieved the status of dominant social structure, so did the incidence of its internal cultural beliefs become increasingly relevant to explaining its functioning. In other words, there is a link between the fact that each corporation develops its own culture and the fact that the corporate entity has become the structural focus of modern society.

The latter point brings us to make an important remark concerning the links between the historical evolution of the corporation and the body of theory accompanying it: the corporation is an entity which changes over time, so that when a theorist discovers new properties in it he may be inclined to suppose that management science has progressed and that he himself has been more perspicacious than his predecessors; but another explanation may be that the properties in question did not previously exist. In this connection, we tend to favour the following exposition:

- (i) When Mayo describes the Hawthorne effect, he is drawing attention to a phenomenon of recent origin (due, for instance, to the rise in the standard of living and the cultural level of the working class),
- (ii) When the corporate culture concept starts to attract great interest, this is because a type of factor which was formerly less influential, and thus less relevant, is coming to the forefront.

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3 - A Socio-Cultural Model of the Corporation

The model we are about to describe possesses four features which, in our opinion, should be part of all corporate models:

- (1) It takes both the holistic and the individualistic approaches
- (2) By taking the status of the corporation at any given time to be the sum of all the decisions previously made, it combines a corporate behaviour theory with a decision theory
- (3) The main factors built into it change over time, making it possible to investigate the long-term evolution of the corporation
- (4) These same factors enable us to describe, at any given time, the interactions between society as a whole and a particular corporation.

The model is based on three types of factor which constantly interact with each other. However, in the interests of clarity, we will describe them separately and in turn. Then, we will show how this model presents the four characteristics enumerated above. Finally, we examine the extent to which it enables us to relate culture to rationalism.

3.1 - The social structure within the corporation

It is at this first level that the individual image and the corporate entity image combine to act within the same continuum. Owing to this theoretical merger, it is possible to describe the social structure from two twin standpoints:

- on the one hand, we can say that the social structure in the corporation results from the intersection between the corporate body and the social groups making up society as a whole. These groups are represented within the corporation by individuals whose characteristics form a "sociological identity" sometimes called the "habitus" (18);

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- on the other hand, we can relate the behaviour of each individual in the corporation to the characteristics determining in some respects (social background, academic, social and financial status, etc). The social structure is then represented by the pattern of distribution of those characteristics, including - it must be remembered - the ones resulting from the social pattern of which the corporation itself forms a part: company status and past career.

As we have emphasised elsewhere (19), there are two kinds of typical behaviour within the corporation: one which is confident and creative, and one which is hesitant and keeps to routine. The work of P. Bourdieu et al (20) stresses the relationship between the individual's behaviour style and his habitus. This relationship is based on two separate principles:

- firstly, there is the effect of the mental outlook belonging to each particular social group (such as the confident style of the dominant bourgeoisie and the painstaking style of the lower orders);
- secondly, the credibility factor which compounds the effects of the mental factor: depending on the nature of his personal "capital" (diploma, social standing, financial position), the individual is granted by his chiefs - usually drawn from the same or a higher social class as himself - a greater or lesser measure of credibility, determining the extent to which he is judged on his initiative rather than on his results.

All these factors combine and interact to create, as is illustrated both by short surveys and by statistical records, a cleavage between the careers of different categories of employees. To take the engineer class, with which the author has especially been concerned, the gap occurs between those

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trained in the specialised technical colleges (which recruit from the lower middle classes) and perform technical functions, as opposed to the graduates from the Grandes Ecoles (an institution peculiar to the French higher education system, but corresponding to similar establishments elsewhere), who find posts on the management side.

The habitus can be considered mainly as a factor of differentiated behaviour: providing that the business imperative is not overriding (i.e. when there is no obviously "best" solution), individuals with a different habitus but whose functions are comparable (such as can be explained by career length), may make different decisions faced with the same problem. This brings us to a question which some of the theories mentioned above have attempted to address: "In the individual's behaviour (particularly the decisions he makes), what is to be attributed to the fact of his belonging to a given company at a given point in time, and what to that individual's personal characteristics?" It was in an attempt to contribute to answering this question that we turned to the corporate culture concept.

3.2 - Corporate culture

Within this concept, we include (to enable systematic description of it) all the specific factors which impel individuals to subscribe to certain corporate values. Some of these factors are specific to a given corporation, while others are related to industry in general; the latter, however, may come to the surface in different ways from one corporation to another. For example, the idea of rationalisation may come to have very different connotations.

When we speak of the cultural element - or system - we

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are thus referring to the whole body of perceptions shared by all the employees of a corporation at a given time, and which enable that corporation to function properly. If we consider, for example, the decision-making process, we see that in most cases the number of variable factors to be examined is theoretically infinite, whereas most of the individuals actually concerned in the decision take it for granted that those factors are for the main part invariable, variable only within known limits, or of negligible incidence.

As already pointed out, this system of shared perceptions, assimilated to the point where it is often applied unconsciously, tends to produce standard behaviour patterns; it is the result of the corporation's past experience as interpreted by those qualified to do so. Many theorists having an eye to the cultural element have considered it somewhat as a remanent factor which resists logical analysis, so that it cannot be regarded as a stable system capable of systematic treatment. It is inserted into our model on the hypothesis that such a stable and universal (i.e. applying to each employee) system can indeed be observed within any given corporation and that, furthermore and most importantly, there is some structural homology between the systems obtaining in each and every corporation. This means that a quasi-ethnographic survey of a corporation can bring out the dominant image which prevails there, both of the worker and of the corporation as a whole.

This hypothesis appears to be valid to the extent that it explains certain functional disparities (due to the inherent inertia of the cultural system) and enables us to examine the restructuring potential of the corporation concerned. We can thus assume that shopfloor organisation reflects a particular image of the worker, and show by experiment that the former cannot significantly evolve unless the latter is thoroughly transformed.

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It is here appropriate to come back to the point, of special importance in the interaction between the social structure and the cultural system, that the normalising effect of the latter is exerted notably in the context of the scale of behavioural legitimacy assimilated by the corporate work force. As in other fields of social activity, we find that the individuals from the dominant social classes are the most ready to accept certain temporary adjustments of the scale of legitimacy which are inherent in official industrial relations policy (improvement of working conditions, worker participation in management, and so on). In other words, the cultural system's normalising effect is differentiated according to the habitus of each employee and to the area of decision concerned.

3.3 - Economico-organizational contingencies

What we have said up to now might leave the impression that our model is a rather "immaterial" view of the corporation, and that it fails to make room for some practical constraints such as market conditions, technology, industrial relations, and so on. And indeed, it is a deliberate attempt to get away from the excessively mechanical interpretations of the relationships between the variable factors involved which have thus far been the rule. In particular, we hold that statistical correlations established between these variables are not significant in themselves and that, to become meaningful, they need to be entered into an appropriate overall model. In most cases, this implies an investigation of the decision-making processes underlying those correlations. While not, of course, rejecting the considerable sum of acquired findings concerning most of the organisational variables, we nevertheless consider

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them to be capable of different interpretations. For instance, the fact that a particular type of organisational structure predominates in a given sector of industry, or in corporations of a given size, cannot be construed as meaning that it is the optimum structure for the purpose. Its predominance may just as well result from a cultural consensus within the area concerned (a topical example is that offered by the French car-manufacturing industry in relation to its Japanese competitors). In other words, we suggest that organisational evolution - which may tend towards generally homogeneous structures reflected in contemporary statistical studies - should be regarded as resulting from a historical process, whereas little research has thus far been aimed in this direction.

The foregoing impelled us to devise a kind of instantaneous model of decision-effects, investigating how the corporation moves from state t to state $t + dt$. Within this analytical framework, contingencies (both the economic, social and technological ones forming the corporation's environment, and the organisational ones forming that of the decision maker or makers inside the corporation) determine a range of possible options. Out of this range, only certain options are actually perceived by the deciders, depending on their personal habitus (most of them, making necessity a virtue, tend more or less unconsciously not to become aware of options they could not fulfil). Then, as we have already seen, the dominant culture within the corporation awards different degrees of legitimacy among the remaining options; but the personal habitus of a decider may incline him to take more or less notice of this informal discrimination.

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The organisational contingencies thus represent for us the same set of variables as is meant by this term in the context of conventional corporate models, but their shaping effect on decisions is variable:

- if there obtains a strong "business imperative", such as when the available options can be quantified and filtered through an established evaluation system, and it is fairly easy to come up with a "best" solution recognised by all, then the incidence of the other dimensions is limited or takes expression only in secondary effects, i.e. not affecting the economic weight of the decision but sometimes the way the solution is applied (it quite often happens that several alternatives all lead to the same result in purely accounting terms);
- on the other hand, there may be a need for decisions that are just as important to the corporation, but which lie in less familiar areas: entirely new situations, decisions of a more qualitative kind (such as concerning the nature of an organisation project, rather than its investment cost). Here, the over-riding influence may be wielded by individual deciders using different arguments (technical emphasis, marketing emphasis, etc).

In fact, the assumption that a current decision situation is broadly similar to many others that have already been handled, is often itself merely a presumptive decision not fully proof against rational examination; it assumes in effect that many relevant factors have since remained unchanged, which may be quite untrue. On a later page, we will discuss a case

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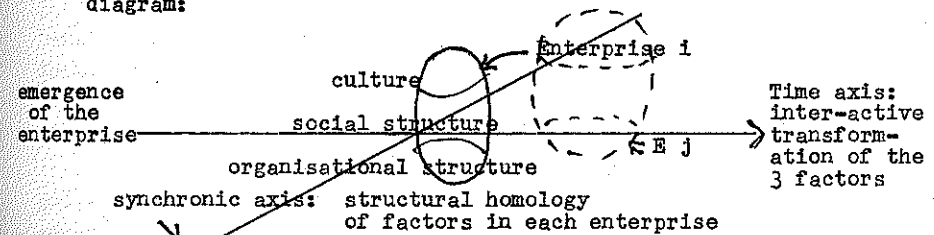
where the cultural factor influenced consideration of the continuing validity of earlier solutions.

3.4 - The corporation, History and Society

The model we have just outlined comprises three types of factors which interact in the short term and can be used to explain corporate evolution over that term. At the same time, however, each of these explanatory factors is modelled by its own history and thus forms part of an overall pattern of change. It can be considered that, at any given time, this general trend is defined in relation to two axes:

- a diachronic axis, which represents the transformation of the explanatory factors over the historical term and also the changing position of the corporate institution in relation to the society as a whole;
- a synchronic axis, associating the characteristics of each corporation with general trends applicable to society as a whole at that time, resulting from extension and balancing procedures based partly on the various other institutions in what we call the "inter-enterprise space".

These two axes can be depicted as in the following diagram:



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The evolutionary trend followed by each of the three components of our model can be described as follows:

- the main long-term development affecting the cultural factor is the phenomenon described by Elias, and which we have chosen to call the "industrial civility" factor". This corresponds to the gradual generalisation (through assimilation by increasingly large sections of the community) of certain values which first gained recognition in the corporate world: the value of time, the work ethic, and so on. At given times, the spread of these values is effected by various agencies working on different levels but all carrying messages in some way related to the entrepreneurial ideal (schools, news media, etc);

- the structure of society changes with the emergence of new professional occupations, initially defined in terms of corporate functions, but whose members gradually come to constitute new social groups forming their own life styles. This gives us a gradual diversification of the social structure in response to the specific requirements of the corporation; the social hierarchy within the corporation depends, in return, on that which governs society as a whole at any given point in time. Thus, having first contributed to forming the social environment around it, the corporation finds that its own structure comes to be influenced by the latter;

- the underlying trend affecting organisational contingencies can be identified as, on the one hand, the development of new management techniques and procedures and, on the other hand, the emergence and extension of new organisational patterns which add to the store of those already tried out. At each given time, various agencies contribute to propagating these techniques and patterns, through the work of consultants, researchers and others who channel the new developments within the inter-corporation fabric.

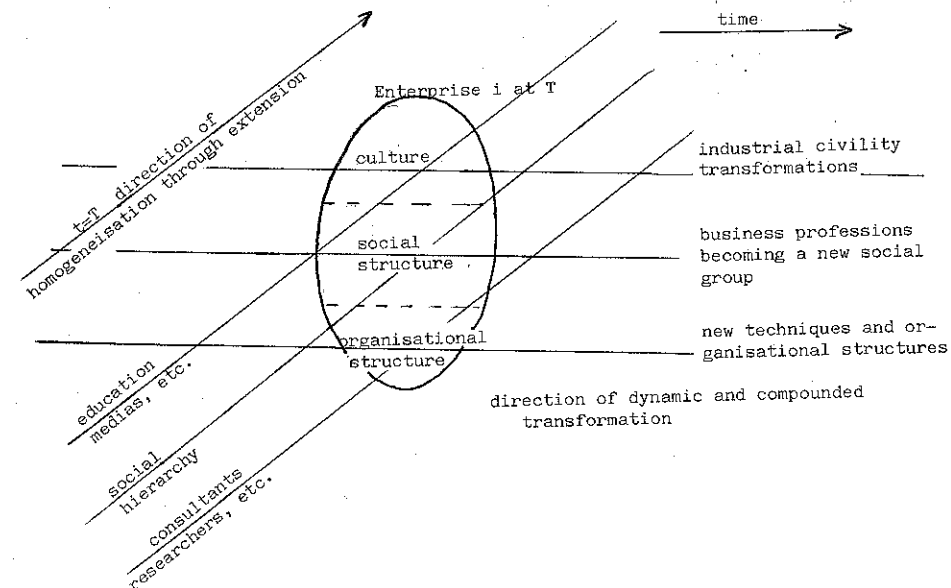
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The fact that these three components of the model¹²¹ vary over time implies, reciprocally, that by following them we should be able to comprehend the long-term changes taking place in the corporation. This is one of the reasons for our assertion that the model described is a relevant one: it reflects historical developments and establishes a relationship between each corporation and the society in which it lives.

This is the property which enables the model's application to studying the twin movement referred to at the start of this paper, and which results in a change in the signification of the corporation:

- the corporation tends to affirm its own logic by imposing its own rationalistic values on its social environment (conduct, specialisation, techniques);
- from being a structural mover, it becomes, as from the point where a certain equilibrium is attained between it and its social context (thereby becoming the focal institution in the society), itself an object of structural change in the hands of external social influences.

Our earlier diagram can thus be enriched as follows:



3.5 - Culture and rationality

We have suggested several reasons behind the fact that, over the long term, an increasing discrepancy is to be observed between the early rationalistic theory and the true current status of the corporation. However, these reasons concern the corporation considered as a social institution, and this is a concept which extends outside the time scale applying to a corporate employee or to any one corporate entity, such as has been the scope of past theories.

If we now return to considering the short-term functioning of the corporation, applying the model just described, we find that there are several types of relationships between the cultural and the rationalistic components of the problem:

(1) Classical economic theory assumes that decisions are made in the light of full possession of all the factors involved. In actual fact, however, our span of knowledge is limited, as is the number of factors that can materially be handled. When making a decision, therefore, we are bound to formulate a large number of working hypotheses (most of which are in fact implicit) as to the variability and incidence of many relevant factors. Given that these hypotheses cannot be supported by scientific evidence (there being no discipline able to predict the behaviour of a given type of individual in given circumstances, or to guarantee that the optimal production process for a given purpose will, in ten years' time, be of a given kind) it is legitimate to describe them as "cultural" hypotheses within our meaning of the term: most decision-makers accept them to be incontrovertible truths. Thus, the cultural factor is closely linked to the formulation of rationalistic decisions: it enables an infinite number of unknown factors of decision to be reduced to the small number which is actually considered. This is one of the reasons

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why we refer to the cultural element as a "pseudo-rationalisation": it is an essential aid to developing "rational" analysis (comparing options in quantitative terms), and it guides decision-makers just as firmly as do scientifically established facts.

(2) The cultural factor also helps to understand the differences between the rationalised model and the observed reality with respect to integrating the time factor and the proliferation of centres of decision-making. According to the theoretical principles of rationalisation, the corporation should:

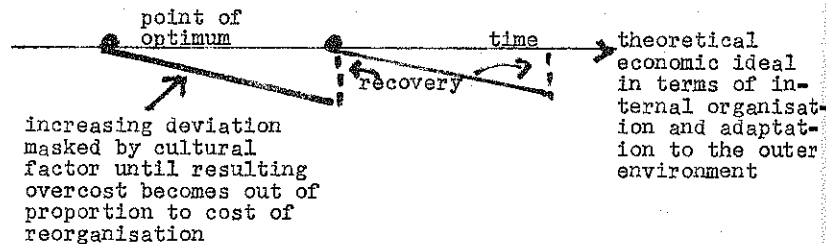
- constantly adapt itself to ensure that its structure remains in line with the optimum model,
- adapt all its sub-structures in conformity with that model.

In practice, however, such a permanent process of restructuring is not feasible, and any corporation in which each department practiced its own separate organisational principles would be quite unmanageable. Therefore, except for a few periods during which a corporation is both perfectly adapted to its environment and internally efficient, it to a lesser or greater extent deviates from the theoretical model. This is a source of weakness in the corporation, since some participants in its management may seek, in the name of rationalisation, to convert their particular departments to a new structure which is demonstrably superior in the purely local context. Whence the risk of friction and conflict.

The cultural factor must therefore intervene to cover up the gaps between points of optimum structure which in practice can be reached only sporadically. This gives us

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a process we can depict as follows:



This establishes a link between the functional application of the cultural factor and the deviations from the rationalistic norm marked by the corporation. The greater the deviation, the greater the need for a cultural counterweight; and, conversely, we can say that, in terms of the cultural factor, the rationalistic optimum is the zero point of signification.

The cultural factor thus has a twin role to play: in the short term, it enables decisions to be made; in the medium term, it avoids conflicts within the corporation. This functional role explains why some elements of the cultural factor are closely determined by organisational contingencies. It forms a kind of screen and a link between those contingencies and the general social structure: in relation to the former, it bends to comply with corporate necessities; in relation to society generally, it tends to avoid conflicts by normalising individual behaviours. Consequently, it can be described as one of the means by which the corporation tends towards the rationalistic optimum, and whereby that optimum is defined in terms of only a fraction of the complete range of possible options.

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The above observations concerning the relationship between the cultural factor and the rationalistic ideal are illustrated by the two examples to which we now turn.

4 - Two Case-histories Relating Culture to Rationality

The following two examples illustrate some features of the link between the cultural factor and the rationalistic ideal which has just been evoked.

- The first case concerns change in the conditions of manual work in industry
- The second is an account of how new technology transformed conditions of office work

They have in common at least three features that are particularly relevant to our subject:

- both studies were performed recently and covered a limited time span, but their findings pointed to the importance of past events in leading to the current state of things;
- they both bring out the dynamic interaction between investment and organisational decisions on the one hand, and stereotyped worker images on the other;
- finally, they both describe the implementation within a corporation of a type of intellectual approach which contained many ideas brought in from outside and followed unorthodox lines of reasoning.

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On the other hand, the two cases differ in a major respect whose importance will emerge later on:

- the first instance is concerned with an employment category which has for long been regarded as the focus of the productivity drive: the shopfloor workers; whereas the second deals with a category which until recently had been immune from attempts at rationalisation: secretarial staff.

4.1 - Shopfloor reorganisation (21)

This case-history refers to two field surveys performed between 1972 and 1978. Between the two, we were able to observe a major transformation in the outlines of the worker image, together with the consequences of this in organisational terms. Where France is concerned, it can be said that this transformation - coming more than half a century after the earlier stereotype gained currency - has been a slow process. Some of the reasons behind this slowness will emerge from the following account.

First of all, we shall recall the beginnings of the traditional worker stereotype, and show how it engendered production procedures and systems regarded as rationalistic. Then, we go on to explain why some organisational implications of this image were brought into question, and to describe the two approaches adopted by the corporations concerned with a view to overcoming the difficulties being experienced. Finally, we identify those implications of the new organisation systems which can be attributed to the gradual change of image.

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4.1.1 - The Taylorist image of the factory worker

Although it may seem somewhat irrelevant to go back to such an ancient theory, there is no doubt that Taylorism still survives widely in France, through the principles of the assembly line and the procedures of investment evaluation. It can also be regarded as the source of an underlying worker stereotype that still remains current.

The problem arising at the start of the Century was that of how to reconcile the apparently non-rational behaviour of individual workers with rationalised production systems. To be more precise, how to attain output aims with a minimum labour force, given the organisation systems and the technology then available; to put it in another way still, how to determine the maximum output capacity of a worker in those same conditions.

Through observation and experiment, Taylor arrived at two conclusions:

- workers preferred short and well-defined tasks;
- piece-work was the most efficient basis of remuneration, and the least open to criticism or complaint.

Given these premises, it was possible to employ an individual as part of a process in which he performed precise but limited tasks. The definitions of these elementary tasks were to be made by specialised departments using scientific methods for:

- breaking down whole jobs into a set of basic motions,
- allotting a time to each motion by reference to a schedule drawn up in the light of time-and-motion studies,

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- reconstituting from these motions a series of work-station tasks of roughly equal duration to each other,
- establishing a relationship between the sequence of those tasks and the equipment composing an assembly line.

The worker stereotype evolved thus makes it possible to use precise methods of calculation to determine the optimum production system. These new work-study methods came to supplement the existing methods of evaluating investment projects by comparing discounted capital costs and operating costs corresponding to alternative options.

From the organisational standpoint, the consequences of this extension of methods of calculation were of two kinds:

- firstly, technical authority was transferred from the workshops to a centralised Order and Methods department enjoying the scientific computing facilities described earlier;
- secondly, in industries such as car-manufacturing, where re-tooling is a regular necessity, this O & M department tended to organise itself as an assembly line for producing assembly lines.

The Taylorist model can thus be associated with two types of consequences:

- firstly, the definition of rules for applying highly-developed methods of scientific calculation, these also extending to cost-control purposes;
- secondly, centralised consolidation of all the decision centres concerned with designing and operating the assembly lines.

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The consistency of this system, together with the reassuring effect of its scientifically-based evaluation practices, readily explain why it has proved extremely difficult to move with the times.

4.1.2 - The first cracks in the facade

However, in the early Seventies, two sets of factors combined to bring certain aspects of the system into question. Firstly, there were factors affecting the society in general:

- the aftermath of the May 1968 disturbances, which gave voice to aspirations for a better quality of life, as opposed to higher standards of living, and signalled the downfall of arbitrary authoritarianism,
- then, a series of short-lived but determined strike actions which drew extensive comment in the media and brought major economic sectors to a standstill.

There thus emerged two different motives for unrest, both revealing the fragility of the production system and neither capable of being appeased by merely increasing wages as in the past.

Secondly, there were factors directly connected with the industrial world:

- absenteeism, worker turnover and the rate of manufacturing defects all increased sharply,
- the production system lacked the flexibility needed to cope with foreign competition,
- the increasing diversification of product design was seen to be in conflict with the principle of standardisation which had thus far justified the assembly-line system.

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Out of these considerations there developed a movement which soon attained a consensus of opinion - having attracted support both from the government and from the employers - and became known as the movement for Better Working Conditions. One of the main justifications underlying this was the fact that, while living standards had risen substantially during a long period of economic growth, continuing poor working conditions were the cause of worker dissatisfaction resulting in greater absenteeism, bad workmanship, and so on. This marked the appearance in the corporate philosophy of elements of a different essence than had hitherto been the case (particularly as concerned Taylorism). We shall now see that the implications of the movement were interpreted quite differently from one to other of the two undertakings covered by our study, owing to their different organisational systems.

- The Renault Corporation

This is an example of a corporation which has carried Taylorist principles to a point of extreme:

- the assembly line is virtually the sole production system in force,
- technical command is highly centralised,
- classical cost-accounting methods are applied to all investment projects.

The way in which the Better Working Conditions policy was introduced was consonant with the above basic principles: the management set up a central unit responsible for studying the question. This unit then proceeded to develop a method for comparing plant equipment as objectively as possible, i.e. on the basis of quantitative criteria such as the physical strain, monotony of work, and nervous stress, involved.

This approach was fairly consistent with the fact that

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- The Creusot-Loire Company

This company makes more diversified products, with less detailed pre-processing of the work, so that it employs workers with higher job qualifications. When introducing the Better Working Conditions policy, it was concerned not to tackle the consequences of the worker stereotypes evolved by Taylorism, but to change those stereotypes themselves. At the time our study took place, the company was dealing with the problem of adapting its production capacity to market fluctuations. However, since its production was relatively diversified (lathes, presses, furnaces, machine-tools, etc not specific to any particular end-product), the greater flexibility needed had to be achieved at individual worker level: mainly by reorganising systems so that the workers could exercise more initiative and would have a greater feeling of responsibility.

In view of the production structure of this company, it is natural for technical authority to be located very close to the shopfloor concerned. In conformity with this decentralised organisation, the management encouraged the shopfloor supervisors to work out local solutions to the general problem described above. It merely laid down the overall policy framework, which constituted the go-ahead for implementing a Better Working Conditions Policy within the corporation.

This led to the setting up of a wide variety of experimental projects, ranging from what were known as "Progress Groups" (forerunners of the present Quality-chasing Groups, but run on a less formal basis) to "self-contained workshops". All these experiments had one thing in common: they relied on more-or-less permanent consultation among the shopfloor operatives: for

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the unit's assignment was to develop a tool which the O & M specialists could use to guide their decisions in the light of BWC policy criteria. In relation to this implicit aim, the unit can be seen to have failed in its task: the O & M Department did not introduce any wider method of cost-evaluation such would have allowed for the estimated costs on account of absenteeism and poor workmanship.

Nevertheless, the unit's work exerted an indirect influence: owing to the publicity it attracted, some of the shopfloor managers felt that they could legitimately suggest alternatives to the assembly-line system, although being bound to remain within the existing rules governing investment options: if a factory layout promoting improved working conditions were to stand a chance of being adopted, it had also to represent the most cost-effective investment option. This led to further exposure of the limitations of the assembly-line system: it could be replaced by a more cost-effective one.

However, initiatives of this kind brought sharply into question some of the tenets derived from Taylorist principles, including that awarding decisional supremacy to the O & M Department - a veritable State within the State. Consequently, with the exception of a few marginal experiments (paint shops, engine relining) this approach was abandoned. Even if it tended to perpetuate the Taylorist model (assuming that better working conditions would reduce absenteeism and bad workmanship, without undermining the production-gearred system as a whole), it threatened too many organisational interests. The corporation thus favoured recourse to the alternative approach which will be discussed hereunder and which is both more radical in principle and more conservative in its structural effects.

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sharing out work between themselves, evaluating proposed equipment changes, or fixing hours of work. Other Taylorist principles were also thrown overboard, such as by providing for more systematic discussion between shopfloor operatives and the technical management staff, mainly on day-to-day matters, but also concerning issues of more general interest such as the state of the company's order-books or its broad technological options. One of the aims of this policy was to enable problems to be handled at the lowest level where the necessary competence and knowledge were to be found.

4.1.3 - The recent developments

The two studies outlined above corresponded to the early days of the Better Working Conditions movement and are not necessarily representative of the latter's overall effects within French industry, but we feel that they bore the seeds of the most typical reactions everywhere. Before going any further, it is appropriate to recall that the movement was not to survive beyond the advent of the economic crisis, which made it less credible in the eyes of the workers and contributed to attenuating the incidence of underlying factors such as high labour turnover and absenteeism. By 1978, almost all of its effects had disappeared.

As we saw earlier, there were two alternative solutions available to deal with the problems which had arisen:

- either to establish new and more restrictive rules of reform, within which the original Taylorist principles stood some chance of surviving, as was clearly implicit in the Renault Corporation's approach to the extent that the implementation of the BWC policy at no time supposed that the worker

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could be asked to discuss his job, being content solely to consider job-station amenity in relation to standards evolved elsewhere;

- or partly to abandon the old system, replacing the image of the "dumb robot" worker by one of a worker qualified to express himself about his job and able to adapt to more varied and less predetermined tasks. To use the terminology of human communications developed by the Palo Alto school, a linear and mechanical model was replaced by a retroactive and cybernetic model.

The following relationships can be put forward in an attempt to interpret the trend in more general terms:

- the workers studied by Taylor had - as he himself made plain - only recently left a rural environment to enter factory life. His depiction of them was not merely geared to the needs of rationalisation, but was also the reflection of a lack of technical and cultural benchmarks on the part of those workers;
- the "cybernetic" model emerging over the past few years is the expression of a rise in the social and technical culture levels of the working class; a development which goes back much further, but becomes truly relevant in concomitance with certain corporate requirements (such as flexibility of production).

From this angle, it is again possible to understand the difference in the strategies adopted by the two corporations in question. The first employs mainly immigrant workers who, in the eyes of the management, had little contribution

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to make in the way of technical suggestions; whereas the other's factories are sited in areas which saw the first stirrings of French industry, so that many of its workers have a long industrial tradition behind them. The inherent characteristics of the working population are thus gradually becoming a factor in the organisational concept, and it can be said, even, that the overall efficiency of a working organisation will eventually depend on the cultural level of that population.

An important stage in this trend, and one which also reflects a departure from former worker stereotypes, was the appearance more recently than the above studies of what are known as "Cercles de Qualité" (quality-chasing groups). These emphasise the importance of highly-decentralised communication by providing procedures for the local formulation of worker expression. The basic principles are briefly as follows: operatives are provided with elementary statistical data and methods of diagnosis based on chains of causality, enabling them to formulate local improvements in the production process and then to discuss this first formulation with appropriate specialists working in the factory. Remembering our earlier statement of the general principle underlying the trend of industrial intercourse (workers become increasingly aware of the consequences of their behaviour in relation to the life of the corporation), it is clear that these Cercles de Qualité are one of the first deliberate applications within the corporation of what was at first only a general factor of normalisation throughout the society. The corporation is thus again seen to be assimilating a form of logic which was previously external to it.

This trend obviously deviates from the rationalistic model, if we mean by the latter a system which relies on cost-accounting to dictate the detailed workings of the production

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facility. Costing is still the basis for investment decisions, but the true performance of the option thereby adopted depends increasingly on worker behaviour, especially where Cercles de Qualité exist to correct aberrations in the theoretical assumptions guiding the decision-makers.

As things stand at present, we seemingly have a "transitional" worker image comprising two facets:

- the first aspect, being in agreement with the rationalistic ideal, comes into play when decisions are made and corresponds to a typical attitude to the job,
- the second, corresponding more to the true social and cultural personality of the worker, represents the latter's imaginative potential as it can be released when suitably "sympathetic" procedures like the Cercles de Qualité are in force.

It is true that, for the time being, it remains to find a way of integrating this second aspect in a structural model of corporate management and control. A potent instrument is seen to exist, but a precise evaluation of its performance has not yet been reached.

4.2 - The secretarial function (22)

The secretary's job can in many ways be considered as the antithesis of that of the workman: the one is on the outer fringes of the corporation's industrial purpose and performance in terms of added value, whereas the other is central to it. The difference is further accentuated by the behaviour of the secretary, doing her best to avoid being confused with the shopfloor operative despite a number of

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similarities between the two situations: absence of career prospects, limited scope for initiative, generally low wages.

This "resistance" displayed by secretarial workers may be the reason for the limited penetration of the principles of rationalisation in their area. The way in which an office works still depends mainly on the personalities of the people in it and, above all, of those it serves - i.e. the higher executive or executives controlling it.

The study on which this paper is based was carried out in the offices at the headquarters of EdF, the French electricity generating and supply organisation. The assignment was to examine the practical possibilities of introducing in the secretarial offices the modern word-processing and telecommunications systems known collectively as "office computer systems". It was a follow-up to an earlier study in which, in conjunction with EdF's own specialists in the field, we compiled forecast scenarios covering the introduction of these systems at a more general level.

These scenarios had had the effect, following wide internal circulation of them prior to publication, of provoking relevant observations from the secretarial workers and of awakening a kind of collective awareness of the subject.

We took advantage of this surge of interest by forming two study groups, composed of secretaries and executives respectively, who were asked to think over the organisational implications of introducing the new systems, together with related questions of training, qualification and career prospects.

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4.2.1 - The secretariat

The situation of the secretarial staff of EdF at the start of our assignment was characterised by a number of features of such a general nature that we can legitimately assume it to be relevant to many other corporations.

That situation can be examined from the twin standpoint of the work performed and the status of secretariat staff within the corporation:

- the work performed has some features bringing similarity with that of the corporate executives, and others which correspond to fully subordinate tasks. There is a hard core of activities associated with all secretariats (typing, filing, call-taking, appointment-making, and so on), but some of these can be performed in a large number of different ways. Furthermore, this core is surrounded by a multitude of other tasks which differ from one secretariat to the next, so that two main characteristics emerge: each secretariat seems to be different from all the others; and the sequence of activities seems to be unforeseeable.

The subjective tone in which these observations are framed is due to the fact that the secretaries themselves emphasise the differences in a manner which well illustrates the ambiguity of their position: they set store by this erratic pattern of their job, in that it underlines their personal organising abilities, but they at the same time make it a matter for complaint;

- the special status of the secretarial function is derived from the fact that it is not part of a chain of functions

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such as to some extent links those of operative, technician and engineer, at different levels of technical knowledge and power of decision. The secretariat is isolated in two ways: firstly, it leads nowhere and is not part of a career plan; secondly, there is no corporate institution to unite the secretaries for such purposes as centralising their problems and expressing their collective aspirations.

Here again, the secretaries themselves adopt an ambiguous attitude by regretting the absence of career prospects, whilst at the same time identifying themselves closely with their present functions and thus leaving little room for mobility.

The various characteristics just summarised attempt solely to illustrate the specific status of the secretariat, which appears to have developed over a long period, without being affected either by costing procedures (no attempt is made to determine the cost-effectiveness of providing a given type of executive with a secretary) or by work standardisation (such as by standardising methods of filing). It is as though the secretariat were too close to the management for certain rules of organisation to be applicable to it. The secretaries themselves thereby enjoy the status symbols attached to their job, but suffer material disadvantages.

The elements of that situation have become accentuated with the advent of office computer systems.

4.2.2 - Office computer systems

The systems which came onto the French market some five or six years ago (at least, as concerns the word-processor, which had the most spectacular short-term impact) possessed three characteristics explaining their manner of introduction

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into the corporation considered:

- they are based on computer technology (micro-chips, software) but, as concerns the first generation at least, could not be programmed by the user or take modified software;
- they are designed as a replacement for the ordinary typewriter, and thus to be used in secretariats;
- their cost (between 50,000 and 100,000 Frs) is within the range where procurement can be authorised at a fairly low level.

The first point explains the small interest displayed by the computer people: single-purpose systems with no programming capability.

The second point is to be seen in conjunction with the fact that there is no central level responsible for evaluating the problems and methods of secretariat operation, such as might otherwise have questioned the usefulness of the items concerned.

Finally, the relatively low cost involved meant that the equipment could be purchased out of current expenditure appropriations, rather than on capital investment account, so that its purchase was not subject to budgetary planning and control procedures.

These considerations explain why, at the time they came onto the scene, office computer systems had not claimed the attention of any of the senior levels of the corporation's management (in computing, operations, accounting or planning). A typical outcome is that the assignment referred to above, concluding with the presentation of forecast scenarios, was ordered by a division of the corporation responsible for information and public relations. The challenge, not having

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been taken up by the senior management, might have been seen by the secretaries as an opportunity for them.

4.2.3 - Strategic options of the secretaries

However, it so happened that the secretaries did not exist as an organised group and, for the introduction of office computer systems to be influenced in ways conducive to meeting some of their aspirations, it was essential for them to speak with one voice. This was gradually achieved through the action of the two study groups mentioned at 4.2 above. We cannot speak really of a strategic option, however, since this would have assumed an informed view of the issues at stake. It was only through the process of collective reflection, when we were urging the secretaries to state their position, that the latter was formulated in a coherent manner. The basic ideas expressed were the following:

- the systems being introduced into the secretariats imply constraints which it will be better to deal with on an overall basis. There thus arises a risk of standardisation of work, except if the secretary is not just a mere user of the system, but to some extent its master;
- this mastery will not necessarily be acquired by each individual, since there may remain some secretaries who are no more than blind operators, but the secretaries considered as a kind of corporate body demand the right of access to it;
- it is not a question of technical expertise, given that the systems and software are purchased in full and final working order. What matters is the right to decide how the systems will be used, how they will be incorporated in the work process, and so on;

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- the specialists in this area should be recruited from among the secretaries, who are the only people with practical experience of the work concerned. This is thus an opportunity to define new job categories and set a career pattern going from the operator to the office systems expert.

By reference to these ideas, the secretaries' study group drew up a document containing what it considered to be reasonable recommendations with a view to proper exploitation of office systems, and focusing on specific points: training, careers and new job categories, work-station organisation, and formulation of a corporate policy of implementation (23).

4.2.4 - Lessons for the future

From the overall theoretical standpoint, the new office systems correspond to the appearance of technological investment requirements in an area where virtually none had thus far existed. It could have been expected that the introduction of this new element would bring a change in the rules applying to secretarial work, such as new investment control procedures and the standardisation of work processes; in other words, that - as was the case fifty years ago with respect to factory work - general principles of work organisation would be established in a scientific way.

This has not been the case: the relatively low level of rationalisation in the secretariat (as compared with that applying to matters of productive investment, with its strict procedures and criteria) remains unchanged to the extent that the workers directly concerned are seeking to take organisational control of the new systems, a field left open to them by all sections of management.

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This contains the longer-term implication that the theory saying that the sectors involving the highest investment cost are those subjected to the strictest calculations, is on the way out. It would be unwise to assume that our example is a freakish one, and that even if hundreds of word-processors are installed in a particular division of a particular corporation, this does not amount to much in general terms. A more realistic view would be that it is a significant illustration of an overall trend identified by a number of observers during recent years (24): in the industrialised countries, the workers engaged in actual transformation processes (from factory operative to shopfloor manager) now represent less than one-quarter of the total active population, and the remainder are in one way or another concerned with data processing operations. It is as though the methods of scientific organisation, which made an effective contribution in the field of productive investment evaluation, were to prove much less relevant in connection with investment in the processing of information.

Seen from this angle, the secretariat study just outlined (which is currently being extended to other and more central parts of the administrative realm: accountants, personnel managers, etc (25)) forms both a counterpoint and a further stage in relation to the Creusot-Loire study:

- the capital-intensiveness of production industry, and the labour force it employs, are in relative decline and corporate decision procedures are less rationalistic;

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- the capital-intensiveness of data-processing activities is increasing sharply, more workers are involved in them, but rationalistic decision procedures - already much less prevalent in this field - are gaining no ground in an expanding sector.

5 - A Relativised Epistemological Approach

Many authors hold that the principles of theoretical investigation applied to the physical sciences can be directly transposed to the social sciences. The following brief example shows the shortcomings of this assumption.

In a well-known work (26), the French epistemologist Gaston Bachelard considered the way in which a problem of physics had been handled from one century to another: the problem of thermal propagation in solids. One of the fundamental demonstrations to be made was the following: when a bar of a pure metal is heated, its volume is modified. What is the law relating the change in volume to the rise in temperature?

This problem gave rise to two stages of investigation:

- the first stage consisted in a phenomenological study of the phenomenon, i.e., based on reiterated observation of the visible effects. It led to identification of the specific heat factor, which depended on the nature of the metal and whose coefficient enabled the formulation of a linear relationship between the expansion

.../..

of the metal bar and the increase in temperature;

- the other and later stage referred to the analysis of the internal crystallographic structure of metals, which explains how the volumetric change comes about.

There was thus, on the one hand, a remote approach considering merely the visible factors external to the metal bar and building conclusions on a statistical basis, and on the other hand, an analytical approach describing the visible phenomena in terms of internal variations on a microscopic scale.

Coming back to the corporation, and considering the "individualistic" and the "holistic" theories defined earlier in this paper, we can establish a parallel between the latter and the two stages of investigation just quoted. However, a fundamental difference arises from the fact that the metal bar observed 250 years ago and the ones analysed today can be assumed to possess the same properties, whereas the same cannot be said of historically remote corporations. As we saw in Part One of this paper, there is also a third dimension to be considered, that of the corporation as a social institution. The latter changes over time, implying that the notion of repeatable experiment loses its signification and that the concepts applied to explaining factual situations may have a changing signification.

At first sight, it appears that the true concern of corporate theory is encompassed in segment I of the following diagram:



.../..

However, when observation and concept fail to allow for the third dimension (II), we come up against difficulties which corporate theorists have recognised, and which explain why the progress of knowledge in this field has not been a cumulative process.

It is for this reason that we are impelled to suggest concepts that are in harmony with historical change. As will have been noted, these concepts are still related only to very general factors, such as the social structure, the cultural element, etc. It will certainly be relevant to continue along the same lines with a view to establishing continuous long-term relationships between observations of a more precise kind; for example, how to relate Lewin's leadership concepts with the Z Theory, or Mayo's concept of ambience with that of J.A.C. Brown.

An effort in this direction would require a comparative review of all stages of corporate theory, not merely with a view to determining which theorist comes out best, but aiming to identify how concepts have themselves evolved: such as when a previously valid concept suddenly becomes irrelevant to understanding a set of genuinely new circumstances.

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6 - Conclusions

The corporate model we have just described is no doubt still more of a conceptual model than an operational model; in the sense that, in relation to a concrete situation, the cultural reference can explain some behavioural mechanisms, but that it seems unrealistic to hope to make systematic studies and comparisons of different cultures such as the anthropologist can attempt in relation to primitive societies. Where our theory is concerned, at least, culture is not an autonomous entity.

In the preceding pages, we have attempted to suggest that many theorists, although accumulating a considerable mass of empirical evidence, have failed to address a sufficiently broad theoretical canvas and thereby done nothing more than participate in the process of corporate evolution. In fact, some past theories can be construed more as corroborations of current ideological theses concerning the corporation, than as true explorations of current corporate processes.

Having thus set the axiomatic scene, we would wish to make further advances in two directions:

- firstly, by bringing focus to bear on more specific case-studies;
- secondly, by examining the contributions which this model can receive, as well as those it can make, to, from related disciplines such as economic history, sociology, economics, and so on.

As concerns a study of the corporation from the cultural standpoint, all still remains to be done; this is inevitable to the

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extent that, in our belief, it is only recently that the types of factors concerned have come to the fore, not only in the minds of the researchers, but also in the actual lives of corporations. Earlier, we suggested that this emergence of the cultural factor resulted from the fact that the corporation-social-institution has moved to become the focal point of the whole society. Two arguments can be put forward to support this idea:

- firstly, with the development of the process of industrial civility, the rule of force gives way to that of reason, so that the corporation can and must establish its identity on the cultural plane;
- secondly, when the corporation takes up a more central position, it comes more into contact with more of the other social structures and becomes one of the theatres of cultural expression.

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Full Addresses of the Authors:

J.W. Fairfield-Sonn	Dept of Management and Public administration, University of Hartford, West Hartford, CT 06117, USA
W. Burish	Universität Gesamthochschule Paderborn, Warburger Strasse 100, 4790 Paderborn, Postfach 1621, WEST GERMANY
J.F. Brissy	Faculté des Sciences Sociales, Politiques et Economiques, Université Libre de Bruxelles, 4, Avenue Jeanne, 1050 Bruxelles, BELGIQUE
P. Carter	Dept of Management Systems and Sciences, The University
N. Jackson	of Hull, Cottingham Road, Hull, HU6 7RX, ENGLAND
B. Sievers	Dept of Business Administration and Economics, Bergische Universität, Gaussstrasse, 20, D-5600 Wuppertal 1, WEST GERMANY
V. Dégot	Centre de Recherche en Gestion, Ecole Polytechnique, 1, rue Descartes, 75005 Paris, FRANCE