

1 Organization Theory: The Classical Constructions

I

The concept of organization took on clearer contours only in the second half of the nineteenth century. In the Middle Ages there had been no need for a special concept for what we now call organizations. It would have lacked substance: the stratification of family households and corporations provided for social order, which for the rest was subject to a multiplicity of legal arrangements.¹ Only in the nineteenth century did it become usual to conceptualize the organization as a social formation distinct from other social orders (e.g., communities or social classes). Then the term “organization” found its way into normal, everyday and scientific usage to describe a special type of object. Already frequent in the eighteenth century, it originally referred to the order of organic life as opposed to artifacts and mechanisms.² Jean Paul had still regarded the term organization with reference to non-organic matters as a metaphor,³ but himself wrote about the organization of texts in the sense of actively ordering production.⁴ Perhaps the transition to an active, activity-related usage of the term generalized the concept. At any rate, the concept of organization, originally, offered the possibility of referring to both an activity and its effect without addressing this difference.

Because the eighteenth century tended to replace hierarchical distinctions by the distinction between “inside” and “outside,” in the semantic field of organization we already find the distinction between internal and external relations. This enabled the disorganization concept to be introduced - separately from any hierarchical architecture of the world and with reference to the internal defects of an organism. At about the same time, biology and demography adopted a new concept relating to the individual: “population,” which deprived the old genus/species schema of much of its significance and prepared the way for the evolution theory of the nineteenth century. In explaining internal organization, however, the whole/parts schema persisted, and thus the assumption of a harmony tuned to this schema, almost in the old sense of *ordinata concordia*. The distinction

between means and ends could be used, treating the compounding into a whole as the end and the combination of parts as the means. This allowed Kant to introduce fuzzy concepts like "interaction" [Wechselwirkung] between parts and the idea that the whole was its own end.⁵ This prepared the conceptual isolation of organized entities in themselves and gave substance to the distinction between inside and outside.

After these first ventures and the quite positive complexion lent to the concept, the nineteenth century came to use organization above all in the theory of society. Modern, post-revolutionary society was in search of a form for itself - partly in distinction to the aristocratic societies of the European tradition, partly in conceptual defense against the unrest generated by the French Revolution. What was at stake was reconstruction on a new basis with promise for the future. Saint-Simon announced his program as follows: "The philosophy of the last century was revolutionary, that of the nineteenth century must be organizational,"⁶ and August Comte was to endow the same thought with characteristics like scientificity, positivity, and sociology. Despite the deliberate quest for historical distance and new, reliable objectives, the conceptual elements of attributing parts to a functioning whole were retained. However, the organization concept now exuded strong positive qualities such as "social" and "solidarity"⁷ that had a good chance of calling attention to the inadequacy of mere organization; of becoming desiderata, indeed oppositional concepts.

It was demanded, as we would now say, that an enterprise ought to keep the social interests of its employees in mind - as if working together was not yet in itself social. While retaining its original characteristics, the organization concept when applied to society now bifurcated. It marked an inadequacy, a dissatisfaction with the typical features of modern society, together with such concepts as commodity, market, exchange, finally money. In 1887, Tönnies's "Community and Society" [Gemeinschaft und Gesellschaft] appeared; it enjoyed little success with its unusual conceptuality, but the dualization it introduced captured and long influenced the spirit of the times. Parsons's "pattern variables" still followed this model.⁸

The first distinction that produced the modern concept of organization was accordingly the distinction between order and organization, both referring to societal phenomena. This was the basis on which general theories of organization were still elaborated in the first decades of the twentieth century, which, however, no longer addressed the societal problems that preoccupy sociology, restricting themselves to special issues of good work organization or the very formal analysis of relations. "Organization," like "management," was now a term that allowed knowledge to be withdrawn from the direct work process and autonomized as institutional and supervisory knowledge. Organizational

knowledge and the knowledge of scientific management now claimed to be more than the sum of the working knowledge needed to take action.

Publications by individual authors were primarily involved, who, few in number and widely scattered internationally, could not underpin a discipline grounded in research.⁹ Only Taylor's microscopic theory of work organization¹⁰ attracted greater attention, but from the 1920s onward met with increasing opposition from anthropologists and sociologists.¹¹ Whereas concern about jobs has since muted this "humanistic" critique, the temporal contingency of Taylorism has become more apparent: its dependence on mass markets for standardized products that changed little in the long term. This limitation has changed owing, above all, to the introduction of microelectronics in the production process.¹²

Organizational theories at this level of abstraction have found no successor in the present day. Why is this so? They clearly offer obsolete models, models no longer pursued. On the one hand, faith in the possibility of organizing rationally (in the sense of optimally) on the basis of principle has been lost - both in managerial business theories and in sociological organization research. On the other hand, abundant empirical organization research and lively business consulting - efforts that constantly launch new slogans on the market - generate a complexity that can no longer be dealt with by the old forms of theory. What is more, it no longer suffices, as in older organization theories, to consider only a few types of organization, notably the factory and the public authority. Symphony orchestras, newspaper offices, banks, political parties, sport and recreation clubs, schools, hospitals, and prisons also have to be taken into consideration. How is alcoholism therapy organized? Or libraries? Or container transport, which has drastically changed the organization of ports and shipping? Or waste disposal involving the modern functions of sorting and recycling? If this diversity is to be amenable to a general theory of organized social systems at all, the conceptual tools discussed so far will no longer suffice to produce it. Thinking in wholes and parts has had its day without being replaced by a theory of complex systems. The question is whether this must remain so, or whether quite different theoretical approaches may allow us nevertheless to elaborate a general theory of organization.

II

Since the Second World War, organization research has reached such proportions that no adequate account of trends, results, authors, and publications can be given. We must leave it to the textbooks to report on theory; they often do little else.¹³ Our approach is to present distinctions that have played a role in research. When a distinction has exhausted its usefulness, it is replaced by

another. This occurs when literature uncovers problems or phenomena that had not been sufficiently taken into account and that require a change of frame.

Our coverage of theory will ignore research that pursues a normative line in quest of rationality, which seeks to establish how certain results can be most effectively achieved with the greatest certainty or at minimal cost, limiting ourselves to approaches that are explicitly or implicitly formulated on the basis of the causality concept. Our theoretical and methodological ambition is to coordinate the distinction between cause and effect with other distinctions, for example, that between means and ends or between command and obedience, or between group formation and motivation. In this sense we are concerned with a sociology intent on explanation and, where possible, prediction; or which is also intent on providing technical, advisory aid for organizational planning. Research in business administration or developments in the theory of the firm are also relevant, but their exploitation in sociology has to this day been hampered by barriers between subjects and disciplines, not to mention the sheer volume of the literature. The way is now paved primarily by analysis of relations between structures and decisions. We will be returning to this.

From the older literature, organizational sociology has taken over, above all, the distinction between command and obedience familiar from the sociology of power, as well as the rationality-related distinction between means and ends. Authority can accordingly be rational if it uses commands in such a way that its ends can be attained through obedience. This is not only the old European myth of order,¹⁴ reaching even into theology, but certainly, after the transition from created nature to value relations and the need for legitimation, also Max Weber's bureaucracy model.¹⁵ According to Weber, the historical condition for this is that workers lose their ownership of the means of production and are paid in money. As a result, they come under the pressure of imposed work discipline, and the master (whether a holder of political power or the owner of the plant) can rely on the efficacy of his commands. However, such practice in governance and administration is rational only if it can manage without the enormous cost of communicating instructions individually, and can draw up general rules that subordinates can apply to the concrete state of affairs by logical deduction or in typical cases through appropriate interpretation. The model on which this theory draws is legally elaborated public administration. But according to Weber, "bureaucracy" with its formal rationality has imposed itself throughout the world in modern society; for not only political power but also property is a possible basis for power.

The success of this bureaucracy model is best explained historically. It opposes arbitrariness at all levels of order, concentrating it at the apex, which is assumed to be disciplined by its own value relations and by environmental conditions - in the economy by the market and in public administration

by politics governed by the rule of law. Bureaucracy also means that large working units can be formed in which many people can work together at the same time and in coordination. And, above all, this allows the order of rank established by society to be replaced by the principle of equality. In both external and internal relations, bureaucracy proceeds on the assumption of equality - *unless the organization itself draws a distinction*. All this, in reality as in theoretical modeling, takes account of the immense complexity of modern society - in a form that we could describe in systems theoretical terms as outdifferentiation [Ausdifferenzierung] *within* society, as outdifferentiation of an autonomous but nevertheless steerable system, adaptable to societal interests, amenable to coordination, "controllable."

There are innumerable objections to the European, if not "Prussian," model of bureaucracy. As far as economic enterprises are concerned, in particular, it is claimed not to do justice to in-house super- and subordination relations.¹⁶ It is asserted that it does not work outside Europe and is not a suitable standard for modernizing developing countries.¹⁷ It is said to ignore the scope for interpretation that goal orientation would necessarily allow.¹⁸ The result is, not least, that collusion between internal and external forces is difficult to discover and difficult to prevent, and can be stamped as corruption only where the law has clearly been broken. The organization, also and particularly in government and municipal administration, connects up at lower levels via negotiations with systems of the environment in order to generate the necessary cooperation.¹⁹ The centralization of control over the means of production (including legal decision-making powers) clearly no longer suffices to ensure the isolation of the system as the object of centralized control.

In economics, the experience that the market offers possibilities for observation but no clear directives on decision-making has produced a theory of organization (often also called hierarchy). This is partly because corporate organization manages with lower transaction costs, partly because the market does not yet determine the decisions of economic participants (the latter point raising the question of how market participants make decisions).²⁰ This paradigmatic shift²¹ clarifies the need for organization but not its internal structures and processes.

Finally, the problem of work motivation has also long been discussed. The more latitude there is for decision-making, the more important motivation becomes to ensure efficiency in the workplace. Barnard's highly regarded management theory had, as regards motivation, postulated a "zone of indifference" within which personnel do not care what they do as long as they are acknowledged to be fulfilling the conditions of their membership.²² This may well also be true today. But it raises the question of whether such indifference is not harmful to the enterprise, especially if dismissal is difficult due to labor

market conditions or for legal reasons. Moreover, recent research on Swedish welfare bureaucracies shows an inverse relationship between rationalization, democratization, and motivation. If plans and rules are made by means of complex rationalization and consensus-finding processes, this so exhausts the organization that, should obstacles or unforeseen difficulties arise, members are unlikely to continue working actively on implementing the solution found.²³ After all, they had failed to garner acceptance for what they themselves considered to be right.

Another proposal that could have been pursued comes from psychiatry, and (for that reason?) was long ignored by organization theory. Only more recent organizational consulting methods have used ideas from this source, stemming from systems therapy and especially family therapy. The basic thought is that every communication that conveys commands and, in so doing, distributes information (even if only information about authority, motives, and good will as the reason for the command) tends to generate paradoxes or, as one now says in semiotics and linguistic text theory, to deconstruct itself.²⁴ As information, the world is described as it is or should be; and the right to make this description and the expectation that it will be accepted is also communicated. At the same time, however, the fact that this is communicated means that things could be otherwise. Unity and difference, indication and distinction are synthesized in communication. But the fact that this (and not something else) happens produces the opposite of what was intended. This naturally does not mean that nothing more can happen, because every determination is paradoxical and is immediately deconstructed. However, therapists ask what normally prevents the deconstruction and disintegration of communication and motivation, and what in exceptional cases nevertheless unblocks deconstruction, opens Pandora's box, and puts paradoxization into effect.²⁵ We will be considering this subject at a late stage under the heading of "uncertainty absorption."

All this criticism is now a conspicuous component of every theory in organizational science. But it should not distract attention from the fact that hierarchy, in the sense of chains of command, is indispensable in constructing complex organizations. Vertical integration is still the most important way of handling uncertainty,²⁶ that is to say, the future. "Alternatives to hierarchies"²⁷ are hardly to be found. On the other hand, we should avoid using the term hierarchy as more or less synonymous with organization.²⁸ At any rate, the consequences of hierarchizing social relations have to be registered, and this cannot be done in the form of in-house cost accounting, indeed not at all in the form of "costs." Sociological analysis is needed. It has therefore been clear for some time that the characteristics of Weber's bureaucracy do not necessarily have to do with the criteria of rationality elaborated independently of them.²⁹ All this obliges us to abandon the notion that organizations *are* hierarchies. Max Weber himself had diluted such statements of essence under the influence

of Neo-Kantian theories of knowledge into statements on “ideal types.” This was to concede that reality did not necessarily need to correspond to type - for instance, such formulations as “in greater or lesser approximation to the pure type.”³⁰ In this manner, however, what is important, namely the difference between type and (diverging) reality, could not be reflected.³¹ A different, both more abstract and more complex organization theory is clearly needed.

III

Another key distinction was not a divergence from Max Weber's bureaucracy model but the result of social science experimentation with Taylorist work organization. The breakthrough in the scientific literature came when the irritating results of the “Hawthorne” experiments became known.³² The experiments had not been planned as a test of the theory later imputed to them; but they contradicted expectations about the links between working conditions, incentive systems, and performance, so that an explanation had to be sought. The concept of group, which had become fashionable in social psychology, appeared to offer a solution, and the result was formulated in terms of the distinction between formal and informal organization.³³ A structural conflict between individual motives and organizational purposes was presupposed, and it was assumed that the motives of individuals could be better accommodated in groups than in the formal organization.

The formal/informal distinction treats the formal organization as given. One can think in terms of a hierarchy of authority to which members of the organization are subject. The problem with implementing this order is seen on the other side of the distinction, in informal organization. This side of the distinction is therefore marked (in linguistic terminology), because there is something to be done there. For the informal organization can support the goals of the formal organization or run counter to them; it can encourage members to perform or to hold back performance - depending on what the group holds to be right and imposes on the individual. It can adapt organizational changes to local conditions or oppose and forestall them.³⁴ The question fits the possibilities of empirical social research: it is about the measurable effects of different conditions. Corporate management could accordingly be expected to take a favorable interest in such research.³⁵ However, the Hawthorne experiments had already shown that the intervening variable “group” makes the formulation of rules governing dependence on conditions and consequences more difficult if not impossible. Using Heinz von Foerster's terminology, we could say that the group is a nontrivial, historical machine that does not operate in accordance with fixed rules (which is precisely what formal organization is supposed to ensure) but is guided by the state in which it happens to be at a given time.³⁶

What is gained is therefore a mode of observation and not fixed knowledge - a mode of observation that pays attention to local social conditions of individual behavior and does not prematurely classify behavior in the usual terms of conforming or deviating. Many studies show the beneficial effect deviant behavior can have on work, but also - especially in connection with risk technologies - the danger of noncompliance with rules even if this normally goes well.

The dubious nature of the findings deprived the formal/informal distinction of much of its former importance.³⁷ The reaction was to extend the understanding of structures to allow the close interaction between formal and informal organization to be addressed. Since the 1960s, organizational sociology has again tended to prefer the concept of formal organization to enable a return to the distinction between formal and informal within this framework.³⁸ This is not least because the concept of group has remained fuzzy in the context of organizations with respect to membership, boundaries, fluctuations, and tolerance for internal differentiation. But it is striking that the concept of group dynamics has retained its importance in organizational consulting, now going by the name "organizational development." Emerging originally as a practical consequence of the human relations approach, it is now more concerned with the autonomization of functional areas from excessive hierarchical control. This indicates that a socially more sensitive mode of observation is involved, which escapes schematization by formal organization and the management's operational understanding. Advanced consulting concepts also tend to combine organizational development with systems theory and to set their sights on developing the capability of the organization for self-observation and diagnosis.³⁹ The interest in "informal organization," by contrast, appears to have shifted from groups that management regards as helpful or disruptive to individuals, who, depending on the organization of their work and their individual inclinations, develop greater or lesser interest in elaborated, "helpful" social contacts.⁴⁰ Where the formal/ informal distinction is still used today, interest has shifted to the question of whether and how formal organization (= bureaucracy) is able to control informal organization.⁴¹

If the formal/informal distinction no longer divides theories or research preferences, the question can finally be addressed of how organizations themselves deal with this distinction. Research will then investigate when and by what criteria formal or informal communication is chosen. Network analysis could be a good starting point for examining such questions. For the network concept is not defined from the outset in terms of formal organization but rather in terms of a sort of trust grounded in recognizable interests and repeated proof. To demand or initiate formal communication is a way of avoiding tests of trust and gaining greater certainty - not infrequently to the detriment of the network,

which is thus treated as superfluous. Vice versa, the choice of informal communication, and the explicit avoidance of formalization (without waiving its possibility), is a move by which the choice between formal and informal can be left open and reproduced. Whereas the official description of the organization will tend to regard the formal structure of responsibilities and official channels as the condition for informal communication also being an option, network analysis might show that informal communication predominates, reserving the ceremonial of formal communication only, as it were, for emergencies and borderline cases. On this point, the official self-description of the system diverges from what anyone working in an organization has to learn.

There are, meanwhile, many indications that the concept of informal organization, along with the group concept, are being replaced by a theory of interaction systems.⁴² This draws on ideas developed by Erving Goffmann, and reformulates them with recourse to the general theory of social systems. The advantage is that analysis does not need to answer the question of whether and to what extent groups actually form in organizations. This means that the concept of group, not very amenable to theoretical development, can be replaced by a theory of face-to-face interaction. The problem is then that systems of a different type develop within organizational systems, more or less usurping influence on decision-making.

IV

When rationality was at issue, classical organization theory focused on another distinction, that between means and ends. This goes back to a concept of the rationality of action, and hence to the presupposition that someone imagines being able to attain certain ends by certain means. The classical concept assumed that an organization was managed through actions, and that the apex of the hierarchy identified themselves with the purposes of the organization and imposed them through the exercise of authority, whereas the means envisaged tended to autonomize⁴³ or even to escape organizational control. In this sense, a package was put together that presupposed the concordance of a multiplicity of distinctions or treated this concordance as a problem of control, namely whole and part, top and bottom, ends and means. The organization could then be understood as a goal-directed system, and the subordination of persons/roles/positions as the means to an end.⁴⁴ But a closer analysis of these various distinctions very soon put paid to such assumptions of harmony.

The distinction between ends and means was limited on both sides by presupposed value judgments (hence by a worth/worthless distinction). It was thus not simply a matter of the causality of effects. Ends are evaluated ends, and, even as means, only ends that do not "cost" much can be considered. It is therefore not difficult to describe the unity of the distinction, namely as

a positive (if possible maximal or optimal) return on the relationship between means and ends. What values (= preferences) are to be realized can be left open. We can, hence, describe the schema in abstraction from all concrete value judgments provided that they are within the scope of what can be causally realized. Programs for the maximization of spiritual welfare, too, have at times been considered a possible object for organization.⁴⁵ There must, of course, be some preferences or other if the system is to operate selectively; but preferences are introduced into the model as external factors, as independent variables.

However, closer analysis and the empirical examination of the demands this schema makes of information processing in organizations brought difficulties to light, indeed inevitable renunciations. Economic enterprises, above all, which have to fix the prices of their products, discovered that (in the absence of "perfect competition") the market does not simply dictate prices. They have to be set in the organization. But how? In more general terms, the environment of organizations does not absorb enough contingency, so that the organization cannot content itself with working out the one and only right decision. Without sufficient knowledge and curtailed information processing, it has to decide for itself. The organization is not subject to the authority of an environment whose will has to be carried out. Both in the economy and in politics it is a turbulent, opaque field in which the organization has to establish its own basis for making decisions. And how good these decisions are will depend, by whatever criteria, on the structures of the system.

The ends/means schema or, to put it more abstractly, the general medium of possible causalities and possible evaluations therefore provides no more than a framework for necessary restrictions, which still have to be decided within the organization. Max Weber, above all, used this schema - firstly to "interpretatively explain" action and, secondly, to limit it through hierarchical rule and command boundedness to a general, ideal type of bureaucracy (however, in Weber it is not clear that the infinite horizons of this schema render such limitation possible and necessary). It was only after the Second World War and especially in the United States that this was to become a guiding principle for specific organizational studies detached from societal theory.⁴⁶

However, what one had assumed to be the inner rationality of the ends/means schema dissolves on closer examination. It is increasingly seen only as a symbol of rationality. A now only symbolic use of the schema nurtures suspicions that it is no more than an ideology in the unchecked pursuit of interests under the guise of a rationality beneficial to society.

Such suspicions cannot be dissipated by distinguishing, with Max Weber, between types of rationality (instrumental rationality [Zweckrationalität], value rationality [Wertrationalität]), nor, with Jürgen Habermas, by favoring a particular type of rationality, namely understanding-oriented rationality

[verständigungsorientierte Rationalität]). Herbert Simon had suggested making do with “bounded rationality.”⁴⁷ This amounts to drawing a distinction between two levels, one of which sets sufficient conditions as premises for decision-making, leaving the details up to not very far-reaching, but at any rate practicable, decisions. The significance of this concept lies not only in weakening the demands made of rationality. It means, above all, that how a system is organized makes a difference; and, furthermore, that learning can be important, because rationality is not already defined by the relation of the system to the environment (of the enterprise to the market). However, what the sociologist finds to be lacking is consideration of the social limitations to action.

Today it seems obvious to interpret this difference with the aid of cognitivistic concepts such as “schema,” “script,” and “cognitive map.”⁴⁸ Other concessions are that unforeseen side-effects are allowed for and reserves are built up to cover the risk of miscalculation. Other modifications are to reverse the direction of ends and means asymmetry and to include the case of an organization seeking ends for a given stock of means (or a useful investment opportunity for capital). We then speak not only of goal-oriented organizations but of goal-seeking organizations.⁴⁹ This reversal of perspective shows that the schema has to be considered contingent on both sides and, therefore, serves to implement value judgments that, in the distinction between ends and means, can only take a form that can be described as rational.⁵⁰

If rationality in the strict, classical sense is regarded as unattainable, this does not mean that behavior in organizations is arbitrary. A new distinction looms, that between rational and intelligent behavior.⁵¹ Intelligent behavior can find order even in the ruins of the conditions for rationality, even in the “garbage can.”⁵² But research on this subject can no longer limit itself to models of the one and only right decision. It must first discover the structures of disorder, the inconsistency of demands, and the limits to cognitive orientation capacity in order to see that those involved nevertheless seek - and find - comprehensible contexts for decision-making.

Even if variation in evaluation is also to be included, whether of means (e.g., ecological re-evaluation or cost increases) or of ends, it seems advisable to introduce - in the sense of older functionalism - the self-preservation of the system as meta-goal⁵³ guiding all other variations. But this was unfortunately formulated in terms of a resource conservation program. For what are these “resources” if all operations of the system are guided by values and can be re-evaluated, and if there is no strict criterion for identity? It therefore seemed reasonable to criticize this theory of goal variation in the interest of resource conservation (and with it structural functionalism in systems theory) as “conservative.” But the principle had already attained the form of scarcely covert paradox with the insight that conservation requires variation and that limits to it cannot be given theoretically. It what follows we will

therefore not be adopting the formula, although we will be addressing the problem.

Another criticism of the resource conservation formula is that an organizational system cannot be looked at in isolation, but only in relation to its environment or environments with which it exchanges performance and information. The coincidence of ends/means schema and hierarchy could then be replaced by the coincidence of ends/means schema and system/environment distinction. This could be formulated in terms of the input/output model, with output being formulated within the system as the end and the necessary input as the means of the system. But this brings us to a further distinction, which since the 1960s has, in accordance with developments in general systems theory, begun to assume the function of a lead distinction: the distinction between system and environment.

V

No one will doubt that there is more to the world than organized social systems. The question is what one does with this insight theoretically.

There is also no disputing that every scientific study (like every observation and description) is based on the isolation of specific objects. If we want to indicate something determinate, it must first of all be distinguished from everything else. Every observation begins with a distinction. It must then be asked whether and why certain distinctions are more suitable than others - and for whom.

The distinctions we have discussed so far, hierarchy, formal/informal organization, ends and means, have addressed the internal affairs of the organization. It had perhaps been assumed that, once internal distinctions were clarified, the object concerned would emerge as a matter of course. One would then have to take recourse to assumptions about essentiality, to say, for example, that the essence (or ideal type) of bureaucratic organizations consists in a command hierarchy and can be defined in such terms; or that the essence of industrial organizations is goal orientation (which can be described more precisely). Or a very old distinction can be revamped, that between the whole and its parts.⁵⁴ But this is quite obviously a resolved paradox. For in this description, the system occurs twice: at the level of the whole, which cannot be a part of itself, and at the level of the parts, of which none can be the whole. The doubling requires the difference to be creatively attributed to unity with the aid of such concepts as integration, domination, representation, and participation, but which can hardly conceal that there are residual problems that this procedure cannot solve.

Experience in research with such distinctions has raised doubts. And the aging of these classical approaches has shown that their area of research was

too strongly limited. What is more, if one recognizes that this reduction is not a matter of theory but has to be achieved by organizations themselves, a new distinction is called for, that between system and environment. The problem is still seen in the system itself, but the main question is now how the system is to be organized in relation to its environment; and all the distinctions to date, between the whole and its parts, the hierarchy, and the ends/means schema now have to be reinterpreted as forms that have to prove their worth in the relationship between system and environment.

The first reaction to the possible relevance of the environment for the development and structuring of organizations had drawn on the theory of open systems. Interest in this theory had arisen from the discussion on thermodynamic laws, which had predicted a tendency toward entropy in closed systems to the detriment of all useful differences. Reversing or at least halting this tendency seemed to require open systems, whose exchange relations with the environment enabled it to produce useful differences, to exploit chance opportunities to build up its own order, and to keep itself "homeostatically" stable in the state attained. This version, formulated partly in terms of the distinction between machines and natural systems,⁵⁵ dominated organization theory in the 1960s.⁵⁶ The asymmetry between environment and organization was thus accepted, but in one direction only, which could be described as reducing environmental complexity or providing requisite variety, or, finally, as the principle of order from noise. This was convincing where a natural environment was involved. But if the human, societal, and political environments were also taken into account, there was no overlooking that and how the reductions achieved in organizations - from their point of view successfully and rationally - affected their environment. And given the growing interest in ecological issues, the impact of organizational successes on the natural environment was soon to attract attention.⁵⁷

The openness of the system to the environment immediately raises the question of how reductions are to be achieved. Perhaps the most important solution to this problem proffered since the 1950s lay in the distinction between input and output. This distinction differentiated the environmental relations of the system in terms of whether the system received something or gave something. In the theory of the firm, for example, commodity markets, labor markets, and financial markets are distinguished from product and sales markets, and it is assumed that organizations can develop only if these markets can be distinguished (alternatively, that they become distinguishable by developing corresponding organizations).⁵⁸ In the state organization political system, the input of information and declaration of interests can be distinguished from the output of collectively binding decisions,⁵⁹ and here, too, the primary achievement of the system is that these environments are distinguished at all or are

assumed to be distinguishable and do not fuse in the confused interplay of particularistic collusion.

However, this model merely shifts the problem of generating reductions. It now lies in the question of how the link between input and output or the transformation of input into output is to be understood. There are various possibilities, which have led critics to argue that the model is technical if not technocratic. A mathematical transformation function comes to mind, but no real system would render itself superfluous through such a description. Another possibility would be transformation on the pattern of a machine, which, if not in disrepair, always produces the same outputs from identical inputs, thus functioning reliably. The third possibility is to assume that internal processes cannot be observed and to limit observation to external regularities. This version has been labeled the "black box." It has provoked so much curiosity that people finally started to speculate on what happened in the black box or what was to be assumed if the functioning of the machine was not orderly but clearly unpredictable, not reliable but erratic, not trivial but nontrivial. And the assumption that brought us to a quite different sort of systems theory was that self-reference was at work in such a machine or that imaginary numbers, paradoxes, or similar specters played a role in its mathematics.

Apart from these modeling attempts, more strongly abstracted issues had also been addressed since the cybernetics of the 1950s, concerned with the asymmetries in relations between system and environment. Cybernetics addressed the question of requisite variety, which enables a system to gain or construct information adequate to the environment.⁶⁰ In the functionalistic cognitive psychology of the period, but also on the basis of empirical organizational studies, the problem of this difference was seen to lie in a complexity gap. The expression "reduction of complexity" dates from this period and context.⁶¹ Simon had drawn attention to this problem at an early date in the theory of rational decision-making.⁶² Early empirical studies in organizational sociology looked into organizational forms that fitted turbulent environments.⁶³ We can either set out from forms of organization and ask about environmental correlates (e.g., formal/informal, steep/flat hierarchy, delegation of powers, or strict/loose rule-boundedness) or tackle the problem of complexity difference in different ways. If we start with the resources required, it is a question of ensuring access to resources in the face of varying business success, thus a problem of liquidity, of creditworthiness, or of internal elasticity that permits substitutions. Thus, stressing dependence on resources raises the question of the extent to which having the necessary resources at one's disposition gives one external control of dependent organizations.⁶⁴ If we see the problem in information, it is a question of coping with uncertainty, of minimizing the cost of processing information or of rationalizing or renouncing further information, and overall, of managing risk. The two questions can largely translate into one another, so that

we face the question of what theoretical treatment of the system/environment relationship gives the better results.

Following the work done by Lawrence and Lorsch, so-called contingency theory took the lead in the 1970s.⁶⁵ They inquired into the forms and conditions for fit between environments and systems.⁶⁶ Complexity, above all of the organizational systems themselves, was, however, underestimated for reasons of empirical methodology. The self-referentially determined unpredictability of systems was also initially ignored, and without paying sufficient attention to this problem, it was assumed that establishing a fit between environment and system was a job for the management of an organization. Organization theory could thus claim to be working very close to the interests of management, helping to adapt the organization to the demands and the possibilities of the environment.

VI

The environment? Theory had hitherto assumed that the environment was the part of the world that did not belong to the organization. The environment was thus seen as given. It was assumed to be objectively given but to burden the system with a scarcity of resources and a surplus of information, and therefore to require the system to reduce its complexity. Since the second half of the 1970s we find critical remarks on the subject, which are, however, not consistently elaborated in the sense of constructivist theories.

Karl Weick goes farthest.⁶⁷ He sees the environment as the result of an “enactment” that obeys the logic of internal processes. In his view, it is not a given independent of the organization. It is the result of action by the organization, which, like all action, can be observed only in retrospect. We could say that what one has done can be seen only with the help of the environment concept. And this concept makes externalizations possible, that is to say, it allows causes to be attributed beyond the internal responsibilities of the organization. The environment is accordingly an assumption that holds true even though - indeed because - it cannot be tested.

So far-reaching a conceptual reshuffle has hitherto met with little response in organization research, particularly as systems theory itself had not been prepared for it (the theory of self-referential systems, second-order cybernetics, and constructivist epistemology are only gradually beginning to provide a basis). Instead, the distinction between system and environment merely weakened. Criticism of contingency theory, which had objected to the strictness of the distinction and the lack of societal- theoretical reflection, had led to the so-called “institutional” approach in organization theory⁶⁸ - with a corresponding return to the concept of institution in political science, in the theory of science, and in legal

theory.⁶⁹ Relatively permanent behavioral premises resistant to change are meant on which action can be based and which obviate further analysis. To this extent, taking institutions for granted also marks the limits to the rational classification of preconditions for action. In succession to the fit problem of contingency theory, cultural accord between organizations and their societal environment is investigated. It is rightly stressed that accord between systems and environments is not to be explained solely in terms of technical requirements or exchange relations. Conceptual elaboration (as typical in recourse to old theoretical resources, and, for example, related efforts to re-introduce culture or ethics) has not succeeded, and all explanations only make things worse.⁷⁰ The institution concept is countered partly by technology, partly by instrumental rationalism, partly by limitation to the perspective of individual actors, and partly by overly strict isolation of the organization from the values and the cultural and semantic constructions of reality in the surrounding society. There seems to be a sort of pendular movement between "disembedding" and "embeddedness."⁷¹ The scholarly situation in which this new institutionalism has developed makes the desire comprehensible, but the inclusion of further phenomena does not justify regarding it as a new theory.

In the American context, recourse to "institution" can also be explained by the view that systems theory has had its day. The concept of institution is used to set accents directly or indirectly, countering assumptions that are, with some justification, attributed to older systems theory, namely inadmissible object isolation, overestimation of technical-mathematical possibilities, rational instrumentalism, and "holistic" mysticism.⁷² But the polemic has been unable to secure or even explain its own theoretical foundations. In the meanwhile, systems theory has further developed its own tools by building in self-reference concepts, so that the system/environment distinction now has quite different implications than it did from the 1950s to the 1970s. Applied to social systems in general and organizations in particular, systems theory shows that the difference between system and environment has to be produced and reproduced within the system itself, and that precisely this obliges systems to take their environment into account.

Once this research approach has been adopted, all hitherto prominent distinctions can be subordinated to it. We can say, for example, that the function and legitimation of hierarchical superordination result from better or more important environmental contacts that can be centered at the apex. The boss is the resource procurer, at the level of smaller working units and at the level of highly complex systems. He transforms irritation⁷³ into information. It is also easy to see that distinctions such as that between formal and informal organization or between ends and means relate to different environments of the system, for example, the environment of markets on the one hand and that of personal motives and

willingness to work on the other; or to the environment of resources markets and product markets in the economic system; or, in the case of public administration, to the environment of interested parties and their organizations and political parties. Finally, the distinction between the whole and its parts can be reformulated as a theory of system differentiation, if system differentiation is treated as the repetition of the differentiation of systems and environments in systems. Such systematization could prove the superiority of the systems-theoretical distinction between system and environment if the problem addressed by this distinction can be characterized more exactly.

The distinction between system and environment offers greater scope than others for expression, a greater variety of forms. At least, this appears so in theory, if only because the other distinctions can be attributed to it. On the other hand, it has difficulty indicating the unity of the difference. It is not authority, it is not formal and informal social cooperation, it is not rationality, nor is it integrated wholeness. More so than in other cases, one is therefore discouraged from asking about the unity of the difference between system and environment at all. Of course it is always possible to say that the system and everything else taken together constitute the world. But what would be gained by doing so? From a formal point of view, asking about the "sameness of difference" amounts to a paradox. An organizational system exists only by distinguishing itself from its environment. How can it then reflect on unity and operate on the basis of difference at the same time? Faced with this problem, older societies were able to reflect on a cosmological totality. However, today's holism in the New Age sense or similar notions serve only as self-descriptions of sectarian movements rather than as an answer to a question that can no longer be convincingly posed.⁷⁴

Many theoretical controversies have established themselves within the framework set by the distinction between system and environment (and which alone offers the possibility to describe something as a "system"). This apparently has to do with the endogenous dynamics of the science system, which demands a "critical" attitude toward existing theory design and in the form of critique provides the fastest way to mark out new knowledge. However, this has considerable disadvantages, which have since become apparent and subject to discussion. For one thing, this procedure hardly (or only, as it were, by chance) leads to the accumulation of knowledge. One works with distinctions until a sort of fatigue sets in and innovative approaches turn to other distinctions. Moreover, distinctions that are used for polemical purposes (e.g., system vs. conflict; action vs. structure; micro- vs. macro-) split subject matter that can be understood only where both sides are adequately included.⁷⁵ Empirical studies, in particular, which always have to do with mixed relations, can make no theoretical headway.⁷⁶

Controversies of this sort are then nothing other than resolved paradoxes.⁷⁷ In the form of a controversy, one can avoid asking about the unity of the distinction that makes the controversy possible. But this soon renders such discussion unproductive.

These considerations bring us to a point where it seems worthwhile to turn to more general theoretical foundations - be it a general theory of social systems or even the basic problems of general systems theory. Systems theory at least has the advantage of being unsuitable for playing off environment against system or system against environment. This need not mean neglecting the peculiarities of organized social systems. But we can recognize the specificity of organization only if we can distinguish organizations from other sorts of system formation; and, where systems theory is involved, if we can determine how organizational systems generate the difference between system and environment.

Notes

1. This was true even of production plants, which we would now set up as organizations. See the example of the Lüneburg saltworks in Egbert Kahle, *Die Organisation der Saline Lüneburg vom Mittelalter bis ins 19. Jahrhundert*, *Zeitschrift für Unternehmensgeschichte* 1 (1987), 1-22; idem., *Interrelations Between Corporate Culture and Municipal Culture: The Lüneburg Saltworks as a Medieval Example*, in: Barry A. Turner (ed.), *Organizational Symbolism*, Berlin 1990, 33-41.
2. See, e.g., Pierre-Louis Moreau de Maupertius, *Essai sur la formation des corps organisés*, Berlin 1754; Abbé Joannet, *De la connoissance de l'homme dans son être et dans ses rapport*, 2 vols. Paris 1775, esp. vol. 1, 180 ff. ("organisation du corps humain").
3. *Vorschule der Ästhetik*, Jean Paul, *Werke*, vol. 5, Munich 1963, 296.
4. "Just organize a volume of epigrams!" - loc. cit. 357. Friedrich Schlegel, too, uses the word organization in all sorts of ways: "the thoroughly organized and organizing work" (Wilhelm Meister), "female organization," "philosophy that has to re-organize and disorganize itself," "Organization of the universe," etc. works in two volumes, Weimar 1980, vol. I, 145 vol. I, 230 vol. II, 113. See also Karl Philipp Moritz, *Schriften zur Ästhetik und Poetik: Kritische Ausgabe*, Tübingen 1962, e.g., 76, 82, who demands that an organization should have so fine a texture that its organ can be "an impression of overall conditions," and "Therefore every higher organization, by its nature, takes up what is subordinated to it and incorporates it into its essence" (p. 82); or Johann Gottlieb Fichte: "I find myself to be an organized product of nature," in: *Das System der Sittenlehre*, Zweites Hauptstück § 9, *Werke* vol. II, Darmstadt 1962, 516.
5. See in particular § 65 of Critique of Judgment [Kritik der Urteilskraft] under the heading "Things considered as natural purposes are organized beings." In a lengthy remark there is also reference to reform of the body of the state: "In a recent complete transformation of a great people into a state the word organization for the regulation of magistracies, etc., and even of the whole body politic, has often been fitly used.

For in such a whole every member should surely be purpose as well as means, and, whilst all work together towards the possibility of the whole, each should be determined as regards place and function by means of the Idea of the whole" (Kant's Critique of Judgement, translated with Introduction and Notes by J.H. Bernard (2nd ed. revised) (London: Macmillan, 1914)). "Member" clearly refers to human beings, whom moral law does not allow to be reduced to mere means but who must have the opportunity to realize their humanity in relation to a whole.

6. "La philosophie du siècle dernier a été révolutionnaire, celle du XIXe siècle doit être organisatrice," see Claude Henri de Rouvroy, Comte de Saint-Simon, *De la réorganisation de la société européenne*, Paris 1814 Œuvres, Paris 1868 ff, reprint Paris 1986, vol. 1, 153-248 (158).
7. See, e.g., Alfred Fouillée, *La science sociale contemporaine*, Paris 1880; Charles Gide, L'idée de solidarité en tant que programme économique, *Revue internationale de sociologie* 1 (1893), 385-400, and looking back on the history of the concept J.E.S. Hayward, Solidarity: The Social History of an Idea in 19th Century France, *International Review of Social History* 4 (1959), 261-284.
8. See Talcott Parsons, Pattern Variables Revisited, *American Sociological Review* 25 (1960), 467-483.
9. See, e.g., Johannes Plenge, *Drei Vorlesungen über die allgemeine Organisationslehre*, Essen 1919; Henri Fayol, *Administration industrielle et générale*, Paris 1925; A. Bogdanow, *Allgemeine Organisationslehre (Tektologie)*, vol. 1, Berlin 1926; Luther Gulick and Lyndall Urwick (eds.), *Papers on the Science of Administration*, New York 1937; Karl Stefanic-Allmayer, *Allgemeine Organisationslehre: Ein Grundriß*, Vienna 1950.
10. See Frederick Winslow Taylor, *The Principles of Scientific Management*, first Norwood, MA 1911; idem., *Shop Management* (1903), New York 1912.
11. See, with considerable influence on further research, Elton Mayo, *The Human Problems of an Industrial Civilization*, New York 1933. In Germany, e.g., R. Lang and W. Hellpach, *Gruppenfabrikation*, Berlin 1922; Eugen Rosenstock, *Werkstattaussiedlung*, Berlin 1922; Heinrich Nicklisch, *Grundfragen für die Betriebswirtschaft*, Stuttgart 1928; Walter Jost, *Das Sozialleben des industriellen Betriebs: Eine Analyse der sozialen Prozesse im Betrieb*, Berlin 1932, esp. 10 ff. On the persistence of these anti-Taylorist notions based on the community [Gemeinschaft] under the Nazi regime, see Theodor M. Bardmann, *Wenn aus Arbeit Abfall wird: Aufbau und Abbau organisatorischer Realitäten*, Frankfurt 1994, 303 ff.
12. See among others Richard Hyman and Wolfgang Streeck (eds.), *New Technology and Industrial Relation*, Oxford 1988.
13. See, e.g., Charles Perrow, *Complex Organizations: A Critical Essay*, New York 1986, or Alfred Kieser (ed.), *Organisationstheorien*, Stuttgart 1993. For an account explicitly designed as theory history, see also Giuseppe Bonazzi, *Storia del pensiero organizzativo*, 5th ed. Milan 1993.
14. See, e.g., Thomas Aquinas, *Summa Theologiae* I q. 65 a.2.
15. See Max Weber, *Wirtschaft und Gesellschaft*, 5., rev. ed. Tübingen 1972, 125 ff.
16. See Jost loc cit, 55, further to the article by Götz Brief, *Betriebssoziologie, Handwörterbuch der Soziologie*, Stuttgart 1931.

17. For many similar studies, see Onofre D. Corpuz, *The Bureaucracy in the Philippines*, n. p. (Institute of Public Administration, University of the Philippines) 1957; Morroe Berger, *Bureaucracy and Society in Modern Egypt: A Study of the Higher Civil Service*, Princeton 1957; Edgar L. Shor, The Thai Bureaucracy, *Administrative Science Quarterly* 5 (1960), 66-68. Ralph Braibanti, Public Administration and Judiciary in Pakistan, in: Joseph LaPalombara (ed.), *Bureaucracy and Political Development*, Princeton, NJ 1963, 360-440; Lloyd A. Fallers, *Bantu Bureaucracy: A Century of Political Evolution among the Basoga of Uganda*, 2nd ed. Chicago 1965; Louis A. Zurcher, Jr. et al., Value Orientation, Role Conflict, and Alienation From Work: A Cross-Cultural Study, *American Sociological Review* 30 (1965), 539-548. At this time much research was undertaken under the heading of "comparative public administration," which sought to clarify the conditions of modernization at the organizational level. See, e.g., Ferrel Heady and Sibyl L. Stokes (ed.), *Papers in Comparative Public Administration*, Ann Arbor, MI 1962. In the late 1960s, such attempts were halted by both severe and sweeping social theoretical critique. More recent discussion has often also objected that this bureaucracy model does not take adequate account of the dependence of all organizations on "human capital" or "social capital." The reference is to traditional attitudes and institutions that could be used with somewhat more adroitness, for example, in development projects. The criticism is clearly directed against theory simply assuming differentiation whereas the very question of differentiation is in reality the problem. In this context, the expression "capital" betrays the persistent underlying "instrumentalistic," goal-directed perspective.
18. Not least, it is a problem of the legal order and its constitutional supervision, and thus also has to do with increasingly purpose-oriented public administration in industrial countries. See for a case study Keith Hawkins, *Environment and Enforcement: Regulation and the Social Definition of Pollution*, Oxford 1984; also Arthur Benz and Wolfgang Seibel (eds.), *Zwischen Kooperation und Korruption: Abweichendes Verhalten in der Verwaltung*, Baden-Baden 1992, and on problems of constitutional law, Dieter Grimm, *Die Zukunft der Verfassung*, Frankfurt 1991.
19. This also strikingly applies for otherwise rigorously managed industrial enterprises, where, for example, the "just-in-time" principle for component supply requires cooperation between various firms at lower levels, with the result that even centralized production planning has now become difficult.
20. See Ronald Coase, The Nature of the Firm, *Economica* 4 (1937), (which initially attracted little attention) 386-403, reprinted in idem., *The Firm, the Market, and the Law*, Chicago 1988, 33-55; also Herbert A. Simon, *Models of Man – Social and Rational: Mathematical Essays on Rational Human Behavior in a Social Setting*, New York 1957; James G. March and Herbert A. Simon, *Organizations*, New York 1958; Oliver E. Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications*, New York 1975.
21. See Brian J. Loasby, *Choice, Complexity and Ignorance: An Enquiry into Economic Theory and the Practice of Decision-Making*, Cambridge 1976, 211.
22. See Chester I. Barnard, *The Functions of the Executive*, Cambridge, MA 1938, ed. 1951, 167 ff.

23. See Nils Brunsson, *The Irrational Organization: Irrationality as a Basis for Organizational Action and Change*, Chichester 1985.
24. See Jürgen Ruesch and Gregory Bateson, *Communication: The Social Matrix of Psychiatry*, New York 1951, using the concepts "command" and "report". On "deconstruction" see, beside Jacques Derrida and Paul de Man, Jonathan Culler, *On Deconstruction: Theory and Criticism After Structuralism*, Ithaca, NY 1982.
25. In the sociological theory of society, the same topic could be dealt with in the context of a theory of symbolically generalized communication media. See Niklas Luhmann, *Die Gesellschaft der Gesellschaft*, Frankfurt am Main 1997, 316 ff.
26. See, e.g., Jay B. Barney and William G. Ouchi (eds.), *Organizational Economics*, San Francisco 1986, Introduction 12.
27. See the title of Ph.G. Herbst, *Alternatives to Hierarchies*, Leiden 1976 - written in connection with the human relations movement of the Tavistock Institute.
28. Thus in the much-discussed opposition of market and hierarchy. On the point of departure for the discussion, see Oliver E. Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications: A Study of the Economics of Internal Organization*, New York 1975.
29. See only Stanley H. Udy, Bureaucracy and Rationality in Weber's Organization Theory, *American Sociological Review* 24 (1959), 791-795.
30. On the misunderstanding that Weber's theory of ideal types is an empirical theory in the usual sociological sense, see Renate Mayntz, Max Webers Idealtypus der Bürokratie und die Organisationssoziologie, *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 17 (1965), 493-502; reprinted in idem., (ed.), *Bürokratische Organisation*, Köln 1968, 27-35. However, the concept of ideal type can also be empirically defined as marked resistance to blending with other principles. In this sense, bureaucratic hierarchies have survived all attempts to enrich them with other principles such as participation, teamwork, and humanization without abandoning the terrain to reform.
31. It could be conceded that Weber had conceived of typification as an essential condition for understanding, thus of understanding in everyday, organized and organization-related action. But this does not necessarily mean and cannot guarantee that everyday typification coincides with scientifically instrumental idealization - an issue that was to be addressed by Alfred Schütz with reference to Weber and Husserl.
32. The final publication is Fritz J. Roethlisberger and William J. Dickson, *Management and the Worker*, Cambridge, MA 1939. On the ideological concept see Mayo loc. cit. (1933).
33. A better formulation would perhaps be "prescribed framework" and "emergent interactions." See C.R. Hinings and Royston Greenwood, *The Dynamics of Strategic Change*, Oxford 1988, 11 f.
34. See, in particular, Lester Coch and John R.P. French, Jr., Overcoming Resistance to Change, *Human Relations* 1 (1948), 512-532.
35. "Empirical knowledge" is no protection against ideological prejudices or those oriented on power structures. See, with reference to the presupposition of a worker influenceable by conditions, Dana Bramel and Ronald Friend, Hawthorne, the Myth of the Docile Worker, and Class Bias in Psychology, *American Psychologist* 36 (1981), 867-878.

36. See Heinz von Foerster, Principles of Self-Organization - In a Socio-Managerial Context, in: Hans Ulrich and Gilbert J.B. Probst (eds.), *Self-Organization and Management of Social Systems: Insights, Promises, Doubts, and Questions*, Berlin 1984, 2-24; reprinted in: Heinz von Foerster, *Wissen und Gewissen: Versuch einer Brücke*, Frankfurt 1993, 233-268.
37. See, e.g., Martin Irlle, *Soziale Systeme: Eine kritische Analyse der Theorie von formalen und informalen Organisationen*, Göttingen 1963. For a good retrospective see Anna Maria Theis, *Organisationskommunikation: Theoretische Grundlagen und empirische Forschungen*, Opladen 1994, 123 ff. See also H. Roy Kaplan and Curt Tausky, Humanism in Organizations: A Critical Appraisal, in: Amitai Etzioni and E. W. Lehman (eds.), *A Sociological Reader on Complex Organizations*, New York 1980, 44-55.
38. As a text for university use, see Peter M. Blau and W. Richard Scott, *Formal Organizations: A Comparative Approach*, San Francisco 1962.
39. See, e.g., Rudolf Wimmer, Organisationsberatung: Eine Wachstumsbranche ohne professionelles Selbstverständnis: Überlegungen zur Weiterführung des OE-Ansatzes in Richtung systemischer Organisationsberatung, in: Michael Hofmann (ed.), *Management Forum*, Heidelberg 1991, 45-136; idem., Was kann Beratung leisten: Zum Interventionsrepertoire und Interventionsverständnis der systemischen Organisationsberatung, in: idem. (ed.), *Organisationsberatung: Neue Wege und Konzepte*, Wiesbaden 1992, 59-27; idem., Neuere Methoden der Organisationsentwicklung zur Steigerung der Überlebensfähigkeit mittelständischer Unternehmen, in: Dieter Schwiering (ed.), *Mittelständische Unternehmensführung im kulturellen Wandel*, Stuttgart 1996, 182-205.
40. See hierzu Lothar Peter, "Jeder irgendwie für sich allein"? Probleme und Chancen sozialer Interaktion am Arbeitsplatz, *Zeitschrift für Soziologie* 22 (1993), 416-432.
41. See, e.g., Charles Heckscher, Defining the Post-Bureaucratic Type, in: Charles Heckscher and Anne Donnellon (eds.), *The Postbureaucratic Organization: New Perspectives on Organizational Change*, Thousand Oaks, CA 1994, 14-62 (21 f.).
42. See André Kieserling, Interaktion in Organisationen, in: Klaus Dammann, Dieter Grunow, and Klaus P. Japp (eds.), *Die Verwaltung des politischen Systems: Neue systemtheoretische Zugriffe auf ein altes Thema*, Opladen 1994, 168-182; idem., *Kommunikation unter Anwesenden: Studien über Interaktionssysteme*, Frankfurt 1999, 335 ff.
43. A classical account of this problem of the ends-means shift and its description as bureaucracy is given in Robert Michels, *Zur Soziologie des Parteiwesens in der modernen Demokratie*, reprint of the 2nd ed., Stuttgart 1957; also, for example, Peter M. Blau, *Bureaucracy in Modern Society*, New York 1956, 93 ff. or Renate Mayntz, *Soziologie der Organisation*, Reinbek 1963, 78 f.
44. See Barnard loc. cit. 231 ff.; Blau and Scott loc. cit. (1962), 5; or Joseph A. Litterer, *The Analysis of Organizations*, New York 1965, 246 ff.
45. That the means have to be included had provoked the well-known criticism of Jesuit organizational practices.
46. On the beginnings see, e.g., Robert K. Merton, *Bureaucratic Structure and Personality*, *Social Forces* 18 (1940), 560-568; Philip Selznick, An Approach to a Theory of Bureaucracy, *American Sociological Review* 8 (1943), 47-54; idem.,

Foundations for a Theory of Organizations, *American Sociological Review* 13 (1948), 23-35.

47. See Herbert A. Simon, *Models of Bounded Rationality*, 2 vols., Cambridge, MA 1992.
48. See Giancarlo Provasi, Oltre il modello di "razionalità limitata": Il contributo del cognitivismo, *Rassegna Italiana di Sociologia* 36 (1995), 251-278. On the influence of cognition theory on organization research see also vol. 1-2 (1996) of the *Revue internationale de systemique*.
49. See James G. March and Johan P. Olsen, *Ambiguity and Choice in Organizations*, Bergen, Norway 1976.
50. For a detailed treatment of this critique in the 1960s, see Niklas Luhmann, *Zweckbegriff und Systemrationalität* (1968), Neudruck Frankfurt 1973.
51. See Massimo Warglien and Michael Masuch (eds.), *The Logic of Organizational Disorder*, Berlin 1996.
52. Following Michael D. Cohen, James G. March, and Johan P. Olsen, A Garbage Can Model of Organizational Choice, *Administrative Science Quarterly* 17 (1972), 1-25.
53. See, e.g., Harry M. Johnson, *Sociology*, New York 1960, 284 ff.
54. See still today the "system-oriented management" approach of the Hans Ulrich school (St. Gallen). The core concept of integration is defined as the bringing together of parts to form a whole. See, e.g., the festschrift Hans Ulrich: Gilbert J.B. Probst and Hans Siegwart (eds.), *Integriertes Management: Bausteine des systemorientierten Management*, Bern 1985.
55. For a typical text see Daniel Katz and Robert L. Kahn, *The Social Psychology of Organizations*, New York 1966.
56. An attempt at integration that had at the time attracted a great deal of attention reacted to this distinction: James D. Thompson: *Organizations in Action: Social Science Bases of Administrative Theory*, New York 1967.
57. On this stage of the discussion, see Louis R. Pondy and Ian I. Mitroff, Beyond Open System Models of Organization, *Research in Organizational Behavior* 1 (1979), 3-39. As long ago as 1969, Karl Weick had stressed that organizations "enact their environment" and that criteria for this are needed. See the German translation of the second edition: Karl E. Weick, *Der Prozeß des Organisierens*, Frankfurt 1985.
58. For a relatively late publication of this form of theory see Piero Romei, *La dinamica della organizzazione: Le costanti di comportamento dei sistemi organizzativi aziendali in azione*, 5th ed., Milan 1990.
59. See David Easton, *A Framework for Political Analysis*, Englewood Cliffs, NJ 1965; idem., *A Systems Analysis of Political Life*, New York 1965.
60. See W. Ross Ashby, *An Introduction to Cybernetics*, London 1956, esp. 206 ff.; idem., Requisite Variety and Its implications for the control of complex systems, *Cybernetica* 1 (1958), 83-99.
61. See Herbert A. Simon, *Rational Choice and the Structure of the Environment*, *Psychological Review* 63 (1956), 129-138.
62. See Tom Bums and G.M. Stalker, *The Management of Innovation*, London 1961. Also F.E. Emery and E.L. Trist, The Causal Texture of Organizational Environments, *Human Relations* 18 (1965), 21-32; idem., *Towards a Social*

- Ecology: Contextual Appreciation of the Future in the Present*, London 1972; Paul R. Lawrence and Jay W. Lorsch, *Organization and Environment: Managing Differentiation and Integration*, Boston 1967; idem., *Differentiation and Integration in Complex Organizations*, *Administrative Science Quarterly* 12 (1967), 1-47; Howard E. Aldrich, *Organizations and Environments*, Englewood Cliffs, NJ 1979.
63. See Tom Burns and G.M. Stalker, *The Management of Innovation*, London 1961. Also F.E. Emery and E.L. Trist, *The Causal Texture of Organizational Environments*, *Human Relations* 18 (1965), 21-32; idem., *Towards a Social Ecology: Contextual Appreciation of the Future in the Present*, London 1972; Paul R. Lawrence and Jay W. Lorsch, *Organization and Environment: Managing Differentiation and Integration*, Boston 1967; idem., *Differentiation and Integration in Complex Organizations*, *Administrative Science Quarterly* 12 (1967), 1-47; Howard E. Aldrich, *Organizations and Environments*, Englewood Cliffs, NJ 1979.
 64. See above all Jeffrey Pfeffer and Gerald R. Salancik, *The External Control of Organizations: A Resource Dependence Perspective*, New York 1978. See also David Jacobs, *Dependency and Vulnerability: An Exchange Approach to the Control in Organizations*, *Administrative Science Quarterly* 19 (1974), 45-59.
 65. On the literature see note 63.
 66. See the attempt to cope with the complexity deficit, a (rather vague) type differentiation in Robert Drazin and Andrew H. Van de Ven, *Alternative Forms of Fit in Contingency Theory*, *Administrative Science Quarterly* 30 (1985), 514-539.
 67. See Karl E. Weick, *Der Prozeß des Organisierens*, German transl. of the 2nd ed. Frankfurt 1985, esp. 212 ff.
 68. See, e.g., John W. Meyer and Brian Rowan, *Institutionalized Organizations: Formal Structure as Myth and as Ceremony*, *American Journal of Sociology* 83 (1977), 340-363; John W. Meyer and W. Richard Scott, *Organizational Environments: Ritual and Rationality*, Beverly Hills, CA 1983; Lynne G. Zucker, *Institutional Theories of Organization*, *Annual Review of Sociology* 13 (1987), 443-464; James G. March and Johan P. Olsen, *Rediscovering Institutions: The Organizational Basis of Politics*, New York 1989; Walter Powell and Paul DiMaggio (eds.), *The New Institutionalism in Organizational Analysis*, Chicago 1991; W. Richard Scott, *Institutions and Organizations*, London 1995.
 69. See only Santi Romano, *L'ordinamento giuridico* (1918), reprint of the 2nd ed. Florence 1962.
 70. See only W. Richard Scott, *The Adolescence of Institutional Theory*, *Administrative Science Quarterly* 32 (1987), 493-511. The "maturity" of theory is seen in the many contradictory versions that one can choose between in empirical research. The same applies with respect to the complementary concept "culture." See below, chapter 7, note 27.
 71. See esp. Marc Granovetter, *Economic Institutions as Social Constructions: A Framework for Analysis*, *Acta Sociologica* 35 (1992), 3-11.
 72. For the theory of science and legal theory we could also add positivism.
 73. Used in analogy to the biological sense of to stimulate (an organism, cell, or organ) to produce an active response (translator's note).

74. See Horst Stenger, *Die soziale Konstruktion okkultur Wirklichkeit: Eine Soziologie des "New Age"*, Opladen 1993.
75. See W. Graham Astley and Andrew H. Van de Ven, *Central Perspectives and Debates in Organization Theory*, *Administrative Science Quarterly* 28 (1983), 246-

273.

76. Of course, it also does not help to react with criticism of “grand theories.”

77. See Robert E. Quinn and Kim S. Cameron (eds.), *Paradox and Transformation: Toward a Theory of Change in Organization and Management*, Cambridge, MA 1988.

