Understanding the Office:
A Social-Analytic Perspective

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In order to apply office automation in a meaningful fashion, it is apparent that some understanding of the office is necessary. Most descriptive studies of the office have placed great emphasis on manifest office actions, suggesting that offices are the embodiment of these actions. The meanings of these actions or tasks, however, have been given scant attention. There exist a number of office activity or task taxonomies, but they do little more than provide a simple and limited structure through which to conceive of an office. From a social-analytic perspective this appears to be overly simplistic and misses the richness of social action in an office. Focusing on the overt and manifest aspects of the office may very well lead to its misrepresentation. This paper takes a critical look at the way offices are conceived in the office automation literature and suggests alternatives that may provide a better understanding of the real functions of an office.

1. INTRODUCTION

It is hard to imagine how office automation (OA) could be successfully applied without a detailed understanding of the environment into which it is placed, that is, the office. Researchers have sought such an understanding through the development of two types of taxonomies: one associated with the kinds of offices that exist; the other, with the various observable office activities. The former attempts to categorize the office into specific and different types; the latter tries to uniquely classify office activities or tasks. Examples of the former are Panko and Sprague's Type I and II offices [59], Panko's enhancement [58], and Gunton's typology [27]. This type of taxonomy has currently not provided a great deal of insight into the inner workings of offices. The office

categorizations, although interesting, have been too simplistic to be of much value. This paper will therefore concentrate on the taxonomies that focus on the functions performed by individuals in an office.

Numerous taxonomies, each with its own terminology to define and classify the activities of an office, have been proposed [11, 17, 18, 25, 41, 45, 54, 62, 68, 75]. Although each classifies activities in its own particular way, from a more global perspective such classifications are fundamentally the same. This is a point suggested by Higgins and Safayeni [32] and substantiated by Dodswell [22] who had little difficulty synthesizing six different studies, each with its own specific taxonomy. The simple fact is that these types of taxonomies are relatively straightforward; that is, easy to conceptualize, and it is easy to understand how observable office activities could be classified under such a scheme. However, the simplicity of these taxonomies raises considerable concern. Higgins and Safayeni [32], for example, note three problems associated with such taxonomies: (1) office activities may not be classifiable in any meaningful way; (2) the idea of mutually exclusive categories does not necessarily reflect reality; and (3) office activities may not be mappable onto different technologies. Suchman [71] worries that these taxonomies reflect a view in which office activities are seen to be the product of some enduring structure that stands behind office work, rather than the product of social action. From a social-analytic perspective, the activities (or procedures, functions, and tasks, as they are loosely referred to in the literature) performed in an office are largely social in nature. An office, therefore, is a social environment involving social action. Manifest behavior, the basis of all the taxonomies cited above, provides only one perspective from which to conceive of office activities. There are others. The purpose of this paper is to analyze critically the foundations of the various ways an office can be conceived, highlighting the implicit assumptions underlying each.

2. OFFICE PERSPECTIVES

In attempting to develop an understanding of the operations of an office, it is necessary to first explore the notion of "office." This, however, proves most difficult. Dodswell, for example, laments: "it is extraordinarily difficult to provide a concise and clear definition [of office]" [22, p. 8]. Viewing the office as a place where white collar work is conducted or as a set of functions and activities whose output is written and oral communication is likely to lead to an unacceptably narrow focus. The former view focuses on geographical constraints, whereas the latter concerns itself only with what people appear to do in offices. Neither view sufficiently takes into account the fact that offices are not isolated entities but, rather, interdependent bodies that interact and exist within some larger context— the organization. Offices serve a variety of purposes, many of which are highly informal and not easily understood. Moreover, they are in a dramatic state of flux. The advent of remote work, for example, has removed the geographical boundaries associated with offices. The functions carried out by the office can now be dispersed across the social and geographic landscape. Thus, the term "office" may very well be an unsatisfactory label for where, how, when, and what work is performed in the emerging information society. This, of course, is particularly true given the increasing role information technology plays in the

evolution of the office. Nevertheless, as Delgado [21] notes, the concept of "office" is deeply ingrained in our culture. He writes:

> The concept of the office can be seen as one of the most consistent threads in any culture, for systems of government and manufacture may change beyond recognition, but in any organization of human beings which extends beyond the smallest group, the word "office," and the ideas it represents, emerge as stable components of language. (Quoted in [22, p. 9].)

Although the concept "office" poses considerable difficulty in terms of definition, there are a number of dimensions or levels through which an office could be conceived. For example, offices are thought to have a geographical dimension (physical placement), temporal dimension (hours of work), activity dimension (tasks that are performed), structural dimension (worker-reporting relationships), spatial dimension (area in which people work relative to their co-workers), economic dimension (economic criteria that drive the organization and by which workers are assessed), and social dimension (the social and psychological reasons that motivate people to work in offices). This list is not exhaustive; it is simply meant to suggest the complexity of what is involved in attempting to acquire an understanding of the office. Exploring offices in terms of these dimensions, however, tends to mask the fundamental conception of an office. That is, underlying the dimensions is a more basic notion, namely, a *theoretical perspective*.

The assertion proposed here is that there are two different theoretical perspectives of the office: an *analytical* perspective and an *interpretivist* one. These perspectives represent two markedly different notions of what goes on in an office. The former sees the office as an environment in which people perform a variety of functions to support the successful running of the organization. The functions are conceived of in terms of largely formal and structured actions or activities. The latter conceives of the office in terms of mostly unstructured and informal human action. In some ways these perspectives are not dissimilar from Kling's two perspectives on the social impact of computing [43], that is, *systems rationalism* and *segmented institutionalism*. He defines systems rationalism as assuming a consensus on major social and organizational goals. It possesses a relatively synoptic account of social behavior and places extreme weight on both organizational and economic efficiency. Segmented institutionalism, on the other hand, sees intergroup conflict as the norm and is thus disinclined to believe in any consensus about organizational goals. Social behavior is dynamic, hard to understand and define, and yet the key ingredient of organizational life. The sovereignty of individuals and social groups over critical aspects of their lives is considered the dominant issue instead of economic efficiency.

The Analytical and Interpretivist office perspectives differ on a number of dimensions. For example, the former sees office functions (activities) as largely deterministic, rational, and overt, whereas the latter conceives of them as mostly nondeterministic, political, and covert. The analytical perspective metaphorically conceives of the organization as *structure*; the interpretivist perspective sees organization as *agent* or *culture*. This metaphorical difference (based on Argyris and Schon's theories of organizational learning [3]) reflects two alternative views of organizations. The *structure* view sees organizations as "an ordered array of role-boxes connected by lines which represent flows of information, work, and

Table I. Comparison of the Analytical and Interpretivist Perspectives

	Analytical	Interpretivist
Office functions	Largely deterministic, rational, overt	Largely nondeterministic, political, covert
Metaphor	Organization as *structure*	Organization as *agent* or *culture*
Office action	Manifest behavior	Social meaning
Appropriate measurement instrument	Formal models	Phenomenological study
Research paradigm	Quantitative	Qualitative
Focus	Analysis	Understanding

authority" [3, p. 324]. The *agent* or *culture* view notes that organizations are both instruments for achieving social purposes and small, restricted societies where "people create for themselves shared meanings, symbols, rituals, and cognitive schemas which allow them to create and maintain meaningful inter- actions among themselves and in relation to the world beyond their small society" [3, p. 327].

The analytical perspective sees office action in terms of manifest behavior; the interpretivist perspective sees it in terms of the shared social meeting of the actors. The former is observable and empirical; the latter is symbolic and largely nonempirical. It follows, therefore, that the appropriate measurement instru- ments and research paradigms must also differ. The analytical perspective adopts formal models using empirical methods as the appropriate measurement instru- ment, whereas the interpretivist perspective uses phenomenological study. The former embraces a quantitative research paradigm; the latter, a more qualitative one. This is similar to the Burrell and Morgan [8] dichotomy of "objectivism" versus "subjectivism." Last, the two perspectives differ in their focus: for the analytical, the focus is on analysis; for the interpretivist, it is understanding. The former seeks to analyze office operations and functions by breaking them down into their constituent parts. Knowledge is acquired through the scientific en- deavor of reductionism. The latter is less concerned with analysis and more concerned with understanding. Knowledge is available only through understand- ing the social actions and meanings of the participating actors in a social setting. The focus is on understanding these social actions and meanings. Table I summarizes the differences of the two theoretical perspectives.

Although these perspectives are very broad, and perhaps not as clear-cut as portrayed, it is felt that they do reflect the general archetypal notion of an office that exists in the published literature. The perspectives are operationalized through office views, which are more specific approaches or conceptions of an office (and/or office actions).

3. OFFICE VIEWS

An office view refers to the particular way an individual conceives of an office. It is likely to be related to a person's world view or *Weltanschauung* [9], which itself is the product of a person's education, environment, cultural background, experiences, and the like. An office view reflects the aspects of an office that are

thought to be most important in the eyes of the perceiver. Views are likely to be overlapping and not so clearly defined as what follows. Nevertheless, the archetypes presented below do seem to reflect the general constructs presented in the literature. They also fall neatly into two theoretical perspectives presented above.

The Analytical perspective is reflected in three different, although popular, views of the office: *office activities, office semantics,* and *office functions.* The first conceives of an office as a place where a variety of activities are performed to support the successful operation of the organization. The second centers on office behavior as a reflection of organizational goals. The third places primacy on the functions that go on in an office. Functions are analyzed through office procedures. A procedure, in this context, is the unit of analysis that allows one to study the fundamental operations of an office. All three views focus on manifest behavior as the key element or primitive of the office. That is, the most effective way of understanding the office is to see it in terms of observable behavior. Because the office is perceived as largely deterministic and structured, a methodology that is more formal in nature is considered appropriate. Thus, methodologies based on recognized systems analysis approaches, for example, entity–attribute-relationship formalisms, data-flow diagrams, and other data analysis techniques, are embraced. Examples of these *office methodologies are* OAM [66], OADM [73], MOBILE [23], and OFFIS [44]. They result in a fairly formal office model/system (cf. SCOOP [83], ICN [24], OMEGA [5], OBE [84], OPAS [49], SOS [7], and OFS [10].

The Interpretivist perspective is observable in four alternative office views: *work role, decision taking, transactional,* and *language action.* The first views offices in terms of a series of work functions that are performed by organizational actors. Its basic focus is on the roles of the actors. The second sees offices in terms of decisions that have to be taken by various decision makers, each having a particular cognitive style. The focus here is on cognition. The third conceives of offices as arenas where information transactions occur. Office workers are viewed as information exchangers who behave opportunistically while bargaining among themselves for information. The focus is thus on information exchange. The fourth looks at offices in terms of social action mediated through language. Organizational actors engage in dialogue or language action in the course of their work. Since it is imperative to comprehend the meaning of such language action for the office to be truly understood, the focus is on language. Because the office is conceived of as largely nondeterministic, formal office methodologies are more problematic. Classic systems analysis methods are inappropriate in this circumstance. Instead, methods based on, for example, sociotechnical systems principles and participation appear more appropriate. Methodologies such as Mumford and Weir's ETHICS [55], Pava's Socio-technical Approach [60], Checkland's Soft Systems [9], and Lehtinen and Lyytinen's SAMPO [46] offer possibilities that need to be explored in the office context. It is apparent that the resultant office model generated using these types of methods is nothing like the formal model of the analytical approaches. Any model would be a loose one, providing little more than a structure or framework through which to consider offices. In fact, the Interpretivist perspective notes it is not possible to develop a formal model of the office, since its underlying assumption—that offices are nondeterministic—

Views	Focus	Methodologies	Models
Analytical Perspective			
Office activities		OAM	SCOOP
Office semantics	Manifest behavior	MOBILE	ICN
Office functions		OFFIS	OBE
			OFS
			OPAS
			OMEGA
			SOS
Interpretivist Perspective			
Work roles	Roles	ETHICS	
Decision taking	Cognition	Sociotechnical	
Transactional	Information exchange	Soft systems	No formal models
Language action	Language	SAMPO	

Fig. 1. Comparison of the office views.

negates the possibility of a formal, structured model. Figure 1 attempts to depict the different views diagrammatically.

4. ANALYTICAL PERSPECTIVE

4.1 The Office Activities View

By far and away the most prevalent view of the office is the activity view. It conceives of the office not so much as a place but as an environment where certain activities are performed to support the successful operation of the organization. The important concept in this view is *what* activities are undertaken and by whom. The time taken to perform an activity and the procedures followed in carrying it out are both crucial aspects. Taylor's [74] conception of work rationalization provides the motivation and basis for this view. The office activity view is a popular one for two reasons: (a) it provides the simplest way of empirically measuring what goes on in offices, since it considers only manifest behavior; (b) it is easier to see how office technology can be applied when the subject of study is observable tasks. A major criticism of the view is that, although it looks at what activities are performed, it does not attempt to understand *why* they are performed, that is, for what underlying reasons. Examples of studies adopting such a view are [11], [17], [18], [25], [41], and [62].

4.2 The Office Semantics View

An attempt at overcoming the limitations of the activity view is provided in the office semantics view. According to Barber [6], its primary focus is to understand not only how but why a task is performed. It sees office work as being much more complex than just performing simple activities and concentrates on procedures and goals. It uses current knowledge from the field of semantics to make explicit the rules associated with the performance of office tasks. Problem solving (office work) is characterized as a search for a procedure (sequence of action) that will achieve some desired goal. This may come about in one of two ways: (a) goals

could be specified by the user, or (b) they could be inferred from the sequence of actions (procedures) performed [70]. Unfortunately, as discussed by Klein and Hirschheim [40], the philosophical grounding for such semantic contentions is extremely weak. Goals cannot necessarily be inferred from action. The office semantics view can be found in the writings of Attardi [4], Barber [6], and Hewitt et al. [31].

4.3 The Office Functions View

In this view, offices are conceived of in terms of procedures and functions. To understand what goes on in an office, it is necessary to analyze the procedures and functions that make up office work. Procedures can be combined into higher level functions that can be defined as "aggregates of all the detailed activities that collectively manage and maintain some resource that relates to the business goals of the larger organization" [66]. These high-level functions do not usually lend themselves to analysis, and thus it is the procedures that become the center of focus. A procedure can be thought of as a description of the historical sequence of events that an office object or operation progresses through to reach its intended goal. The realization of its goal, in combination with the completion of other procedures, leads to the successful operation of some higher level function and (ultimately) the business. Examples of an office functions view can be found in [1], [29], [30], and [66].

5. INTERPRETIVIST PERSPECTIVE

5.1 The Work Role View

Because of the limitations of analytical perspective views in providing a detailed understanding of the office, Mintzberg [54] chose to study office work in terms of roles. Roles, according to Weinstein and Weinstein, are the "set of rights and duties relating to the performance of a function in accomplishing a task" [77, p. 11]. Roles apply to particular situations and are understood by those in the situation. Moreover, they define the expected behavior of any person in a social setting. The rights and duties are social constructs performed in a social arena and govern a person's behavior. Instead of perceiving office work in terms of simple activities, Mintzberg felt that understanding the work roles of managers would provide a richer picture of the office and its operation. He suggested the existence of three *interpersonal* roles that give rise to three *informational* roles, which in combination yield four *decisional* roles. Interpersonal roles arise directly from a manager's formal authority as figurehead, leader, and liaison with outside contacts. Informational roles derive from the fact that managers are the nerve centers of their organizational units; they monitor, disseminate, and transmit information. Decisional roles are based on a manager's formal and informal authority, and include the roles of entrepreneur, disturbance handler, resource allocator, and negotiator.

5.2 The Decision-Taking View

An alternative to the work-role view can be found among the many researchers who focus on the decisions that are made in an office environment. Here, the central issue is decision making—what decisions are made, by whom, for what

reasons, the decision makers' cognitive style, and the like. There are two complementary components of this view: cognitive style and decision-making style. The former reflects the particular cognitive preferences of the individual decision maker by examining the cognitive processes involved in problem solving and the use of information. Various models exist by which to categorize the different cognitive styles; many of these are based on Jung's psychological types [12, 35, 38, 53, 61]. See [36] for a review of current cognitive-style research. The latter focuses on the decision maker and on how decisions are made. This is related to cognitive style but is more comprehensive. It addresses the conceptual ways in which people make decisions. See Keen and Scott Morton's classification of five decision-making schools of thought [37], Sprague's (1980) review of decision-making approaches [67], and Mintzberg's decision-making roles [54]. Other frameworks on decision making can be found in [2], [19], [48], [56], [67], and [78].

5.3 The Transaction View

This view conceives of offices as arenas for information-exchanging that operate on the basis of contracts [79]. Organizations are perceived as stable networks of transactions that are regulated, through the processes of coordination and control, by a set of contracts. These govern the transactions that occur between organizational units. Ouchi [57] defines three types of units: markets, hierarchies, and groups, which form the basic contractual arrangements. Williamson [80] notes the use of "spot" contracts in the market, "authority relation" and "employment relation" contracts in bureaucracies (hierarchies), and informal trust-based contracts within groups. Fundamental to such a view is the belief that organizational (and office) goals are complex social constructs and not the simple procedure-oriented functions adopted in, for example, the office semantics view. Clegg and Dunkerley state that "the real goals are the result of negotiation and conflict between individuals and groups at different organizational levels; the outcome of process rather than formal function" [16, p. 304].

In the transaction view, actors behave opportunistically, bargaining with whatever resources they have at their disposal. Ciborra defines such behavior as "an attribute of the human agent related to his/her proclivity to manipulate . . . information, misrepresent goals and intentions in a context where self-enforcing promises cannot be secured" [14, p. 138]. Offices are thus seen as *negotiated orders* and the product of continuous contractual arrangements. Examples of the negotiated order and/or transaction view can be found in [13], [15], [20], and [69].

5.4 The Language Action (LA) or Rule Reconstruction View

The language action view sees offices in terms of human action where language is the mediating force. Goldkuhl and Lyytinen note that human action is supported through information systems that are defined as "formal linguistic systems for communication between people which support their actions" [26, p. 14]. The primary concern is with improving the "rationality" of human action through improved communication, achieved through a proper analysis of information needs in terms of the language of the office workers. The LA view

seeks to construct a general theory of communicative human action for which speech act theory is the base. It notes that office modeling should be concerned with the rational (or rule) reconstruction of the professional language that is used to transmit the meanings necessary for effective human action. From speech act theory, four levels of analysis are applied to office communication: (a) syntax description, (b) description of propositional content, (c) description of perlocutionary forces, and (d) description of illocutionary forces [64]. A detailed treatment of the LA view can be found in [26], [46], [47], [50], and [52].

6. DISCUSSION

The alternative office perspectives and views can be seen to differ in many ways. Yet underlying these differences is one fundamental issue: the degree of determinism and structure intrinsic to the office domain. This is perhaps the most basic notion of all and the root cause of the alternative office views.

The analytical perspective conceives of offices as mostly structured and deterministic. People perform certain tasks in specified ways because that is how they accomplish the jobs they are employed to do. They are accountable and responsible for specifiable and rational functions. All one needs to do is analyze these functions to discover the tasks and activities that the office worker needs to undertake in the performance of his or her job. Offices are thus rational, organizational, goal-seeking bodies that follow a mostly deterministic set of rules. There is some difference in the interpretation of whether the rules are manifest or need to be drawn out from the office workers. In the former case the rules are articulated and set out in organizational documents. In the latter they have to be elicited. This can be done by interviewing the appropriate organizational personnel, tracing organizational responsibilites and accountabilities (such as might be suggested in the office functions view), or backtracking from office work behaviors to implicit rules (such as advocated in OMEGA).

A number of researchers have noted the difficulties inherent in discovering office rules. They are not simply discovered by asking people or looking at organizational charts. Panko for example, suggests that the only way to understand the operation of the office is to look at it in terms of the wider organizational setting, as "part of larger organizational processes" [58, p. 228]. The function of the OA analyst then is to define the larger organizational processes by uncovering the underlying structure of the office. The fundamental belief, therefore, is in the existence of an underlying and enduring structure of the office.

Such a belief, however, just perpetuates the simplistic and rational notion of the office. Instead of realizing the social nature of the office, it attempts to explain behavior by appealing to its more global nature, that is, as part of a larger process (the organization) and needing to be viewed as such. By analyzing the operation of the organization, an understanding of the behaviors of the office can be understood. From an interpretivist perspective, such a conception is pure naivete. Offices are not "rational" and manifestly rule following; they are social arenas where power, ritual, and myth predominate. The set of rules or procedures followed in an office are not a simple empirical reality existing "out there" to be discovered by classic empirical means; rather it exists in the minds of the social actors and is intersubjectively determined. Sheil brings out this point cogently.

He writes:

> I had approached those offices convinced . . . that office procedures were, at least in principle,
> clearly defined methods of processing information. I assumed that they existed, indepen-
> dently of my enquiries. And that is fantasy. The office worker is under no such delusion.
> [65, p. 300].

Moreover, if one attempts to draw out the procedures followed by an office worker
through normal means, for example, through interviews, questionnaires, and the
like, the result will be little more than a distorted picture of the office. Sheil
states that

> office workers construct different descriptions of what they do around a common core of
> fact, for consumption by different groups of outsiders. By controlling those groups' beliefs
> about his work, the office worker can cause them to interact with him in a way that he finds
> advantageous [65, p. 300].

On the basis of this analysis, it is apparent that only some form of interpretivist
perspective offers any hope of capturing the richness of the office. Yet, as Kling
points out, such a perspective is rarely found in the literature. He writes:

> although sociologists no longer believe that the classical theory provides a credible account
> of the ways that large organizations are or can be managed, it is commonly adopted as an
> analytical posture in the computing literature. [42]

Alternative conceptions, such as the work role, transactional and language
action views, possess the potential for providing a much richer social account of
the office and office work. But it is likely that none of them in their present form
provide a complete picture. These views are in the formative stages. Considerable
effort is needed to refine them and then test their veracity in the office domain.

Further, more emphasis should be placed on anthropological and sociological
studies. These fields have a long tradition in human study and yet, with little
exception (cf. [71], [72], and [82], they have been largely ignored by the OA
researchers. Additionally, the methods of inquiry (e.g., ethnomethodology and
phenomenology) used by these fields should be considered in understanding the
office. At present, only orthodox methods based on a positivist conception of
knowledge acquisition have been used [33].

7. IMPLICATIONS FOR OFFICE SYSTEMS DEVELOPMENT MODELS AND METHODOLOGIES

Because the office is thought to be more appropriately conceived in terms of
social entities, formal and deterministic systems development models and meth-
odologies are likely to be problematic. Although models such as SCOOP, ICN,
OFS, and OMEGA and methodologies such as OADM and MOBILE have merit
in structured and deterministic environments, they are not considered appro-
priate for most office systems development. Methodologies and models that are
less formal and more participative in nature (cf. Checkland's soft systems
methodology [9], Pava's sociotechnical approach [60], and Mumford and Weir's
STS-based ETHICS [55]) are likely to be more appropriate because they have a
greater capability of capturing the social aspects of the office domain. Further-
more, it is plausible that some combination of the approaches may even be better

than a single approach on its own. For example, Checkland's methodology is particularly strong in problem formulation and in reaching a consensus on what might be done (e.g., introducing word processing or the like). It is weaker on the design and development phases. The approaches of Pava and Mumford and Weir, on the other hand, are strong on these phases, but perhaps weaker on the initial phases. Thus, the use of soft systems methodology at the outset to clarify problems and opportunities followed by ETHICS or Pava's sociotechnical approach during office system design and development may provide a richer and better vehicle for developing successful systems. Wood-Harper et al.'s [81] amalgamated approach, called the multiview methodology, provides some support for this contention. (See [34, chap. 4] for a more detailed analysis of models and methodologies.)

It is clear that further research is needed to develop models and methodologies that can capture the richness of the office. One attempt to do so can be found in [51], where a "social action perspective" is adopted. There, an office is considered part "human activity system" and part "social community." The former stresses the conscious design of a set of interlinked, purposeful, human activities. The latter reflects the more random, nonpurposeful, and evolutionary character of organically developed social collectivities that are tied together by tradition and emotion. Both aspects are always present in *social systems* that exhibit this important duality (cf. [9] and [76]). An office possesses characteristics of purposeful systems such as the performance of tasks by individuals to achieve certain goals (e.g., to meet budget constraints) and nonpurposeful systems such as the evolutionary pattern of friendships. It is thus an example of a social system. Conventional office systems development methodologies treat offices as purposeful systems, omitting their nonpurposeful element and resulting in a too narrowly focused and defined office system.

Lyytinen et al. [51] note four types of social action: *instrumental, strategic, communicative,* and *discoursive*. Conventional methodologies conceive of the office only in terms of instrumental action; the other three action types are ignored. Yet, it is only through considering strategic, communicative, and discoursive actions that the true social systems nature of the office can be taken into account. From such a perspective, office systems development proceeds through an understanding and analysis of the four forms of social action. For further details on the social action perspective and its theoretical base, particularly its philosophical connection with Habermas' "Critical Theory" [28], see [39] and [51].

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