

CONFLICT STRUCTURE OF THE INFORMATION SOCIETY

Thomas Söderqvist

Dept of Theory of Science, Gothenburg University, Sweden

The purpose of this paper ¹ is to present a macrosociological framework for the discussion of computerization and human communicative interaction. After a review of the notions of "knowledge society" and "information society" as an alleged new stage in the cultural evolution of mankind, I argue for a non-economic macrotheory of knowledge-information conflicts. In the final part of the paper I discuss attempts to explicate a fundamental mechanism relating knowledge-information elites with non-elites.

A new stage in cultural evolution?

There seems to be a great deal of agreement among many observers of society that the North-western world (incl. Japan) has begun to enter into a new stage in the cultural evolution of mankind. A number of recent conceptual innovations have tried to pinpoint this development. The postulated new social order has been referred to as "knowledgeable" ², "technotronic" ³, "programme" ⁴, "post-industrial" ⁵, "post-modern" ⁶ etc., depending which characteristics has been focused upon.

Two main characteristics of the assumed new social order are frequently discussed. One is the role played by knowledge, especially theoretical (or scientific) knowledge, in contemporary societies, the other is the vast use of information technologies and information handling. Consequently notions of "knowledge society" and "information society" have been widely spread in the literature and the public debate during the last few years. Of course, neither knowledge application nor information handling is any peculiar characteristic of contemporary societies. The creation, distribution and application of knowledge and the adjunct handling and storage of information are necessary pre-conditions for all societies. But, as it is argued, both traits have undergone a qualitative change during the 20th century.

Knowledge society

With regard to the notion of "knowledge society" Daniel Bell, one of the first ardent spokesmen of the new social order, has suggested that the distinctive character of "the post-industrial society" is the predominance of a certain kind of knowledge. Decisive for the direction of change should be

"the centrality of theoretical knowledge - the primacy of theory over empiricism and the codification of knowledge into abstract systems of symbols" ⁷.

In the post-industrial knowledge society so defined, universities and intellectual institutions, codifying theoretical knowledge, become the "axial structures" of the

alleged new society. This emphasis on the growth of application of theoretical knowledge in all spheres of human life, i.e., the scientification of society, has been paralleled by an growing concern for studies of societal rationalization, i.e., systematization, generalization, routinization and formalization by rules of human conduct⁸, for the primary role of of the educational system in contemporary societies epitomized in the notion of "credential society"⁹, for the role played by the professional expertise¹⁰, for the substitution of corporate owners with managerial expertise¹¹ and for the fusion of scientific knowledge and practical actions in all aspects of modern planning¹². The concern for the phenomenon of scientification is further reflected in the upsurge of scholarly studies of science in a social context and the activities unfolded by governments to cope with scientific and technological development¹³. In Eastern European Marxist tradition the notion of the "scientific-technological revolution" points to the same phenomenon¹⁴. Altogether the steadily increasing role of secularized, scientific knowledge for the management of societal affairs throughout the 20th century seems to justify the notion of "knowledge society"¹⁵.

Information society -- computerized society

The recent conspicuous rise of information technologies, including computer hardware, software and telecommunications, has reinforced the argument of a new stage in the cultural evolution. While the notion of knowledge society largely has been an issue for scholarly recognition, the notion of "information society" has been widely recognized and closely associated with corporate and governmental strategic action, as well. Porat has argued that changes in GNP output and work force allocations calls for a new interpretation of US economy, substituting the indices of industrial economy with indices for an "information economy"¹⁶. Nora and Minc has taken the convergence of computing and telecommunications as their point of departure for advocating "l'informatisation de la societe" as a French national policy for the 1980's¹⁷. The construction of a 5th generation computer system has been announced as the treshold event turning Japan into a leading nation of the "information age"¹⁸. The introduction of world-wide satellite-mediated communication networks, the silent intrusion of the microprocessors into many everyday life routines, the implementation of personal computers, computer networks and high-level 4th generation languages, the fair success of expert-system simulation of professional information and knowledge management¹⁹, the emergence of a plethora of entirely new social roles concerned with creation, handling and application of information, and the rise of a whole computer and information processing culture, are but a few indicators of a change in the basic societal processes being considered as profound as the industrial revolution and modern break-through²⁰. Thus, the notion of an emerging "information society" as a "computerized society" seems to be justified too.

A knowledge-information analytical dimension

The basic assumption guiding this paper, however, is that, although the processes referred to are indeed impressive, it is nevertheless premature to conclude that the social changes associated with the notions of knowledge society and computerized information society should signify a new stage in the cultural evolution of mankind, comparable to the modern breakthrough. In fact, stage theories of human evolution can only be made in retrospect. Hence, I assume that the main function of these macrosocial notions is political-rhetorical.

On the other hand, the above-mentioned changes and the discussion accompanying them have raised our insight into the strategic importance of societal knowledge and information processes in all societies, alongside economic and political processes. Hence, the conspicuous post-war development of societal knowledge and information processes epitomized by the notions of knowledge society and information society puts a heavy demand on a reorientation of the theoretical and empirical analyses of contemporary societies ²¹, as a consequence the focus on economic and political institutions and processes which have been of such fundamental importance for our understanding of the modern breakthrough, can no longer be defended.

Consequently, I will speak in terms of a knowledge-information analytical dimension of society ²², alongside with economic and political analytical dimensions, but not to be confused with the "symbolic system" of Parsons ²³. The knowledge-information analytical dimension of society deserves to be analyzed *sui generis*, without reducing it to other analytical schemes, for example economical theory, political theory etc.

Further, classical macrosociological questions concerning social structure, stratification and class formation, ideology, power legitimation etc., should be consistently recast in the light of this analytical focus. Hence Porat's use of the concept of "information economy", although probably useful as a rhetoric concept for convincing economists, is ambiguous, and actually misses the point. A more consistent approach is taken by Duncan when envisaging the macrosocial order as primarily a problem of communication ²⁴, and insisting upon that studies of symbolic relations and communication do not have to be reduced to other, more "real" phenomena ²⁵.

Discarding the idea of economy being determinant "in the last instance" specifically rules out all Marxist approaches to the knowledge-information analytical dimension of society. Thus, criticizing the premise of material production and labor as "the first historical act" ²⁶, Poster utilizes Michel Foucault's theory of discourse power ²⁷ to introduce the concept of "mode of information" as a substitute for the Marxist "mode of production". Poster's stand is in accordance with Nowak's attempt to reformulate a non-marxian historical materialism ²⁸, distinguishing between three material momentums of society: an economic, a political and a spiritual momentum ²⁹, being irreducible visavis each other ³⁰.

Thus from a macrosociological perspective social interaction in a so called computerized society should basically be approached in terms of a general analytical theory of human knowledge-information communication.

The conflict structure of the knowledge-information dimension of society

What are the basic features of a macrosocial theory of human knowledge-information communication? A fundamental dividing line in macrosocial theory goes between different brands of functionalist theory and conflicts theories. In accordance with the conflict theoretical (but not necessarily marxist) tradition, I assume that the knowledge-information dimension of society should be analyzed in terms of conflict and domination. In fact, most proponents of the notions of knowledge society and information society agree that traditional class conflict and class power based upon the control of the means of production is diminishing in the North-western world (incl. Japan). Correspondingly many discern new kinds of macrosocial conflicts more or less based on knowledge monopolies³¹, adding to or replacing property monopolies. Thus, many analysts suggest the existence of an elite of knowledge and information actors, such as professionals, expertise, intellectuals, scientists etc., occupy an important position³².

Hardly two analysts agree upon the exact nature of that new kind of conflicts, however. With regard to a possible knowledge elite, already Bakunin envisaged the division of a society into "the mass of the people" and "the state engineers" as "the new privileged political-scientific class"³³; anarchist thinkers have since repeated his warnings in different versions. E.g. Nomad discussed "an actual or potential antagonism of interests between the educated, leading 'knows', and the rank-and-file, the uneducated, horny-handed 'know-nots'".³⁴ In different variants this thesis is reborn in recent contributions, including the relation between "technocracy" and "social movements"³⁵, "Intellektuellen" and "die Anderen"³⁶, "dominating" and "dominated" positions in symbolic fields³⁷, an "intelligentsia" and a non-intellectual proletariat³⁸, the "priests" and the "faithful"³⁹, the "planners" and the "planned"⁴⁰, the "professional expertise" and the "clients"⁴¹, "the leading role of the planning elite" and the "workers" in Eastern European societies as "the dictatorship over needs"⁴². etc.. Probably the most elaborated attempts to formulate a theory of symbolic power is Gouldner's concept of the "culture of critical discourse"⁴³. According to Gouldner, the social hierarchy established under intellectual rule is between "those who speak it /the CCD/, and others about whom they speak", a relationship akin to that "between judges and judged"⁴⁴. Deeply seen, the distinction is between "those who speak and understand truly and those who do not"⁴⁵.

With regard to elite formation in an information society, leading representatives of the information industry have suggested a differentiation of the population between an elite of "wise" and "knowledgeable" and a mass of unknowledgeable busy with information

handling⁴⁶. Likewise Toffler predicts that some will succeed to synthesize their own world picture and life meaning and "develop into continually growing, competent individuals, able to act at a higher level", while others "will break down under the new pressure and withdraw in apathy or anger"⁴⁷.

Against an economistic interpretation of knowledge-information conflict structure

The multitude of denotations of the knowledge-information dimension of society indicate a substantial disagreement among the analysts on this issue. A major problem in reducing the redundancy among these concepts is to keep the analytical distinction between on the one hand knowledge-information conflicts and on the other economic or political conflicts. According to the sui generis assumption stipulated above, all attempts to formulate knowledge- and information conflicts and domination patterns in economic or quasi-economic, (or political) terms are unacceptable. This objection also applies to some of the contributions to a theory of a new post-capitalist class society⁴⁸, which otherwise lends itself to be a possible candidate for a conflict theory of "knowledge society" and "information society". For example, Burnham meant that corporate managers would be the true inheritors of capitalist class power⁴⁹. Geiger, although objecting against Burnham's managerial revolution thesis, nevertheless advocated another "economistic" interpretation of the New Class prophecy, when suggesting that state economic planning expertise was about to usurpate capitalist power⁵⁰. A recent example of an "economistic" interpretation of the New Class thesis is Hodges' theory of organization as a fourth factor of production and his proposal of a new mechanism of bureaucratic expertise exploitation substituting for Marxist surplus value exploitation⁵¹. In their original formulation of the theory of the intellectuals on the road to class-power Konrád and Szelényi derive the social positions of the intelligentsia from their function in the rational economic redistribution⁵². But also other variants of the New Class theory, although emphasizing the peculiarity of symbolic conflicts, are still economic in "the last instance". Gouldner, although focusing on the New Class as a speech community sharing a "culture of critical discourse", nevertheless takes a basically economistic approach when constructing the concept of "cultural capital"⁵³. Even Bourdieu, who has consistently focused on the dynamics of linguistic and symbolic "fields" considers the "sphere of cultural production" to be "relatively autonomous" only from "material production", and hence his use of the concept "symbolic capital" is used metaphorically only⁵⁴. Likewise Latour and Woolgar have advocated an economic analogy in their discussion of the "credit circle" as an explanatory concept for the study of the stratification of laboratory science⁵⁵.

In light of this ambiguity concerning the interrelation between knowledge and ownership monopolies, I believe that the main problem facing the analysis of "the knowledge structure of society"⁵⁶ today, is how to depict symbolic conflict and power relations without falling back into an "economistic" interpretation. Our present level of

analysis of the alleged "knowledge society" and "information society" is, *ceteris paribus*, analogous to the level of analysis of modern societies before Marx: Many, including the utopian socialists, were aware of the existence of new strata of the population, the "new rich" and the "new poor", standing in opposition to each other. Marx' most important contribution to the analysis of industrial capitalism was to suggest a mechanism for its working, i.e., the surplus value relation.

Without advocating a hidden economical analogy to the surplus relation, I believe that the approach to the problem of structural conflicts in a knowledge-information society could be made in an analogous manner. What is needed is to explicate a fundamental mechanism by which a knowledge elite relates to a knowledge non-elite, that is to formulate models of basic type of social bonds involved in the mutual relation between "knows" and "know-nots". To formulate such models is a prerequisite for embarking upon a microtranslation strategy⁵⁷, whereby macrosocietal concepts like "knowledge society", "information society" etc. can be reduced to the microsocial level of inter-individual conversation and behaviour⁵⁸.

In the concluding last sections of the paper some potential knowledge-information conflict interaction models will be discussed. I will provisionally differentiate between two kinds of interaction models, first models restricted to cognitive parameters, and second models involving cognitive and emotional parameters.

The socio-logic of knowledge-information conflicts

The models of knowledge-information conflicts considered first refers to what has otherwise been called socio-logical relations, that is actor-actor relations where the defining trait is the logical relation between cognitive parameters⁵⁹. The point is not only that the relation between cognitive parameters is taken as a model of social action, but that it is impossible to differentiate between the actor-actor relation as a logical relation between cognitive parameters and as a social relation. For example, to state a problem is a combined social and logical operation, "identifying a problematization postulates the existence of an actor"⁶⁰.

A number of existing conceptualizations of logical relations between cognitive parameters might be interpreted as socio-logical relations, and hence serve as structural conflict models of the knowledge-information dimension of society. For example, the distinctions between "scientific knowledge" and "tacit knowledge"⁶¹, "scientific knowledge" and "narrative knowledge"⁶², a "World III" of objective knowledge and a "World II" of personal knowledge⁶³, "Systemwelt" and "Lebenswelt"⁶⁴, etc. all indicate possible models of societal knowledge and information conflict and dominance relations⁶⁵ to be considered further.

In this context two such types of socio-logical relations will be discussed, viz., a cybernetic "power-through-model" theory, and a "power-through-explanation" theory.

A "power-through-model" theory

The first socio-logical relation considered here is the "model-strength"/"model-weakness" relation suggested by Bråten ⁶⁶. Although originally proposed to deal with the problem of participant democracy in corporations, it is nevertheless applicable to the problem raised in this paper. The basic concepts of the power-through-model theory are model-strong and model-weak actors. The model-strength (model-weakness) of an actor refers to its capacity to handle information about its variable environment; hence a model-strong actor is more able to handle a variable environment than a model-weak actor, provided that they share a common environment.

Let a model-strong and a model-weak actor be coupled in an open information exchange system. They will then behave according to the Matthew-effect, that is the model-strong actor will continually increase its strength relative to the model-weak actor. At each point of time data provided by the model-weak actor can be utilized and computed by the model-strong actor, while data provided by the model-strong actor only can be computed and utilized by the model-weak actor according to the degree of development of its model resources. Thus, even though the model-weak actor enhances its capacity for handling information, the two actors will, as long as they are coupled together, still develop an asymmetrical control relation. Ultimately, the model-strong actor will adopt all the information handling models of the model-weak actor, hence eventually being able to control the latter's behaviour completely.

The relevance for the problem of conflict structure of the knowledge-information dimension of society is apparent. The "information society", or "computerized society" provides an environment with largely open and steadily increasing information flows. The "power-through-model" theory implies that people having a higher initial degree of theoretical knowledge will continually increase their control of the behaviour of people having an initially lower degree of theoretical knowledge.

A "power-through-explanation" theory

The other socio-logical relation considered here is a very specific, but crucially important kind of socio-logical translation, namely explanation ⁶⁷. To the traits of explanation discussed by philosophers of science, viz., semantical, syntactical, ontological, epistemological and psychological aspects ⁶⁸, should be added the social, pragmatic trait, that is explanation as a social relation. An explanation, being an answer to a why-question, consists of three elements: 1) a fact to be explained (explanandum), 2) a circumstance, and 3) a generalization (2 and 3 together constituting the explanans). The logical relation between the three elements are:

"given generalization(s) and circumstance(s), therefore the fact to be explained"

Now, let two actors communicate. Both agree upon the social circumstances involved. The one actor expresses a factual event concerning his own life world. The other actor expresses a generalization which serves as an explanation to the expressed fact. Then the hypothetico-deductive sequence established is not only a logical relation between the three logical elements of the explanation, but a social relation between the carriers of the logical expressions as well, that is a socio-logical relation.

Expressed in terms of pragmatics, the explanatory domination relation might also be described as a relation between generalizing speech acts and factual speech-acts⁶⁹. Thus, we may presume the existence of two types of speech-acts involved in the kind of socio-logical domination relation discussed here. One refers to a codified and current theoretical language and to macrosocial phenomena. The other refers to microsocial you-and-I-here-and-now situations. The logical aspect of the relation between these two speech acts is that the first one "explains" or "entails" the other as a singular event, having logical interpretative priority of the other. The social aspect is, of course, that those uttering the first kind of speech acts define the space of possibly conceived action for the others. This amounts to the notion of "the privilege of formulating the problem", as the Swedish author Lars Gustafsson puts it⁷⁰.

Socio-emotional relations

Socio-logical domination relations like those discussed here fulfil one specific feature of a universal theory of social closure⁷¹, viz., a criterion for distinguishing "insiders" from "outsiders"⁷². By the explanatory relation, characterized by social interaction between generalizing speech-acts and factual speech-acts, "insiders" are demarcated from "outsiders" by the epistemological criterion for allowing certain factual speech-acts to be deduced from generalizing speech-acts⁷³. Likewise, the specific criteria for including data provided by a model-weak actor into the model of the model-strong actor, demarcate "insiders" from "outsiders".

By also invoking socio-emotional parameters we might be able to account for another crucial trait of social closure, i.e., the nature of privileges, or resources enclosed. The existence of emotions as a constituent element in social relations, including symbolic communication, is usually noted in everyday speech. We "trust" a proposition, we consider a theory to be "dull", or we get "excited" by a piece of information. Emotions have not attracted much attention by students of "knowledge society" or "information society", except for bold but unprecise references, e.g., Foucault's discussion on "the regime of power-knowledge-pleasure"⁷⁴. Gouldner addressed the emotional dimension in passing when suggesting that the culture of cultural discourse "is productive of intellectual reflexivity and the loss of warmth and spontaneity", depicting it as "a lumbering machinery of argumentation that can wither imagination, discourage play, and curb expressivity"⁷⁵.

A possible fruitful approach may be Collins' distinction between cultural resources and emotional energies ⁷⁶, as the two ingredients in conversation rituals to determine the social bonds of temporary or permanent social domination-subordination structures. The implication of Collins' argument in this context is, that the micro-social relation between actors result in domination-subordination patterns if, and only if, it reinforces invested emotional energies. Otherwise, the rich rhetorical tradition dealing with cognitivo-emotional relations ⁷⁷, has only implicitly touched the aspect of social domination.

The actor network theory, in fact originally formulated by Callon to cope with the problem of scientification, can be seen as a more elaborated social closure theory, invoking both cognitive and emotional parameters ⁷⁸. Actor network theory addresses the problem what is involved when an author "catches" his readers, when a speaker "wins" his audience or when an expert "persuade" his clients. According to actor network theory, actors grow by means of enrolment processes. A growing actor identifies other actors and orders them in relation to each other, i.e., the growing actor enrolls other actors. Enrolment is a specific socio-logical relation, in which the identification and ordering of actors can be described as interest translation. Interest translation stands for the mechanisms and strategies through which an actor identifies other actors, imputes interests, and places the actors in relation to one another. Such mechanisms and strategies include manipulation of needs, wishes, dreams, desires etc., that is, the emotional components of interests.

Concluding remarks

The argument presented above point to the need of understanding the macrosocial conflicts of the alleged "knowledge society", "information society" or "computerized society" both in terms of basic socio-logical and socio-emotional mechanisms, involving both cognitive and emotional parameters. Although the aim of this paper has been to review some possible candidates for models of such mechanisms, it must nevertheless be emphasized that the ongoing discussion of the macrosocial structure of the computerized society calls for detailed, microsociological empirical studies of the domination relations involved in computerized information handling. Such studies are still badly wanting.

NOTES AND REFERENCES (fotnotsnumren passar inte exakt med numren i texten)

1. This paper was originally presented to the conference "Communication and contacts between people in the computerized society", Gothenburg, Dec. 6th-7th 1984. I am grateful to Ron Eyerman, University of Lund, Adam Westoby, Open

University, Peer Hull Kristensen, Roskilde University, and Jesper Hermann, University of Copenhagen for constructive criticisms of a earlier versions of this paper.

2. R.E.Lane, "The decline of politics and ideology in a knowledgeable society", *Amer.Sociol.Rev.* 31,649-62 (1966)
3. Z.Brzezinski, "America in the technotronic age; new questions of our time", *Encounter*, vol2 (January),16-23 (1968).
4. A.Touraine, *La Société post-industrielle*, Paris: Denoël 1969.
5. D.Bell, *The Coming of Post-industrial Society*, N.Y.: Basic Books 1976; Touraine 1969 op.cit.
6. M.Köhler, "Postmodernismus; ein begriffsgeschichtlicher Überblick", *Amerikastudien* 22, -, 1977; B.Holzner and J.H.Marx, *Knowledge Application; the Knowledge System in Society*, Boston: Allyn and Bacon 1979, Part I; J-F.Lyotard, *La Condition postmoderne; Rapport sur le Savoir*, Paris: Minuit 1979 (engl. transl. *The Postmodern Condition; a Report on Knowledge*, Manchester: Manchester Univ.Press 1984).
7. Bell 1976 op.cit., p. 20.
8. The classical formulation of the rationalization problem is, of course, Weber (see e.g., M.Weber, *Economy and Society* **); in Parsons functionalist version rationalization is an inherent feature of societies' adaptive capacities during progressive cultural evolutionary change (see e.g. T.Parsons, *Societies; Evolutionary and Comparative Perspectives*, Englewood Cliffs: Prentice-Hall 1966); finally Habermas has reformulated the classical alienation theory by means of reference to the process of system rationalization and life world rationalization (see J.Habermas, *Theorie des kommunikativen Handelns*, vol 1-2, Frankfurt a.M.: Suhrkamp 1981).
9. R.Collins, *Credential Society; an Historical Sociology of Education and Stratification*, N.Y.:Academic Press 1979
10. See e.g., B.Bledstein, *The Culture of Professionalism*, N.Y.:Norton 1976; R.Dingwall and P.Lewis (eds), *The Sociology of the Professions*, London:Macmillan 1983.
11. See J.Burnham, *The Managerial Revolution*, N.Y.:John Day; and the discussion following it.
12. J.Friedmann and B.Hudson, "Knowledge and action; a guide to planning theory", *J.Amer.Inst.Planning* 40(1),2-16, 1974.

13. A significant volume is I.Speigel-Rösing and D.de Solla Price (eds), *Science, Technology and Society; a Cross-Disciplinary Perspective* 1977; the scholarly and governmental attention to scientification cooperate in a growing concern from the side of governmental agencies to support science studies programmes as a tool for coming to grip with scientific and technological development.
14. See R.Richta et.al. *Civilisation at the Crossroad*, Prague: * 1967; Autorenkollektiv, *Die gegenwärtige wissenschaftlich-technische Revolution; eine historische Untersuchung*, Berlin: Akademie 1972.
15. To quote Westfall: "In my vision of modern history, the growth of science plays the central role. It began by transforming the intellectual structure of the Western world. It proceeded to transform the economic system. It is now transforming life itself on the entire globe, not to mention threatening it as well. I find no way to reduce the fundamental reality of the modern world to the status of an epiphenomenon. Quite the contrary, much of the modern world appears to me as so many epiphenomena to the growth of science". (R.S.Westfall, "Reflections on Ravetz's essay", *Isis* 72,402-05, 1981). Note that this view of the "knowledge society" puts the traditional problem of sociology of knowledge upside down.
16. M.U.Porat, *The Information Economy; Definition and Measurement* (9 vol.), Washington D.C.: U.S. Government Printing Office, 1977; M.U.Porat, "Global implications of the information society", *J.Communication* 28(1),70-80 1978.
17. S.Nora and A.Minc, *L'Informatisation de la Société*, Paris: La Documentation française 1978 (Engl.transl. *The Computerization of Society*, Cambridge,Mass.: MIT Press 1980).
18. See e.g., Y. Masuda *** 1980; G.L.Simons, *Towards fifth-generation computers*, Manchester:NCC publications 1983; E.A.Feigenbaum and P.McCorduck, *The Fifth Generation Artificial Intelligence and Japan's Computer Challenge to the World*, Reading, Mass.: Addison-Wesley 1983.
19. F.Hayes-Roth, D.A.Waterman and D.B.Lenat (eds), *Building Expert Systems*, London: Addison-Wesley 1983.
20. A forceful argument for this, employing the metaphore of a "third wave" of cultural evolution is found in A.Toffler, *The Third Wave*, * 1980; A.Toffler, *Previews and Premises*; an Interview, London: Pan 1984.
21. Cf. the changing focus in sociology during the 1970's sometimes designated the "cognitive turn" in sociology: "the problem of social order has... turned into a problem of cognitive order"(K.Knorr-Cetina, "The microsociological challenge of macro-sociology: towards a reconstruction of social theory and methodology", in

K.Knorr-Cetina and A.V.Cicourel (eds), *Advances in Social Theory and Methodology; Toward an Integration of Micro- and Macro-Sociologies*, Boston: Routledge & Kegan Paul 1981, pp.1-47 (p.7); See also G.Böhme, "The knowledge-structure of society", in G.Bergendal (ed), *Knowledge policies and the traditions of higher education*, Stockholm: Almqvist & Wicksell, 1984, pp. 5-17, for a preliminary, but consistent, cognitive approach to the problem of societal structure.

22. Although the discourses on "knowledge society" and "information society" rarely have overlapped in the literature, it is assumed here that they presuppose each other. The expansion of information processing technology has been of fundamental importance for the development of theoretical knowledge and vice versa.

23. see note 30 below.

24. H.D.Duncan 1968, *Symbols in Society*, N.Y.: Oxford Univ.Press 1968 and *Communication and Social Order*, N.Y.: * 1962.

25. H.D.Duncan, 1968 op.cit., Ch. 1.

26. "It cannot be taken for granted that human societies are structured by the subject-object relation of labor, nor that change in society can best be understood by referring back to a subject who makes something, in this case a social change" (M.Poster, "Mode of production, mode of information; toward a critique of political economy", unpublished manuscript, Dept of History, University of California, Irvine n.y.,p.9.

27. Cf. M.Foucault, *The Birth of the Clinic; An Archeology of Medical Perception*, London 1973 and *Discipline and Punish; Birth of the Prison*, London 1977.

28. L.Nowak, *Property and Power; Towards a Non-Marxian Historical Materialism*, Dordrecht: Reidel 1983.

29. Nowak 1983, op.cit. pp. 169ff. Nowak uses the term "momentum of the production of consciousness", but the term "spiritual momentum" is more in accordance with his own discussion on pp. 174-77.

30. The spiritual momentum is not to be mixed up with a normative structure, and hence not with the "cultural system" or "symbolic system" in Parsons's sense either. The "symbolic system" is a system of shared values, while the "spiritual momentum" includes both the "software" and the "hardware" of societal symbolic interaction. I.e., the exclusive ability to set the means of orientation for society's members (cf. N.Elias, "Scientific establishments", in N.Elias, H.Martins and R.Whitley (eds), *Scientific Establishments and Hierarchies*, Dordrecht: Reidel 1982 (*Sociol.Sci.Yearbook* vol 6), pp. 3-69.

31. There are, of course, many counter-arguments to this proposal. E.g. Weingart ("The scientific power elite - a Chimera; the de-institutionalization and politicization of science", in N.Elias, H.Martins and R.Whitley (eds), *Scientific Establishments and Hierarchies*, Dordrecht: Reidel 1982, pp. 71-87, 1982) drawing on his empirical studies of so called "hybrid communities" argues against the thesis of "scientification" of politics. The diversification of the institutional locus of production of theoretical knowledge makes the notion of a "scientific establishment" misleading, he maintains. Instead it is rather a question of a "politicization" of science. (Weingart 1982, p.73). Weingart misses the point, however. What is crucial is not a "scientific power elite" qua scientific community, but the growing power chances of those possessing the means of orientations formulated in terms of theoretical knowledge, whether they are located in scientific institutions or elsewhere. Weingart himself has demonstrated how the "hybrid communities" in the intersection of the "scientific system" and the "political system" occupy key positions.
32. Quoted from S.Dolgoft (ed.) *Bakunin on Anarchy*, N.Y. 1972, pp.332-33).
33. M.Nomad, *Apostles of Revolution*, N.Y.:Collier Books, p.10.
34. A.Touraine, *La Voix et le Regard*, Paris: Seuil 1978; eng.transl. *The Voice and the Eye; An Analysis of Social Movements*, Cambridge: Cambridge Univ.Press 1981.
35. H.Schelsky, *Die Arbeit tun die Anderen; Klassenkampf und Priesterherrschaft der Intellektuellen*, Opladen: Westdeutscher 1975.
36. See P.Bourdieu, "The specificity of the scientific field and the social conditions of the progress of reason", *Social Science Information* 14,19-47 (1975).
37. G.Konrád and I.Szelényi, *Die Intelligenz auf dem Weg zur Klassenmacht*, Frankfurt a.M.: Suhrkamp 1978.
38. According to Nowak, the disposal over "the spiritual forces" of society divides its members into two main categories, the "priests" and the "faithful", where the former have recourse to "the spiritual forces" and make decisions of the goals of society and the ways to reach these goals. The control exercised by a priest means subordinating ideas which are spontaneously accepted by people in their everyday life to a unifying doctrine.
39. Th.Söderqvist, "Kunskap är makt; intelligentsian och statskulturen", *Fenix* (Stockholm) 1(3/4),9-31 (1983).
40. Social critics like Lasch and Illich describe ordinary people as besided by the caring expertice. For a discussion on the power of professional expertice in relation to Gouldner's concept of "culture of critical discourse", see U.Hannerz, "The power of expertice; notes on the division of knowledge in contemporary

societies", paper presented at the HSFR-seminar on "Dominance and culture", Södergarn, Sweden, Oct. 17-19 1983.

41. F.Feher, "The dictatorship over needs", Telos nr 35 (spring) 1978, p.35.
42. A.Gouldner, The Future of Intellectuals and the Rise of the New Class, London: Macmillan 1979.
43. Gouldner, op.cit., p.59.
44. loc.cit.
45. In his speech to the international software congress in Copenhagen 1982 Walter F.Bauer at ** envisaged a growing differentiation between a new global knowledge elite being able to continuously to restructure its knowledge apparatus on the basis of information flows, and others only being able to handle information within existing models (source*)
46. A.Toffler 1980, p. *.
47. For a general overview of the New Class literature, see e.g. A. Westoby, "Review article: the 'new class'", Higher Education 10,363-68 (1981) and A.Westoby, "One class, many theories? Political, social and historical accounts of the 'new class' and socialism", unpublished paper presented at the European Consortium for Political Research workshop on 'The politics of intellectuals' in Freiburg, March 1983 (to be published).
48. J.Burnham, The Managerial Revolution, N.Y.: John Day 1941.
49. T.Geiger, Die Klassengesellschaft im Schmelztiegel, Köln: Kiepenheuer & Witsch 1949, ch. 9:5.
50. "the mechanism of bureaucratic exploitation is a function of the average paycheck /.../ by which surplus labor is pumped out of the direct producers" (D.C. Hodges, The Bureaucratization of Socialism, Amherst, Mass.: Univ.Mass.Press 1981, p. 74.).
51. Konrád and Szelényi, op.cit (note 38).
52. A.Gouldner, op.cit. (note 43); for a critique of Gouldner's economism, see C.Disco, "Intellectuals in advanced capitalism; capital closure and the 'new class' thesis", in, R.Eyerman, L.Svensson and T.Söderqvist (eds), Intellectuals, Universities and the State in Contemporary Western Societies (forthcoming).
53. "The linguistic exchange is not only a communicative relation between sender and reciever... but also an economic exchange which... can deliver a certain material or symbolic profit" (quoted from a Swedish translation of the introduction to P. Bourdieu, Ce Que Parler Veut Dire, Paris: * 1982. This

standpoint is probably a consequence of Bourdieu's view of economy, i.e., "to extend economic calculation to all goods, material and symbolic, without distinction" (P.Bourdieu, *Outline of a Theory of Practice*, Cambridge: Cambridge Univ.Press 1977; p.177-78).

54. B.Latour and S.Woolgar, *Laboratory Life; the Social Construction of Scientific Facts*.
55. Cf. G.Böhme, *op.cit.* (note 21).
56. R.Collins, "Microtranslation as a theory-building strategy", in Knorr-Cetina and Cicourel *op.cit.* (note 21), 81-108.
57. For a general discussion of the relation between macrosocietal and microsocial analysis, see Knorr-Cetina and Cicourel *op.cit.* (note 21).
58. M.Callon, "Struggles and negotiations to define what is problematic and what is not; the sociologic of translation", in K.Knorr, R.Krohn and R.Whitley (eds), *The Social Process of*
59. Callon, *op.cit.* (note 59), p. 207.
60. See e.g. M.Polanyi, "Tacit knowing; its bearing on some problems of philosophy", *Rev. Modern Physics* 34, 601-16, 1962).
61. J-F.Lyotard, *op.cit.* (note 6).
62. K.Popper, *Objective Knowledge; an Evolutionary Approach*, Oxford: Oxford University Press, 1972; see also Söderqvist, *op.cit.* (note 40).
63. J.Habermas, *Theorie des kommunikativen Handelns*, Frankfurt a.M.: Suhrkamp, 1981, esp. Ch 6.
64. Most discussions on this issue take a dichotomous (class or quasi-class) conflict model as their point of departure. It should be noticed, however, that there are no a priori reasons for assuming a dichotomous conflict model. There are in principle many possible structural conflict topologies. For example, Bahro has suggested a hierarchical five stage stratification conflict model, stretching from "analysis and synthesis of the natural and societal wholeness" to "simple schematic part- and service work" (R.Bahro, *Die Alternative; zur Kritik des real existierenden Sozialismus*, Köln: Europäische 1977; p. 193.
65. S.Bråten, "Model monopoly and communication; systems theoretical notes on democratization", *Acta Sociologica* 16,98-107 (1973); a similar model for how the already information rich may become even more information rich is presented in N.Katzman, "The impact of communication technology; promises and prospects", *J.Comm.* 24,47-58 (1974).

66. Th.Söderqvist, *op.cit.* (note 40).
67. Cf. M.Bunge, *Scientific Research*, vol 2 (The Search for Truth), Berlin: Springer-Verlag 1967, p.6-7.
68. For a general review of the recent status of speech-act theory, see the special issue of *Journal of Pragmatics* 8 (1) 1984.
69. L.Gustafsson, *För liberalismen*, Stockholm: Norstedts, 1981, p. 59.
70. The concept of social closure problematic, building on different works by Weber, has recently been reviewed by Murphy ("The struggle for scholarly recognition; the development of the closure problematic in sociology", *Theory and Society* 12,631-58 (1983).
71. Cf. Disco, *op.cit.* (note 53).
72. There is a striking similarity between this explanation model of sociocognitive domination and the linguistic domination pattern revealed by certain family therapists. E.g. Kempler, in his gestalt-oriented family therapy, distinguishes between two kinds of discourses, merchant talk and personal talk (W.Kempler, *Principles of Gestalt Family Therapy*, : 1974). Speaking in contingent, local and the first person terms, e.g., "I want...", "I prefer...", "I wish..." are fundamental elements of "personal talk". Speaking in terms of "it is...", "As we all know...", "According to the latest reports..." are fundamental elements of "merchant talk". Introducing merchant talk in the family leads to different situations of interpersonal control. The goal of the therapy is to learn to express personal needs in terms of "personal talk", and hence to break the domination pattern. Like other similar situations (sermons, lectures, psychoanalytical sessions etc.) family therapy sessions are probably useful test-bed situations for exploring the symbolic interaction at the interpersonal level.
74. M.Foucault, *The History of Sexuality*, vol.I, *An Introduction*, Harmondsworth: Penguin 1981, p.11.
75. Gouldner *op.cit.* (note 43), pp. 84-5.
76. R.Collins "On the microfoundations of macrosociology", *Am. J. Sociol.* 86,984-1014, 1981.
77. See e.g., R.Edmondson, *Rhetoric in Sociology*, London: Macmillan 1984.
78. See e.g., Callon, *op.cit.* (not 59) and M.Callon and B.Latour, "Unscrewing the Big Leviathan: how actors macrostructure reality and how sociologists help them to do so", in K.Knorr-Cetina and A.Cicourel (eds), *op.cit.* (note 21), pp. 277-303.