

Identity as a Cybernetic Process, Construct and Project

A Paper presented to “Governance & Public Administration”
A Conference by the Cybernetics Society and Metaphorum
London School of Economics, 3rd–4th Sept 2004

©Paul A. STOKES
Department of Sociology
National University of Ireland, Dublin

Email: paul.stokes@ucd.ie

Note:

This work is a draft and may not be quoted in publication without the author’s permission.

1 Introduction *

It is fair to say that the social sciences have been infatuated with the notion of identity in recent years. There are signs however that the infatuation is about to end (Brubaker and Cooper 2000). Before we throw the baby out with the bathwater we might usefully ask why the potential of this concept has not been fully explored.

I think the potential and future of the concept of identity lies with cybernetics.

Cybernetics also needs the concept of identity. In fact, I wish to argue that identity provides the point of articulation for cybernetics and the social sciences. This will be theme of my paper.

As a sociologist interested in cybernetics it is remarkable to note just how little impact cybernetics has had on the social sciences, sociology in particular. Indeed if anything there is a stance of skepticism if not downright hostility towards cybernetics and systems thinking in my discipline.

There were two problems applying cybernetics to the social realm. One was a conceptual problem – how exactly do you apply the insights and ideas of cybernetics to social science? Efforts to date must be judged to have failed, including sociocybernetics (Geyer and van der Zouwen 1996). The other was a matter of the ‘structural coupling’ of a cybernetic sociology to the historical conditions of society. I want to propose that both problems have now been overcome, and that the concept of identity holds the key to both. In relation to the first I want to suggest that Stafford Beer’s work gives us the conceptual infrastructure necessary to unpack the potential of the concept of identity as a foundational concept of social science. In this sense, the concept of identity is intrinsically a cybernetic one, which describes both a process and a structure. Secondly, it has now become possible to apply these insights and ideas because society has become what I call an ‘identity’ society. In order to provide a context for the later discussion I will deal with this latter phenomenon to start with.

2 The Coming of the Identity Society

Three interrelated trends have emerged in recent western history whose convergence have resulted in the identity society and have produced the conditions for a new approach to governance that addresses the problem of complexity:

1.1 Survival Units

Historically, the survival imperative was based on power conflict and politics. Now it is down to the management of complexity. Structures that were appropriate in the previous era are being left behind in the contemporary era. This phenomenon has been referred to as the ‘hollowing out of the state’ (Rhodes 1997).

2.1.1 The Fate of Survival Units in Human History

Survival is an empirical matter; for human beings viability has been a project of human groups since the beginnings of civilization. With human beings group life has always been primary – group life represents our species being (Dalal 1998). As an imperative, viability emerges from the power struggle between competitively organized contiguous social groups.

Human beings have always lived within the supportive framework of what Norbert Elias calls a survival unit. Schmookler and Elias on how the competitive struggle between survival units and the increasing integration of smaller units into units of greater size and complexity has been the engine of history.¹

Corning tells us that the term collective survival enterprise is meant to denote the fact that survival is the basic vocation of organised societies and that many (but not all) aspects of the survival problem are pursued through organised, interdependent social systems.

The most important unit of adaptation in human beings must often be defined in relation to units of cybernetic (political) control and to units of functional (broadly economic) interdependency that go beyond anything in the rest of nature. (Corning 1983: 163)

The political dimension or level of cultural evolution human beings is of overriding importance. Our ability to coordinate behaviour and to act as a group has played a decisive part in human evolution. Shaped by power, civilised societies have grown ever *larger*, ever *more complex*, and ever *more effectively controlled by a central ruling part*.

However, in the last few centuries several tendencies have worked to modify this picture.

¹ In his earlier book *What Is Sociology?*, Elias referred to these groups as ‘attacking-and-defence-units’ (Elias 1978).

2.1.2 Dispersal of Monopoly Power

Since the end of feudalism in Europe there has been a strong centripetal tends towards the escalation in societal size through successive rounds of elimination contests. Those led to the development of highly concentrated structures of power with monopolies of force and taxation being held by very few individuals at the top of the structure. Paradoxically this process arrived at a terminus beyond which it could not go. Due to the increasing complexity of ever-larger polities, monopolist rulers became increasingly dependant on ever-greater numbers of functionaries for the administration of their territories. This was the first step in the transition from private power monopolies to publicly administered monopolies of power in society. Innovation in the technology of production gave greater control and autonomy to producers thus loosening the hold of authoritarian modes of social regulation. This was the beginning of a long-term trend in the valorisation of horizontal relationships over vertical relationships. The long chains of horizontal interdependency that ensued began to ensnarl society in a web-like structure of complexity. This in turn led to the augmentation of the self and the sense of self-identity, relative autonomy and self-regulation. With the rise and widespread use of the technologies of self-reflexivity we are on the verge of a veritable explosion of identities and identity claims. So much so that we may consider that we have entered the phase of identity society.

2.1.3 Lessening of Power differentials between governors and governed and the development of multi-polar power

The sociologist Norbert Elias has characterised the seismic shift in consciousness and action in modern societies are deriving principally from a decisive shift in the balance of power among strata, classes and groups in society (Elias 1978). Thus has shift the balance of dependence among individuals: from top down unilateral control to interdependence.

Elias draws our attention to four aspects of this trend:

1. The reduction of power differentials between governments and governed.
2. The reduction of power differentials between different strata and groups.
3. The transformation of all social relationships in the direction of a greater degree of reciprocal, multi-polar dependence and control.

4. The development of social sciences and social ideals as instruments of orientation when social bonds are relatively opaque and when awareness of their opacity is increasing.

2.1.4 The Diminution of Requisite Hierarchy

According to Aulin, the decisive factor behind these developments, making it possible to relax social hierarchy² is the growth of the regulatory ability and self-regulation of productive forces. He writes:

As long as improvement of the tools of production implies more automation, and a higher level of education means increased productivity, this factor is identical with economic growth.... Should all the economic growth disappear in the world, we would be facing, in view of our cybernetic analysis, the real threat of reverting to the era of totalitarianism as a necessary element of survival of human population. ... Absolute power and strict social hierarchy backed by conditioning of the truth serves the survival of human population only at a low level of development of productive forces. (Aulin 1982: 29)

Western societies have undergone a process whereby crude, disciplinary, top-down controls have given way to more participative, democratic, distributive control in which more and more of society gets to have a say. This decline of strict class-society, Aulin tell us, began in Europe with the collapse of the Roman slave-society. The feudal social order, which after some chaotic centuries began to take shape in West Europe, represented the beginning of a relaxation of social hierarchy. This went hand in hand with a process whereby the enormous unused developmental resources of the lower social classes were gradually released, and began to speed up social progress toward greater self-steering and emancipation (Aulin 1982: 138; 1986). In fact, if anything it was the development and dissemination throughout European and later on American societies of new technologies of control as well as new forms of social organization that permitted self-regulation to take such a strong hold (Beniger 1986; 1990; Whitney-Smith 1991).

The possibilities of self-steering in human society depend largely but not entirely on the level that has been reached in the process of production in that society (Aulin 1986). In this sense, productive forces act as regulators in human society (Sen 1999).

² By hierarchy is meant here 'heteronomous directedness' or 'direction by others' in contrast to autonomy.

However, self-steering is not only a matter of directly productive activity but also depends decisively on the level of development of political, administrative and creative activities as well. In fact the degree to which the possibilities of self-steering created by productive activity are realised or not depends crucially on the deliberate political, administrative and creative acts of the members of the society (Aulin 1982: 135; Corning 1971; 1983; 1996).

In the history of human civilizations, initially, it is the aristocratic elites who define their own importance and for whose sake the survival unit exists. Gradually and by virtue of the growing dependence of elite groups upon them, members of the lower orders are co-opted in alliances against other elite groups (Elias 2000). Such a process, the formation of vertical alliances (Powelson 1994) extends the range of numbers of people who identify with the survival unit of the state and who feel as though they have a stake in it. All the time, power ratios between the top layers and intermediate to lower layers are being attenuated in a process that Elias calls 'functional democratisation' (Elias 2000).

Aulin suggests that with increasing self-steering and increasing variability of social structures endogenous causality will grow in significance. He writes that

The march of events in a human society will be ever more based on the deliberate decisions of its members. Counter to the expectations of most futurologists, increasing progress thus means decreasing predictability. With advancing self-steering in society the future can be less and less foretold by the past. Life becomes ever more like an intellectual adventure and ever less like a military or an economic one. (Aulin 1982: 144)³

Or in Dennis Gabor's words, the challenge may well be to invent the future (Gabor 1964). Beer and others (Beer 1979; Espejo and Harnden 1989) have well made the point that institutions are currently lacking that specifically embed the future into the present in such a way that a proactive stance towards bringing out future states of the societal system becomes possible.⁴ The possibility of such institutions is intrinsically caught up with the possibility of a social science (Elias 1978; Etzioni 1976).

³ See also Bennis and Slater (1964).

⁴ System Four of Beer's Viable System Model [VSM].

2.1.5 Historical Increase in Societal Complexity

According to Stafford Beer the shift from the vertical to the horizontal in relationships is responsible for the enormous increase in social complexity that characterises our era (La Porte 1975; Luhmann 1985).⁵

He maintains that for many centuries, horizontal linkages were not very important for the vast preponderance of human beings, except of course for the aristocracy for whom the ability to form coalitions and cement alliances was crucial for survival.

‘The organizational quantum, a village in a feudal society, the subsidiary of a firm, a the ward of a city, and so on, obeyed the law upwards and administered the law downwards. What the cousins were doing, which is to say organizational quanta at the same hierarchic level, was really of no concern’ (Beer 1975: 30).

A feudal Lord [one man] exerted total control over his serfs—simply because they could not in practice match his variety between them. That is because the variety available to them in principle was never allowed to proliferate. On men digging the soil from long to dusk, and then collapsing into bed, offered no more variety to the boss than one such man—because they were replicas, one of another. They presented a low variety situation easily contained by master having unquestionable authority and plenty of time. [op.cit.: 34]

He claims that ‘perhaps the major organizational issue today could be called horizontal relevance.’

Society has undergone an expansion which has caused the quanta carefully separated by the stereotype to collide in almost every dimension we can nominate. Social units are no longer separate: they share common boundaries, which the inhabitants freely cross. Divisions by profession, trade or skill, have come to overlap because of changes in our conception of the best way to do things. Knowledge itself has been reorganized, because of changes in our understanding of the universe, with the result that interdisciplinary studies taken as a whole are now far more important to society than studies made within the classical disciplines. Above all, technological change—in communication, computation, the ability to travel—has affected the family tree stereotype of organization to the point where the boundaries it seeks to maintain can be maintained no longer. [loc.cit.]

⁵ Livingston defines complexity as follows: ‘A thing is complex when it exceeds the capacity of a single individual to understand it sufficiently to exercise effective control – regardless of the resources placed at his disposal’ (Livingston 1985: 11).

This has come about through the interaction of a number of factors. Technology has facilitated the proliferation of individual variety and hence the complexity of society. Communication technology in particular [from reading and writing to train travel and beyond] has facilitated the spread of horizontal networks, as a result of which, society has ‘fairly suddenly become massively interactive.’ This has altered the variety balance of traditional forms of domination and control.

There has also been a substantial diminution in the degree of what Douglas calls ‘grid’ (Douglas 1978; 1982). Beer describes the situation of one of loss of authority and hence simplicity of control.

Just at the moment when technology has unleashed such potent mathematical forces of interaction in the human society, society has for other reasons abandoned most of the restraints on variety it already had. Leaving aside the relatively small numbers of ways of behaving better cut out as actually illegal, there used to be a great many variety-inhibiting social taboos. There were social disciplines too—administered by squires, priests, schoolmasters and even fathers; and there was in the individual himself and acceptance of what used to be called ‘his station in life’. [op.cit.: 33]

The regulatory process has been threatened in the process forcing it to increase its own complexity and variety relative to that of the environment. Beer cites the example the growth in complexity of the tax code.

The general levy is a low variety tax, and therefore easy to administer. Once we take account of individual circumstances, the variety goes up. Trying to match this variety, more and more regulations are introduced—until it is doubtful whether anyone can work out what is happening. A similar situation exists for the police, and even for less obvious social regulators existing within education, health and social welfare. [op.cit.: 34]

These developments are due to the overwhelming tide of complexity of the modern world.

Complexification of society not merely due to an objective process of the interaction of variables but due to the expansion of noetic element due to the interrelatedness of increasing intersubjective spirals of recognition of the internal ramifications of the interactions and internetworking of identities at all three and between the three levels of recursion.

These developments give us the phenomenon of the identity society.

2.1.6 Complexification and entropification

As societies become more complex they become subject to entropification—either the number of barriers to action multiply or the ramifications of actions explode. This is exemplified in diminishing returns to scale that kick in after a certain threshold of complexity has been crossed (Tainter 1988; 1995).

The more complex a system becomes it approaches the limits of its existing control architecture and a period of crisis of governance ensues (Beniger 1986). Risk is an endemic outcome of this process (see Beck 1992).

Such a ‘control crisis’ is resolved by the dissemination of new control technologies and the unfolding of new modes of organization are deployed in ways that augment the control variety that is available (Zuboff 1988).

2.1.7 Historical Distortions of the Viability Model

Looked at from a selectionist perspective it can be said that human social groupings have sought viability for their societies but in the context of a competitive struggle against other social groupings. Selection is the means whereby the cybernetic function is carried out in human societies.

Throughout history to date the power imperative (Elias 2000; Schmookler 1995) has imposed conditions of systematically distorted communication (Habermas 1970) on all relationships in human societies.

The criterion of viability has changed since then. Formerly it was a matter of power, strategy and military strength. Then, during the phase of mass society and managerialist production capitalism it was GNP. Now it is becoming different: the capability of managing complexity.

Political scientists have now recognized that previous and existing models of government no longer adequately account for the contemporary situation.⁶ They are looking for a new theory to take account of the phenomenon of governance which

⁶ Here is a fraction of titles published by political scientists on the topic of governance since 2000: (Aglietta 2000; Armstrong 2001; California. Commission on Local Governance for the 21st Century et al. 2000; Coghill 2002; Curtin 2002; Della Salla 2001; H eritier 2001; Huber and Stephens 2000; Jessop 2001; Kooiman 2000; 2001; Marsden 2000; Paquet 2002; Peters and Pierre 2001; 2002; Sassen 2000; Warleigh 2000)

they see as more nearly describing the current situation (Peters 1998; Peters and Pierre 2001; 2002). Can cybernetics supply the answer?

1.2 Organizations and their interrelations as the 'stuff' of society

The rise of a support infrastructure in the form of the matrix of social organisations. The rise of organizations is the major but neglected phenomenon of our time. So argue Peter Drucker (1993; 1996) and sociologists Charles Perrow (1979; Perrow 1991), Randall Collins (1975) and James Coleman (1991).

As James and March have put it:

. . . the high specificity of structure and coordination within organizations - as contrasted with the diffuse and variable relations among organizations and among unorganized individuals - marks of the individual organization as a sociological unit. (Quoted in Ahrne 1990: 36)

In contrasting the durability and specificity of organizations with the diffuse and variable relations between organizations and between people, these authors are also drawing our attention to an important feature of organized social life: the fact that it is embedded in a the web or network of connected humanity, what I refer to as the sociomatrix. More on this anon.

The fundamental units of society are organizations and not individual people. This has been recognised only recently and is far from being universally accepted. Still when we look at society in this way it explains a lot about current societal developments. According to Göran Ahrne, 'One cannot understand human action without relating it to an organizational context' (Ahrne 1994: 87). And, 'People encounter society through their organizational affiliations, and the positions they have in organizations' (Ahrne 1994: 114).

Social organizations are the site and context within which most of the processes addressed by sociological theories take place. As such organization shapes and gives particular meaning to the activities that occur within it. For too long social theory has been worked in a context devoid of empirical referents. Of course, the question is: what empirical referents are the most appropriate? Ahrne proposes that social organizations are the most appropriate forms of empirical referent for the development of sociological theory.

Ahrne's basic idea is that organizations are central to social analysis. According to Ahrne, 'organizations are the most obvious components of society' (Ahrne 1994: vii).

Organizations are the locus of connections between individuals, and through them human actions are transformed into social processes. The debate on the so-called structuring of interaction [see Turner (1988: 150) and Giddens (1984)] has taken place in a very abstract way as though the process had no location and concrete specificity. This above all happens in the context of social organization and because of its means and mechanisms.

It was Chester Barnard, not a sociologist, who proposed the key sociological insight that 'formal organization is the concrete social process by which social action is largely accomplished' (Barnard 1938: 3). The routinization of the practical consciousness of actors (Giddens) should be understood from the perspective that most routines are formalized into organizational arrangements. If all social interaction takes place in the context of social organizations or their semi-organized fields, it follows that a closer study of the mechanisms of social organizations should generate many insights into the formative processes of social life.

Of crucial significance is that fact that organizational affiliation confers identity. Social individuality or identity is chiefly a combination and construction of previous and present organizational affiliations: family background, citizenship, grades from school, previous and present employments, marital status (see Meyer, Scott and Strang 1987). Belonging and affiliation are prerequisites for individuality. To be an individual it is necessary to be recognized. For example, when a person loses their job or when they divorce they lose part of their identity.

In an organizational society interests and opinions have to be socially organised in order to be articulated, expressed and communicated to the society. It is from this that NGOs get their salience for contemporary social developments. For historical reasons direct consumer representation tends to be rather weak and underdeveloped as in the various national consumer organizations that exist. This is a role that NGOs and new social movements have taken up, because they are differentiated. They have become the icon of new consumer awareness and concern. They demonstrate flexibility in addressing issues of concern that traditional vehicles of governance are proving too slow and unwieldy to deal with. The crisis of governance in modern societies has also left a vacuum that NGOs have rushed to fill and they have been welcomed with open arms by many existing agencies of government (Curtin 1997; 2002).

There is a growing ability and sophistication of activist groups to target corporations they perceive as not being socially responsible, through actions such as public

demonstrations, public exposes, boycotts, shareholder resolutions, and even “denial of service” attacks on company websites.

1.3 *The Cutting Edge: Individualization*

This trend is associated most strongly with the ethic and ideology of individualism that has arisen within western societies, certainly since the French and American revolutions. To regard it, as a right wing phenomenon however would be to seriously misrepresent the sociological process of differentiation and individuation that has been going on (Franck Thomas 1999). Only complex societies with high levels of coordination and control are capable of supporting a culture that valorizes the individual. The rise to power of the organized individual completes the picture. This brings to an end the mass society of Fordist-based managerial capitalism and inaugurates the identity society (Glasser 1976; Mitchell 2002; Zuboff and Maxmin 2003).

These three phenomena are related to each other in a dependent hierarchy as depicted in Figure 1.

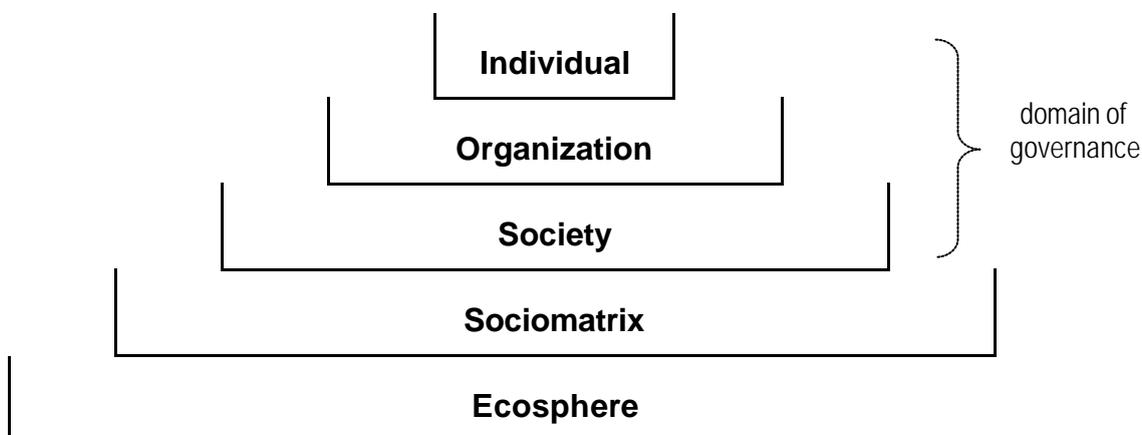


Figure 1: The Dependent Hierarchy of Society

1.4 *The Identity Society*

In terms of a theory of action, all of these changes manifest themselves as different facets of a single societal phenomenon: identity and identification.

The self-effacement of the masses came to an end, paradoxically, with the mass political movements of the late 19th and early 20th centuries: the democratic movement, nationalism and anti-imperialism, the suffragettes, and so forth. These were movements of mass society and of mass democracy (Ortega y Gasset 1932). The

identity society has now replaced the society of the masses, although many do not yet realise it (Glasser 1976). Identity has become so central to the experience of our societies that it has become an indispensable explanatory concept of social action and social forms in these societies.

So-called hyper self-reflexivity is no more than the identity phase of the self-recognition of the self (Beck, Giddens and Lash 1994). This is the state of society characterised by post-modernism.

In an identity society, identity and complexity emerge as dancing partners. This is the root of the experience of post-modernism, the sense of ennui, of 'nothing happens'. As the possibilities for getting action become stymied under existing arrangements, action gets backed up down the side-alleys and side-shows of identity.

The developments of the last century have to be seen in the context of the human history that preceded them. In a real sense the last century saw for the first time since the rise of the 'common person' (Robertson and Holzner 1980). For almost all of human history till then the common person was a nobody, a zero, a nothing. History was about and for the aristocrats and nobles. The peasantry was largely invisible, except when they occasionally revolted. The rise of the cities began to change all that. When craftsmen formed guilds in the medieval cities they began to take on, assert and defend completely new forms of identity that demanded recognition and respect from others. The rise of the bourgeois class and their forms of association similarly brought forth new forms of identity and recognition. The growth in the numbers of types of identities has led to a great complexification of society. Although correlated with the growth of the division of labour this process—the multiplication of identities—is not one and the same. Marx's distinction between a class in itself [*klasse an sich*] and a class for itself [*klasse für sich*] is apposite. Whereas identities can be wholly attributed [e.g. 'nigger', 'Mick'] normally the demand for recognition comes from identities that are self-consciously chosen, affirmed and validated.⁷

Even though undergoing tremendous functional differentiation the industrial working class was nonetheless highly under-differentiated in terms of identity claims for the early period of industrial revolution. Like the peasantry before them, they were

⁷ Some groups 'turn around' attributed identity in an ironic reversal by embracing and espousing the values associated with those negative identities e.g. the way some black people and groups have embraced and celebrated the 'nigger' identity.

invisible and of no consequence as social actors. They were merely instruments of production, pure labour power. This began to change with the rise of organized associations of workers, the trades unions. It was these associations that demanded recognition, respect and their due for workers. However, even with the rise of unions, industrial workers remained highly under-differentiated in terms of identity. The identity of 'boilermaker' conceals a multitude of possible unique identities of individuals that it cannot express. Nonetheless, the activism of the industrial working class did significantly add to the pantheon of competing identity claims in modern society. They demanded and got a place at the table, as witnessed by the history of social partnership in Europe since the end of World War II.

Mass society did exist for a period but we are now leaving it. Mass society was the society in which complexity was not acknowledged and things were run as though society was still small and intimate. Mass society is an engulfed society [Scheff 1997]. This is not the society of the 'good old times' when things were simple and black and white, before 'everything got so complicated'. Mass society was a society of uniformity, of sameness, of grey conformity organized around the simple nostrums of family, country and religion. Governments ran countries on the basis of simple notions of population and mass demographics.⁸ Managerial capitalism reigned on the basis of Fordist production norms. The period of mass society was a transitional period and as an example of cultural lag in governance was a precursor to the current control crisis.

Worse, people misunderstood themselves in deceptively simplistic terms and denied their own complexity. Family life was a Pandora's box of seething complexity and repressed identity claims (Cooper 1971; Laing 1976; Laing and Esterson 1970). Of course, the complete inadequacy of simplicity when confronted with complexity was bound to come to grief. And so it did with the eruptions of the 1960's, the decade when individuals began to 'come out' and 'do their own thing'. The self-reliance and self-confidence that increasing affluence gave to young people in particular triggered a process of unprecedented differentiation and individuation based on life experience (Habermas 1971). Of course, this necessary re-balancing of the social bonds in the

⁸ There is also the not inconsiderable fact that most government and administrative elites held very snobby, simplistic and derogatory attitudes towards the common people, such was the class divide between government and governed.

direction of individuation was completely hi-jacked by the Thatcherite revolution and misinterpreted as a swing towards selfishness, egoism and the private sphere and against community and connectedness. We are still dealing with it under the crisis of governance and with what Knorr-Cetina (1997) calls the trend towards individualism. A significant increase in the inflation of identities and identity claims was brought about by the introduction of numeracy and literacy on a mass scale (Hoggart 1958). In discovering and becoming more of ‘themselves’ people propagate identities. Recognition and respect become the by-words of the new society of identities. Political correctness is a reflection of this newfound necessary respect for difference, even though it often gets it wrong and triggers the embarrassment it was meant to avoid. In coming to discern their interests, their likes and dislikes people join with others in forging new collective identities of many kinds and varieties. These new identities become a new source of action and of demands for recognition. Individual action was by no means the only outcome of this process. New forms of identification unleashed mobilization of collective action on an unprecedented scale as whole groups of people struggled to wrest control of their destinies from overweening, bloated and redundant empires (Anderson 1991). In many instances of the latter collective identification and liberation took precedence over individual liberation, which means that the severing of community bonds has come later if yet at all to post-colonial societies than to the societies of empire and domination. Ultimately though, as we have seen with Ireland in recent decades, the demands for individual release from communal engulfment cannot be postponed indefinitely and the floodgates are rent asunder. In post-colonial societies this latter process is incorrectly attributed to some kind of malign American cultural influence. But this would not be correct. The mass media of television, radio and the cinema is only doing what the print media of books, magazines and newspapers did to previous generations: prizing people away from the grip of collective engulfment by tickling and awakening the imagination of individual identity and destiny.

Complexity, we have seen, is a function of the numbers and patterns of interconnected networks between identities. And this also has precipitated a challenge to traditional governmental institutions.

Governance as a growth industry has its basis in societal developments, in particular with increasing interdependencies, and this at many levels and in many directions. ... these broad societal trends [may be considered] to be an expression of, a reaction to, or even an

engine of long-term societal differentiation and integration processes. These processes result in lengthening chains of interactions (Kaufmann 1991). These chains are increasingly institutionalised, multi-level, and multi-dimensional and this ongoing process leads to the proliferation of the number of influential actors in society while at the same time increasing the number of interactions among those parties. (Kooiman 2001)

This has resulted in the stretching of the state apparatus out into society to address these demands. The further the arms of the state stretched the more the central organs of government were subjected to erosion of power and were overtaken by as a process of de-monopolisation and diffusion of power [the so-called ‘hollowing out of the state’ (Elias 2000; Rhodes 1996)]. In consequence this has precipitated what has been referred to as a failure of hierarchical decision-making and ‘top-down’ planning in recent decades. Peters and Pierre have written:

Finally, the overall nature of the political project pursued by contemporary Western states has changed significantly over the past 10–15 years. Previously, the emphasis was on expanding the political sphere in society; the current main objectives are to increase efficiency in public service delivery and delivering more customer-attuned services. (Peters and Pierre 2001)

It is precisely the profusion and proliferation of such heteronomous wills in a myriad different ways that has led to the stretching of the arms of government to embrace as much as possible of the emergent but refracted civil society. Among the factors responsible for the current crisis of government Jessop mentions the ‘eruption of identity politics and new social movements which threaten established forms of social and political domination’ (Jessop 1995).

However, not all identities are equal. Not all identities are complete. We have seen how individual identity is a function of the ensemble of one’s social memberships. If the quantum of social organizations is deficient in a society and hence also the quantum of social capital deriving from the social networks that subtend these, then there will be a deficiency in the quanta of identities at both levels of individuals and of social organizations. This is why this phase of the discussion more nearly fits the European situation than it does the North American. In recent years Europe, and certainly that region of it covered by the EU, has seen a burgeoning growth of civil society, in networks and innovative forms of social organization and of government (Egeberg 2000). There has taken place veritable economic and cultural renaissance in the EU regions of Rhône-Alpes, Baden Wurtemberg, Catalonia and Lombardia. And

according to researchers, there has been sustained recent growth in social capital in countries such as the Netherlands (Curtin 2002) and Ireland (Sabel 1996).⁹ In the United States, in contrast, according to at least one influential commentator, there has been a net decline in historically high levels of social capital (Putnam 1995; 2000).

3 The Importance of ‘Identity’

All of these developments have been leading us to what I call the identity society. It is pregnant with the imminent birth of a cybernetic sociology. What shape should this have?

The essential feature of human beings is a self-awareness that is mediated through the recognition of others. This specular structure or spiral of co-recognition with others, other identities, constitutes the human condition. The inequality of recognition, its uncertainty, fragility and transience can give rise to severe pathologies: as Sartre said, *l'enfer, c'est les autres*.

Identity for human beings is the form of reflexive self-awareness by which social entities are conscious of themselves and of their embeddedness in a context of self and others. All social action takes place by and on behalf of identities.

All social entities exist by virtue of their being an identity. Identities are *the* social actors in society. They range from the ‘I’ through a variety of group or ‘We-identities’. To have an identity is to be recognised. Identities are constructed and maintained through the activities of control, which in themselves are secured through circuits and networks of communication. The purpose and *raison d'être* of any identity is to maintain its viability, that is, to maintain its capacity for autonomous existence.

An identity, therefore, is a self-aware locus of social recognition and is the only source of social action in society. Burke defines identity as ‘a sense of meanings applied to the self in a social role or situation defining what it means to be who one is’ (Burke 1991). And Harrison White characterises identity as follows: ‘... identity is any source of action not explicable from biophysical regularities, and to which observers can attribute meaning’ (White 1992: 6). And if, for Bateson, identity was a matter of the ongoing truth of certain descriptive propositions, then the process of maintaining

⁹ Also Pauline Jackson, University College Dublin, who has just completed a research project on the growth in the number of organizations in the Irish Republic. Personal communication.

the truth of such descriptive propositions was the identity process itself (Bateson 1973).

All social entities exist by virtue of their being an identity. Identities are *the* social actors in society. They range from the ‘I’ through a variety of group or ‘We-identities’. To have an identity is to be recognised. Identities are constructed and maintained through the activities of control, which in themselves are secured through circuits and networks of communication. The purpose and *raison d’être* of any identity is to maintain its viability, that is, to maintain its capacity for autonomous existence.

An identity, therefore, is a self-aware locus of social recognition and is the only source of social action in society. Burke defines identity as ‘a sense of meanings applied to the self in a social role or situation defining what it means to be who one is’ (Burke 1991). And Harrison White characterises identity as follows: ‘... identity is any source of action not explicable from biophysical regularities, and to which observers can attribute meaning’ (White 1992: 6). And if, for Bateson, identity was a matter of the ongoing truth of certain descriptive propositions, then the process of maintaining the truth of such descriptive propositions was the identity process itself (Bateson 1973).

The identity project is animated by the desire for recognition and control. Contemporary struggles between social groups are all marked by these characteristics. Hegel of course understood this. As did Alexis DeTocqueville who claimed over 170 years ago in his celebrated *Democracy in America* that “the struggle for recognition is the dominant passion of modernity.”

The identity society that is taking place around us is based on the eclipse of contention based on purely material interests alone (Fukuyama 1999). It is true that the high point of the capitalist era did represent the triumph of bourgeois values and interests: the reduction of human motives to the metric of self-interest (Hirschman 1977). The entire science of economics is based on this outmoded foundation and unless it can come to terms with the realm of value (Stark 2000) it is doomed to be relegated to the historical rubbish heap.

1.5 Making Distinctions

Identity is about making original distinctions in a continuous and contiguous field of human relatedness. As such identities are ‘digital’ distortions and deformations of the

‘analogue’ sociomatrix¹⁰. They are built on fragmentation and separation of what is not, in fact, fragmented and separated (Bohm 1983). On account of ‘closure’, organizations attempt to deny their embeddedness in the sociomatrix and to sever the links that bind them to it. As it is not actually possible to do this, an active contradiction [in the Hegelian sense] lies at the heart of all identities that are less in range and scope than the sociomatrix itself. *Omega* is the state of non-contradiction of the sociomatrix and is the *telos* of all contradicted forms of social organization (de Chardin 1964; 1977).

3.1 The Recursive Structure of Identity

Albert acknowledges the recursive structure of identity when he writes that ‘The concept of identity has the advantage of being a concept, construct, or question that can be studied or posed at any level of analysis- individual, group, organization, or industry — because, in a certain sense, the question of identity is at the heart of the idea of level’ (Albert 1998: 10).

¹⁰ Pressure of space does not allow me to elaborate on this important idea. It derives from the insight that the ‘web of social relations’, the network of global connectedness or network of social nets is the *matrix* from which societies have emerged and continue to emerge. Elias refers to it as the ‘human network as a whole’ (Elias 1978: 22). It is the basic form of social organization. Societies are contiguous areas of the *sociomatrix* that have been delimited by political fiat. Within societies one finds only identities and the processes of interaction between them mediated by the *frames* of contacts in which they are embedded.

The sociomatrix is the most complete topological extent of connected humanity. It is based on the notion of the indivisibility and inseparability of the human race. As de Swaan tells us, ‘A single network connects people everywhere on earth in a thousand ways’ (de Swaan 2001: 99). From the tribe of Eve in the savannahs of East Africa millions of years ago (Berger 2000; Brown 1990; Sykes 2001) until now, despite many dispersals and fragmenting of the initial unity of the race, to the era of the ‘global village’ there has been only one sociomatrix. The sociomatrix is the foundational crucible of the human race (Foulkes 1990; Foulkes 1973; Foulkes and Prince 1969).

The inspiration for the term is derived from Foulkes’s use with which it has a close resemblance (Foulkes 1973; Roberts 1982). My original formulation of the concept of the sociomatrix was ‘social field.’ The use of a similar term by Bourdieu for an altogether different phenomenon became too confusing and necessitated a new term. The term ‘sociomatrix’ was suggested by the concept of ‘biomatrix’ from the field of Teleonics with which it has strong affinity (Cloete and Jaros 1989; Jaros, Belonje and Breuer 1987; Jaros and Cloete 1987; 1990; 1993).

As Ashforth and Mael have argued:

There are few conceptual bridges for linking macro- and micro-level structures and processes (House, Rousseau and Thomas-Hunt 1995; Staw and Sutton 1993). We believe that the concept of identity provides one such bridge (Kramer 1993; Whetten, Lewin and Michael 1992). Identity has been researched at the level of the individual [particularly in the fields of developmental psychology, social psychology, symbolic interactionism, and psychodynamics], group [particularly social identity theory and various perspectives on genre, racial, ethnic, and national identities], and more recently, the organization. We see many parallels across these levels in the conceptualization of identity dynamics. (Ashforth and Mael 1996: 4)

3.2 *Metasystem transitions and the subsumption of identities*

Over the period of evolutionary time and human history there has been a process of subsumption of individual identities under more embracing identities of higher logical type. There has been a to-and-fro quality to this process, which has been captured nicely by Norbert Elias in his description of the Monopoly Mechanism (Elias 2000) and by Schmookler in his *Parable of the Tribes* (1995). This describes an ongoing process of oscillation according to which periods of increased centralisation, in which large tracts of land areas are brought under unified command and control, are interspersed with periods of break-up and de-centralisation in which power flows to increasingly powerful regional or local power centres (Turchin 1977).

As Leo Buss has written:

The history of life is a history of transitions between different units of selection.... When a transition occurs in the units of selection, synergisms between the higher and lower unit act to create new organizations which may allow the higher unit to interact effectively in the external environment. However, the organization of the higher unit does not simply interact with the external environment; it is also the agent of selection on the lower unit. To the extent that control over replication of the lower unit is required for effective interactions with the external environment, organizations must appear in the higher unit to limit the origin or expression of variations at the lower unit. Any such organization will act to stabilise the higher unit, as limits the capacity for variance to a rise or to be expressed. (Buss 1987: 171)

In the contemporary period top-level identities consist of nation-states and power blocs that populate the global stage. All else is subsumed identity. In other words, whereas identities have always been consonant with survival units, the only units capable of surviving today are viable systems at the level of states and alliances and coalitions of states.

3.3 *Metasystemic Cohesion and Identities*

Cohesion or the integration of relatively autonomous sub-identities under the aegis of single sign or meta-identity begins with the metasystemic activities of VSM systems two and above. Cohesion or integration is a function of this meta-identity.

To understand cohesion well in cybernetic terms is most important, because it governs the question of **identity** in the viable system, and because its practical application is potentially valuable. (Beer 1979: 351)

The possibilities for cohesion around purposes vary considerably at the various levels of the recursive hierarchy. The tightest degree of teleonomic unity and cohesion occurs at the level of the individual person. Despite occasional conflicts of goals, values and purposes individuals represent the highest level of integration in the structure (Csikszentmihalyi 1990; 1993). Organizations are considerably less coherent, because organizational purposes are refracted through the media of individual teleonomies (Espejo 1989).

It is important that there is a high level of convergence among people in an organization regarding the identity of that organization, that their perceptions of the organization's identity is more akin to that depicted in right-hand side of Figure 2 than is depicted on its left-hand side.

The structural implications of one or the other identity are, as it will become apparent later on, significant. Haziness makes it more difficult to state uncontroversial criteria of effectiveness for particular organizations. Indeed, the effectiveness of an organization depends upon its ability to make viable its organizationally agreed identity, but the very problem may be that the stakeholders want to keep their options open. (Beer 1979: 28)

The point is that, to quote from Espejo, 'each identity implies a particular effect on structure' (Espejo 1989).

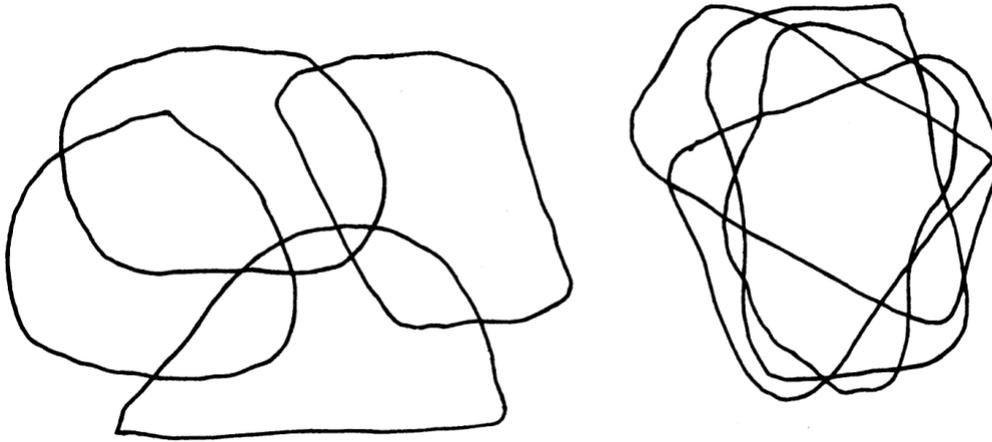


Figure 2: Degrees of Cohesion of Purpose

Least coherent of all are the societies that comprise both individuals and organizations. This has important implications. In particular, it is a potent source of social and political instability (Beer 1970).

3.4 *Managing Sameness and Difference*¹¹

The revolution in structural linguistics since de Saussure (de Saussure 1974; Dor 2000) has alerted us to the crucial roles that metonymy and metaphor play in the ongoing construction of meaning.

Identity is an emergent property of the organisation of relations between the parts and the whole. It is through the structure and work of identity that sameness (whole) and difference (parts) is managed. If the enactment layer of relatively autonomous units may be characterised as the layer of metonymy, then the closure level is the layer of metaphor. The articulation of metonymy and metaphor is the work of identity.

4 Identity as a cybernetic process

An identity is a sense of meanings applied to the self in a social role or situation defining what it means to be who one is. This set of meanings serves as a standard or reference for who 'one is' (Goffman 1967; 1969).

¹¹ Difference does not figure as a major feature of the identification process for the likes of Tajfel et al (1981; 1981; 1982). To this extent, a cybernetic theory of identity cannot be assumed to be synonymous with a social identity theory for which perceived similarity among category members is a key determinant of group identification (Biggiere 1999; 1999; 1999).

Identity is not some once and for all status or trait of a person but is essentially an ongoing process of selection and mapping. As such, identity involves a process of control.

Control brings about islands of order or relative stability in an ever-changing flux of contingency. These ‘islands of order’ constitute self-reflexive identities.

Identity sets the standard for what kinds of perceptions are expectable from us—both for ourselves and for others to whom we communicate with our behaviours. It is not actual empirical behaviours as such that are important. Rather it is how they are constructed in narrative and perceived in understanding. We maintain a model in our heads as to how our behaviours will be perceived in any particular context.

This involves the capacity to engage in ‘mind reading’ [what is referred to as ‘theory of mind’(Baron-Cohen 1995; O’Connell 1997)]. We are acutely aware of how things look to other people. We are ‘past masters’ at doing ‘normality’ (Garfinkel 1967) and we are aware of the boundaries.

New behaviours calculated to bring about an innovation in the perception of identity will necessitate a bridging narrative of justification linking and melding the new elements to the existing identity (Grimshaw 1998; Shotter and Gergen 1989).

Using PCT as a template, Burke has modelled the identity process as a control system (Burke 1991; 1991; 1991; 1995; 1996; 1997; Burke and Gecas 1994; Burke and Stets 1994; Burke and Cooper 2000; Burke 1980; Ellestad and Stets 1998; Freese and Burke 1994; Simmons et al. 1998; Stets 1993; 1995).

When an identity is activated, a feedback loop is established. As shown in Figure 3, this loop has four components:

- ? a reference standard or setting [a set of self-meanings];
- ? an input from the environment or social situation [including one’s reflected appraisals, i.e.: perceptions of self-relevant meanings];
- ? a process that compares the input with the standard [via the operation of a comparator]; and,

- ? an output to the environment, generated by the comparison and which is then the source of behaviours intended to bring one's perceptual inputs into an identity relationship with one's reference standards.

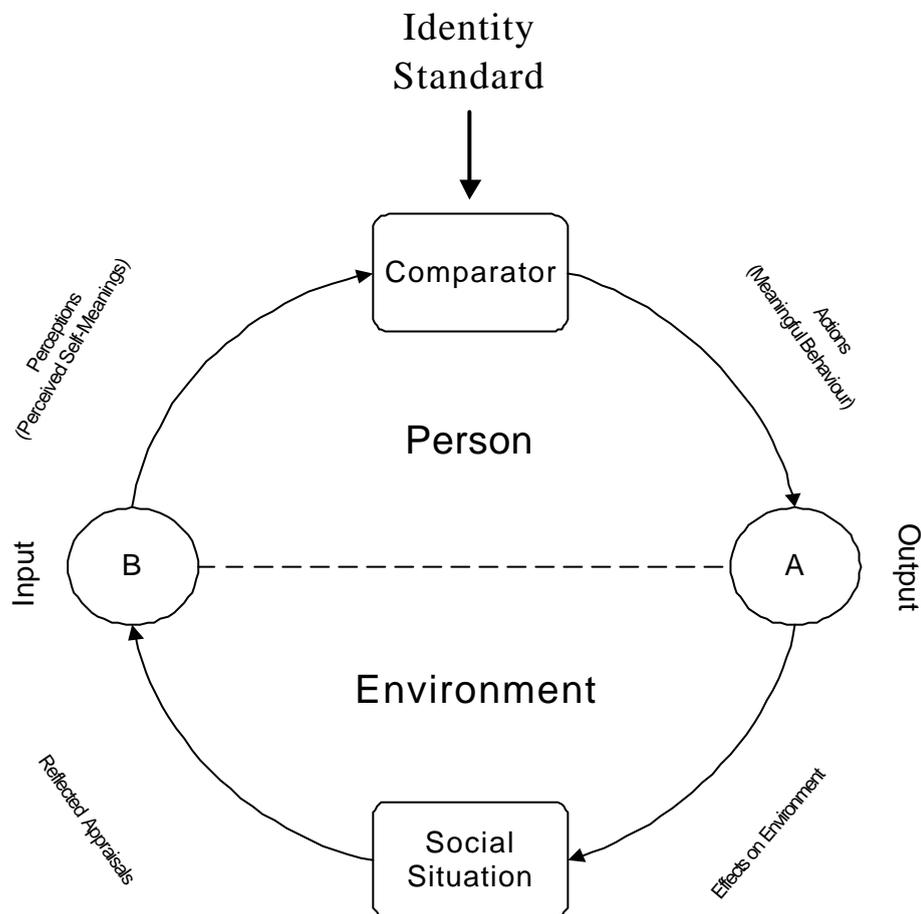


Figure 3: Identity as Control Process (from Burke, 1991)

The system works by modifying output [behaviour to the social situation] in attempts to change the inputs [reflected appraisals] to match the internal standard. In this sense, the identity control system can be regarded as having a goal: the matching of perceptual inputs from the environment to internal standards. Such a system functions by attempting to control its perceptual inputs. It is a control process in the precise sense specified by Powers (1973).

5 Identity as a cybernetic construct and project

I believe that Stafford Beer gave us the basis of a theory not of social entities but of social identities. The key difference is the reflexive nature of human reality.

Beer is universally credited with being the founder of managerial cybernetics (Beer 1966; 1967; 1967; 1970; 1970; 1972; 1979). Beer, like all who are faced with the problematic of application, developed a framework structure and concepts that allowed him to ‘apply’ cybernetic ideas to a realm of activity that was decidedly different from the realms of engineering, biology and mathematics that first generated cybernetics as a fundamental theory.

In his treatise, *Heart of Enterprise*, Beer is careful to make a distinction between the contributions made by engineering cybernetics and the tasks of managerial cybernetics.

The discoveries made by control engineers are of course used: they have understood the scientific rules of regulation. Nonetheless, this is a management book; no attempt is made to teach engineering. Why not? Because, although the principles are inescapable, the whole world of the manager is different from that of the engineer. This is because variety proliferates for the manager, and cannot be tamed by reducing the structure of the system to agreed parameters. Therefore *the management cybernetician must deploy the principles in a different way, to address a different problem.* (Beer 1979: 4) - my emphasis

Although both engineering and management employ the concept of feedback, in management both ‘adjuster organisers’ and ‘hierarchy’ play important roles that are not part of the engineering approach. Furthermore, the idea of the ‘management unit’ has no correlate in the engineering science of control. In other words, Beer knew that to produce an effective and useful cybernetics of management he would have to defend the autonomous cognitive claims of management science and build a conceptual scaffold or bridge from the fundamental theory to management science. This he did with his Viable System Model (VSM) (Espejo and Harnden 1989), the requirements of which are not given in the classic works of cybernetic theory but which Beer constructed for his purposes.¹² In doing so Beer re-casts the definition of cybernetics for the human sciences as the science of effective organization.¹³ In fact

¹² ‘I do not disclaim having made *cybernetic* discoveries here, for the record. But the intention of the work is to provide useful insights into the business of management’ (Beer 1979: 413).

¹³ Contrast with Wiener’s ‘control and communication in the animal and machine’ (Wiener 1948). As definitions they are not contradictory or indeed in conflict. They just emphasise different topics because the levels of analysis are different. In fact, organization is the product of the iteration of the mutually directed concertation of communication and control between two or more people.

the position that I will seek to develop throughout this work is that *the concept of identity is the sociologically appropriate form of the fundamental phenomenon and theoretical notions of communication and control, the inaugural concepts of the science of cybernetics* (Ashby 1964).¹⁴

What is little appreciated, even by Beer himself (Beer 1966), is what Beer did was no different from what many scientists in different disciplines had to do in order to apply fundamental ‘theoretical’ laws to more phenomenal domains to which they were judged to be relevant in principle but which in practice seemed to elude easy and fruitful application. The disciplines of acoustics and fluid dynamics come to mind. There are many such cases. The process has been called ‘finalization’ or the purposeful development of science (Böhme, van den Daele and Krohn 1976; Leeming 1997; Schäfer 1983; Stokes 2003; Weingart 1997).

Beer was exercised by the ability of living and human systems to maintain a relatively autonomous existence in an uncertain environment (Espejo and Harnden 1989).

However in the human world survival is not merely a question of physical endurance (Bauman 1992). It is essentially and above all a question of the viability of *identity*.

What is being presented in these pages, therefore, is a necessarily preliminary cybernetic theory of identity, based on Stafford Beer’s Viable System Model [VSM] (Beer 1979; 1985; 1994).

What are the requirements of a good model of identity? To start with it should be a model of viable organization. ‘Viable’ means ‘capability of sustaining an independent existence’. As Beer says, the goal of survival is different from other goals. ‘It is a purpose that closes in on itself; it is a matter of preserving identity’ (Beer 1979: 114).

He elaborates:

A viable system is one sustaining the capability for independent existence as a recognizable identity. Thus a person is a viable system, and so is a firm. In particular...the institutions that humanity has devised to express the will of the people [from government departments and social services ...] are supposedly viable systems. They do not work at all well, and so their future viability is in question. (Beer 1983: 807)

A viable system then is a system that maintains its identity, whatever that is:

¹⁴ I have turned to the insights of managerial cybernetics for the same reasons that Mary Parker Follett turned to the study of business management and leadership (see Fox and Urwick 1982).

A very remarkable property of the viable system [is] that it retains its identity. The enterprise may last for hundreds of years, changing all of its components parts many times, and assimilating many kinds of change on the way—and yet it is recognisably itself. ... the primary characteristic of a viable system is not the power of self-reproduction but of self-production. It is continuously in business to produce itself, to be what it is, to preserve identity. (Beer 1979: 277)

The ability to maintain a separate existence in this sense does not mean to exist separately from others and one's environment but rather to be able to maintain oneself as a distinct identity even when one is embedded in an environment consisting of interdependent networks of human beings. In fact the more closely one is bound up with others the more necessary it may be to maintain oneself as a separate identity in order to avoid engulfment (Scheff 1990; 1997).

It is a conceit of autopoietic theory to assert that all systems are specified by an observer (Maturana and Varela 1980; 1992). Not all systems are specified by observers, however. Many have a habit of imposing themselves on others, independent of whether observers credit their existence or not. If this is true of tigers and other predators it is especially true of those systems we call identities (see Beer 1979: 8-10). Identities are self-aware systems that impose their own meanings and purposes on observers.

Of all the observers of that viable system called the enterprise, the most significant is inevitably itself. This is because of the reflexive nature of the affirmation of identity. The Enterprise spends a great deal of its effort in this preoccupation; and if we bring Ashby's Law to bear on the need for a viable system to do just that, we can see why. If a certain variety is generated in the pursuit of 'let's go' purposes, then an equivalent variety must be devoted to self maintenance: otherwise the system is going to disintegrate.... Meanwhile, However, the Enterprise is telling not only itself, but everyone else, that *it* exists. (Beer 1979: 114)

What other features characterise a viable system? A viable system is recursive. It is intrinsically scalar in that it replicates itself in self-similar patterns and in a nested manner at all levels of organization. It is essentially embedded in an environment, which is the source of its challenge to acquire 'requisite' variety. It respects the autonomy of the parts that make it up, with one proviso that is agreed by all: that restraints on autonomy shall be computable functions of the purposes of the system and no more than this. Such purposes are given in the organization's self-identity.

Furthermore, a viable system provides a means for the co-ordination of the interactions of the level one autonomous units so as to avoid oscillatory behaviours among and between them.

It provides a further means of systemic cohesion by seeking to achieve synergies among the unit elements. It does this through a process of resource bargaining and of intervening to maintain the integrity of the whole if threatened. It is also at this level that a certain selective bias is evident [reflected in resource bargaining outcomes]—activities more in accord with the identity of the system as a whole are typically favoured over those that do not. Engulfment and isolation are both extremes on the continuum of possible outcomes here.

Up to this point the system has been inwardly focused on issues of ‘here and now’ cohesion and integration. However, any viable form of organization must also be oriented to the two major environments in which it is embedded: its temporally present environment of stakeholders and others as well as its future environment. The tension between the ‘here and now’ focus and the ‘there and then’ focus must be managed. They are so done under the sign of identity that provides the reference standard for all-inclusive infra-level regulation.

The question must now be posed: does this model of viable organization contain within itself sufficient variety such that all forms of social organization can be mapped onto it? The answer is yes. Not only is a viable system designed to contain the structured antinomies of social life but it is designed in such a way that each portion of the model absorbs the variety disposed by the others. It does this not as a closed system but as an open negentropic, dissipative system. ‘All subsystems of a viable system control each other’ (Beer 1979: 362).

All identities are composites, then; they consist of sets of inter-related parts. This goes as much for the organization of the brain and consciousness itself (Beer 1972; Dennett 1996; Edelman 1992) as it does for the identities of social groups and whole societies. In other words, this involves an understanding of a ‘whole’ as being constituted by the interaction of parts and not as some sort of supernatural entity that exists irrespective of what happens between its components (Bateson 1973; Elias 1978).

A specific pattern of inter-relationship of parts constitutes their enduring structure or organization and that that sustains the viability of identity. It is to a detailed discussion of this pattern that I now turn to elucidate the structural dynamics of identity.

Identity is the product of the interactions of different levels of a composite agent.

These layers can be designated as follows:

- ? Enactive
- ? Pattern
- ? Coherence and integration of enactive and pattern layers [homeostasis]
- ? Anticipatory
- ? Self-reference and integration of homeostatic and anticipatory layers.

I will start at the bottom layer, the level of enactment [see Figure 4 and Table 1].

Level 1. Enactment

This level consists of the units that produce the system in question: they are the operational elements, each plausible as behavioural elements in their own right. As such, within an over-arching framework of identity they constitute the indexical sub-identities that represent us contextually from situation to situation. Plausible as they are each in their own setting they are composite units in a larger system. As operational elements they seek autonomy but this can only be achieved within the framework of the system in which they participate as members. ‘It is a condition of existence for the operational element that it subsists within a larger whole, containing other elements’ (Beer 1979: 146). There is a balance to be struck therefore between freedom and constraint: this is a computable function of systemic purpose (Beer 1979: 158).¹⁵

At any moment, maintains Beer, there are two dimensions of constraint at work on the ensemble of operational elements. If we visualise one as coming to bear on the horizontal axis involving peer relations and affecting performance issues, we can visualise the other on a vertical axis as involving questions of the cohesion or integration of the entire system.

¹⁵ ‘Viable systems of concentrated purpose will be closely-knit, highly cohesive. Viable systems of general purpose will be more loosely coherent.... If the systemic purpose is subjective, only agreement of the heart will justify a given level of cohesion in any institution’ (Beer 1979).

This level encompasses, therefore, the elements to be controlled in any composite system. Level One is where the various stakeholders to an identity interact with that identity. This is the level of enacted identity.

This is also the level of metonymy, where the part actions of each of the action units are construed as standing in some way for the whole, or a nested series of wholes in a recursive structure. It is where the work of identity starts. ‘Defining the identity for an organization implies defining the primary activities of the organization’ (Espejo 1989: 89).

Figure 4: The Viable System for Identity

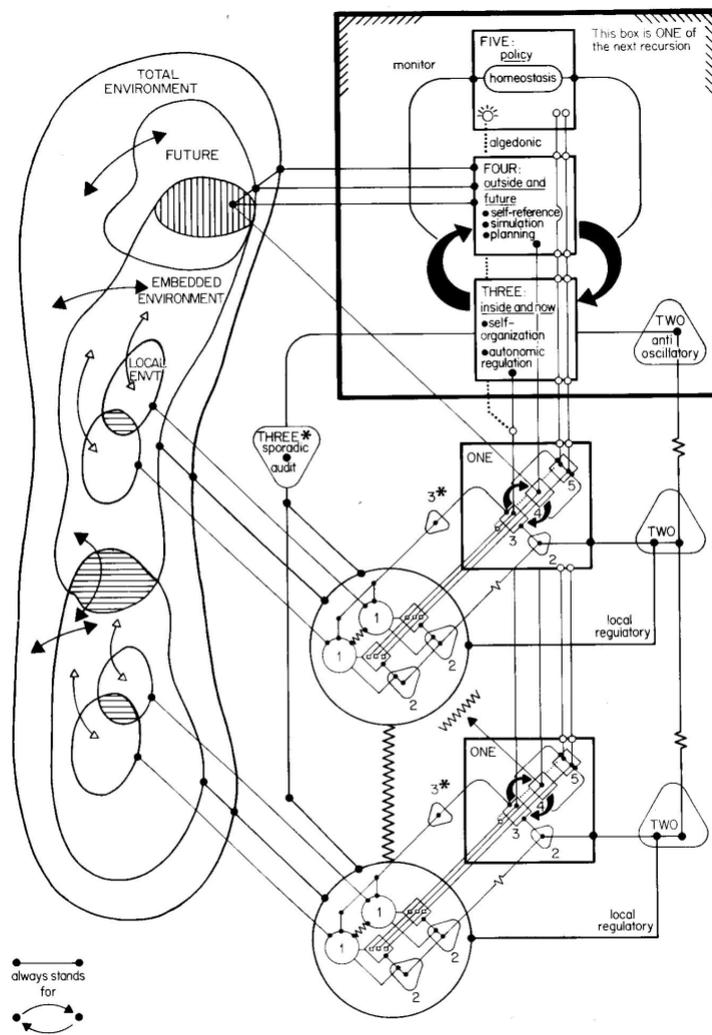


FIGURE 37

THE VIABLE SYSTEM
- Stafford Beer

The tendency here is towards maximum autonomy of action within the constraints of the integrity of the whole from which they derive their own sub-identity. Beer

maintains, that ‘System One ... should have its full variety available to manage, accepting only the constraint that cohesion must be maintained within the purposes of the viable system’ (Beer 1979: 344). In other words there is a constant tension balance between the ‘I’ and the ‘we’ elements of identity, in which *engulfment* is the outcome at one extreme and *alienation* the outcome at the other (Scheff 1990).

This division of labour, which sustains identity and of which Level I is only a component, may be called the cybernetic organization for viability (Beer 1972; 1974; 1975; 1975; 1979; 1985; 1994).

In terms of human society, level one operational elements will be quite different depending on the level of recursion involved. For instance at the level of the individual, they will consist of the various coherent packages of behaviour that we put out in every social situation which define who we are there and then. At the level of a human society the level one operational elements are all the varieties of social organization that dwell within it. For organizations, at the median level of recursion, they are the operational departments that actually carry out the work that produces and hence defines the organization. For instance, in a university we might conclude that each academic department is a distinct operational unit of the university. If we take it that both individuals and organizations function as identities, then the operational elements constitute the level of sub-identities that have to be woven into a coherent narrative of the systemic meta identity (Czarniawska 1997; Shotter and Gergen 1989).

Beer has often remarked that the purpose of any system is what it does. What it does is done at level one.

Levels 2-5: The Metasystem

All levels above level 1 belong to the metasystem. The metasystem exists exclusively to service the ensemble of operational elements as a going systemic concern under identity. To this end it performs a number of distinct functions [see Figure 4 above]:

To avert conflict, competition, duplication and oscillatory behaviour generally between the operational elements. This is the task of level two of the metasystem.

To engage in cohesion management, secure the vehicle in the here and now and to conduct resource bargaining between the various operational elements.

Occasionally a special function is to conduct spot audits of the operational level.

This distinct set of tasks is the responsibility of level three.

To engage with the environment and to anticipate and create future possibilities.
This takes place on level four.

To secure the closure of systemic meta identity and to maintain the integrity of this meta-identity through managing the transition of identity from the ‘here and now’ into the ‘there and then.’

Level 2: Pattern

Meta-identity is enacted through the pattern of relatedness of the sub-identities that constitute it. It is this level that manages potential conflicts between the semi-autonomous units of Level 1. It choreographs their interactions so as to eliminate tension and conflict. This level carries out the work of mediation that is implied in Peirce’s concept of thirdness (Wilden 1980: 160-1). Level Two is the personality layer of identity. Pattern is a form of constraint on the horizontal axis.

As I shall argue in a later section, Level 2 pattern making between identities in human societies takes the form of culture, of how things are routinely done (Bateson 1980; Volk 1995).

Level 3: Integration

Vertical constraint begins with level three, which is concerned with systemic cohesion and internal regulation. It is the level of homeostasis.¹⁶ Firmly embedded in the here and now, the integration level engages in the real-time control of actual events. This level achieves the ongoing cohesion and integration of the composite agent as a matter of practical accomplishment. It also manages the resource bargaining of the composite unit with level one operational elements: who gets what resources from the common pool and how much, who contributes what and how much. It is also possessed of the power of executive action in times of emergency. Level 3* engages in periodic ‘emergency’ audits of Levels 1 activities.

Level Three monitors and controls the activities of the relatively autonomous units of Level One by means of an embedded system called an Identity Regulation Network (IRN) (Beer 1979: 428). The IRN operates on signals from the organization regarding key variables. It is alerted to activities on the enacted level that pose a threat to

¹⁶ In Claude Bernard’s famous phrase: ‘*La fixité du milieu interieur est la condition de la vie libre, independante*’ (in Beer 1979).

Identity as currently conceived. It intervenes principally by re-negotiating the reference levels of the Level One units themselves rather than engaging in any direct material intervention at the level of overt behaviour.¹⁷

Level three has discretion over what activities at level 1 may be considered as constituting the system in question (Beer 1979: 254). To this extent it regulates the diversity of identities at Level 1. It is the guardian of the synchronic identity of the metasystem. It determines what forms of teleonomy are considered valid and legitimate within the context of the purposes of the system as a whole. Because it is the managerial fulcrum of the viable organization it is the seat of the ‘chief executive’, however that function may be conceived (Beer 1979: 263). For instance in state societies, the institutional process crucially embraces departments of government and agencies of state (Beer 1989; 1994).¹⁸

Level three is oriented to the ongoing task of securing the operational integrity of the survival vehicle or unit at all times.

Level three is easily enough discerned in the individual and in organizations and state-societies. At the level of human society, as we shall see, level three is expressed through the phenomenon of institutionalisation, the recursive application of cultural selection to organizations.

In this way levels two and three regulate the pattern and type of teleonomy of level one operational elements. The two levels in particular regulate the economy of teleonomy of the system in focus—as we shall see, level 2 operates by means of cultural patterns and is augmented by level 3, which operates by means of the process of institutionalisation.

The realm of institutionalisation is the realm of self-recognition of society. This is typically the realm that is reflected in the media. It reduces enormously the complexity of society that official society has to deal with. It is an imaginary realm in that it excludes the grey area, the areas of no-legitimate practices and identities, the bohemians, the poor, the marginalised – all those from whom the halo of institutional

¹⁷ Beer writes: ‘The command axis should be minimally used in the maintenance of organizational cohesion and not more than this’ (Beer 1979: 351).

¹⁸ Consider, the highly conservative role of all government ministries for finance!

recognition has been withheld. This is why so many ‘problems’ in society don’t make it onto the official agenda for action - they don’t ‘officially’ exist.

However, because the overall process is that of selection this area is also a source for the selection of new practices and the legitimization of new ways of doing things: witness the way jazz music came from the dept of scandal to being a highly ‘institutionalised’ musical form the late 20th century western society.

Level 4: Anticipation

Level four is a complex level engaging as it does with the environment and the future. Although the system’s operational identity is enacted at level 1, level four’s activities also have a bearing on this question because of its engagement with the environment. According to Beer, ‘Systems Three and Four should exhibit themselves to each other, in a continuous mode, and absorb each other’s variety’(Beer 1979: 258).

Goal-seeking by definition, due to its forward-looking nature involves anticipatory behaviour (Rosen 1985). Through imagination we envisage the completion of the very act we are about to embark upon. Furthermore, we anticipate the responses of others whenever we engage in social action and pitch our behaviour accordingly to take these reactions into account (Mead and Morris 1974).

Anticipation is also a form of learning II [Argyris] or deutero-learning [Bateson] according to which we anticipate patterns of events by projecting forward into the future. In this way we overcome the errors of over-learning from past experiences by anticipating that things could happen that we have not had to deal with before. It is a form of learning that transcends the limitation of ordinary learning [from experience] (Bateson 1973) or learning I (Argyris and Schön 1995).

Geoffrey Vickers points to the role of anticipation in human affairs.

Firstly, by being able to anticipate outcomes of causal series of action it is not necessary to subject ourselves to the tit-for-tat of action and reaction and the possible deleterious outcomes. Systems thinking can provide us with possible ‘forms of anticipation’.

Secondly, by being able to anticipate deleterious outcomes it is possible to circumscribe the deleterious escalation of inter-actions. This is otherwise known as ‘regulation’. (Vickers 1972: 158)

Both of these capacities derive from our ability to anticipate with high certainty the outcomes of cycles of action and reaction. They form part of our interactional

economy whereby certain outcomes are either facilitated or inhibited through the expenditure of minima quanta of effort.

Nor is anticipation limited to the nearly imminent. Within increasing interdependence through interconnected networks, in view of the future possible outcomes of our actions, comes the necessity for heightened levels of control over our own behaviour. It is important therefore to be able to anticipate even rather remote consequences of our behaviour (Elias 2000).

Anticipation is such an important faculty that some have argued it has roots deep in our evolutionary past. Dunbar, for instance, points out the evolutionary significance of being able to anticipate danger:

Being able to predict what is going to happen in order to be able to act in an appropriate way at the right moment is fundamental to survival. Organisms that wait until something has happened before responding to it tend not to survive for very long. Sooner or later they will be caught with their ecological pants down. (Dunbar 1995: 58)

And organisms can be evolutionarily successful if they become ever more sensitive to the consequences of their actions:

Organisms most likely to be changed by certain kinds of consequences have presumably had an advantage, and a culture brings the individual under the control of remoter consequences which could have played no part in the physical evolution of the species. A remoter personal good becomes effective when a person is controlled for the good of others, and the culture which induces some of its members to work for its survival brings an even more remote consequence to bear.

The task of the cultural designer is to accelerate the development of practices which bring the remote consequences of behaviour into play.

If there is any purpose or direction in the evolution of the culture, it has to do with bringing people under the control of more and more of the consequences of their behaviour. (Skinner 1973: 141-142)

For Skinner, this is what cultures are about and what they do, therefore, ‘is to bring the individual under the control of the remoter consequences of his behaviour’ [op.cit.: 170].

There is more to it than passively second-guessing some pre-existing future. When we ask, ‘what will the future bring?’ are we not assuming that the future has already been constituted, is not open to our influence and that our best strategy is to try to work out what it might [already] hold in store for us? Yet our future is formed in the very stance we take towards it. In many respects, we invent our futures (Gabor 1964).

The environment [‘outside’] and future [‘then’] represents the horizon of possibilities present to us now, however dim, a virtual perception some subset of which we elect to enact now, however weakly (Harnden 1989).

The American pragmatist, George Herbert Mead, in his action philosophy laid down the template for how self-conscious organisms take action simultaneously with respect to an environment and a temporal horizon of future possibilities. Mead postulated that the self-conscious organism [the ‘I’] takes action with reference to an internal model of the self [the ‘Me’] in order to stabilise its actions within a consistent temporal pattern and in conformity with some sense of self-identity (Mead and Morris 1974). It is at this level, therefore, that we find the beginnings of self-awareness of identity. This is expressed in the development and elaboration of a model of the self, embedded in an environment, whose beginning we find at level four of the structure for viable identity.

Unlike the other elements of this model, embodiments of this element [Beer’s System Four] in organizations and society tend to be underdeveloped, denatured or degraded in terms of its embedment in the operational feedback loops of the identity in question.¹⁹ However, recent developments, particularly in the sphere of European governance, suggestively indicate the recent growth of system four features. Importantly, the development of such a system four is a strong pre-condition for the successful advance of a social science (Stokes 2003).

One last point should be mentioned. Rosen (1985) has negatively evaluated systems based on feedback in favour of systems that are characterised by anticipation. There is no necessary conflict, however, as the incorporation of both feedback and anticipation into the model under development here indicates. Furthermore to set one against the other in this fashion is to misunderstand the crucial distinction between calibration and feedback and its importance for an understanding of human behaviour (Bateson 1980; Bateson 1991).

Level 5: Closure

The self-image, the sense of self is constituted at this level. At Level 5 one is keenly aware of self and other. This is the level that renders all behavioural metonymies into

¹⁹ It is relatively well developed in individuals, though, at least in Western civilisation. See the discussion above and also the work of Elias (1991; 2000).

metaphors for the identity is question and where the essential tautology that lies at the heart of identity is resolved: I am I. This represents the closure that finally seals identity.

The acting person is in a state of constant tension between what he/she is here and now and what he/she is passing over into becoming in the there and then. This tension is managed by our sense of identity, another higher order control system. It manages the rate of change that is occurring between levels 3 and 4 so as to keep things manageable within homeostatic limits of cohesion on the one hand and the demands of the imminent and the future on the other.

Change always poses a threat to existing ways and definitions. It therefore has to be managed so that there is a smooth transition of identity into the future. That is why Level 5 regulates interactions between Levels 3 and 4. Level Five carries out the requisite *identity work* according to which the new is joined to the old and a narrative of continuity is formulated (Somers 1994). The challenge of identity is precisely encapsulated in the aphorism: *plus ça change, c'est plus la même chose*.

Level Five is the self-reference level of identity—it represents the self's own understanding of itself to itself [reflexive]. By managing the interactions between Levels Three and Four [and in particular the error signals that rise from the layers of enacted identity in Levels One] it controls its own perceptions of itself. It is in this sense that 'closure is the talisman of identity'.

6 Summary

Increasing societal complexity challenges the limited understanding of the processes of governance that were barely adequate in an age of mass society but that are clearly and manifestly inadequate in an age of identity.

Existing forms of bureaucratic organization are increasingly deficient in requisite variety in the face of the burgeoning complexity of the social world. Governance is a distributed function throughout the society and has three major loci or attractors: the individual the social organization and the state-society.

The following historical trends and phenomena have placed governance and identity on the agenda for decades to come:

- ? Increasing autonomy of social actors as identities
- ? Increasing complexity in the interaction of identities

- ? Cultural change at the level of business practice, e.g. the emergence of Corporate Social Responsibility.
- ? Government and control have become problematic. The emergence of policy networks, advocacy coalitions, the rise in importance of NGO, new social movements, public-private partnerships – collectively these constitute a single phenomenon: the leakage of power and governmentality to lower levels of recursion.
- ? Institutionalisation continues as a process – the family has been undergoing a process of de-institutionalisation whereas there seems to have been a hardening of institutionalisation around the education system.
- ? The service class has been identified as a source of social unrest.
- ? Lastly, the possibility of a cybernetically informed social science is now seriously on the cards.

We have seen a loosening of the bonds of state-society which hitherto had been bound tightly under the onus of competitive power struggle between nation states.

Innovation in the technology of production gave greater control and autonomy to producers thus loosening the hold of authoritarian modes of social regulation. This was the beginning of a long-term trend in the valorisation of horizontal relationships over vertical relationships. The long chains of horizontal dependency that ensued began to ensnarl society in a web-like structure of complexity. This in turn led to the augmentation of the self and the sense of self-identity, relative autonomy and self-regulation. With the rise and widespread use of the technologies of self-reflexivity we are on the verge of a veritable explosion of identities and identity claims. So much so that we may consider that we have entered the phase of identity society.

6.1 Conclusion

The tasks and challenges of government change dramatically as we move from a mass society where government is based on demographics to a complex society where it seems identities in their various recursions have already begun to assume quite autonomously governance functions of their own. It seems that government is no longer the seat of societal governance—societal governance has become part of the self-governance of society itself.

I have been arguing that now more than ever there is a real opportunity for a fruitful liaison between cybernetics and the social sciences. I have tried to show how the

concept of identity holds the key to this union. Identity is the appropriate sociological form in which the cognitive interests of cybernetics can be expressed and made meaningful at this level of social organisation.

Furthermore, we have been moving towards an identity society, a society in which previous concepts of government and authority have been losing ground. A governance vacuum is a real danger if the appropriate understandings are not communicated and put in place now. That is the challenge that we, as cyberneticians face.

We are moving towards new models of governance and more particularly new models of democracy. By asserting the premise that control is a distributed property of any system cybernetics has a unique contribution to make here. ‘Identity’ gives us the key to unlocking this door. Let us now move forward.

Level of Recursion	Enactment - S1	Pattern – S2	Homeostasis – S3	Anticipation – S4	Closure – S5
R ₋₁	Individuals engaged in the perceptual control of their own behaviours and projects in environments which they enact with others (Powers 1973).	Protocols and norms for communication and interaction as given in language and the performative & pragmatic aspects of communication and interaction, i.e. culture (Bateson 1973).	Stabilisation of the personality system and the adaptation of the individual's drive economy with the structure and horizon of constraints and opportunities for action. Socialization and the social construction of the individual generally through processing by social institutions e.g. schooling. Marcuse's (1968) example of the reduction to the metric of calculability of the legitimate motivations of individuals.	The ability to anticipate the ever more remote and ramified consequences of one's behaviour; Self-restraining behaviour e.g. the civilizing process (Elias 2000). This is the realm of imagination and of the contemplation of possible future identities.	The Individuals sense of him or her-self: identity. Me-myself.
R ₀	Organisations constructing and maintaining their identities through boundary interactions with complex environments; the achievement of complex projects and the production of use-values for individuals and other organisations (Ahrne 1990; 1994)	Interactional ethos & norms between organizations and between organizations and people; not only anti-oscillatory measures but reduction of transaction costs, and build-up of trust, social capital, business culture e.g. HR and PR.	Process of selection whereby some organizational forms and practices become institutionalised by the state.	Similar process at the level of organizations e.g. Corporate Social Responsibility.	The Board and the corporate identity of the organisation.
R ₊₁	State-Societies: maintaining themselves as viable identities through the production of real collective use-values e.g. education, transport, energy, water, sanitary services, infrastructure, etc.	Sets of practices developed by the service class and underwritten by the state: doctors, accountants, engineers, e.g. standards of all kinds.	Resource bargaining by Ministries of State with organizations (institutions) and individuals.	Foreign affairs & diplomacy; all state planning, studies and projections regarding the future. Applied social science.	Parliament; the Head of State; symbols of national identity e.g. flag and emblems.

Table 1: The Structure of Governance in Society as a Viable Identity

Words: 10218

<<ends>>

References

- Aglietta, Michel. 2000. "Shareholder value and corporate governance: some tricky questions." *Economy and Society* 29:146-159.
- Ahrne, Göran. 1990. *Agency and Organization: Towards an organizational theory of society*. London: SAGE Publications.
- . 1994. *Social Organizations: Interaction inside, outside and between organizations*. London: Sage.
- Albert, Stuart. 1998. "The Definition and Metadefinition of Identity." Pp. 1-13 in *Identity in Organizations: Building Theory Through Conversations*, edited by David A. Whetten and Paul C. Godfrey. Thousand Oaks, CA: SAGE Publications.
- Anderson, Benedict. 1991. *Imagined Communities: Reflections of the Origins and Spread of Nationalism*. London: Verso.
- Argyris, Chris, and Donald A. Schön. 1995. *Organizational Learning II: Theory, Method, and Practice*. Reading, MA: Addison-Wesley.
- Armstrong, Kenneth A. 2001. "The Rediscovery of Civil Society in the Production of Governance."
- Ashby, W. Ross. 1964. *An Introduction to Cybernetics*. London: Methuen & Co.
- Ashforth, B. E., and F. A. Mael. 1996. "Organizational identity and strategy as a context for the individual." *Advances in Strategic Management* 13:19-64.
- Aulin, Arvid. 1982. *The Cybernetic Laws of Social Progress*. Oxford: Pergamon Press.
- . 1986. "Notes on the concept of self-steering." Pp. pp 100-118 in *Sociocybernetic Paradoxes: Observation, Control and Evolution of Self-Steering Systems*, edited by Felix Geyer and Johannes van der Zouwen. London: Sage.
- Barnard, Chester. 1938. *The Functions of the Executive*. Cambridge, MA: Harvard University Press.
- Baron-Cohen, Simon. 1995. *Mindblindness: An Essay on Autism and Theory of Mind*. Cambridge, MA: MIT Press.
- Bateson, Gregory. 1973. *Steps to an Ecology of Mind*. London: Paladin.
- . 1980. *Naven*. London: Wildwood House.
- Bateson, Mary Catherine. 1991. *Our Own Metaphor: A personal account of a conference on the effects of conscious purpose on human adaptation*. Washington: Smithsonian Institution Press.
- Bauman, Zygmunt. 1992. "Survival as a Social Construct." *Theory, Culture & Society* 9:1-36.
- Beck, Ulrich. 1992. *Risk Society: Towards a New Modernity*. London: SAGE Publications.
- Beck, Ulrich, Anthony Giddens, and Scott Lash. 1994. *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order*. Cambridge: Polity Press.
- Beer, Stafford. 1966. *Decision and Control: The Meaning of Operational Research and Management Cybernetics*. London: John Wiley & Sons.
- . 1967. *Cybernetics and Management*. London: English Universities Press.
- . 1967. *Management Science: The Business Use of Operations Research*. London: Aldus.
- . 1970. "Managing Modern Complexity." *Futures*:245-257.
- . 1970. "Managing Modern Complexity." *Futures*:114-122.

- . 1972. *Brain of the Firm*. London: Allen Lane.
- . 1974. *Designing Freedom*. London: J. Wiley.
- . 1975. "Managing Modern Complexity." Pp. 221-241 in *Platform for Change*. London: John Wiley & Sons.
- . 1975. *Platform for Change*. London: John Wiley & Sons.
- . 1979. *Heart of Enterprise*. London: John Wiley & Sons.
- . 1983. "The Will of the People." *Journal of the Operational Research Society* 34:787-810.
- . 1985. *Diagnosing the System for Organisations*. London: John Wiley & Sons.
- . 1989. "National government: disseminated regulation in real time, or 'How to run a country'." Pp. 333-360 in *The Viable System Model: Interpretations and Applications of Stafford Beer's VSM*, edited by Raúl Espejo and Roger Harnden. Chichester: John Wiley & Sons.
- . 1994. *Brain of the Firm*. Chichester: John Wiley & Sons.
- Beniger, James R. 1986. *The Control Revolution: Technological and Economic Origins of the Information Society*. Cambridge, MA: Harvard University Press.
- . 1990. "Conceptualizing information technology as organization and vice versa." Pp. 29-45 in *Organization and Communication Technology*, edited by Janet Fulk and Charles Steinfield. Newbury Park, CA: SAGE Publications.
- Bennis, Warren, and Philip E. Slater. 1964. "Democracy is Inevitable." *Harvard Business Review*.
- Berger, Lee R. 2000. *In the Footsteps of Eve: The Mystery of Human Origins*. New York: Simon & Schuster.
- Biggiro, Lucio. 1999. "Entrepreneurial Networks: The Construction of Identity as a Self-organizing Process." in *SOEIS Project of TSER European Program*.
- . 1999. "Identity and Identification in Industrial Districts." *Journal of Management and Governance*.
- . 1999. "SMEs Networks in Industrial Districts: Do they Create an Identity? Does it Matter?" in *NECSTS'99 Conference on Regional Innovation Systems (Spain)*.
- Bohm, David. 1983. *Wholeness and the Implicate Order*. London: Ark.
- Böhme, Gernot, Wolfgang van den Daele, and Wolfgang Krohn. 1976. "Finalization in Science." *Social Science Information* 15:307-330.
- Brown, Michael Harold. 1990. *The Search for Eve*. New York: Harper & Row.
- Brubaker, Rogers, and Frederick Cooper. 2000. "Beyond "Identity"." *Theory and Society* 29:1-47.
- Burke, Peter J. 1991. "Attitudes, behavior, and the self." Pp. 189-208 in *The Self-Society Dynamic: Cognition, Emotion, and Action*, edited by Judith A. Howard and Peter L. Callero. Cambridge: Cambridge University Press.
- . 1991. "Identity Processes and Social Stress." *American Sociological Review* 56:836-849.
- . 1991. "An Identity Theory Approach to Commitment." *Social Psychology Quarterly* 54:239-251.
- . 1995. "Identities and Self-Verification in the Small Group." *Social Psychology Quarterly* 58:61-73.
- . 1996. "Social Identities and Psychosocial Stress." in *Psychosocial Stress: Perspectives on Structure, Theory, Life Course, and Methods*, edited by Howard Kaplan. Orlando, FL: Academic Press.
- . 1997. "An Identity Model for Network Exchange." *American Sociological Review* 62:134-150.

- Burke, Peter J., and Victor Gecas. 1994. "Self and Identity." in *Sociological Perspectives on Social Psychology*, edited by Karen Cook, Gary Fine, and James House. Boston: Allyn and Bacon.
- Burke, Peter J., and Jan Stets. 1994. "Inconsistent Self-Views in the Control Identity Model." *Social Science Research* 23:236-262.
- Burke, Ronald J., and Cary L. Cooper. 2000. *The Organization in Crisis: Downsizing, Restructuring, and Privatization*. Oxford: Blackwell Publishers.
- Burke, W. Warner. 1980. "Systems Theory, Gestalt Therapy, and Organization Development." Pp. 209-222 in *Systems Theory for Organizational Development*, edited by Thomas G. Cummings. New York: Wiley-Interscience.
- Buss, Leo W. 1987. *The Evolution of Individuality*. Princeton, NJ: Princeton University Press.
- California. Commission on Local Governance for the 21st Century, Susan Golding, Ruben Barrales, and Jacqueline Bacharach. 2000. *Growth within bounds: planning California governance for the 21st century*. Sacramento, Calif.: The Commission.
- Cloete, A., and G. G. Jaros. 1989. "The Biomatrix: Optimisation and Efficiency of Teleons." in *Advances in Systems Research and Cybernetics*, edited by G. E. Lasker. Windsor, Ontario: International Institute for Advanced Studies in Systems Research and Cybernetics.
- Coghill, Ken. 2002. "Governance for Uncertain Times." Cambridge University.
- Coleman, James. 1991. "Prologue: Constructed Social Organization." Pp. 1-14 in *Social Theory for a Changing Society*, edited by James Coleman and Pierre Bourdieu. Boulder, CO: Westview Press.
- Collins, Randall. 1975. *Conflict Sociology: Toward an Explanatory Science*. New York: Academic Press.
- Cooper, David Graham. 1971. *The Death of the Family*. New York: Pantheon Books.
- Corning, Peter A. 1971. "The Biological Bases of Behavior and Some Implications for Political Science." *World Politics* 23:321-370.
- . 1983. *The Synergism Hypothesis: A Theory of Progressive Evolution*. New York: McGraw-Hill.
- . 1996. "Synergy, Cybernetics and the Evolution of Politics." *International Political Science Review* 17:91-119.
- Csikszentmihalyi, Mihaly. 1990. *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.
- . 1993. *The Evolving Self: A Psychology for the Third Millennium*. New York: Harper & Row.
- Curtin, Deirdre. 1997. *Postnational Democracy: The EU in Search of a Political Philosophy*. Dordrecht: Kluwer.
- . 2002. "Non-Governmental Representation v. Civil Society Deliberation: A Contemporary EU Governance Dilemma." University of Utrecht: Europa Institute.
- Czarniawska, Barbara. 1997. *Narrating the Organization: Dramas of Institutional Identity*. Chicago: University of Chicago Press.
- Dalal, Farhad. 1998. *Taking the Group Seriously: Towards a Post-Foulkesian Group Analytic Theory*. London: Jessica Kingsley.
- de Chardin, Teilhard. 1964. *The Future of Man*. London: Collins.
- . 1977. *The Phenomenon of Man*. London: Collins.

- de Saussure, Ferdinand. 1974. *Course in General Linguistics*. London: Fontana/Collins.
- de Swaan, Abram. 2001. *Human Societies: An Introduction*. Cambridge: Polity Press.
- Della Salla, Vincent. 2001. "Constitutionalising Governance: Democratic Dead End or Dead on Democracy?"
- Dennett, Daniel C. 1996. *Kinds of Minds: Towards an Understanding of Consciousness*. London: Phoenix.
- Dor, Joël. 2000. *Introduction to the Reading of Lacan: The Unconscious Structured like a Language*. New York: Other Press.
- Douglas, Mary. 1978. *Cultural bias*. London: Royal Anthropological Institute.
- . 1982. *In the Active Voice*. London: Routledge & Kegan Paul.
- Drucker, Peter F. 1993. *Post-Capitalist Society*. Oxford: Butterworth Heinemann.
- . 1996. "The Coming of the New Organization." Pp. 3-14 in *Fast Forward: The Best Ideas on Managing Business Change*, edited by James Champy and Nitin Nohria. Cambridge: Harvard Business Review.
- Dunbar, Robin. 1995. *The Trouble with Science*. London: Faber and Faber.
- Edelman, Gerald. 1992. *Bright Air, Brilliant Fire: On the Matter of the Mind*. London: Penguin Books.
- Egeberg, Morton. 2000. "The Organisational Dimension of Integration in the EU (and Elsewhere)." in *ARENA Working Papers WP 00/10*. University of Oslo: Department of Political Science.
- Elias, Norbert. 1978. *What is Sociology?* London: Hutchinson.
- . 1991. *The Society of Individuals*. Oxford: Basil Blackwell.
- . 2000. *The Civilizing Process: Sociogenetic and Psychogenetic Investigations*. Oxford: Basil Blackwell.
- Ellestad, J., and J. E. Stets. 1998. "Jealousy and parenting: Predicting emotions from identity theory." *Sociological Perspectives* 41:639-668.
- Espejo, Raúl. 1989. "A Cybernetic Method to Study Organizations." Pp. 361-382 in *The Viable System Model: Interpretations and Applications of Stafford Beer's VSM*, edited by Raúl Espejo and Roger Harnden. London: John Wiley & Sons.
- Espejo, Raúl, and Roger Harnden. 1989. *The Viable System Model: Interpretations and Applications of Stafford Beer's VSM*. London: John Wiley & Sons.
- Etzioni, Amitai. 1976. "Towards a General Theory of Guiding Societies." Pp. 97-104 in *Sociotechnics*, edited by Albert Cherno and Ruth Sinclair. London: Malaby Press.
- Foulkes, Elizabeth. 1990. *Selected Papers of S.H. Foulkes: Psychoanalysis and Group Analysis*. London: Karnac Books.
- Foulkes, S. H. 1973. "The Group as Matrix of the Individual's Mental Life." in *Group Therapy: An Overview*, edited by L. R. Wolberg and E. K. Schwartz. New York: Intercontinental Medical Books.
- Foulkes, S. H., and G. Stewart Prince. 1969. *Psychiatry in a Changing Society*. London: Tavistock Publications.
- Fox, Elliot M., and L. F. Urwick (Eds.). 1982. *Dynamic Administration: The Collected Papers of Mary Parker Follett*. New York: Hippocrene Books.
- Franck Thomas, M. 1999. *The empowered self: law and society in the age of individualism*. Oxford: Oxford University Press.
- Freese, Lee, and Peter J. Burke. 1994. "Persons, Identities and Social Interaction." Pp. 1-24 in *Advances in Group Processes*, edited by Barry Markovsky. Greenwich, CT: JAI Press.

- Fukuyama, Francis. 1999. *The Great Disruption: Human Nature and the Reconstitution of the Social Order*. London: Profile Books.
- Gabor, Dennis. 1964. *Inventing the Future*. Harmondsworth: Penguin Books in association with Secker & Warburg.
- Garfinkel, Harold. 1967. *Studies in Ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.
- Geyer, Felix, and Johannes van der Zouwen. 1996. "Cybernetics and Social Science - Theories and Research in Sociocybernetics." *Kybernetes* 25:59-59.
- Giddens, Anthony. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.
- Glasser, William. 1976. *The Identity Society*. New York: Harper & Row Perennial Library.
- Goffman, Erving. 1967. *Interaction Ritual: Essays on Face-to-Face Interaction*. New York: Pantheon.
- . 1969. *The Presentation of Self in Everyday Life*. Harmondsworth: Penguin Books.
- Grimshaw, A. D. 1998. "Narrating the organization: Dramas of institutional identity." *Contemporary Sociology-A Journal of Reviews* 27:262-263.
- Habermas, Jürgen. 1970. "On Systematically Distorted Communication." *Inquiry* 13:205-218.
- . 1971. *Toward a Rational Society: Student Protest, Science and Politics*. London: Heinemann Educational.
- Harnden, Roger. 1989. "Outside and Then." Pp. 283-404 in *The Viable System Model: Interpretations and Applications of Stafford Beer's VSM*, edited by Raúl Espejo and Roger Harnden. London: John Wiley & Sons.
- Héritier, Adrienne. 2001. "New Modes of Governance in Europe: Policy-Making without Legislating?" Vienna: Renner Institut.
- Hirschman, Albert O. 1977. *The Passions and the Interests: Political Arguments for Capitalism before Its Triumph*. Princeton, NJ: Princeton University Press.
- Hoggart, Richard. 1958. *The Uses of Literacy: Aspects of Working-Class Life with Special Reference to Publications and Entertainments*. Harmondsworth, Middlesex: Penguin Books in association with Chatto and Windus.
- House, R., D. M. Rousseau, and M. Thomas-Hunt. 1995. "The Meso Paradigm: A framework for the integration of micro and macro organizational behavior." Pp. 71-114 in *Research in Organizational Behavior*, edited by L. L. Cummings and B. M. Staw. Greenwich, CT: JAI.
- Huber, E., and J. D. Stephens. 2000. "Partisan governance, women's employment, and the social democratic service state." *American Sociological Review* 65:323-342.
- Jaros, G. G., P. C. Belonje, and H. Breuer. 1987. "Biological Systems: A General Approach." Pp. 73-115 in *Control and Dynamic Systems*, edited by C. T. Leondes. London: Academic Press.
- Jaros, G. G., and A. Cloete. 1987. "Biomatrix: the web of life." *World Futures* 23:215-236.
- . 1990. "The Biomatrix: The Web of Purposeful Processes or Teleons." in *Advances in Education and Human Development II: Social Systems and Processes*, edited by T. Koizumi and G. E. Lasker. Windsor, Ontario: International Institute for Advanced Studies in Systems Research and Cybernetics.
- . 1993. "Teleonics: The Science of Purposeful Processes." in *The Ethical Management of Science as a System*, edited by R. Peckham. Louisville, KY: The International Society for the Systems Sciences.

- Jessop, Bob. 1995. "The regulation approach, governance and post-Fordism: alternative perspectives on economic and political change?" *Economy and Society* 24:307-333.
- . 2001. "The Governance of Complexity and the Complexity of Governance: Preliminary Remarks on some Problems and Limits of Economic Guidance." Kaufmann, Franz-Xaver (Ed.). 1991. *The Public Sector: Challenge for Coordination and Learning*. Berlin: De Gruyter.
- Knorr-Cetina, Karin. 1997. "Sociality with Objects: Social Relations in Postsocial Knowledge Societies." *Theory, Culture & Society* 14:1-30.
- Kooiman, Jan. 2000. "Societal Governance." Pp. 136-166 in *Debating Governance*, edited by J. Pierre. Oxford: Oxford University Press.
- . 2001. "Governance: A Social-Political Perspective."
- Kramer, R. M. 1993. "Cooperation and Organizational Identification." Pp. 244-268 in *Social Psychology in Organizations: Advances in theory and research*, edited by J. Keith Murnighan. Englewood Cliffs, NJ: Prentice Hall.
- La Porte, Todd (Ed.). 1975. *Organized Social Complexity: Challenge to Politics and Policy*. Princeton, NJ: Princeton University Press.
- Laing, R. D. 1976. *The Politics of the Family, and other essays*. Harmondsworth: Penguin Books.
- Laing, R. D., and Aaron Esterson. 1970. *Sanity, Madness and the Family: Families of Schizophrenics*. London: Tavistock.
- Leeming, W. 1997. "Revisiting Finalization." *Social Science Information* 36:387-410.
- Livingston, William L. 1985. *The New Plague*. Bayside, NJ: FES Publishing.
- Luhmann, Niklas. 1985. "Complexity and Meaning." Pp. 99-104 in *The Science and Praxis of Complexity*, edited by S. Aida. Tokyo: United Nations University.
- Marcuse, Herbert. 1968. "Industrialization and Capitalism in the Work of Max Weber." Pp. 201-226 in *Negations*. Harmondsworth: Allen Lane The Penguin Press.
- Marsden, T. 2000. "Food matters and the matter of food: Towards a new food governance?" *Sociologia Ruralis* 40:20-29,157.
- Maturana, Humberto R., and Francisco J. Varela. 1980. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht: Reidel.
- . 1992. *The Tree of Knowledge: The Biological Roots of Human Understanding*. Boston: Shambala.
- Mead, George Herbert, and Charles William Morris. 1974. *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*. Chicago: University of Chicago Press.
- Meyer, John W., W. Richard Scott, and David Strang. 1987. "Centralization, fragmentation, and school district complexity." *Administrative science quarterly* 32:186-201.
- Mitchell, Alan. 2002. *Right Side Up: Building Brands in the Age of the Organised Consumer*. London: HarperCollins.
- O'Connell, Sanjida. 1997. *Mindreading: An investigation into how we learn to love and lie*. London: Heinemann.
- Ortega y Gasset, José. 1932. *The Revolt of the Masses*. London: G. Allen & Unwin Ltd.
- Paquet, Gilles. 2002. "Introduction to Governance." *ADM*.
- Perrow, Charles. 1979. *Complex Organizations: A Critical Essay*. Glenview, IL: Scott, Foresman and Company.
- . 1991. "A Society of Organizations." *Theory and Society* 20:725-762.

- Peters, B. Guy. 1998. "Managing Horizontal Government: The Politics of Co-Ordination." *Public Administration* 76:295-311.
- Peters, B. Guy, and Jon Pierre. 2001. "Developments in intergovernmental relations: towards multi-level governance." *Policy and Politics* 29:131-5.
- . 2002. "Multi-Level Governance: A Faustian Bargain?"
- Powelson, John P. 1994. *Centuries of Economic Endeavor: Parallel Paths in Japan and Europe and their Contrast with the Third World*. Ann Arbor, MI: University of Michigan Press.
- Powers, William T. 1973. *Behaviour: The Control of Perception*. New York: Aldine de Gruyter.
- Putnam, Robert D. 1995. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6:65-78.
- . 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Rhodes, R. A. W. 1996. "The New Governance: Governing without Government." *Political Studies* 44:652-667.
- . 1997. *Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability*. Oxford: Oxford University Press.
- Roberts, J. P. 1982. "Foulkes' Concept of the Matrix." *Group Analysis* XV:111-126.
- Robertson, Roland, and Burkart Holzner (Eds.). 1980. *Identity and Authority: Explorations in the Theory of Society*. Oxford: Basil Blackwell.
- Rosen, Robert. 1985. *Anticipatory Systems: Philosophical, Mathematical and Methodological Foundations*. Oxford: Pergamon.
- Sabel, Charles. 1996. *Ireland: Local Partnerships and Social Innovation*. Paris: OECD.
- Sassen, S. 2000. "Digital networks and the state - Some governance questions." *Theory Culture & Society* 17:19-33,156.
- Schäfer, Wolf. 1983. *Finalization in Science: The Social Orientation of Scientific Progress*. Amsterdam: Reidel.
- Scheff, Thomas J. 1990. *Microsociology: Discourse, Emotion and Social Structure*. Chicago: University of Chicago Press.
- . 1997. *Emotions, the Social Bond, and Human Reality: Part/Whole Analysis*. Cambridge: Cambridge University Press.
- Schmookler, Andrew Bard. 1995. *The Parable of the Tribes: The Problem of Power in Social Evolution*. Albany, NY: State University of New York Press.
- Sen, Amartya. 1999. *Development as Freedom*. Oxford: Oxford University Press.
- Shotter, John, and Kenneth J. Gergen. 1989. *Texts of Identity*. London: SAGE Publications.
- Simmons, R. W., K. Smith, E. Erez, J. P. Burke, and R. E. Pozos. 1998. "Balance retraining in a hemiparetic patient using center of gravity biofeedback: A single-case study." *Perceptual and Motor Skills* 87:603-609.
- Skinner, B. F. 1973. *Beyond Freedom and Dignity*. Harmondsworth: Penguin Books.
- Somers, Margaret R. 1994. "The Narrative Construction of Identity: a relational and network approach." *Theory and Society* 23:605-649.
- Stark, David. 2000. "For a Sociology of Worth." in *Working Paper*. Columbia University: Center on Organizational Innovation.
- Staw, B. M., and R. I. Sutton. 1993. "Macro Organizational Psychology." Pp. 350-384 in *Social Psychology in Organizations: Advances in theory and research*, edited by J. Keith Murnighan. Englewood Cliffs, NJ: Prentice Hall.

- Stets, Jan E. 1993. "Control in Dating Relationships." *Journal of Marriage and the Family* 55:673-685.
- . 1995. "Modelling Control in Relationships." *Journal of Marriage and the Family* 57:489-501.
- Stokes, Paul A. 2003. "Finalization, Cybernetics and the Possibility of a Social Science." Pp. 319 + bibliography + front matter in *European Business Management School*. Swansea: University of Wales.
- Sykes, Bryan. 2001. *The Seven Daughters of Eve: The Science that Reveals our Genetic Ancestry*. New York: WW Norton & Company.
- Tainter, Joseph A. 1988. *The Collapse of Complex Societies*. Cambridge: Cambridge University Press.
- . 1995. "Sustainability of Complex Societies." *Futures* 27:397-407.
- Tajfel, Henri. 1981. *Human groups and social categories: studies in social psychology*. Cambridge Cambridgeshire; New York: Cambridge University Press.
- . 1981. "Social Stereotypes and Social Groups." in *Intergroup Behaviour*, edited by J. C. Turner and H. Giles. Oxford: Blackwell.
- . 1982. *Social Identity and Intergroup Relations*. Cambridge: Cambridge University Press.
- Turchin, V. F. 1977. *The Phenomenon of Science*. New York: Columbia University Press.
- Turner, Jonathan H. 1988. *A Theory of Social Interaction*. Stanford, CA: Stanford University Press.
- Vickers, Geoffrey. 1972. *Freedom in a Rocking Boat: Changing Values in an Unstable Society*. Harmondsworth: Pelican Books.
- Volk, Tyler. 1995. *Metapatterns: Across Space, Time, and Mind*. New York: Columbia University Press.
- Warleigh, Alex. 2000. "Beyond the Functional-Ideational Gap: From Network Governance to Network Democracy in the European Union?" *Civic 2000* 2.
- Weingart, P. 1997. "From 'Finalization' to 'Mode 2': Old Wine in New Bottles?" *Social Science Information* 36:591-613.
- Whetten, David A., D. Lewin, and L. J. Michael. 1992. "Towards an integrated model of organizational identity and member commitment." in *Annual General Meeting of the Academy of Management, Las Vegas*.
- White, Harrison C. 1992. *Identity and Control: A Structural Theory of Social Action*. Princeton, NJ: Princeton University Press.
- Whitney-Smith, Elin. 1991. "Information Technology and Wealth: Cybernetics, History and Economics." Old Dominion University.
- Wiener, Norbert. 1948. *Cybernetics: or control and communication in the animal and machine*. New York: John Wiley & Sons.
- Wilden, Anthony. 1980. *System and Structure: Essays in Communication and Exchange*. London: Tavistock.
- Zuboff, Shoshana. 1988. *In the Age of the Smart Machine: The Future of Work and Power*. Oxford: Heinemann.
- Zuboff, Shoshana, and James Maxmin. 2003. *The Support Economy: Why Corporations are Failing Individuals and the Next Episode of Capitalism*. London: Allen Lane The Penguin Press.

* Thanks to Margeret Heath, Luc Hoebeke and John Clarke for their helpful suggestions.