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Network Society

Like moths to a flame, ambitious minds seek out the spirit of their age. A spirit is a vital or animating principle: in the enchanted vocabulary of the ancient faiths, spirit comports with the soul and is ageless; in the enlightened vocabulary of modern science, the term spirit names a motive force particular in time and place. Thus, the political economist Max Weber, searching in 1904 for the ‘spirit of capitalism’, employs distinctly modern language in describing spirit as ‘an historical individual, i.e. a complex of elements associated in historical reality which we unite into a conceptual whole from the standpoint of their cultural significance’ (1958: 47). Weber understood both the religious and the secular dimensions of spirit but, as a social scientist, his aim was to gather the particularities of his historical situation and abstract from these a *concept* that would articulate the principle animating human practices and relationships in that moment. Weber’s great insight was his conceptualization of modernity as an ‘iron cage’ populated by ‘specialists without spirit; sensualists without heart’ (1958: 182). The spirit of industrial capitalism was, in Weber’s estimation, *spiritlessness*: modernity culminates when ascetic devotion to profit as an end in itself recedes into a rather vulgar and progressive technological materialism. The principle animating the modern world is revealed by an eclipse of faith in the possibility of a transcendent animating principle. Paradoxically, the spirit that

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breathes life into modern industrial society also drives the spirit out of the human soul.

Few moths have come as close to the flame, or captured the spirit of their age so precisely, as Weber did his. Nevertheless, there have been attempts. Presently, one of the more ambitious and intriguing efforts to conceptualize the spirit of the contemporary era is gathered under the phrase 'the network society'. In simple terms, this thesis asserts that the spirit of our age is the spirit of the network: the constitutive principles of networks have become the animating force of individual, social, economic and political life, and this marks the distinction of our period in history. Manuel Castells, the Catalunyan sociologist whose three-volume study of the economy, society and culture of the information age was a singular moment in the articulation of this idea (1996; 1997; 1998), puts the matter as follows: 'as a historical trend, dominant functions and processes are increasingly organized around networks. Networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power and culture' (1996: 469).

The word 'network' describes a structural condition whereby distinct points (often called 'nodes') are related to one another by connections (often called 'ties') that are typically multiple, intersecting and often redundant. A network exists when many nodes (people, firms, computers) are linked to many other nodes, usually by many ties which cross the ties connecting other nodes. Numerous metaphors have been used to describe this type and configuration of relationship – indeed, 'network' itself is one of these – including 'lattice', 'web' and 'matrix', all of which seek to evoke the logic of decentralized, proliferating connectivity which defines the essence of a network. The matrix metaphor is particularly apt in light of what is conceived by the network society thesis. Matrix derives from the Latin *mater* for 'mother' and carries 'womb' as its primary meaning: the possibility is that networks are the womb from which a qualitatively new form of society is being born, a society in which identity, politics and economy are structured, and operate, as networks. This is what is at issue in the idea of the network society, and a

critical investigation of this concept, in its various dimensions, is the object of this book.

Later in this chapter, I will return to a closer examination of the nature of the network form, an elaboration of the core elements of the network society thesis, and a brief consideration of how these elements ramify in terms of economics, politics and identity in a holistic account of contemporary society. Before doing this, however, I think it would be helpful to situate the network society thesis in relation to a number of the discourses and theories which have risen to prominence (in some cases, only to fade) in the latter decades of the twentieth century, as theorists have attempted to capture and designate the fluctuating social, political and economic dynamics of this historical juncture.

What is in a name?

The power attached to naming something is considerable. In the Christian account of Creation, God gives to Adam the power to name other creatures, and this constitutes a significant aspect of his dominion over them (Genesis 3:19–20). Thomas Hobbes, in his seventeenth-century masterwork *Leviathan*, asserts that it is names which universalize particulars, and which constitute truth when they are ordered in human affirmations (1968: 102, 105). Thus, to name something is to express dominion over it, to constitute it as true, which are no small powers. Those who attempt to name an age seek to unify or gather its particularities, to establish the truth about it, and to exert some control over its dynamic forces by understanding these to the point of being able to nominate them comprehensively and persuasively. That being said, there is considerable variation amongst these efforts. In some cases, the names assigned to ages are *ideological* insofar as they describe the world as those conferring the name would like it to be in their fondest imaginings. Names such as the Enlightenment, or the Knowledge Society, arguably fall into this category. In other cases, the names seek more objective, disinterested description in the highest tradition of sociology. Sometimes the names result from comprehensive

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meditation on historical periods that have long since passed; in some cases, those who would name an age apply themselves to the present or, more perilously, to prospecting the future. Finally, various epochal names emphasize variables that differ in kind – some speak to the organization of economic production and relationships (the Industrial Age), some to political activities (the Age of Revolution), others to social structures (the Mass Society).

The period leading to the millennial turn has not suffered from a lack of attempts to name it as an age. James Beniger, in his book *The Control Revolution* (1986), lists no fewer than seventy-five distinct appellations in scholarly and popular circulation between 1950 and 1985, each of which attempted to characterize what were perceived to be definitive and transformative aspects of the period – a flurry of naming which leads one to wonder whether history, in its cunning, will perhaps look back and finally designate ours as the Age of Nomination. The network society thesis is part of this galaxy of recent attempts to capture decisively that of which we are in the midst, and our understanding of it as a discrete concept will benefit from considering the constellation of discourses to which it is related most closely, both conceptually and historically. In this section I would like to focus particular attention on the following discourses of nomination: post-industrialism; information society; post-Fordism; postmodernism; and globalization.

It should be stressed at the outset that each of these phrases, including the ‘network society’, gathers an array of efforts to articulate the definitive spirit of whatever it is that follows either the realization or the exhaustion of the modern project in the West. In the Western world, modernity has been, among other things, the age of technological industrialism, class divisions, mass societies and markets, conflicting ideologies, and political authority organized at the level of territorial, sovereign nation-states. Whether this period has waned, is in its twilight or has been eclipsed is the subject of profound, but unresolved, intellectual debate and speculation. What is certain is that fluctuations and deviations have been detected in various aspects of this trajectory, and each of these detections has been graced with a name of its own.

Post-industrialism

Industrialism was spawned in the eighteenth century, matured in the nineteenth and culminated in the twentieth. At its core was a set of productive practices which brought with them, and relied upon, a particular range of social arrangements: industrialism was characterized by the mine and factory, the urban city, class divisions and mass consumer markets. Motivated by the appetites of a bourgeois class liberated from the constraints of feudal property relations (in the capitalist model) or the rational egalitarianism of a vanguard elite uncorrupted by self-interest (in the socialist model), and animated by the labour of a working class transformed from a rural peasantry into an urban proletariat, 'industrialism' named the economic face of modernity. The principle of industrialism as an economic model was quite simple: apply human labour (either directly or technologically) to the transformation of basic matter into products which could be circulated and consumed – profitably as marketable commodities in the capitalist model; equitably as centrally distributed collective wealth in the socialist model. Industrialism sought perfection along a number of axes, including the mechanization, rationalization and standardization of production; increased power generation; efficient exploitation of an increasing array of natural resources; and the organization of national mass markets for the consumption of its output (Landes 1969). Industrial production was the engine that generated the enormous economic wealth – inequitably distributed though it may have been in both capitalist and communist societies – which has adorned the modern West.

Theories of post-industrialism attempted to express the transition of industrial economies and societies into what was, at the time, an unknown future. As the 1960s gave way to the 1970s, and the welfare state accelerated its development in many capitalist countries, writers such as Alain Touraine (1971) and Daniel Bell (1973) strove to articulate what they saw as a definitive shift in the industrial paradigm. For these theorists, several crucial dynamics combined to signal a transformation. These included a diversion of the

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energies of post-industrializing societies away from material manufacturing and towards service provision as their primary economic activity and source of wealth, and a corresponding focus of attention on the exploitation of information and knowledge, as opposed to labour and capital, as crucial economic resources. As Bell wrote, 'A post-industrial society is based on services . . . what counts is not raw muscle power or energy, but information' (1973: 127). This reorientation towards service industries (trade, finance, transport, retailing, health, recreation, research, education, government) was accompanied by the growth of white-collar service occupations relative to blue-collar jobs in industrial manufacturing. Thus, in the post-industrial society, the basis of social and economic stratification would no longer be a property relation turning on ownership of the means of production, but rather control over systemic information and knowledge: a new class of technocrats, managers, professional engineers and scientists would replace the owners of factories and mines at the top of the social and political hierarchy, and those executing the more menial tasks of service delivery would replace the industrial proletariat at its bottom. As we will see, an updated version of this part of the post-industrial thesis is central to accounts of the network society.

Some theorists of post-industrialism, such as Bell, saw in this shift the potential to overcome the more degrading and unjust aspects of the industrial era. Images of the post-industrial future were characteristically infused with heady optimism: post-industrial society, it was imagined, would bring with it a more educated, leisured and engaged citizenry, a levelling of economic inequality, a thriving global economy, scientific advance immune to ideology, and rational management of public affairs. There were, however, others – including Touraine (1971), Herbert Marcuse (1964) and Jacques Ellul (1964) – who saw in post-industrialism the harbinger of a 'programmed' or 'one-dimensional' society which would deepen the alienation of capitalism, in which human life would increasingly be subjected to domination and irrational exploitation masquerading as objectively rational technique. Thus, the differences between industrial and post-industrial society were differences in degree – of the sophistication of domination and the depth of alienation – rather than kind.

Yet another body of opinion challenged the theory of post-industrialism on a more empirical level. In their influential book *Manufacturing Matters*, Stephen Cohen and John Zysman (1987: 261) contended that 'There is no such thing as a post-industrial economy.' In the view of these authors and others (see Woodward 1980), post-industrialism named an ideology, not an economic reality. While it was undeniable that micro-electronics technologies were having considerable effects on production practices, the shift away from manufacturing towards service was, in this view, wildly exaggerated, as were claims regarding a 'revolution' in the basic practices and relationships of industrial capitalism. In short, according to these critics, to the extent a socio-economic shift was occurring, it was not a shift from industry to service or knowledge, but rather simply a transition 'from one kind of industrial society to another' (Cohen and Zysman 1987: 260).

Information society

The fortunes of post-industrialism were dashed upon the energy crisis and ensuing recessions in the Atlantic economies during the 1970s. Around the same time, Japanese scholars and policy-makers were beginning to sketch the contours of a model for society and economy which revolved specifically around the increasingly flexible functionality of microcomputers. The name chosen for this model was *joho shakai*, which translates roughly as 'information society'. In many ways, the information society model represents an echo of the theory of post-industrialism, albeit one with a sharper articulation of the role of computing technology and knowledge in the abstract form of information. As imagined by Japanese futurist Yoneji Masuda (1981) *joho shakai* would replace the production of 'material values' with the mass production and circulation of 'information values'. At the core of the information society would be the computer, the fundamental economic function of which would be to augment and replace mental labour, yielding increased leisure and new information-based industries. In social and political terms, information societies would feature voluntary com-

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munities, participatory democracy, generalized affluence, equality and psychic well-being; the information society would be, in Masuda's vision, a 'Computopia' in which a person could 'paint one's own design on the invisible canvas of one's future, and then set out to create it' (Masuda 1981). As we will see in chapter 5, these themes remain significant in discussions of identity in the network society.

By the late 1970s, as the decade's economic downturn continued, intellectuals in Europe and North America were beginning to consider seriously the new Japanese approach to maintaining productivity and growth. In the United States, Marc Porat published a study entitled *The Information Economy* (1977) in which he attempted to define and measure the contours of the information sector – including the nature of its workforce and occupational structure – and its ancillary activities. Porat's findings indicated that, by as early as 1967, 'information activities' accounted for 46 per cent of the United States's gross national product, and 'information workers' comprised 40 per cent of the country's labour pool (Porat 1977: 8). There was certainly debate over the integrity and definition of Porat's categories, but here was persuasive empirical evidence that 1970s America was *already* an Information Society. Notable theorists of post-industrialism such as Daniel Bell (1979) began to rearticulate their analyses in the language of computerization and information. In 1978, Simon Nora and Alain Minc published *L'Informatisation de la Société*, translated as *The Computerization of Society* (1981), a report on computerization for the French government. In it they surmised that the 'increasing interconnections between computers and telecommunications' would 'alter the entire nervous system of social organization... open radically new horizons... [transform] the pattern of our culture... affect the economic balance, modify power relationships, and increase the stakes of sovereignty' (Nora and Minc 1981: 3–4). The report went on to recommend both vigorous state action in this field – 'standardizing the networks, launching communications satellites, and creating data banks' – and a willingness to decentralize 'when the needed changes require other groups to take the initiative' (Nora and Minc 1981: 6, 9).

Ideas surrounding the 'information society' quickly transcended their roots in utopian idealism and disinterested social science, and by the 1980s took the form of a distinct revolutionary doctrine. As Nick Dyer-Witheford (1999: 22–6) has characterized it, this doctrine has seven elemental beliefs: that the world is in a state of fundamental transition/upheaval, similar in kind and intensity to that experienced in the shift from agrarian to industrial society in the nineteenth century; that the crucial resource of the new society is knowledge/information; that the primary dynamic force in this revolution/society is technology development and diffusion; that the generation of wealth in the information economy has eclipsed that of the material/manufacturing economy; that the social transformation accompanying these technical and economic changes is essentially positive; that the information revolution – technical, economic and social – is planetary in scale; that the information revolution is not only a new phase in human *civilization* but also an evolutionary step forward for *life itself*. We could add to this list a firm conviction that the information revolution is irresistible and irreversible. Of course, the primary technological driver of the information society (and its rhetoric) was/is the personal computer, which, in the 1980s, shed its rarity and began its maturation into an everyday mass appliance.

Theories of the information society thus extended theories of post-industrialism, modifying them to reflect the rapidly expanding role played by computing and digitized information in the mediation of an increasing array of social, political and economic activities. As with post-industrialism, theories heralding the arrival of the information society were not without critics (Traber 1986). Much of this criticism questioned the accuracy of labelling as 'revolutionary' a series of technologically driven dynamics which not only left intact the foundational logic, practices and relationships of liberal-democratic capitalism, but also entrenched them. Some critics argued that the distinction between the information and industrial economies was a false one, and preferred instead to regard computerization as simply part of, or at best a phase-shift within, well-established industrial production regimes. Others pointed to the failure of this revolution to

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redistribute political power and knowledge, or to reconfigure the possibilities of participation in a substantial way, either within or between societies (Leiss 1989). Most fundamentally, it was clear to many observers that the development of new information technologies and practices occurred under the logic of the market, and were simply instrumental to the reproduction of capitalist relations of production more generally, empowering existing elites and perpetuating the disempowerment of the working class (Lyon 1988; Robins and Webster 1988; H. Schiller 1986). The combined effect of these critiques was a growing sensitivity to the ideological and mythological character of the discourse surrounding the information society.

Post-Fordism

The network society thesis is closely connected to the constellation of theories and analyses which arose in the 1980s under the banner of 'post-Fordism' (Amin 1994). The roots of this discourse lie in the Regulation School of political economy, specifically the work of Michel Aglietta (1979) and Alain Lipietz (1987), who sought to provide a model for understanding the historical resilience of the capitalist mode of production. These thinkers rejected the orthodoxies which stipulated that capitalism was a static phenomenon, historically destined to collapse under the weight of its own contradictions. Instead, the Regulation School conceived of capitalism as a succession of 'regimes of accumulation' comprised of complementary production, consumption and regulatory configurations: a regime of accumulation combines a particular way of producing goods, a particular construction of the consumer market for these goods, and a particular role for state regulation of the market economy.

Fordism, the accumulation regime which prevailed from the late nineteenth to the mid-twentieth century, bears the name of Henry Ford, the archetypical American capitalist industrialist, in whose mass production automobile factories – and in the societies which surrounded them – this regime was made manifest. In terms of production processes, the attributes of the Fordist model are well known: mass, often

mechanized, production of highly standardized goods in a very rigid and highly segmented process; human labour reduced to the repetitive execution of highly circumscribed, specialized, routinized tasks which admitted little variation or discretion on the part of the labourer; the replacement of individual judgement and craft by standardized operational principles oriented to maximum efficiency (i.e. the application of Taylorist principles of 'scientific management'). Fordist relations of production featured large numbers of relatively interchangeable wage-labourers gathered into urban masses proximate to sites of production, disciplined variously by the punitive wrath of middle-class managers, the persistent prospect of unemployment, and collective agreements negotiated between capitalists and trade unions. Interestingly, while trade unionism and collective bargaining were institutionalized through this period, in many cases the very qualities which enabled unions to achieve some modicum of security for working people also complemented the organizational logic of the Fordist accumulation regime: strict hierarchy and bureaucratization; rigid, specialized job classifications; separation of the interests of the employed and the unemployed; and a repudiation of radicalism (Harvey 1989: 133–4).

The mass production paradigm of the Fordist regime was paralleled by the creation and maintenance of mass markets able to absorb the surfeit of consumer goods yielded by increasingly productive and efficient manufacturing techniques. Fordist enterprises were very good at converting resources into massive quantities of standardized goods efficiently at a relatively low cost, and commuting this efficiency into profits required the consistent generation of demand for those goods. Goods were thus not the only thing manufactured under the regime of Fordism – it also featured close attention to the manufacture of appetite for these goods; the scientific management of labour and the mass production process was complemented by a parallel effort to manage desire in a culture of mass consumption. New communications technologies and industries (i.e. broadcast radio and television) provided media through which a mass culture of consumption could be manufactured, and the quasi-scientific practices of opinion polling, market research and advertising

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provided means for the management of the mass audience and market (Leiss et al. 1990).

Massive numbers of otherwise discrete individuals could be persuaded by advertisers and Hollywood that they all needed the same cigarettes and automobiles, but profitability under the Fordist regime also required that these masses actually be able to purchase the goods they had been induced to desire. Ensuring this entailed balancing the gains to be made by keeping labour costs low (via automation and low wages) with the need to maintain acceptable levels of purchasing power amongst the consuming class. The crucial role of demand management under the Fordist regime also required that the capitalist state be prepared to intervene to offset cyclical market failures and restore equilibrium. The activist Keynesian welfare state – the definitive state form of the Fordist accumulation regime – accomplished this in a number of ways, including income redistribution, unemployment insurance, labour and market regulation, collectivization of mass education and healthcare costs, and counter-cyclical public spending to prop up demand in times of recession. The centralized, regulatory state completed the Fordist regime by providing stable conditions for mass production and mass consumption within territorially defined national units.

Looking backwards, it could be argued that the first signs of instability in the Fordist regime were the countercultural social movements of the late 1960s, many of which rejected – either explicitly or implicitly – the spirit of mass society. By the mid-1970s, the economic and political foundations of Fordism were coming under similar strain: domestic markets in the advanced economies were reaching saturation, which led to sometimes forcible and politically contentious penetration into foreign markets in search of untapped demand for consumer items; downward pressure on employment and wage levels led to increasing labour unrest and strikes, which in turn led many manufacturers to relocate production operations to jurisdictions where labour was less organized, undercompensated and more easily managed; rising unemployment and inflation outpaced the ability of most welfare states to compensate and stabilize demand. Crucially, during this period it was also becoming more difficult for states to redistribute the diminishing fruits of Fordist prosperity, or to

provide the levels of general welfare (i.e., housing, health care, education) upon which the legitimacy of the Keynesian social contract rested.

The response of capitalist elites and the capitalist state to this crisis can be captured in a single word: *flexibility* – the word most closely associated with the post-Fordist regime of accumulation, and a word that continues to occupy a place of privilege in the economic discourse of the network society (Harvey 1989: 140–72; Piore and Sabel 1984). Drawing direction from the success of east Asian (particularly Japanese) economies in weathering the economic storm of the 1970s, European and North American economies began to restructure with an eye to building flexibility into each of the three elements of the accumulation regime.

Thus, in the realm of production, the flexibilities of so-called ‘Toyotism’ gradually replaced the rigidity of Fordist mass manufacturing: economies of scale were replaced by economies of scope (i.e., elimination of large inventories in favour of ‘just-in-time’ delivery of specialized orders); small batch production of variable product types replaced mass production of standardized goods; integration of production from initiation to finishing and individual multitasking replaced task segmentation; limited individual judgement, craft and skill were reintroduced; Taylorist hierarchical management structures and standardization of operational processes were modified by the flattening of hierarchies and limited decentralization of decision-making by ‘teams’ with increased discretion, better knowledge of the scope of the enterprise, and enhanced responsibility for the ‘quality’ of productive output. This reconfiguration of the productive process necessitated a parallel restructuring of the relations of production and the Fordist industrial workforce: the fully employed mass proletariat was reconfigured into a small and shrinking core group of highly skilled workers and a larger, growing group of non-traditional employment categories (self-employed subcontractors, short-term contract employees, temporary workers, freelancers, part-timers, job sharers, teleworkers). In concert with these shifts has been a dismantling of established, well-defined job classifications and working conditions/compensation arrangements, and a high degree of volatility, insecurity and liquidity in the labour

market. Additionally, qualification in relatively static craft and skill sets has given way to continuous retraining in response to technological innovation in work processes. Together, these measures dramatically increased the flexibility with which labour could be deployed in relation to economic fluctuations and market conditions. Needless to say, this occupational and labour market restructuring was accompanied by decreasing rates of unionization, as well as a diminishing level of power on the part of organized workers and their representatives relative to that which they enjoyed under the Fordist regime – despite the rhetoric of individual and ‘team’ empowerment that attended these changes.

Just as mass consumption complemented the mass productivity of the Fordist regime, so too does the flexible specialization of post-Fordism have a complementary ethic of consumption in what has been characterized as pluralized or individualized consumption behaviour. That the new consumption regime is often described contradictorily as ‘mass customization’ reveals both the realities of scale which linger on in advanced economies despite the eclipse of Fordism, as well as the discursive cunning of the post-Fordist solution to market saturation and exhaustion. Manufacturers in large economies continue to generate massive quantities of consumer goods and services that are more standardized than they are customized – nevertheless some degree of variation in the properties of these goods, particularly when this variation can be rapidly responsive to consumer preferences within a defined range, has proved to be an effective technique for the regeneration and management of demand. Just as the Fordist regime relied on the manufacture of a culture of mass consumption, the post-Fordist regime relies on the continual manufacture of a culture where consumption is at least perceived to be customized, pluralized and specialized. Thus, for example, instead of producing a single type of computer with a fixed set of universal features and marketing this to a single mass of consumers by manufacturing in that mass a homogeneous need, it is now more prudent to produce computers whose attributes can be chosen from within a certain range by a plurality of consumers. Provided that production processes are sufficiently flexible to meet this degree of specialization, the consumption behaviour encouraged under the

post-Fordist regime presents to firms the possibility of a market that continually reproduces itself simply by expressing superficial preferences.

The role of the state under the post-Fordist regime of accumulation is essentially to provide the conditions for flexibility, innovation and competitiveness. Typified by the Thatcher government in the United Kingdom, the Reagan administration in the United States and the Mulroney government in Canada, the post-Fordist state bears little resemblance to its Keynesian forebear. Many of the positions characteristic of these states could be characterized as a retreat of the public role of the state in economic matters. These have included rapid privatization of state enterprises; market deregulation; decentralization of state authority; lowering barriers to the mobility of capital and labour; decreased taxation; and privatization/devolution of social welfare and security delivery. On the other hand, post-Fordist states have played more activist roles in crafting anti-inflationary fiscal and monetary policy, subsidizing research and development pursuant to innovation, funding and constructing the technological infrastructure for enterprise, creating the regulatory conditions for the flexible deployment of labour, and fabricating attractive investment environments to offset the flight of highly mobile capital. The latter set of policies would seem to undermine the ideological fiction that the post-Fordist state is somehow less activist under these new economic conditions, and to suggest rather that the state continues to act, only using different techniques towards somewhat modified ends.

Thus, to recap, the post-Fordist regime of accumulation is said to have accomplished the following transitions: from Taylorism and mass production to flexible specialization; from the mass proletariat to a more flexible labour market; from mass, standardized consumption to pluralized customization; and from the Keynesian welfare state to the neo-liberal competitive state. Theories of post-Fordism have been subject to a variety of criticisms, including charges that they overemphasize discontinuities in capitalist development at the expense of continuities, that they uncritically accept the propaganda of the business elite regarding enterprise restructuring as evidence of a fundamental shift in the organization of work, that they are technologically determinist, and that they

are more concerned with theorizing the continued stability of capitalism than its inherent irrationality and injustice (Pollert 1991). Nevertheless, the dynamics described by the post-Fordist analysis remain central to the network society thesis.

Postmodernism

A fourth discourse that is intimately linked with the network society thesis is that of postmodernism, a notoriously slippery and often obscure collection of theoretical positions that emerged from the writing of leftist intellectuals in France following the student–worker uprisings in the spring of 1968, and subsequently has been elaborated across a broad range of disciplines in the arts, social sciences and humanities (Best and Kellner 1991; Rosenau 1992). The work of writers such as Michel Foucault, Jacques Derrida, Jean-François Lyotard, Jean Baudrillard, Gilles Deleuze and Felix Guattari resonated deeply with the rapidly changing social and economic conditions of the era (Lyon 1994) and inspired a fundamental challenge to the basic categories of Western social and political thought.

As its label suggests, postmodernism comes *after* modern political thought, but this does not mean that it is particularly *anti*-modern, as is sometimes supposed. Indeed, it might be more accurate to describe postmodern thought as *hyper*-modern. At the core of modern political thought lies Thomas Hobbes's assertions that truth and falsehood are a function of names rather than nature, and that power rather than justice is the central preoccupation of political life. Friedrich Nietzsche, whose thought represents the culmination of modern political philosophy, declared that Western society had reached a point where it was 'beyond good and evil' and where moral categories such as these, and truth itself, were rightly understood as historical artefacts contingent upon the operation of human will-to-power. Postmodern thinkers seized on these elements of modern political theory to radically undermine traditional notions of the constitution of truth and reality. In the postmodern view, truth is neither metaphysical unity nor correspondence to the observed material world; it is instead simply the regularized and institu-

tionalized product of human discourse, which is itself an outcome of the operation of power in human relationships. As such, the truth is not a transhistorical, stable standard in light of which practices can be consistently judged; it is rather the deeply historical and contested outcome of those practices themselves – a reflection, rather than a source, of power.

This view of the nature of the truth – what we might label the postmodern *epistemology* or account of knowledge – gives rise to a gamut of concerns and positions which characterize the broader agenda of postmodernism. Common to most postmodern approaches to the study of social phenomena is a heightened awareness of the constructive function of language, and the manner in which language itself encodes and legitimates particular practices and relationships in a given historical context. In this view political struggles are, at their root, textual struggles over language and discourse, and the task of thought is to deconstruct prevailing discursive configurations to reveal the radical contingency at their centre (Derrida 1974). In particular, postmodernists have sought to undermine or at least destabilize the so-called ‘grand’ or ‘meta-’ narratives of history which purport to express something unifying about the human condition (i.e., the historical narratives of Progress, Reason, Enlightenment, Liberty, Class Struggle, etc.) but which in fact do violence to the irreducible particularity of human existence by silencing micro-narratives that are marginal to the story imagined by whichever master narrative happens to be operative at any given time. Thus, postmodernists position themselves as champions of the silenced, marginal, ‘little’ or ‘micro-’ narratives against the totalizing tendencies of the hegemonic, ‘grand’ or ‘meta-’ narratives (Lyotard 1984).

The postmodern assertion of the discursive and narrative qualities of truth has also been elaborated into a set of provocative claims about the status of reality itself. Language, in this view, is not only constructive in its function, but also highly self-referential – as opposed to representational – in operation. That is to say, more than to any concrete objective reality out there in the world, language most often refers to itself; language does not simply represent or symbolize the world, it constitutes a complicated code in which certain elements are internally connected but not obviously linked to

any external, objective reality. Radical postmodernists have seized on this notion to suggest that the status of so-called reality is highly unstable, communicable only through highly subjective applications of symbolic codes that decreasingly refer to any stable ground outside language. Thus, social and political life is now enacted in the realm of hyper-reality, a realm of intense simulation where symbolic exchange no longer refers to an objective reality that is external to that exchange – a world of copies of copies with no original referents, where language no longer simulates reality but rather marks its complete absence as a meaningful category (Baudrillard 1983). This notion of *hyper-reality* – a world of discourse that floats *beyond*, and is indistinguishable from, reality – has had strong purchase in the media-saturated cultures of the affluent West.

Perhaps the closest connection between theories of post-modernism and the network society thesis arises in the context of anti-essentialist conceptions of human identity. Just as postmodernists reject fixed foundations for the truth and stable, objective grounds for claims about reality, so too do they question the premise that there is a relatively stable, coherent, unified centre – whether spiritual or biological – which comprises the essence of selfhood and from which human identity directly emerges. Identities, like truth and reality, are constructed through discourse. They are thus built upon shifting relationships and networks of power, expressed in language practices using the materials provided by, and appropriated in, distinct social, cultural and political configurations. Human identity is thus contested, contextual, multiple, fragmentary and transient – human beings construct multiple selves which appear in sometimes incoherent and contradictory combinations, dependent on contexts which themselves often overlap or are seemingly incommensurable. The self-reflective postmodernist does not ask, *what am I?* Instead s/he asks, *who, or which combination of my selves, am I today, here, in this context, and what is it that makes me that and not someone else?* In this view, rather than something deep and unalterable, the self or identity is the discursive surface upon which a complex network of relationships, symbols and gestures converge to articulate themselves. The question this raises for social or political analysis is that of

figuring out which particular identities are normalized in particular contexts and which are marginalized, and under which constellations of power or conventions of discourse they are assigned that status.

Globalization

The final set of ideas relevant as a foreground to our discussion of the network society coheres around the theme of globalization, which became commonplace in the 1990s. At the core of all theories of globalization is the claim that nation-states are being challenged in their capacity to organize and contain core elements of modern economic, political and social life. The source of this challenge has been a historical dynamic of deterritorialization in each of these three realms: economic activities once relatively contained within national borders are now prosecuted as if borders were non-existent; state political authority once limited only by national geographic boundaries now finds itself also challenged and hedged by international and transnational (sometimes regional, sometimes global) regimes; social practices, identities and solidarities once defined by national purposes and parameters are decreasingly characterized or contained in this way. Correlated with these challenges to the containment capacity of national states is a dynamic of accelerated mobility or 'flow' – of people, commodities, technology and information – across borders. In most analyses, these conditions are described in terms of *decline*: a decline of national economies; a decline of national political sovereignty; a decline of nationally defined social identity and culture.

Economic considerations figure centrally in most accounts of globalization. The historical tendency of capitalist economic activity towards organization and operation at the level of the nation-state has given way in the latter decades of the twentieth century to a centrifugal reconfiguration of capitalism as a transnational phenomenon. This transnationalization has occurred at every level of advanced capitalism. In terms of the mode of production – the foundation of any economy – contemporary capitalism is increasingly organized and executed beyond national contexts, with production

chains, material resourcing, labour pools and strategic ventures straddling multiple and shifting locations across a plurality of national contexts (Ohmae 1990). It is now not uncommon for raw resources from one country to be synthesized in a second into production materials, which are manufactured in a third into components, which are assembled into finished products in a fourth. The transnationalization of production has been driven by the basic desire to take advantage of the most profitable conditions (i.e., regulatory controls, taxation regimes, labour costs) for productive activities in any given moment regardless of location – a desire facilitated when the economic penalties for relocation are relaxed and technologies which enable management and coordination of geographically disaggregated operations are readily available. Complementing this transnationalization of production have been increases in both global trade and foreign direct investment. In 1997, the United Nations Development Program reported that by the mid-1990s global trade had grown to \$4 trillion per year, and foreign direct investment reached a level of \$315 billion (United Nations Development Program 1997). Finance and capital circulation have similarly escaped the constraints of national systems. A number of factors have contributed to the global integration of finance capital: deregulation and liberalization of domestic controls on the flow of capital after the collapse in 1971 of the Bretton Woods agreement on a fixed exchange-rate system in favour of floating exchange rates; invention of a range of new instruments of speculation and investment; and generalization of technologies capable of mediating and coordinating financial transactions globally, on a 24-hour basis. By 1995, global trading in foreign currencies had surpassed a volume of \$1.2 trillion (US) *per day* (United Nations Development Program 1997). Early in its development, Susan Strange coined the phrase ‘casino capitalism’ to name this new, transnational finance economy (Strange 1986), and later she described the speculative, globally circulating currency driving it as ‘mad money’ (Strange 1998).

A crucial element of this global restructuring of capitalism has been the rise, since the Second World War, of several international and supranational agreements, instruments and institutions charged with managing the mercurial flow of people,

commodities and currencies across national borders. The Bretton Woods conference of 1944 (named for the New Hampshire town where it was held) led to the establishment of two institutions – the International Monetary Fund (IMF) and the World Bank – whose purpose was to regulate various aspects of the emerging system of international capitalism (Cohn 2000). Initially, the role of the IMF was to provide short-term loans to bolster the fixed exchange rates of currencies in countries experiencing temporary balance of payment problems; when the system of fixed rates collapsed in the early 1970s, the IMF shifted its emphasis to managing Third World debt. The World Bank was formed to provide long-term loans for postwar reconstruction in Europe; however when much of this reconstruction was instead financed through bilateral aid packages (i.e., the United States’s Marshall Plan) the World Bank turned its attention to economic development in the Third World. In 1947, twenty-three industrialized countries signed the General Agreement on Tariffs and Trade, a structure for opening and managing trade in goods between signatories that was succeeded in 1995 by the World Trade Organization (WTO), whose mandate extended to liberalizing trade in services, intellectual property, and trade-related investment. Still another international body active in this area is the Organization for Economic Cooperation and Development (OECD – the core of which is known as the G8), founded in 1961 as a forum in which industrial nation-states could develop coordinated approaches to common economic problems. The OECD has been a major player in the move to eliminate barriers to the free flow of goods and capital across borders, as exemplified in its drafting and promotion of the ill-fated Multilateral Agreement on Investment (MAI). Supplementing – or perhaps embodying – the work of these institutions has been the proliferation of a range of regional trade and investment organizations (Asia-Pacific Economic Cooperation; Association of Southeast Asian Nations (ASEAN); European Economic and Monetary Union) and bilateral and multilateral regional free-trade agreements (North American Free Trade Agreement; Southern Common Market Treaty (Mercosur); ASEAN Free Trade Area), which together purport to transform the international economy into a global marketplace.

One political consequence of this global liberalization of the capitalist economy has been a deterioration of nation-states' ability to unilaterally manage their economic activities according to exclusively domestic priorities (McGrew and Lewis 1992). States still make and enforce decisions, but they do so in an environment in which their possible courses of action are increasingly hedged by conditions set by international economic institutions and agreements such as those listed above. Whether it is a Third World nation grudgingly conforming to 'structural adjustment' requirements in order to qualify for an IMF loan, or an industrial nation whose efforts to support indigenous industry are deemed an unfair trade and investment practice, the rules of the game of the global economy lead states either to take actions they might not have otherwise, or to refrain from actions and policies they might otherwise have freely chosen to undertake. Sacrificing a certain degree of political autonomy is a condition of admission into the global economy, wherein states compete for market share, rather than for territory. Many see in this sacrifice a decline of the sovereignty of nation-states, as they essentially transfer a great deal of their authority to disembodied agreements and conventions, to largely unaccountable institutions dominated by ruling interests from a narrow selection of wealthy states (the IMF and World Bank have voting systems weighted in favour of rich states, who also set the agendas and dominate the leadership of the WTO and OECD), and to the transnational corporations which find themselves relatively unconstrained in this environment. Under these conditions, states decreasingly resemble centralized bodies capable of enforcing sovereign authority *within* the boundaries of their respective territories, and begin to act more like 'transmission belts' that facilitate the movement of goods and capital *through* their jurisdictions (Cox 1987).

These dynamics have led to the widespread perception that globalization names a set of phenomena that are deeply un- and anti-democratic, constituting a disconnection between the locus of effective power (to the extent such a locus exists in a globalized condition) and the site of citizenship, representation and accountability. In the modern context, these democratic categories have customarily been organized in correspondence with effective political and economic power

at the level of the sovereign nation-state. However, as the political and economic authority of nation-states is restructured and transferred, the organization of democratic citizenship, representation and accountability around national institutions loses its effectiveness. Absent the institutionalization of meaningful citizenship opportunities, effective representation, and legitimate accountability in parallel with the globalization of economic and political power, a democratic crisis ensues. The manifestations of this crisis – captured well in Lou Pauly's provocative question, *Who Elected the Bankers?* (1997) – range from declining rates of participation in national elections across the liberal democracies, to the trivialization of national politics reduced to scandal and spectacle, to the increasingly violent mass demonstrations which now routinely attend meetings of the various international agencies identified as the vanguard of globalization. It is important to be careful not to exaggerate the demise of the sovereignty of nation-states: state governments retain considerable and significant discretion in the formulation and execution of domestic social-policy regimes and even economic-policy regimes and, after all, it is national governments which form, direct and consent to the activities of international agencies and agreements. In light of this, it is worth bearing in mind that while the neo-liberal marketization at the heart of globalization is often taken to signal a retreat of governance, the construction and maintenance of these markets are ever and always the result of policy choices consciously taken by sovereign state governments, choices that could have been made differently. States participate, with varying degrees of willingness and enthusiasm, in the establishment and maintenance of market conditions that allow transnational economic actors to operate and prosper. It is also the case that new structures of global governance – as well as globally organized and globally concerned political movements – are slowly emerging (Held 1995). Whether these will satisfy the democratic aspirations of global citizens remains to be seen.

The dynamics of globalization operate in the cultural arena as well, as the material and practices of identity and community are deterritorialized, and flow across geopolitical borders with increasing ease (Appadurai 1996). Just as the

nation-state's role as a container for political and economic activity has declined, so too has its ability to contain identity, community and culture. Several factors have combined to produce the condition of 'postnationalism' that is often associated with globalization: dramatically increased international migration and a concomitant proliferation of multi-ethnic societies and diasporic communities; the rise of media technologies which facilitate the global distribution and consumption of mass cultural products, as well as inexpensive, timely, interpersonal communication across vast distances; and the diminishing ability of states to protect and nurture domestic, indigenous cultural industries in the context of the global, liberalized market conditions described above (which pertain to cultural goods and practices when they take the form of intellectual property and are commodified).

It is certain that, in the contemporary context, these dynamics have combined to succeed in detaching the phenomenon of culture from its concentration in a particular geographic location. Nevertheless, the implications of cultural globalization are hotly contested. From one perspective, it is argued that globalization constitutes the culmination of modern deracination, the final stage in the progressive homogenization of meaningful cultural distinctions into a single, mass consumer culture emanating from the conglomerated, transnational media empires of the United States. In this view, globalization is a particularly virulent strain of American cultural imperialism enabled by the political economy of late capitalism, and is synonymous with the demise of national, cultural particularities. From another perspective, however, the view is less bleak. In this view, globalization names a phenomenon of cultural heterogeneity and hybridization, in which immigrant communities bring their cultures with them, maintaining and mixing these with the cultures of their new homes, and in which globally dispersed recipients of Western mass cultural products appropriate these in creative and idiosyncratic ways, to craft identities that negotiate between the local and the cosmopolitan (Cheah and Robbins 1998). Here, coherent cultures grounded in territorially bounded nations have certainly suffered under the flows of globalization, but this is not seen as cause for despair.

On this account, it is at least conceivable that the open-ended cultural cross-fertilization embodied in globalization is more natural, healthy and liberating than the somewhat artificial construct of insulated national culture could ever be.

The network society

The concept of the network society, and certainly the range of phenomena it attempts to describe, encompasses numerous elements of the five discourses briefly summarized above. This is not to say the network society thesis somehow culminates efforts over the past several decades to name the world as it has become at the close of the twentieth century. It is not – whether as a name or as a condition – the ‘successor’ to post-industrialism, the information society, post-Fordism, postmodernism and/or globalization. It is, rather, one star among these others in a constellation of relatively recent attempts to understand and characterize an evolving range of interrelated social, political, economic and cultural forces. It demands our attention because at present it is arguably the brightest of these stars, but it should come as no surprise that the conditions and relationships described by the network society thesis closely resemble those encountered in the five theoretical discourses discussed above. That being said, the idea of the network society does add something particular and distinctive to this conversation.

The phrase ‘network society’ applies to societies that exhibit two fundamental characteristics. The first is the presence in those societies of sophisticated – almost exclusively digital – technologies of networked communication and information management/distribution, technologies which form the basic infrastructure mediating an increasing array of social, political and economic practices. A detailed discussion of these technologies will be the subject of the next chapter. The second, arguably more intriguing, characteristic of network societies is the reproduction and institutionalization throughout (and between) those societies of *networks* as the basic form of human organization and relationship across a wide range of social, political and economic configurations

and associations. The remainder of the present chapter will be devoted to elaborating the nature of the network form and the broad attributes of the societies to which it lends shape.

Networks

Networks are comprised of three main elements: nodes, ties and flows. A node is a distinct point connected to at least one other point, though it often simultaneously acts as a point of connection between two or more other points. A tie connects one node to another. Flows are what pass between and through nodes along ties. To illustrate, we might consider a group of friends as a network: each friend is a *node*, connected to at least one other friend but typically to many others who are also connected, both independently and through one another; the regular contacts between these friends, either in speech or other activities, whether immediate or mediated by a technology, are the *ties* that connect them; that which passes between them – gossip, camaraderie, support, love, aid – are *flows*.

Attached to each of these three elements is a number of variables which, taken together, condition the character of any given network. Nodes (e.g., friends, computers, firms) can be powerful or powerless, active or dormant, stationary or mobile, permanent or temporary, net sources or net recipients of various kinds of flows. Ties (e.g., correspondence, cables, contracts) can be strong or weak, private or public, singular or multiple, unique or redundant, sparse or dense, parallel or intersecting. Flows (e.g., gossip, data, money) can be copious or minimal, constant or intermittent, one-way or reciprocal, uni- or multidirectional, balanced or imbalanced, meaningful or meaningless. Depending on which of these and other variable characteristics its constituent elements bear, a network can exhibit a number of qualities. Networks can be centralized, decentralized (i.e., multicentred), or distributed (i.e., centreless); hierarchical or horizontal; bounded or boundless; finite (i.e., with fixed limits on the number of nodes and ties) or proliferating (i.e., with no limit on the number of nodes and ties); accessible or inaccessible; inclu-

sive or exclusive; intensive (i.e., few nodes linked by a multiplicity of dense, strong ties) or expansive (i.e., many nodes linked by relatively sparse, weak ties); interactive (i.e. enabling reciprocal, multidirectional flows) or non-interactive (i.e. enabling only one-way, uni-directional flows).

The network society thesis suggests that an increasing number of contemporary social, political and economic practices, institutions and relationships are organized around the network form – flows between nodes connected by ties – though the precise configuration and character of these networks vary depending on how they combine the variable qualities of these three essential elements. These combinations will depend heavily upon the material and discursive conditions (i.e. the historical contexts) in which these networks are situated, though it is also true that the network form introduces new organizational possibilities for human associations and institutions, some of which may strain against the very conditions from which these networks emerge.

Attributes of the network society

In Castells's formulation, 'the network society . . . is made up of networks of production, power and experience, which construct a culture of virtuality in the global flows that transcend time and space' (Castells 1998: 370). The network society – the society in which the network form of organization replaces other forms, across the categories of politics, economics and culture – bears the marks of many of the dynamics discussed above in relation to other discourses that have arisen to name the prevailing conditions of late capitalism, liberal democracy and international relations. It is also true that consideration of the centrality of the network form adds something distinctive to these attempts to capture and identify the spirit of the present age. The network society thesis, then, at once gathers and augments many of the themes discussed in this chapter. In his pathbreaking formulation of this thesis, Castells isolates a number of attributes that together give shape to the network society (Castells 1998). Before proceeding to discuss these in detail in the

ensuing chapters, it would be useful to briefly summarize them here.

At the economic base of the network society is an 'informational' – as opposed to strictly industrial – capitalist economy. These are economies that have been restructured to reflect the primacy of the generation and distribution of knowledge and information, especially as they pertain to the optimization and control of productive processes and markets. They are also economies which emphasize continuous technological innovation and flexibility over maximization of output as the key source of growth (Castells 1996: 14–19). The informational mode of development drives the expansive and rejuvenated form of capitalism at the heart of the network society.

The economy of the network society is organized globally, on the network model. In the network society, capital and commodities (including information commodities) are decreasingly contained within the fixed boundaries of territorially defined nation-states, and instead flow with increasing ease along ties that reach across or through these boundaries, between nodes (i.e., firms, regions, markets) which are often themselves organized as networks. Labour remains more territorially confined than either capital or commodities, though the combination of increasing migration and the flexibility of networked production processes mitigates this, primarily in ways that increase the power and control of capital vis-à-vis labour. No longer primarily organized nationally, the global economy assumes the form of a network of networks linked by information and communication technologies configured on the same model, a model which ramifies throughout the economy, as regions, cities, firms, enterprises, workplaces and even individual workers are reconstituted as flexible, temporary networks of nodes of varying power. As Castells observes, in a post-Fordist, globalized economy, the logic of networks 'structure[s] the unstructured while preserving flexibility' (Castells 1996: 62). One result, of course, is a relative decline in the capacity of the nation-state to organize political, economic and social power in the network society.

In the network society, human experience of time and space is displaced to 'timeless time' and the 'space of flows'

(Castells 1998: 1). Human beings live inextricably in space and time, but our experience of these can vary considerably, especially when mediated and rendered artificial by technology. Naturally, human beings experience time as a recurrence of organic cycles (i.e., bodily rhythms, alternating days and nights, seasons) at rates specific to particular locations, and space as the extent of their regular inhabitation (i.e., where they live) and the distance over which they can reasonably travel, communicate or see. Combined, these experiences of time and space as essentially limiting elicit a sense of 'place' that localizes the organization and coordination of the common activities of human communities. Technological mediation – the standardization of time measurement by clocks, calendars and zones; development of transportation and communication technologies – extends the limits of place, enabling the artificial constitution and coordination of communities on a scale (i.e., the nation-state) greater than was possible under the localizing constraints of nature (Anderson 1983). In the network society, with significant social, political and economic activity increasingly concentrated on flows of information, and with the proliferation of technologies that enable widespread communication of large volumes of information across vast territories instantaneously, the human experience of time and space as essentially localized is nearly obliterated. Computerized networks introduce unprecedented levels of speed, automation and reach into human communication, which decrease the need to synchronize and localize activity in a particular place. Localized experience of time and place – the constraint of place – no longer limits the growing volume of increasingly significant human activity expressed in the communication of information via global network media. The network society is 'always on' and the placement of its members in territorial space is less important than their existence in the 'space of flows' where crucial economic and other activity occurs. It is in this sense that the human beings experience time in the network society as timeless, and space as placeless. In cultural terms, one effect of this dynamic is the generation of a globalized (albeit with regional variations) mainstream consumer culture, constructed by a pervasive and globally integrated media system, which, while superficially hybridizing

and incorporating some elements of diverse international cultures, remains highly inorganic, dislocated, and hyper-real. The culture of the timeless, placeless network society exists everywhere, but comes from nowhere; in provocative post-modern phrasing, Castells labels it a 'culture of real virtuality' (Castells 1998: 1).

In the network society, power and powerlessness are a function of access to networks and control over flows. In a society whose principal economic, political and social activities are organized as – or mediated by – networks, access to those networks constitutes an important threshold of inclusion and exclusion, a condition of power and powerlessness, a source of dominance and subjugation. As Castells writes: 'networks also act as gatekeepers. Inside the networks, new possibilities are relentlessly created – outside the networks, survival is increasingly difficult'; and, similarly, 'Presence or absence in the network and the dynamics of each network *vis-à-vis* others are critical sources of domination and change in our society . . .' (Castells 1996: 171, 469). Access to significant networks (i.e., status as a node) is a minimum condition of social, economic and political membership in the network society, and lack of access both reflects and reproduces disenfranchisement, but this is not to say that mere access constitutes empowered membership or equality. As mentioned previously, the network society model contemplates that, in the network of networks (technological, financial, commercial, political, social, etc.) that forms the fabric of a society, some networks and nodes (and therefore connection to these) will be more powerful than others. Some networks will mediate structurally significant activity (e.g., financial networks) while others will mediate activity that is relatively insignificant in structural terms (e.g., chat lines). Some nodes will control and originate flows (e.g., multinational mass media conglomerates) while other nodes will primarily receive flows over which they exert only minimal control (e.g., individual consumers). Some nodes (e.g., governments) will be privy to types and volumes of information to which other nodes (e.g., citizens) are not. Finally, some very powerful nodes (i.e., internet service providers and portals) will actually control access to, and use of, network ties and infrastructure by other, less powerful nodes (i.e., indi-

vidual users). Thus while access is a minimum condition of enfranchisement in the network society, it by no means ensures equality. Indeed, it is a considerable irony of the network society that, for most of its members, securing the minimum condition of inclusion (and thereby averting complete exclusion and the radical powerlessness it would bring) simply grants them access to the infrastructure of their own continued inequality and relative domination.

That being said, the fact remains that economic, political and social agency in the global network society is inextricably tied to inclusion in those networks. Under these conditions, control over access becomes a crucial mechanism of power and domination, and the divide between the included and the excluded constitutes a line of stratification with serious political and material consequences. Perhaps not surprisingly, such stratification is a structural attribute of the network society, whereby entire regions or countries on the periphery of the global economy, or entire classes of people within the core itself, are effectively denied access and thereby excluded from crucial technological, economic, political and social networks. These are what Castells calls the 'black holes of informational capitalism', populated by people deemed non-valuable and irrelevant (i.e., unfit for labour, consumption or legitimation) from the perspective of global capital, people who are 'socially/culturally out of communication with the universe of mainstream society' and who, as a result, have 'no escape from the pain and suffering inflicted on the human condition for those who, in one way or another, enter these social landscapes' (Castells 1998: 161–3).

The principal source of conflict and resistance in the network society is the contradiction between the placeless character of networks and the rootedness of human meaning. As described above, the network society technologically dislocates our experience of important social, political and economic processes, and dislocates power and control over these. This dislocation is at odds with the essential boundedness of life in time and space, and with what appears to be an abiding human need to exercise some degree of localized control over the conditions of living. As Castells points out, in the network society 'most dominant processes, concentrating power, wealth and information, are organized in the space of flows.

Most human experience, and meaning, are still locally based.' Thus, the network society 'shifts the core economic, symbolic and political process away from the realm where social meaning can be constructed and political control can be exercised' (Castells 1997: 124). This suggests that the network society exhibits a deep tension between the abstract placelessness of network mediation and the stubborn desire of human beings to embed their lives in particular places. This unresolved tension, a result of the disjuncture between globalizing technology and local identity, evinces a condition of alienation described by Castells as a conflict between 'the net and the self' (Castells 1996). It is this conflict which animates several of the most significant social and political antagonisms of the network society. These take numerous tangible forms, and include a range of movements to re-establish local (which, in a globalized world, sometimes means national), democratic control over political, economic, cultural and environmental conditions. Interestingly – in what is yet another irony of the current age – many of these movements are themselves organized (sometimes internationally) on the network model, using sophisticated network technologies.

Conclusion: The spirit of informationalism

No name ever represents the whole of that which it names. This is especially so in the case of names for social formations or epochs. Nevertheless, a name should at least suggest something that is of primary and/or widespread significance in the actual societies to which it is attached. At most, a name will illuminate the spirit, or animating principle, particular to a historically specific time and place. It is a bonus if the name provokes critical reflection on the principle it articulates. The remainder of this book will reflect on whether 'the network society' meets these standards in regard to the global society bridging the twentieth and twenty-first centuries. The ensuing chapters will provide a more detailed investigation of the technologies, economics, politics and social practices gathered under this name.

This chapter began with a discussion of Max Weber's provocative identification of the spirit of modernity with spiritlessness. What, beyond this, is the spirit of the network society? Manuel Castells has isolated an 'ethical foundation of the network enterprise' which he calls 'the spirit of informationalism' (Castells 1996: 199). It exists, he says, in the common cultural code that glues together the various networks which together comprise contemporary societies. His characterization of this spirit merits extended quotation:

It is made of many cultures, many values, many projects, that cross through the minds and inform the strategies of the various participants in the networks, changing at the same pace as the network's members, and following the organizational and cultural transformation of the units of the network. It is a culture indeed, but a culture of the ephemeral, a culture of each strategic decision, a patchwork of experiences and interests, rather than a charter of rights and obligations. It is a *multi-faceted, virtual culture* . . . It is not a fantasy, it is a material force because it informs, and enforces, powerful economic decisions at every moment in the life of the network. But it does not stay long: it goes onto the computer's memory as raw material of past successes and failures. The network enterprise learns to live within this virtual culture. Any attempt at crystallizing the position on the network as a cultural code in a particular time and space sentences the network to obsolescence, since it becomes too rigid for the variable geometry of informationalism. The 'spirit of informationalism' is the culture of 'creative destruction' accelerated to the speed of the optoelectronic circuits that process its signals. (Castells 1996: 199)

There are, in this articulation, echoes of each of the five discourses – post-industrialism, the information society, post-Fordism, postmodernism and globalization – sketched earlier as precursors or companions to the network society thesis. There is also, however, a note that is clearly distinctive. This book might well be described as an exercise in listening for that note in the mercurial technological, economic, social and political practices which define our present situation.