The Infrastructure of Modernity: Indirect Social Relationships, Information Technology, and Social Integration

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Social Relationships and Social Integration

During the last decade the reemergence of human geography as a vital field of social science has brought renewed attention to the spatial organization of social relationships (see, e.g., Gregory and Urry 1985). Over a slightly longer time span network studies have brought new power and sophistication to the analysis of concrete patterns of social relationships.[1] These advances draw attention to a weak spot in contemporary social theory. The study of structures of social relationships, that is, the concrete connections among social actors, has not been used to improve our understanding of social integration. Those focusing on structural analysis have failed to show how patterns of relationships constitute social life and hold social institutions and populations together; they have thrown out the problematic of social integration like a baby in dirtily functionalist bathwater. Functionalists have turned to cultural understandings of social integration, but these analyses at best

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omit and at worst obscure attention to the concrete patterns of social relationships.[2]

This failure, or even refusal, to approach social integration on the basis of patterns of concrete relationships is common to work in a wide range of otherwise divergent theoretical perspectives. Relational structures are too narrowly sociological a concern for many cultural theorists. For others the idea of social integration as a variable is too reminiscent of crude contrast of *Gemeinschaft* and *Gesellschaft* . It seems too normative to many theorists (including some who treat utilitarianism as value free) and too vague and unmeasurable to others. In what is perhaps the foremost contemporary effort develop a theory of social integration, Habermas (1984)

focuses on a distinction between social integration/life-world and system integration/system in which concrete social relationships are seen as the stuff of the former, and the latter is conceived in cybernetic rather than social-relational terms.[3] In functionalist accounts integration is usually conceptualized as a system state that is partially dependent on interaction patterns but distinct from these patterns. Clearly, in Parsons's sense (e.g., 1951), the extent of integration of a social system cannot be reduced to relational structures. However, in this chapter I contend that such relational structures have been neglected compared to other aspects of integration and that they have been conceptualized in ways that focus on face-to-face interaction and obscure the fact that mediated relationships are still social relationships.

Before we can explain social change satisfactorily we need a clearer conception of the relational dimension of social integration and the beginnings of a descriptive account of variation in concrete social relationships. The contribution of social relationships to social integration may be taken loosely as the complex variable measuring the extent to which the action of each person in a population implies, depends on, or predicts that of the others.[4] Of course, the extent of social integration is not the only product

of variation in social relationships. These relationships may vary qualitatively in kind, quantitatively in density, and both qualitatively and quantitatively in pattern (including relative boundedness). The key is that we neither ignore concrete relationships nor privilege them as exclusively communal, and that we not leave large-scale organizations to representations in reified, actionless terms.[5] I argue that, by paying attention to patterns of social relationships, we can provide a strictly sociological dimension to complement accounts of the contemporary age in terms of cultural and/or economic tendencies, 'modernity' and/or capitalism.

The first part of this chapter returns to the classical conceptions of modernity, which group cultural, economic, and social structural dimensions together more or less indiscriminately. I suggest a conceptual distinction between direct and indirect relationships that can help to illuminate many of the changes evocatively suggested by *Gemeinschaft* vs. *Gesellschaft* and similar oppositions while retaining a much clearer potential for empirical specification. Taking large-scale markets and especially corporations as examples, I show the utility of this simple conceptualization by focusing on the distinctive features of key modern social institutions. At least one of these institutions, the corporation, has been given surprisingly short shift in sociological theory. One of the constitutive features of the modern age, I argue, is the ever-increasing prevalence of indirect social relationships, that is, those relationships constituted through the mediation

of large-scale markets, administrative organizations, and/or information technology. More and more these relationships are coming to be the basis on which society "at large" is constituted. This does not mean, however, that direct relationships are disappearing or losing their emotional potency for individuals, only that they are becoming compartmentalized and therefore altered in

sociological significance.

The second section of the chapter links this analysis of the changing patterns of social relationships to changes in infrastructural—especially transportation and communication—technologies. Sociological and economic accounts of new technologies tend to focus disproportionately on production technologies and their effects on the labor force. I suggest that infrastructural technologies are at least as important and that the infrastructural uses of such new technologies as computers hold at least as much potential for social change. Such change, however, at present (and for the plausibly foreseeable future) seems to lie primarily in the extension of the trends of the last two hundred or more years, including the increasing importance of indirect social relationships, not in a reversal of these trends. In other words, modernity continues; we are not undergoing an epochal transformation comparable to that ushered in by industrial capitalism.[6]

The third sections follows directly from this point and examines why terms like "postindustrial society" are exaggerations and points out a key sociological weakness of the theories on which they rest: failure of these theories to develop an account of what constitutes society in a postindustrial (or any other) age. In other words, lacking an account of social relationships, theories such as Bell's (1973, 1979) describe features of society but not society itself. In this failure, perhaps ironically, these theories fail to make use of openings to social-relational analysis and the problematic of social integration provided by the very functionalist theories with which they are often lumped by critics and on other parts of which they (like their progenitors in theories of industrial society) depend.

The last section of the paper takes up the Marxist account of capitalism. I try to show that however strong the Marxist theory of capitalism, it must remain a theory of part but not all of social life. Marxism lacks a theory of concrete social relationships (even though it offers a powerful theory of abstract relationships such as those mediated through the commodity

form). It offers an account of the dynamic tendencies that capitalism imposes on modern social actors, but not an account of social integration.[7]

From Kinship and Community to Markets and Corporations

Contrast between country and city were a staple of nineteenth-and-early-twentieth-century social commentary (Williams 1973). Nearly everyone preferred the country. The country was clean, while the chimneys of city factories belched black smoke; the country was morally pure, while cities were dens of iniquity; perhaps most important, country dwellers enjoyed true community and social order, while cities were chaotic, unregulated, and anonymous. Early social theorists believed that cities somehow embodied the core features of a new kind of society, and this new society contrasted sharply with the previous, more communally solidaristic social order. Today, however, Tönnies's (1887) *Gemeinschaft-Gesellschaft* contrast, Wirth's (1938) and Redfield's (1941) folk-urban continuum, and other contrasts of tradition and modernity are as familiar as

objects of abuse as they are as mandatory bits of vocabulary in introductory sociology textbooks. Those who attack this approach generally focus on the community or tradition side of the dichotomy (e.g., Gusfield 1967, 1975). They argue that the depictions by Tönnies and others of traditional community life are nostalgic and unrealistic; they also note that the portrayal of most of the Third World as traditional rather than modern is both patronizing and predisposed to neglect the extent to which contemporary Third World patterns are produced by modern capitalism and international relations.[8]

Surprisingly, the sociological inadequacies of Tönnies's (and others') conception of *Gesellschaft* have not received comparable comment; the same goes for most of the other well-known binary oppositions.[9] The

impact of the transition from *Gemeinschaft* to *Gesellschaft* in Tönnies's conceptualization was largely the loss of a felt sense of belonging together in favor of an exaggerated individualism and a focus on instrumental relations. Tönnies had little social-structural foundation for his notion of changed personal experience, which accordingly remained unsatisfactorily impressionistic.[10] Simmel's analysis of "the metropolis and mental life" made a good deal more of the change in concrete social relationships that accompanied the emerging social psychology of urban life ([1903] 1971). His attention, however, was focused on the larger issue of the development of individuality in the modern West. His characterization of cities, along with most of the other famous typologies of tradition and modernity, offered only a very general view, one that was lacking in historical specificity—or rather, one that failed to recognize the historical specificity implicit in its apparently general account (Abu-Lughod 1969). To be more precise about the experience—let alone the sociological significance—of modern urban life, we need to go beyond such broad statements about sociopsychological differences to a specific analysis of change in the structure and the kind of social relationships.

Almost all major premodern forms of social organization depended primarily on direct interpersonal relationships. Kinship, community life, and even the most stable, recurrent relationships of economic exchange all took place within the conscious awareness, and usually the face-to-face copresence, of human individuals. Such relationships might be more or less systematic and complex: for example, webs of kinship can link hundreds of thousands of members of traditional African societies. However, the actualization of each relationship, as opposed to its latent potential, was normally directly interpersonal. Although state apparatuses certainly predate the modern era (and occurred historically throughout the world), Giddens is surely right to argue that few if any were able to "govern" in the modern sense of the word; their capacity for regularized administration of a territory and its residents was very limited.[11] This limitation was largely the result of the fact that power relations could not be extended

effectively over large distances.[12] Although their cultural variation was enormous and their variation in specific patterns of social organization was considerable, premodern peoples were

only rarely able to produce the physical infrastructure and administrative practices that are necessary to build large-scale social organization of much intensity.

The direct relationships that prevailed included both "primary" and "secondary" ones, to use Cooley's language ([1909] 1962).[13] Useful though it may be for some purposes, Cooley's conceptual distinction does not differentiate the modern age adequately from its predecessors. Modernity is not constituted by the presence of secondary relationships or the absence of primary relationships; both sorts exist in a wide range of modern and nonmodern societies. Rather modernity is distinguished by the increasing frequency, scale, and importance of indirect social relationships. Large-scale markets, closely administered organizations, and information technologies have produced vastly more opportunities for such relationships than existed in any premodern society. This trend does not mean that direct relationships have been reduced in number or that they are less meaningful or attractive to individuals. Rather it means that direct relationships tend to be compartmentalized. They persist as part of the immediate life-world of individuals, both as the nexus of certain kinds of instrumental activities (e.g., the many personal relationships that smooth the way for or make possible business transactions [see Granovetter 1985]) and, especially, as the realm of private life (family, friends, and neighbors). However, direct interpersonal relationships organize less and less of public life, that is, fewer and fewer of the crucially determinant institutions controlling material resources and exercising social power. Indirect relationships do not eliminate direct ones, but they

change both their meaning and their sociological significance.[14] Although they are as sociopsychologically and culturally powerful as ever, direct relationships are no longer constitutive of society at its widest reaches.[15]

The growing importance of indirect relationships was recognized by both Marx and Weber. For Marx these relationships characterized above

all the system of commodity production and capital accumulation. For Weber the commodity form was also key, but, characteristically, market rather than production relations were central; the "indirect exchange of money" was prototypical:

Within the market community every act of exchange, especially monetary exchange, is not directed, in isolation, by the action of the individual partner to the particular transaction, but the more rationally it is considered, the more it is directed by the actions of all parties potentially interested in the exchange. The market community as such is the most impersonal form of practical life into which humans can enter with one another. This is not due to that potentiality of struggle among the interested parties which is inherent in the market relationship. Any human relationship, even the most intimate, and even though it be marked by the most unqualified personal devotion, is in some sense relative and may involve a struggle with the partner…. The reason for the impersonality of the market is its matter-of-factness, its orientation to the

commodity and only to that. When the market is allowed to follow its own autonomous tendencies, its participants do not look toward the persons of each other but only toward the commodity; there are no obligations of brotherliness of reverence, and none of those spontaneous human relations that are sustained by personal unions. (Weber [1922] 1978, 636)

Weber's ideal-typical market does not correspond to any actuality, of course, any more than Marx's pure model of capitalism does. But each expresses a distinctly modern tendency.

Weber's analysis of bureaucracy suggests another such tendency: the creation of social apparatuses for rational administration. Weber tended to assume that bureaucracies would be sociogeographically concentrated; he associated them with cities and treated their development as a specification and enhancement of the role of cities as centers for the exercise of power. In fact Weber wrote at about the point in Western history when cities began to lose some of their distinctive centrality to systems of power and administration.[16] In ancient empires, dispersed city-states, and late-feudal Europe alike, cities had been at the heart not only (obviously) of civilization but also of both power relations and trade. Cities were the nodes that could anchor structures of indirect relationships in an age of minimal information technology. They could provide for mediation among participants in far-flung markets, and they were

the focal points for political and military control. As a result, they created networks of power and exchange stretching well beyond their boundaries. Moreover, they provided(and to a considerable extent still provide) for the direct relationships that make systems of indirect relationships work (the personal relationships that connect banking houses, for example, and the direct communications among central government officials).[17] Cities also provided for public life, which is composed of direct—although not necessarily intimate—relationships among strangers (Sennett 1977; Calhoun 1986). But the development of modern transportation and communications technologies, on the one hand, and the growing administrative organization and power of the state, on the other, meant that both economic and political activity could begin to bypass the cities.[18]

In short, state power could grow because the new forms of organization and the improved transportation and communications infrastructures (based partly on new technologies but, at first, more on heavy investments in the extension of old methods) enabled the spread of increasingly effective administration throughout the various territories of a country. This is the story Giddens (1985b) offers as the centerpiece of his critique of historical materialism, and it is a necessary complement to Marx's analysis of capitalism. It is a crucial complement, but it is not sufficient.

A full account needs to recognize, first, that the growth of the state, like the capitalist economy, developed infrastructures that could be used by ordinary people to develop connections with each other. Roads, trains, telegraphs, and telephone furthered the social integration of dispersed populations, promoted their common participation in capitalist production and exchange, and made possible their common subjection to state surveillance and administration. Class struggle

itself, in the sense of the mobilization of workers organized on the same sociogeographic

scale as capital accumulation, had to wait for a communications infrastructure that was adequate to the formation of large-scale trade unions and political parties (Calhoun 1988).

Second, a full account also needs to recognize that modern states are in fact special (and critically important) instances of a more general phenomenon: corporations. As Giddens notes, the absolutist kings were distinct from other traditional rulers in the crucial sense that they not only sat at the pinnacle of state power but also incorporated the state symbolically within their own sovereign persons: "The religious symbolism of 'divine right' should actually be seen as a traditional accoutrement to something very new—the development of 'government' in the modern sense, the figure of the ruler being a personalized expression of a secularized administrative entity" (1985b, 93–94). This notion is part of what Kantorowicz (1956) meant in his brilliant portrayal of the late-medieval doctrine of the "king's two bodies," one personal and the other public. The king had begun to assume the status (still common to Roman Catholic bishops and other ecclesiastical nobles) of a "corporation sole" (see also Gierke 1934; Maitland [1900] 1958). Eventually, a doctrine of corporate personality developed that freed the corporation from any legal need for embodiment. On this and other bases corporations (starting at least as much with the state and various monastic bodies as with the urban corporations from which the lineage is usually traced) were eventually able to command routine public, jural, and even (rather unanalytical) sociological acknowledgment as unitary actors.

Oddly, the corporate form of social organization has received very little attention in sociological theory even though it is central to modern institutional arrangements.[19] A brief discussion of this remarkable form of organization is therefore in order before considering more recent information technology and the question of whether we have left, or are about to leave, modernity behind us.

The corporation is a remarkable cultural artifact. One of the most extraordinary things about business corporations—as well as the other types of corporations from religious and charitable institutions to governments and quasi-governmental organizations of various sorts—is that we so routinely reify or anthropomorphize them.[20] With minor variations and qualifications corporations throughout the Western world may own

property, litigate, and make contracts in the same way as "natural persons." They may, indeed, enter into a variety of relationships—usually highly asymmetrical—with natural persons.[21]

Such relationships are quintessentially indirect. Although real human beings are linked by them, this linkage is almost invisible. Indeed, social relationships seem to disappear in the operation of an apparently self-moving technical and social system.[22] With even a minimal communications technology the relationships constituting an organization can be rendered indirect, that is, distanced both in time and in space (e.g., by the storage, retrieval, or transmission of the written

word) and socially mediated (by transmission through the official functions of other corporate agents). Thus a corporation is in one sense merely an aggregate or structure of social relationships, most (but not all) of which are indirect. In another sense, however, it is a social creature at a different level, a whole unto itself.[23] Our Western—especially American—culture grants the corporation the status of an autonomous actor, one that is capable of "responsibility," thus offering its members limited liability for their actions.[24]

Both corporations and large-scale markets depend on the flow of information through indirect social relationships, and both are accordingly

subject to routine reification.[25] Economists predict, and nearly everyone discusses, the economy as though it were as natural and objective a phenomenon as the weather. This tendency reflects a culture that is at once pervasively individualistic—and thus underrecognizes the social dimension in the creation of both markets and corporations—and at the same time supports a maximally "disembodied" ontology that allows people to accord some manner of unitary individual existence to bodiless social creatures. Markets differ from corporations, however, in that they lack administration. They are the aggregate of individual actions, and sometimes collective action, but they are not collective actors.

Because of this difference, corporations tend to be not only reified but also anthropomorphized. As note earlier, we no longer find it necessary to embody states in the persons of their rulers; er attribute individuality to the disembodied state itself (see also Manning 1962; Giddens 1995b, chapter 4). Similarly, corporations are readily understood to exist, and in some sense to act, independently of their chief executives. However attractive Chrysler Corporation may find it to promote Lee Iacocca as its symbolic image or however much Ronald Reagan may appeal to Americans as a symbol of their country, no once confuses the person with the corporation. As Justice Marshall wrote nearly a hundred and seventy years ago, a corporation is "an artificial being, invisible, intangible, and existing only in contemplation of law."[26] The confusion comes in treating the corporation *as* a person.

Information Technology and the Expansion of Indirect Relationships

The past two decades have seen a near passion for labeling new ages and new kinds of society: postindustrial, technetronic, Third Wave, etc.[27] These visions of a new and different age derive substantially from the anticipated effects of new technology, most prominently computers and related information technologies. Although this technology is indeed powerful, such accounts of a qualitative break with the previous two hundred years of modernity are misleading. New technologies have extended the most basic trends in social integration more often than they have countered them, and this pattern will probably continue unless substantial social effort is invested to the contrary.

Corporations, large-scale markets, and other organizations of indirect social relationships have grown in size and importance throughout the modern era. Advances in information technology have repeatedly facilitated their extension. Computers and new telecommunications technologies continue this pattern. They not only offer a large quantitative increase in indirect relationships but also contribute to a shift in balance between two qualitative kinds of indirect relationships. By extension from Cooley's notions of primary and secondary relationships, we might conceptualize two kinds of indirect relationships: tertiary and quaternary.

Tertiary relationships need involve no physical copresence; they may be mediated entirely by machines, correspondence, or other persons, but the parties are well aware of the relationship. A tertiary relationship may be created, for example, by writing to a more or less anonymous functionary of a large bank to complain about an error in one's statement. Most ordinary citizens have only tertiary relationships with their national political representatives, relationships that are mediated by broadcast and print media, voting in elections, and, occasionally, correspondence. In a large

corporation most employees have this sort of relationship with top managers. Such relationships are more or less fully contained by their explicit purposes and systemic roles. Because they are not characterized by physical copresence, they are not as open to redefinition and expansion as are secondary relationships. The various media through which the relationship is carried out help in varying degrees to seal role performance off from the other attributes of individuals. But the relationships retain a degree of mutual recognition and intentionality; each party can (at least in principle) identify the other and the relationship itself is manifest.

Quaternary relationships, by contrast, occur outside of the attention and, generally, the awareness of at least one of the parties to them. They are the products of surveillance and exist wherever a sociotechnical system allows the monitoring of people's actions and turns these actions into communication, regardless of the actors' intentions. Quaternary relationships are created by the tapping of telephones, the theft of computerized data, or even the analysis of stored data for purpose other than those for which they were initially provided by people other than those to whom they were initially provided. Each person who uses a credit card, travels on an airplane, pays income taxes, applies for a visa, or completes employment applications—that is, nearly everyone in a modern society—provides data that can be subjected to reanalysis. Such reanalyses can be used to trace behavior of particular individuals as groups. The purpose of such surveillance may be as benign as providing marketing information or as threatening as discovering the members of minority ethnic groups for purposes of control or persecution.[28] Modern markets and governmental apparatuses could not function in their present manners without substantial use of such data. This use nonetheless constitutes surveillance and creates very indirect, nearly invisible, but potent quaternary relationships.

As we saw in the case of markets, not all quaternary relationships depend on the administration of information. The flow of money in successive transactions is itself a form of communication; monetarization laid the basis for an extension of markets that created extremely indirect, almost

invisible quaternary relationships of their own. However, the distinction between monetary communication in large markets and administered information flows is diminishing as money comes increasingly to be one version of electronically encoded information. In addition to markets a variety of noneconomic relationships are facilitated by new technologies. For example, hobbyists may use computer networks to keep in touch, a sort of semiadministered use. However, new technologies have

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their most dramatic impacts on various kinds of more fully administered information flows.[29]

The use of writing marked the first great historical breakthrough in creating the capacity for indirect social relationships. Our present capacities still depend more on literacy than on any other invention or skill. But information technology has advanced enormously throughout the modern era, from the invention of printing presses through telegraphs, telephones, radio, television, communications satellites, cable and microwave transmission, and now computers.[30] Improvements in transportation facilities have also been vast and for centuries constituted the basis for most long-distance communications. It is worth reemphasizing how recent and how enormous transportation improvements have been. As recently as the mid-1750s, it took ten to twelve days to travel from London to Edinburgh; by 1836 less than two days were needed for the trip (Bagwell 1971); the train (which on that route is nowhere near "state of the art") now takes four hours, the plane one hour, and electronically mediated communication is virtually instantaneous. German immigrants to America after 1848 could not count a reliable post (the International Postal Union dates from 1874) and could not expect ever again to see the family member they left behind. Yet, their great-grandchildren not only travel and phone between the two countries with ease but also own shares in corporations doing business simultaneously in both countries and depend on military coordination in which computers and satellites link commanders and staffers thousands of miles apart and monitor the entire face of the earth.

Through most of history wars of conquest and the migrations that they precipitated were among the few major vehicles of long -distance and cross-cultural communication. At considerably greater intervals wars and migrations were supplemented by waves of religious conversion. More frequently, religious pilgrimages and commercial expeditions were mounted. Trading routes provided a flow of gossip, but the everyday scale of activities was much narrower. Communications capacities grew out of the political needs of managing empires and the logistic needs of armies, drawing on the resources of clerical literacy (hence, "clerks"). In the early-modern period commerce began to complete with

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and then surpass warfare as the occasion for international communications. It multiplied the demands for literacy and improved communications media. The growth of strong national states was tied closely to both this growth of commerce (which simultaneously provided the wealth with which to run the states and a need for the protection of trades and international boundaries) and the communications media themselves. National integration was further by these

communications media not only through enhanced means of administration (as Giddens 1985b emphasizes) but also through the growth of cohesive national cultures and shared "consciousness" or ideologies. Linguistic standardization and codification was a key step in nation building (even through the histories of the German-speaking and the Romance-language countries differ somewhat in this regard) and in turn made long-distance communications still easier.[31]

Like literacy itself, new information technologies enable the transcendence of not only space but also time; fewer relationship or transactions require the copresence.[32] Although it is a mundane sort of time machine and disappointingly inert, each gray metal file cabinet enables communication to take place between those who put information in it and those who take it out. Computers are able to do this, of course, on a much larger scale, with much more sophisticated procedures for matching the stored bits of information to the inquiries of future searchers. One of the most distinctive features of modern corporations is their ability to combine a high level of continuity on their patterns (in the face of both environmental complexity and fluctuation and internal personnel changes) with a capacity for organized change in response to managerial decisions. Computers can be used to monitor activities in connection with very long-term plans or simply to maintain conformity with preset rhythms and routines. Communication is increasingly separated from transportation, surveillance from direct observation.

New information technologies may be used in the following ways: to organize more of social life through indirect relationships, to extend the power of various corporate actors, to coordinate social action on a larger scale, or to intensify control within specific relationships. This broad set of potential can indeed be socially transformative; the technologies are

powerful and pliable. But will this transformation be a break with the trend of modernity toward an increasing reliance on indirect social relationship to organize large-scale social integration?

An excessive focus on the question of the extent to which new technologies supplant human labor in the production of material goods has obscured the deeper import of these new technologies for social integration. It is indeed true that the proportionate contribution of "artificial" (not directly to human) labor to the production process has grown and is likely to grow much further.[33] This trend is important, and the potential employment impacts of computerization are not insignificant (see Jones 1982; Gill 1985). Similarly, computerization offers major advances in productivity (not only for labor, but also for capital facilities). Focusing only on these issues, however, obscures other very significant changes, including changes in the material production process itself.

The greatest changes in most production facilities are not in the numbers of people employed or even in their skill levels, but in "throughput" process (Gunn 1982). Computerization enables not just the automation of a variety of different specific production processes (welding, say, or painting) but also the automation of the flow of goods, materials, and information through the factory.[34] At an automobile assembly plant, for example, each chassis is given a computerized

identification card at the start. It corresponds to a specific car ordered by a specific dealer. The computer indicates to each worker (or robot) what parts to add to the basic chassis, what color to paint it, and what trim or finishing to give it. The computer also orders all necessary parts and materials as needed, thus cutting down on both the clerical work force and the necessary inventory. As with assembly line and indeed factories themselves, the change here is in the organization of the production process. Computerization's most profound industrial impact comes in increasing the scale of technically

coordinated activity at the same time that it establishes flexibility for small-batch production. This description of the production process (based on observations in wayne, Michigan) is part of a computerized integration of design, production, and marketing facilities in seven countries on four continents (Ford Motor Company's World Car project).

What is changed, in short, is the social integration of the production process. Just as the factory and the division of labor transformed the production of goods in the classical revolution, so computerization today transforms not just individual task but whole organizational forms. Although automation displaces some manual workers by having machines do their jobs, it changes society by replacing the human component in many organizational links.[35] Social organizations itself is in some sense automated as computers and related information technologies help to create an artificial locus of self-environment. We call a machine automated if it can drive itself or perform autonomously. So, too, we could call the process of creating factories or even more far-flung but autonomously working organizations one of automation. We might even consider that corporations are a kind of social automaton. They are made possible by indirect relationships in which human functionaries serve as intermediaries, but they are greatly expanded on the basis of new information technologies for the mediation of relationships.

Social Integration and the Idea of Postindustrial Society

In attempting to revitalize and reformulate the problematic of social integration, I am following most closely in the path of Durkheim but also in varying degrees in those of Tönnies, Weber, and Simmuel. Durkheim made social solidarity and social integration more distinctively his concern than any other classical sociologist, but he did not for the most part approach these issues concretely through the study of patterns of relationships. Rather he concentrated on the sociopsychological sense of mutuality, the cognitive implications of life in society, and the functional analysis of cohesion among institutions.[36] Functional analysis of this sort

is abstract even though it is not abstract in the sense or to the extent that Marx's categorial analysis of capitalism is.[37] It is from Weber, above all, that we derive the concrete analysis of social relationships, which he understood as the probability that the actions on one person will influence the course of action of another.[38] Not all social relationships are direct, of course, many are mediated. What renders the Weberian approach concrete is its focus on relationships

from the point of view of the actors (thus necessarily recognizing qualitative distinctions) rather than on the categorial nature of meditation.[39]

Ironically, although much of the structural-functionalism of the 1950s retained a focus on social integration and even on concrete social relationships (the latter perhaps more visible in the social anthropological variants), the "industrial society" theories that developed on Durkheimian and Weberian foundations as alternatives to Marxism exhibit the same neglect of social integration that characterizes Marxism. Industry is no more definitive of society than capitalism; if anything, it is less so (Kumar 1978; Giddens 1985b; Badham 1985). Industry as a way of organizing material production is clearly a feature of social life and is somewhat influential, but it is neither dynamic in itself nor the source of the basic web of relationships linking people to each other. The same problem is carried forward in Bell's theory of postindustrial society. The question of how value is produced is mistaken for the question of what society is. Regardless of the merits or demerits of Bell's notion that information

replaces labor as the source of value, this contention cannot be an account of the achievement of social integration.[40] Planning, one of Bell's central new institutions, seems to be charged with the maintenance of social coherence. Its failures are traced to the "cultural contradictions of capitalism" (Bell 1976), not to an analysis of social relationships or their integration as such.

It is particularly unfortunate that Bell's account should exhibit this lack of attention to social integration. This absence vitiates much of the value of what is the most serious sociological attempt to come to terms with the significance of information technology. Moreover, as I have tried to show, the notion of a fundamental discontinuity between post-industrial society (or any of its myriad synonyms) and its putative precursor is misleading. Although I have described much that is new, and a lengthier treatment of technologies and social change could described a great deal more that is new, the set of conditions—especially social-structural conditions—we vaguely term modernity continues and appears likely to continue for some time to come (barring a material cataclysm of one form or another). There has been no basic shift in the form of social integration such that a new sort of society might reasonably be declared to exist. The changes that have occurred and are occurring are more or less of a piece with the changes that have occurred throughout the modern age. Indeed, a high rate of change and an expectation of change are among the defining features of modernity. Capitalism's relentless pushing is a major source of this continuous social (as well as technological, economic, and cultural) change. But it is not the only source, and at points it is resisted, so it should not be thought to contain the whole explanation.

Marx: Abstract Totality and Social Relationships

The issue of concrete social relationships and the integration of social groupings is almost entirely suppressed in the works of Marx and most Marxists (Calhoun 1982; Alexander 1983).

This suppression is partly because of an overemphasis on one of Marx's most fundamental insights: the totalizing drive of capitalist commodity production and capital accumulation.[41] Marx recognized in a profound way that capitalism was not established on the basis of direct interpersonal relationships. It existed only through the mediation of commodities that were produced and exchanged in the pursuit of capital accumulation. Moreover, as Giddens (1985b, chapter 5) has recently reminded us, a central feature of Marx's theory is missing from competing accounts of industrial society. The missing feature is the dynamism of capitalist production and commodification, and its ceaseless expansion into new lines of production, new areas of life, and new parts of the world.[42]

Capitalism, according to Marx, must by its nature increase its extension in the world and the intensity or completeness of its domination wherever it organizes economic activity. Capitalism drives the creation of new technology (for both production and distribution), new products, and new markets. As Giddens stresses (1985b), this analysis neglects the coeval rise of the state, which was crucial to the creation and maintenance of a distinct economic sphere. But this does not go far enough. We must both recognize the accuracy of Marx's argument for the dynamic by which capitalism

pushes toward totality and complement it with an analysis of the concrete social relations with which capitalism (like the notion-state) coexists but which cannot be reduced to it. Capitalism, on other words, is not society. It exists in some part precisely in opposition to direct interpersonal relationships. As Marx remarked: "Their own exchange and their own production confront individuals as an *objective* relation which is *independent* of them. In the case of the *world market,* the *connection of the individual* with all, but at the same time also the *independence of this connection from the individual,* have developed to such a high level that the formation of the world market already at the same time contains the conditions for going beyond it" ([1939] 1973, 161, emphasis in original).[43] Commodities confront human beings as objectifications of human activities (in relation to nature, self, and others). Commodities mediate human relationships to create the abstract totality that is capitalism. At the same time, the commodity form reifies human activity and relationships, obscuring the fact that capitalism is the product of human labor and making it appear as an independent object. Both Marx and, especially, Engels were fond of borrowing Carlyle's phrase that capitalism left no other nexus between man and man than "callous cash payment" (e.g., Marx and Engels [1848] 1976, 487; Engels [1880] 1972, 608). Just as capitalism must disregard or even attack the irreducibly qualitative nature of commodities, so it must disregard or attack the qualitative content of human relationships (Marx [1867] 1974, chapter 1; Lukáacs [1922] 1971, 83–148). But capitalism can go only so far in this attack, even in Marx's theory. Commodities *tend* to the purely quantitative, but they remain physical things and thus have qualities. Similarly, capitalism cannot wholly dominate or eradicate quantitative cultural contents, interpersonal relationships, or purely personal thoughts and affects.

Indeed, it is central to at least one reading of Marx that this should be

so. In this reading one cannot explain the revolutionary transformation or supersession of capitalism solely on the basis of dialectical negation. That is, there must be an alternative, qualitatively separate mode or dimension of existence on the basis of which opposition to capitalism can build. Such a basis may remain outside the domination of capitalism, as in the notion, arguably suggested by Gramsci, of a counterhegemonic culture (Gramsci 1982; Boggs 1984). Or such a basis could be created by capitalism itself. Marx, for example, considered that the very concentration of workers in cities and factories (and the social organization of the factories) might provide the basis for radical mobilization (Calhoun 1983). But there is a tension between this line of reasoning in which Marx expects the coalescence of the working class as a collective actor, subjectively unified on the basis of direct relationships among workers, and Marx's more predominant analysis of how the indirect, abstract relationships of capitalism dominate and destroy direct ones.[44] In this latter line of reasoning Marx focuses on the purely categorical position of the proletariat as the negation of capitalism; the proletariat is unified by common place in the formal relations of production rather than by qualitative relationships to each other.[45]

The other side of capitalist totality in Marx's categorial analysis turns out, ironically, to be a kind of individualism. On the one hand, this is the universal individualism of utilitarianism, and Marx critiques aspects of it.

But, on the other hand, Marx seems to accept this "implicit" individualism as at least a partially accurate description of reality under capitalism: concrete qualitative examples of proletarian social solidarity (such as direct interpersonal relationships as opposed to political commonality or organization) are taken by Marx as nothing other than the residues of the old order. Capitalism is purely formal, impersonal, and quantitative; the working class is unified by the commonalities of a category of individuals.[46] If any relationships are held to be defining or productive of solidarity, they are the relationships of opposition to the bourgeoisie, the ruling class, not the relationships among workers. Nowhere does Marx endeavor to show that individuals in capitalist society (including capitalists as well as workers) are anything other than quantitatively interchangeable, except in potential.

It is important, however, to keep the issue of human social potential in mind. To the extent that capitalism is the object of analysis, direct interpersonal relationships are of minimal significance. In the pre-*Capital* writings where Marx envisages a communist future, however, he does not contrast quantitatively interchangeable individuals with an abstract totality. Rather he takes pains to stress that "above all we must avoid postulating 'society' again as an abstraction vis-a-vis the individual. The individual *is the social being* " (Marx [1844] 1975, 299, emphasis in original). But such a condition is a possible future to be created, not a timeless feature of human nature (other than in potential): "Universally developed individuals, whose social relations, as their own communal [*gemeinschaftlich*] relations, are hence also subordinated to their own communal control, are no product of nature, but of history" (Marx [1939] 1973, 162). Natural law and social contract theorists, Marx says at the same point in *Grundrisse,* focus their attention on "merely objective" bonds among people and mistake them for the spontaneous relationships that are not

possible in the existing state of society. So long as the abstract relationships of capitalism remain determinant, the analysis of concrete relationships will be the analysis of more or less arbitrary epiphenomena. When capitalism and the human self-estrangement of private property are transcended, there will still be a difference between activities that are carried out in direct communality with others and those (e.g., science) that depend less on the immediate copresence of the group but that are nonetheless self-consciously social. But each of these activities will be self-determining in a way impossible under the domination of capitalism:

Social activity social enjoyment exist by no means *only* in the form of some *directly* communal activity and directly *communal* enjoyment, although

communal activity and *communal* enjoyment—i.e., activity and enjoyment which are manifested and affirmed in *actual* direct *association* with other men—will occur wherever such a *direct* expression of sociability stems from the true character of the activity's content and is appropriate to the nature of the enjoyment. ([1848] 1976, 298, emphasis in original)

In terms of Marx's own political interests, that is, his theory of revolution, there is a tension between his account of the tendency of capitalism to eradicate all interpersonal relationships not created by capitalist commodity production and exchange and the need for a basis of social solidarity in the struggle against capitalism. Marx's few comments on interpersonal relationships other than those constituted by capitalism itself indicate that real communality would have to be postponed to a postcapitalist world. Thus Marx has no substantial theory of social integration under capitalism (as opposed to system integration, in Habermas's sense, or the integration of the capitalist totality itself). Although Marx's account of capitalism is powerful, it is an account not of the experiential or observed world of social relationships—that is, society—but of (1) a factor pushing continuously for certain directions of transformation in those relationships and (2) a form of mediation producing systematic misrecognition of those relationships. Marx's theory of capitalism is a more local or specific theory and a less universal one than is frequently claimed. It cannot be the basis for all sociology. Indeed, in the most literal sense it is not a sociology at all. [47] Insofar as they are composed of concrete social relationships, even some of the most characteristic institutions of modern capitalism—business corporations, for example—must be explained by factors other than capitalism.

The some extent the aim of this chapter is to explore these other factors. I have offered a preliminary conceptualization of the structures of the indirect relationships that are distinctive to the modern world. Capitalism has in part helped to produce these relationships, but, at least equally, it depends on them. Corporations and large-scale markets are crucial examples. Indirect relationships have been and continue to be furthered by developments in information technology. Each relationship is also subject to a tendency toward reification, which sets it apart from the social institutions that are formed primarily on the basis of directly interpersonal relationships.

The reader should not think that only Marxism suffers from the lack

of a good account of the role of concrete relationships in social integration, that a good account of social integration is to be found in the whole cloth in some other theoretical corpus, or that my argument is entirely in opposition to Marxist theory. Taking the last point first, my aim is to delimit the application of the most central part of Marxist theory, treating it strictly as a formal of capitalism. Marxism is a theory of capitalism as a form of mediation among human actors (again, considered abstractly as procedures, consumers, and owners), not as a form of social or economic action (as it is for Weber). In this sense capitalism is dynamic and pushes toward totality.[48] Although it may need improvement, with these limits Marx's theory is powerful and still offers an almost unique insight. However, I insist that capitalism is not a form of society. Marx's theory of capitalism should not be privileged as a theory of all social life. We may grant the claim that it is the tendency of capitalism as a form mediation to increase the extent to which a theory of capitalism will explain other aspects of social life, but many of these aspects nonetheless remain "other." Central among these other aspects for the purposes of this chapter are the various relationships through which members of populations are knit to each other and enable the coordination of social action on a very scale. Much the same could be said for the contents of culture.

Conclusion

I have argued that a dominant sociological trend of the modern era is the extension of social integration to an ever-larger scale, albeit with greater internal intensity, through reliance on indirect social relationships. I have suggested that new information technologies do not mark a break with this long-term trend. As material productivity continues to increase, so, too, do our capacities for organization through indirect social relationships. At the same time, social system are extended further beyond the bounds of locality, and the capacity of those empowered by them to reach into the daily lives of ordinary people is extended. Issues of information technology and control are thus central for modern sociology, but this situation does not imply any qualitative break in the kind of social processes

at work at the most fundamental level. Modernity, if that is what we wish to to call our age, continues.[49]

Neither Marx's theory of capitalism nor any theory of industrial society (or postindustrial society) offers an adequate account of society itself, that is, social integration. I have offered a conceptual contribution toward this end by trying to specify the distinctive nature and modern role of indirect social relationships. Of course this discussion raises other issues that I have left untouched. New information technologies may facilitate the reversal of an ancient trend toward population concentration (as least in the rich countries of the world). Will this reversal take place? With what effects? Simultaneously, the same technologies offer an increased capacity for centralized surveillance and control. Will this be checked or balanced by new means of democratic participation? What are the meanings and potentials of direct interpersonal relationships in an age in which so much of social life is constituted through indirect

relationship?

Adequate answers to these and related questions depend on our ability to analyze the varying forms and extent of social integration. This analysis in turn calls for the study of concrete social relationships. Questions of social integration cannot be addressed by purely cultural analysis or through an atomistic utilitarian individualism. Nor does the Marxist theory of capitalism suffice. Despite the centrality of its insight into the dynamic pressures for change in social integration, it remains focused on the abstract, totalizing mediation of qualitative human labor (and the qualitative activity of living itself insofar as it is "consumption" or "enjoyment" of use-values) through capitalist production and the exchange of commodities. From the more structural variants of "structural-functional" thought—especially from Weber and Simmel—we may derive an approach to the study of concrete social relationships. This approach is essential to tackling the issue of social integration, a necessary, it recently neglected, counterpart to cultural accounts of modernity and Marxist accounts of capitalism. We must not, however, limit the study of concrete relationships to the direct ones that constitute the life-world while ceding all analysis of large-scale social organization to systems theory. Rather we must extend the analysis of concrete relationships into the realm of indirect relationships, showing that large-scale organizations are still part of social integration even if they are based on relationships over which participants have little control, of which they may not even be aware, and the results of which they may tend to reify.

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