

# Social Change: Mechanisms and Metaphors

Kieran Healy\*

August 1998

---

\*Department of Sociology, 2-N-2 Green Hall, Princeton University, Princeton N.J. 08544. Email at [kjhealy@princeton.edu](mailto:kjhealy@princeton.edu). Please do not cite or distribute without permission. Thanks to Miguel Centeno, Sara Curran, Paul DiMaggio, Patricia Fernandez-Kelly, Frank Karel, Lynn Robinson, Brian Steensland, Steve Tepper, Bruce Western and Bob Wuthnow for suggestions, discussion and comments. Research for this paper was funded by The Robert Wood Johnson Foundation.

## Contents

<b>Introduction</b>	<b>3</b>
<b>The Varying Fortunes of Social Change</b>	<b>4</b>
The Legacy of the Nineteenth Century . . . . .	4
Social Change as Modernization . . . . .	5
<b>The Analysis of Change</b>	<b>7</b>
Prediction . . . . .	8
Metaphors of change . . . . .	10
Organic development . . . . .	11
Ecological competition and selection . . . . .	11
Diffusion and contagion . . . . .	12
Path dependence and hysteresis . . . . .	12
Complexity and self-organization . . . . .	13
Mechanisms and causes . . . . .	15
<b>Sources of Social Change</b>	<b>16</b>
Demography . . . . .	16
Technology . . . . .	17
Economic change . . . . .	19
Planned change . . . . .	21
Organizations . . . . .	23
Institutions . . . . .	25
Culture . . . . .	28
<b>Conclusion</b>	<b>30</b>
<b>Appendix: An Annotated Bibliography</b>	<b>33</b>
Demography and social change . . . . .	33
Technology and change . . . . .	37
Economic and political change . . . . .	40
Planned change and community change . . . . .	47
Organizational change . . . . .	52
Gender and social change . . . . .	61
Institutions and change . . . . .	64
Culture and social change . . . . .	67
Complexity theory . . . . .	74
Social theory and social change . . . . .	78

## Introduction

Good social science should be able to explain how and why things change. Questions about change can be posed directly, as when we wonder whether religious observance is declining in America, or try to explain why large corporations first appeared at the end of the nineteenth century. But almost any interesting comparative or counterfactual question demands an answer about how something changed. To explain why this happened rather than that, or why things turned out this way here but differently somewhere else, is to deal with questions of change.

Despite its importance to the social sciences — or perhaps because of it — there has been a lot of disagreement about the best way to deal with the problem. This disagreement extends to arguments about whether there is even a sensible question to address in the first place. If change is the stuff of social life, some argue, then social science just *is* the study of change. Talk of “Social Change” *per se* is empty precisely because it encompasses everything. Critics reply, to the contrary, that the social sciences have almost entirely ignored the issue and concerned themselves with a more tractable world of stability and equilibrium. The problem of change can hardly be avoided, but theory and explanation are unthinkingly applied, largely metaphorical, and usually no better than folk wisdom can manage.

This tension pops up in different ways in different fields. In sociology, for example, there is a long-running debate about whether social theory could or should be predictive; that is, whether it should aim to say what will happen rather than rationalize what’s already occurred. Similarly, there are periodic fights over whether history has any overall meaning, or whether we can properly speak of the progress or evolution of civilizations. Opinion runs over a wide range. In his essay *What is History?*, E. H. Carr claimed that “History properly so-called can be written only by those who find and accept a sense of direction in history itself . . . A society which has lost belief in its capacity to progress in the future will quickly cease to concern itself with its progress in the past.” In complete contrast, H. A. L. Fisher prefaced his *History of Europe* with a comment that “Men wiser and more learned than I have discerned in history a plot, a rhythm, a predetermined pattern. These harmonies are concealed from me. I can see only one emergency following upon another as wave follows upon wave . . .” In the field of economics, heated debates over the value or possibility of planning can be seen as another instance of this tension over the real nature and appropriate analysis of change.

This article surveys and discusses diverse recent efforts to grasp processes

of change. I begin by giving a thumbnail sketch of the varying fortunes of the concept of social change in the social sciences. I then briefly discuss some of the theoretical lessons that have been learned from these long-running debates, paying attention to the problems of social forecasting and the different metaphors of change that often underpin our theories. Finally, I discuss recent thinking about change in a number of different fields. Throughout, I will suggest that the best recent work attempts to identify specific *mechanisms* or *processes* of change rather than looking for the master pattern that explains everything, or just cataloging the differences between before and after.

## The Varying Fortunes of Social Change

### The Legacy of the Nineteenth Century

“We bear the nineteenth century like an incubus” says sociologist and historian Charles Tilly. The few social science disciplines not born in the 1800s were deeply transformed during it. Contemporary scholarship inherits many of its questions and much of its temperament from this period. Nineteenth century questions were mainly about the rapid changes that people saw taking place around them — industrialization, urbanization, and so on. Nineteenth century temperament tended to believe these changes were unprecedented, progressive and probably inevitable.

The classics of social science date from this time, and almost all of them can plausibly be read as describing some great process of transition, growth or transformation. There was disagreement about what best characterized the period. Its fundamental basis was taken variously to be a shift from a homogenous to a heterogenous society, feudalism to capitalism, *gemeinschaft* (community) to *gesellschaft* (association), status to contract, mechanical to organic solidarity, or any number of other polar contrasts. Karl Marx, Émile Durkheim and Max Weber survive as the most sociologically compelling thinkers of this period. Their vision may have been sharper than their peers, but they were nevertheless looking in roughly the same direction. Their grasp of the evidence may have been more assured, but their comparative and typological work was meant to flesh out broader questions of social development. Their concern with change was the spark that animated their efforts to catalogue and compare different aspects of society.

Despite its evident importance in their work, their preoccupation with social change did not usually blind these writers to the complexity of what they were studying. In particular, they usually preferred to draw sharp *an-*

*alytical* rather than *historical* contrasts when they identified different social arrangements. This is most obviously true in the case of Weber's painstaking exercises in ideal-typical comparison. It is also apparent in Durkheim's discussion of mechanical and organic solidarity. Similarly, it has often been noted that Marx's writing on specific historical periods is much more nuanced than his grander pronouncements might suggest.

Nevertheless, it was difficult for their successors to avoid the conclusion that these classics described and explained a great historical transformation. Krishan Kumar has traced the emergence of an "image of industrialism" that lurked in nineteenth century history and sociology and culminated in theories of modernization in the 1950s and 1960s.<sup>1</sup> This image was a list of outcomes that defined what a modern society was. It included urbanism, explosive population growth, democratization, secularization, industrialization, and so on. There was a tendency to contrast a pastoral idyll where people lived simple, face-to-face lives with the modern, rationalized, urban world and its complex division of labor. The image cut both ways. You could yearn for a golden age of communal life and reject the bureaucratic alienation of the modern world, or you might be desperate to escape what Marx referred to as "the idiocy of rural life" and embrace the possibilities of modernity.

### Social Change as Modernization

By the 1950s, social scientists had gone a long way towards formalizing these ideas. "Social Change" became a well-defined subfield. You could take courses in it. This ambitious general theory of social change has since become perhaps the most criticized body of work in the whole of social science. Modernization theory rested on the idea that societies were more-or-less independent entities that could be expected to go through the same stages of development. The big changes had happened to European societies first — why so was itself an important question — and their recent histories could be taken as a template for the near futures of other, "less developed" societies. Modernization theory was developed in a number of fields. Sociologists probably had the most general version, but psychologists worked out a complementary account of the individual basis of social development, and the most famous version of the theory was written by an economist. This latter book, W. W. Rostow's *Stages of Economic Development* likened

---

<sup>1</sup>The first half of Kumar's book *Prophecy and Progress* (Penguin) is a very useful guide to the history of ideas about progress, change and development in the eighteenth and nineteenth centuries. Many ideas from this time still lurk in contemporary theories.

modernization to the gradual acceleration of an airplane on a runway, from a standing start to a successful “take-off” into sustained industrial growth.

It’s worth understanding the characteristics of modernization theory. It was what many contemporary scholars were raised on and reacted against, and their preoccupations can’t really be understood unless you know that it’s in the background. Moreover, hindsight makes it a little too easy to dismiss modernization theory out of hand. The post-war golden age led many (mainly American) academics to see the United States as the standard-bearer of social progress, leading on where others would surely follow. It’s easy to ridicule this view now, but of course all social theory is conditioned by the circumstances in which it’s made. This doesn’t exonerate modernization theory of its failings, but the extent to which it was a product of its time might make us more reflective about the origins of our current theories and prescriptions.<sup>2</sup>

Modernization theory had three defining characteristics. First, it saw modernization (defined as a list of things that happened to a society) as the goal of social change in general. There was a tendency to identify a “most developed” society and assume that others would just follow the same path. It should come as no surprise that the most advanced society generally turned out to be the place the researcher happened to be from. Second, it favored functional explanations. The emergence or persistence of some bit of society (the political system, say) was explained in terms of the benefits it provided to the society as a whole (political stability, for example).<sup>3</sup> This tended to distract attention from specific processes or mechanisms of change. If something was beneficial to society, that was why it existed. No further investigation was required. Third, the theory was held together by an organic metaphor (society is like a growing organism) and a particular brand of evolutionism (society is developing toward some final goal).

It was more complicated than this, of course. Like any research paradigm, it was never entirely dominant. It also had its share of researchers who saw the limits of the approach even as they worked within it. For example,

---

<sup>2</sup>This doesn’t mean that circumstances determine the content of people’s ideas, just that they can’t be ignored.

<sup>3</sup>What’s wrong with this sort of explanation? It’s *teleological*: the political system is explained in terms of the effects that it has. But a thing has to exist before it can have any effects, so those effects can’t be used to explain why it exists. Functional explanations answer the question “What is this for?” But saying an animal has a heart to pump its blood and help keep it alive doesn’t explain how animals came to have hearts in the first place. Unless we have a conscious planner who intentionally designs something because she can foresee the effects it will have, describing what something *does* doesn’t explain why it *exists*.

Wilbert E. Moore was an important functionalist who nevertheless complained about the “myth of a singular theory of change.” Models that (like Rostow’s) imagined that societies went through some kind of dynamic “take-off” were “clearly wrong in exaggerating the static qualities of pre-modern societies and, grossly wrong in implying that change ends with the completion of the transition to industrialism.” Moore wanted a theory that made “the connection between ‘before’ and ‘after’ in terms of *sequences or processes* of change...not some invariant sequence according to some law of mindless evolution, for in fact real alternatives exist and real choices are being made by real people.”<sup>4</sup>

This promising insight was not pursued. It’s not immediately clear why. A standard reason is that functionalist explanations made things too easy: things existed or happened because they were beneficial, and wouldn’t exist if they weren’t. Therefore there was no need to examine exactly how they were put together, how they got established or how they changed. But criticism of this flaw came fast and early, and often from paid-up functionalists. A better explanation might be that, in the 1950s and 1960s, American social science relied on a philosophy of science which claimed that the only properly scientific statements were law-like generalizations of maximum scope. Moore himself noted that “in the present state of knowledge, the most impressive array of generalizations derive from before-and-after comparisons.” But however impressive their scope, generalizations derived from “comparative statics” of this kind paid little attention to the causal sequences that get us from before to after. Studies of modernization did little to encourage sociologists to investigate specific sequences of actions or events. The result, in Krishan Kumar’s words, was “a barren formula...imposed on the real word of change, with no more than the most casual investigation of, or reference to, that world.”

## The Analysis of Change

Some scholars are still elaborating or revising the grand vision of functionalism. Adherents to this tradition can be identified by their tendency to speak of *the* theory of social change, by which they mean an account of macro-social change in terms of increasing functional differentiation and evolutionary development. But since the late 1960s, much productive work has been motivated by a thorough critique of functionalism in general and

---

<sup>4</sup>Wilbert E. Moore, *Social Change* (Prentice Hall). This book is a concise and sophisticated summary of the functionalist/modernization perspective.

modernization in particular. This work rejected teleological explanations and simple stage theories of development and social evolution. The 1970s and 1980s saw renewed debates about comparative methods and the place of prediction in the social sciences; the idea of organic differentiation was rejected and new metaphors for change appeared; closer attention was paid to the processes and causal mechanisms of change. Let's look at each development in turn.

### Prediction

The revolutions of 1989–91 in Eastern Europe and the Soviet Union were not conspicuously anticipated by social scientists. This fact provoked derision in some circles. What's the point of all this theory and research if nobody noticed that something as big as this was about to happen? It's not an unreasonable question. Very few people believe the future to be entirely open-ended, and what is social science good for if it can't explain changes like these? Of course, there's now a huge literature devoted to the events of 1989. But if we think we can explain the past, why shouldn't we be able to anticipate the future?

What should we try to predict? Alejandro Portes makes a useful distinction between three candidates: steady states, trends and events. He argues that we are unlikely to work out theories that will accurately predict large-scale, complex and infrequently occurring events like revolutions. They're not common enough and we're not clever enough. Instead, we should concentrate on the other two, and particularly on trends. For example, we might be able to show that the French state's finances were under enormous and increasing stress through the eighteenth century, and we could conclude that this made a revolution more likely. But Portes thinks that any number of contingencies might have prevented it and the outcome was therefore always uncertain. As an illustration, he notes that Turgot's fiscal reforms might well have succeeded and averted the revolution had he not been brought down by the actions of Marie Antoinette.<sup>5</sup>

Prediction is a dangerous business, then. Prophecies can be both self-fulfilling and self-negating. People who are aware of a prediction about themselves may act in such a way as to bring it about. Or if we discover an unpleasant trend, we might be able to take steps to reverse it. Even worse, some kinds of events seem to be *a priori* impossible to predict, because predicting them would involve actually doing them. Humphrey Lyttleton

---

<sup>5</sup>Alejandro Portes, "On Grand Surprises and Modest Certainties" *American Journal of Sociology* vol. 100 no. 6 (1995).



was once asked if he knew where Jazz was going. “If I knew where Jazz was going,” he replied, “I’d be there already.” Virtually the entire “futurology” literature of the 1960s and 1970s is worthless today because it failed to attend to these kinds of uncertainties and relied instead on simply extrapolating the trends of the day. Our theories often presuppose that overall trends or general tendencies can reliably be forecast. But our bad record suggests that such patterns are very difficult to identify. Social scientists have been shy of investigating the role of accident, coincidence or luck in social change. It might devalue the enterprise if too many things just came down to chance.

Portes recommends a middle course between the Scylla of determinism and the Charybdis of caprice. His solution is a sensible one, but the distinction between trends and events begs an important question. How fragile are events and how much leeway should we allow ourselves when analyzing them? Suppose, for example, that Turgot had remained as Louis XVI’s finance minister and implemented his reforms. Suppose further that they had been quite successful, and 1789 turned out to be a quiet year for France. Revolution did not come until 1807. Would this event still be “the French Revolution”? How much would scholarship about its causes resemble the historiography of the real revolution? Portes argues that “predictions” of events like the fall of the Soviet Union are often really statements about trends. But how accurate must we be in order to successfully predict an event?

Portes suggests that “the course of French history might have been altogether different” had Louis not listened to Marie Antoinette. This kind of “what-if?” speculation is usually meant to show how a small change to a small link in large causal chain might have had enormous historical consequences.<sup>6</sup> The real question is whether our theories can hope to tell us *how* different it might have been, and *which* differences are the important ones. If even very large structural trends can be detonated, deflected or defused by individual actions, then reliable prediction is impossible. (Incidentally, the same goes for successful planning or informed efforts to change things.) Events are just too fragile: everything would have been different had  $x$  done  $z$  instead of  $y$ . If individuals do not have this kind of power, though, then predictive theory is not idle speculation (and planned interventions are not worthless). Events are more robust: Marie Antoinette and Turgot might have done what they liked, but the French Revolution would have come sooner or later.

Whatever about the subtleties, the predominant disciplinary view of pre-

---

<sup>6</sup>Cf. the rhyme in which the Kingdom was lost for the want of a horseshoe nail.

diction seems clear — if a little perverse. Surprisingly, successful predictions are rarely taken as strong evidence that a theory is true, or even useful. For example, in 1971 a sociologist writing about the Soviet Union suggested that a contradiction between a dictatorial party elite and a universalist ideology of socialism might lead to a crisis:

“There are instabilities inherent in the dictatorship of the Communist party... To the degree that the party succeeds in educating the population as good socialists, there may emerge democratizing pressures parallel to those that developed in Western polities and in Protestantism for eliminating the status of an elect. The processes of the democratic revolution have not yet reached an equilibrium in the Soviet Union. Further developments *may* well run in the direction of Western types of democratic government with responsibility to an electorate...”

The reputation of Talcott Parsons, the leading light of the functionalist–evolutionary tradition, has not been much enhanced by this accurate forecast.<sup>7</sup> Despite some protest to the contrary, sociologists do not think that this kind of prediction is worthwhile. Economists rarely even protest: the formal nature of their methods means that their disciplinary criteria rest on evaluating the internal logic rather than the empirical predictions of a model. These aversions may have a solid foundation. After all, if a community of scholars makes enough predictions, someone is bound to get it right sooner or later. Instead, researchers aim for maximum explanatory power with the most parsimonious theory. Looking for variables that are “predictably” significant when tested is very different from coming up with a theory that aims to anticipate future events. This limits what social science can hope (or should be expected) to tell us about social change.

## Metaphors of Change

We can usefully distinguish five metaphors that appear in discussions of change: *organic development*, *ecological competition and selection*, *diffusion and contagion*, *path dependence and hysteresis*, and *complexity and self-organization*. This list is not exhaustive; neither will any substantive account of some particular change necessarily be based on a clearly articulated metaphor. But they are very common nonetheless.

---

<sup>7</sup>It can be found in Talcott Parsons, *The System of Modern Societies* (Prentice Hall).

### Organic development

The classic analogy between the growth of living organisms and the development of societies has persisted in some form or other for millenia. In his *Social Change and History*, Robert Nisbet showed how the idea of organic growth and patterned, naturally unfolding development has underpinned all sorts of historical, political and sociological theories. The distinction between social structures and their functions comes from this analogy to complex organisms. In general, the evolutionary component of functional theories usually turns out to be about differentiation rather than Darwinian natural selection. On an organic analogy, societies become more and more complex as time passes, but there is no “selection mechanism” in operation: the pattern of growth is predetermined. It is often forgotten that Darwinian concepts of natural selection and evolution have no historical connection with organic theories of developmental growth. They are two different kinds of evolutionism.

### Ecological competition and selection

By contrast, ecological metaphors of change *are* directly indebted to Darwin. Social units of some kind compete with each other for environmental niches. Population ecology models of organizations are the best-developed examples of this approach. Populations of organizations compete with one another; success is measured by survival.<sup>8</sup> It is possible to speak sensibly of the “efficiency” and “fitness” of the units because there is, as in nature, some regime that selects for some organizations and not others. Change is driven by real competition in any population of units competing for the same resources, be they firms, nation-states or even ethnic groups. Surviving units will therefore be efficient in the sense that they are best adapted to their particular niche. Although it seems natural to extend the ecological metaphor to patterns of competition and evolution in whole ecosystems, population ecologists have largely restricted themselves to “intra-species” competition; that is, to the success rates of individual firms measured against other firms of the same type. “Inter-species” competition is more difficult to model.

The long shadows cast by Eugenics and Social Darwinism have kept sociologists away from exploring the selectionist paradigm in greater depth. Political scientists and (to a larger extent) economists don't suffer as much

---

<sup>8</sup>Even though population ecology is a well-worked-out theory, the disanalogies to Darwinian selection are immediately obvious. In natural selection, success is not defined by how long you survive but by how many offspring you have. There is no corresponding measure for things like organizations or states: life-span is a second-best measure.

from these inhibitions. By far the most extensive work in this area has been done in the social sciences with the closest affinities to biology. In particular, evolutionary psychology has emerged as a well-defined research enterprise in the last fifteen years. It aims to show how individual behavior and the dynamics of social interaction can be explained in evolutionary terms.

### **Diffusion and contagion**

Diffusion and contagion models liken change (especially cultural change such as fads and fashions) to the progress of a disease through a population. New ideas, beliefs or practices are invented and spread from person to person, or organization to organization. Processes of diffusion have been identified in many different studies. These analyses rely less on the biological metaphor if they identify a mechanism driving the process. Several plausible mechanisms exist, ranging from the rational choices of individuals, to the shape of the social networks that people live in, to more cultural accounts.

Theories of contagion with a Darwinian twist are increasingly common. The biologist Richard Dawkins makes the provocative suggestion that ideas and beliefs are subject to selection pressures, just as organisms are, and can be understood in the same way. Dawkins coined the term “meme” as the mental analogue of the gene. Accounts of cultural selection and change from the perspective of “Memetics” or “Memology” have had considerable popular success. The notion that ideas and beliefs stay in your head because they are good at getting you to think about them has a certain twisted appeal. (Is the theory of memes itself a good meme?) But the logic of the theory isn’t so clear. Critics argue that defining a successful meme as an idea selected for its appeal runs the risk of simply affirming the consequent, as memes are selected because they are appealing and are appealing because they are selected. The result is a big “just-so” story that can’t really be tested.

### **Path dependence and hysteresis**

Path dependence is the idea that a present situation depends decisively on some past decision or event. Dependence isn’t determinism: different outcomes are possible but, as time passes, each decision or event changes the set of available alternatives, perhaps opening up new ones, probably closing off previously accessible ones. Steven Krasner invokes the image of a periodically forking road or track. “Once a particular fork is chosen, it is

very difficult to get back on a rejected path”.<sup>9</sup> Once you decide to go to med school, it’s very hard to start over as a computer scientist. These past choices and investments are your sunk costs. They include everything from your capital investments (buying a house in New Jersey makes it that much more awkward to move to Illinois) to your taken-for-granted assumptions about what’s feasible. Their accumulated weight conditions your current set of options, narrowing the range over which you choose.

The concept of path dependence was inspired in part by developments in biology. It derives from a theory of punctuated equilibrium (put forward by Steven Jay Gould and Niles Eldredge), which argues that evolution happens in sudden spurts and jumps rather than by gradual increments. The idea appeals to sociologists and political scientists who want to explain how states tend to get stuck on particular developmental tracks. It is not clear whether these explanations properly explain why changes occur *when* they do. Why should branching happen in some periods and not others?

Path dependence suggests a series of discrete decision nodes, each with a one-time (though perhaps significant and long term) effect on the direction of a process. Hysteresis, on the other hand, is the continuous, elastic effect of the previous time period on the present one. Choosing a particular social welfare system is a path dependent process: what we have today is largely a consequence of what we decided in 1945. By contrast, it may be that one of the most important causes of this month’s unemployment rate is last month’s unemployment rate: this is a case of hysteresis. With path dependence, your sunk costs are dead weight; with hysteresis, they have their own momentum.

### **Complexity and self-organization**

Complexity is a wholly new metaphor. Its novelty means that much work in this area has a breathless quality about it. Complexity theory is the study of *self-organizing systems*. Systems initially composed of more-or-less randomly distributed homogenous units may spontaneously form large-scale spatial or temporal patterns. Complexity theorists see self-organization everywhere from weather systems to Wall Street.

Part of the attraction of complexity theory comes from the fact that it claims to be able to model a huge variety of processes in the same way, without losing its explanatory force. It takes processes characterized by random growth or instability and shows how order is generated. For example, many

---

<sup>9</sup>Stephen Krasner, “Approaches to the State: alternative conceptions and historical dynamics” *Comparative Politics* vol. 16.

and diverse phenomena seem to obey simple (and rather beguiling) power laws: Lotka's law of scientific productivity says that "the number of authors who publish a given number of scientific articles is inversely proportional to the square of the number of these articles."<sup>10</sup> The percentage of authors publishing  $n$  articles is approximately  $\frac{1}{n^2}$ . A similar relationship ("Zipf's law") applies to the relationship between a U.S. city's rank and its size: if you rank the 130 metropolitan areas in the United States by population and then plot the log of city rank against the log of city population, the result is a straight line with a slope of almost exactly minus one. This means it is very nearly true that the second-largest city in the U.S. has half the population of the largest, the third-largest a third of the population, and so on.<sup>11</sup> These data have been analyzed by economist Paul Krugman. He notes that although the second largest city in the U.S. (Los Angeles) is considerably more than half as populous as the largest (New York), "once you get down the ranking a bit, the fit starts to become almost terrifyingly exact. For example, the 10th ranked metropolitan area in the United States is Houston, with 3.85 million people. The 100th ranked area is Spokane, Washington, with 370,000 people...".<sup>12</sup>

It's not clear what these sorts of facts mean. Complexity theory was developed in the natural sciences, mainly by chemists and physicists. Importing it into the social sciences will probably be a difficult business. Part of the difficulty, but also much of the interest, comes from the fact that the outlook of the researchers who developed the approach is rather different from that of mainstream social scientists. Paul Krugman, who usually studies international trade, is one of the few researchers on the social science side of the divide who have tried to apply the approach to standard problems. At present, the promise of complexity theory is greater than its substance. It remains to be seen whether the mathematical core of the theory can usefully be applied to social processes, or whether it will do more metaphorical duty than practical work.<sup>13</sup> The field does seem set to grow rapidly.

---

<sup>10</sup>For details and evidence see William N. Dunn, "Probing the bounds of ignorance in policy analysis" *American Behavioral Scientist* 40:227–98.

<sup>11</sup>Zipf's law also applies to written texts or natural languages, where it states that the rank of a word is inversely proportional to the frequency of its occurrence.

<sup>12</sup>For more on this, see Paul Krugman, *The Self-Organizing Economy* (Blackwell). Another interesting and accessible application of this approach can be found in the fascinating agent-based computer simulations of social processes developed by Brian Epstein and Robert Axtell in *Growing Artificial Societies* (Brookings).

<sup>13</sup>Chaos Theory presently seems confined to this role, in the wake of a lot of excited speculation a few years ago.

## Mechanisms and causes

Enthusiasm for grand theories of social change has given way to demands for well-defined mechanisms that show us how change happens. The idea is that good theory must specify plausible mechanisms that link alleged causes to purported effects. But what exactly is a mechanism?

We can start with a negative definition. To say that a theory “describes no mechanism” linking cause *A* to effect *B* means that we have not been shown a causal sequence that plausibly brings us from one to the other. This assumes that we already know what a plausible cause looks like. The point is brought out nicely by John A. Hall’s story about an essay an undergraduate friend was asked to write on the social causes of the rise of Fascism. Having researched and written the essay, Hall’s friend found that he had fallen into a trap set by his tutor. He was told that there were no “social” causes of Fascism (or anything else), there were only individual motivations, decisions, actions and their consequences.<sup>14</sup> A complaint about the absence of a mechanism is also a claim about what you think exists in the world, *i.e.* what your social ontology contains. For Hall’s tutor, it consisted only of individuals. Classes, states and other “social” entities were at most descriptions of aggregate individual actions. It was a mistake to think they could *cause* anything.

Any causal explanation will take for granted what can count as a cause in the first place. Sociologists often believe in non-individual entities that nevertheless have causal powers. Economists usually don’t: they only believe in individuals. Disagreement about the presence or absence of mechanisms often boils down to a deeper argument about whether things like classes, states, networks, or discourses can really be said to exist or have the power to make things happen.<sup>15</sup>

---

<sup>14</sup>John Hall, *Powers and Liberties* (California).

<sup>15</sup>If you believe an inanimate or abstract object can actively decide to make things happen or generally behave like a person, you commit the sin of *reification*. We sin in a venial way all the time, as when we say “The Computer destroyed all my work,” “Wall Street changed its mind about Microsoft,” or “The United States bombed the Sudan.” This is just shorthand for the correct, but much longer, explanation. If you start to believe that the Computer actually has a vendetta against you, or that Wall Street really has a mind to change then you’ve graduated from metonymy (a forgivable shortcut) to reification (a category mistake).

## Sources of Social Change

So far, we've looked at some of the different ways that change might be described or conceptualized. But what about sources of change in the real world? Abstract mechanisms are one thing, real sites of social transformation are another. The following is a rather selective survey of research on some of these sources. The issues raised so far should be visible to varying degrees in the sections that follow. I discuss the following sources of change: demography, the economy, technology, planning, organizations, institutions and culture. The mechanisms already discussed can be seen operating in these different areas of social life. The metaphors are visible in the theories that scholars have come up with to explain these processes.<sup>16</sup>

### Demography

Demographic processes drive change at all levels of society, from the broadest, long-run, global patterns of human population development to the most contemporary trends in fertility and immigration. Demographic change is bound up with institutional and political change: as family systems shift in form, societies look to influence these patterns through social policy.

At its largest scale, the study of population change intersects with the study of historical variation in geographical conditions. H. H. Lamb has collected much evidence that shows how population growth and economic development have been associated with mild or unusually warm historical periods (such as the early medieval era). On a (relatively) smaller scale, the most durable and debated theory of change is undoubtedly that of the demographic transition. This is the familiar idea that European societies experienced first a drop in death rates and subsequently a drop in birth rates, resulting in a sharp rise in population over a period of several generations.

The demographic transition is a good example of a trend looking for a mechanism. If you make a graph of the birth and death rates of European countries from the late 1700s to the early 1900s, the shift from a high-birth/high-death to a low-birth/low-death regime is clear. There seems to be a stable before period, a stable after period, and some switch-over in the middle. But while the shape of the transition is compelling, there is surprisingly little consensus on the mechanisms that drove this change. It's not clear how we got from before to after, and simply listing the differences

---

<sup>16</sup>Such a brief and rapid survey is sure to annoy anyone who knows any of these fields in depth. I want only to show some of the affinities between them, rather than faithfully reproduce their individual detail.



between the two doesn't constitute an explanation. The usual suspects — modernization, industrial development, and so on — have all been found wanting. Other alternatives fail to explain all the cases. Demographers have found both the mechanisms of the European transition and the applicability of the pattern to other countries to be unclear and controversial.

A different branch of demography tracks and tries to explain contemporary trends in fertility patterns, immigration and family institutions. The focus here is on figuring out what drives changes in the the timing of births, how immigrants adapt to and change the societies they live in, the complicated relationship between demographic change and social welfare policy, and so on. Change in population, whether by fertility or immigration, is perhaps the most basic kind of social change there is. Although we can track what's happening to the population in a more-or-less accurate way, trends are generally not good guides to the future. Forecasting population growth has been an industry since the 1950s, but although extrapolating trends is easy, forecasting changes (like baby booms or busts) has proved much more difficult. Population modelling is an area where the attractions and difficulties of prediction in the social sciences are especially clear.

## Technology

The simplest theories of change depend on some “exogenous shock” to get things moving. Something on the outside (itself generally unanalyzed) gives the system a push and this sets off a series of internal changes. Technology is probably the most common *causa causans* of this kind. A new invention or technique — the steam engine, the spinning jenny, the printing press, the transistor — simply bursts upon an unsuspecting world and transforms it. On this view, technology is its own mechanism, and the timely appearance of a new invention is a sufficient cause of change.

Social scientists have therefore had a difficult relationship with technological explanations of social change. They instinctively (and with good reason) reject this image of protean transformation, contending that technologies can only be understood within particular social contexts. Their adoption, diffusion and even their invention is constrained and explained by social forces. At the same time, the power of new technologies is impossible to discount altogether, and it seems self-defeating to deny the role of technology for the sake of defending a disciplinary boundary.

The latest round of futurist speculation in this area has focussed on new information technologies, and to a lesser (but rapidly increasing) extent on developments in biotechnology. Theorists in the 1970s were sure that

change was happening, but could not give a positive definition of the new society. Instead, they said it was “post-industrial.” With some fanfare, the avatars of the “information society” (Esther Dyson, Michael Dertouzos, George Gilder and the like) have supplied this defining characteristic. These debates are closely related to questions about the changing nature of work in capitalist societies, and thus to the shape of capitalism more generally. I discuss that topic in the next section.

A different tradition of research examines the social history of particular innovations. The divide between popular and academic accounts is quite wide here. On the popular side, we often see the claim that, were it not for some particular invention, the Industrial revolution might never have happened, Columbus might never have sailed to America, and so on. This is the problem of fragile events, discussed above in connection with prediction. For example, Dava Sobel’s bestselling *Longitude* tells the story of attempts to solve the key naval problem of the 1700s. Sailors could calculate their *latitude* very easily, but not their longitude. Navigators needed either a method to derive it from stellar observation or a watch that would run reliably at sea. With a good watch, you can work out your longitude if you know what time it is at some known longitude — Greenwich, for example. Educated opinion at the time held that nobody could make a watch accurate enough to keep time at sea.<sup>17</sup> The longitude problem was eventually solved by John Harrison, a self-taught Yorkshire clockmaker, who had to struggle with the authorities for many years before they believed his marine chronometers really did the job he claimed. Sobel’s account focuses on Harrison’s struggles, his genius, and so on, while emphasizing the enormous consequences of his invention.<sup>18</sup>

We can contrast this sort of account with work that emphasizes the interplay between social context, technological development and individual inventions. A good example is Susan Douglas’s *Inventing American Broadcasting*, which examines the role played by government, business and the military in determining the shape of American radio broadcasting in its early years. She also gives a rich account of radio’s cultural ramifications, from the glorification of the inventors to the thriving world of amateur tinkerers. Similarly, Wolfgang Schivelbusch’s *Disenchanted Night* gives a sense of the cultural consequences of the industrialization of light, arguing that

---

<sup>17</sup>An enormous amount of scientific effort and state money went into solving this problem. The Greenwich observatory was founded precisely to come up with an astronomical solution.

<sup>18</sup>The British empire was a maritime empire, and it would have had a much more difficult time existing without Harrison’s clocks.

the mass production of reliable gas and electric illumination changed the way people did things in public and private, opened up new possibilities for policing and social control and reshaped commercial and cultural practices from shopping to theatre-going.

Other work further downplays the idea of the inventor-hero who changes the world. The question here is, what are the *sources* of innovation? Are some societies better at producing or taking advantage of inventions? There is a solid body of work that tackles this difficult question, showing that the timing and direction of change more often depends on institutional conditions than individual genius. Arnold Pacey's book *The Maze of Ingenuity* traces the development of an ideology of technical virtuosity and intellectual innovation through a series of case studies. In an interesting article, Randall Collins outlines a Weberian approach to the study of innovation, invention and technological change. He argues that new ideas are "rarely the crucial part of any invention, and, indeed, possible ideas seem to be far more widely available than their utilization." Collins advocates a broad historical and comparative approach that examines differences in rates of adoption and diffusion of particular technology, where the broadest impetus is provided by economic and geopolitical conditions, mediated through particular institutional configurations.<sup>19</sup>

### Economic change

Historians, economists and macro-sociologists examine economic change directly, through the analysis of historical transformations and indirectly, through the comparative analysis of different cases. We can highlight three general areas where processes of change are of central concern.

The first is the study of the development of capitalism in the very long-run. Scholars here essentially inherit Max Weber's question, *Why the West?* The most ambitious strand of research here is World Systems theory, which addresses questions of European development in a world-historical framework. The world-systems approach was developed in conscious opposition both to modernization theory and its Marxist alternative, dependency theory. It tries to avoid any hint of developmentalism or ethnocentrism through its global framework and encyclopedic coverage. Its advocates argue that it is only by having a truly global range and a huge historical span that the pattern and direction of social change becomes visible. Social change here

---

<sup>19</sup>See Randall Collins, "A theory of technology" in his *Weberian Sociological Theory* (Cambridge).

is something that happens to whole societies or civilizations over centuries, and over which individuals can have little control.

Still at an international or global scale, but over a much-reduced time frame, macro-economists, comparative sociologists and modern historians examine the present shape and future trajectory of capitalism. Unlike the staggering scale of the world-system, change at this level is visible over the course of people's lives. In the 1970s and early 1980s, sociologists and economists debated the relationship between technology and the labor process, particularly the thesis that technological change deskilled labor to the benefit of capital. These debates gave way to the analysis of industrial restructuring and the decline of heavy manufacturing industry in Western Europe and the United States. A new production and manufacturing regime seemed to be emerging, one based on "flexible specialization" rather than mass-production.<sup>20</sup> In the last few years, these debates have increasingly centered on the idea that the world economy is becoming increasingly "globalized."

The concept of globalization ties together ideas about new information technologies, the changing role of the nation-state, and the spatial reorganization of worldwide capital and labor flows. Geographers have traced the effects of this process on cities, showing how the physical and social geographies of cities like New York, London and Tokyo have been reorganized by global economic change. Within economics and sociology, there is a lot of argument about what exactly is happening. A common argument, generally accepted in the media and well-documented in the academic literature, is that a new era of global competition and mobile capital has hit low- or unskilled workers in the United States and Europe hardest. On the policy circuit, writers like Lester Thurow and Robert Reich argue that the new global competition has completely changed how economies work and what policy-makers can do about it.

Others are skeptical — hence the term "globaloney." The common claim that waves of corporate downsizing improved the competitiveness of American business has been called into question, for example. In *Fat and Mean*, the late David Gordon argued instead that labor market institutions benefit a "bureaucratic burden" of managers at the expense of ordinary workers. From the perspective of mainstream economics, Paul Krugman regularly derides what he calls "pop internationalism" (as represented by Reich *et al.*) as theoretically empty and empirically false. He argues that world trade

---

<sup>20</sup>See, for example, Michael Piore and Charles Sabel *The Second Industrial Divide* (Basic).

is not as important to the United States as people think and that, more importantly, it should not be thought of as a competitive, zero-sum game where some countries must lose if others are to win. In the same vein, a number of historians have pointed out that despite new information technologies and the globalization hype, even open economies like the U. K. still trade less now than they did at the turn of the century.

Debate about globalization is generally carried on amongst policy-makers, which should make it clear that an important source of macro-social change comes from the active attempts of large organizations, and particularly nation-states, to initiate change themselves. Any investigation of large-scale economic change can't avoid the role of political institutions. Work here has recently been spurred by political reconstruction in South America, Eastern Europe and the former Soviet Union. Although they may have failed to predict these events, sociologists, economists and political scientists have not been slow to recommend what should happen next.

### Planned change

Like technology, planning is at once a field of study and a mechanism for change. Intentional action, learning and strategizing can straightforwardly explain why things turned out the way they did. A properly executed plan should bring about the desired outcome. But plans may be variably coupled to outcomes. We can distinguish between planning *that* something will happen and planning *so that* it will happen. The first case is just forecasting: I anticipate something will happen. Maybe I know what to do in the event. In the second, I actively do something to bring it about. But even in this case, others may be skeptical that there really is a direct link between my plan and the outcome. We may feel suspicious when we hear someone claim that their plan and subsequent actions caused their objective to come about.

Advocates of planned change in organizations and communities believe that things can accurately be planned for, plans successfully implemented and goals reliably achieved. There is a theory and method of planned change. There is a whole literature that works from this perspective. It's mainly prescriptive, and addressed to managers or community leaders. It lays out what needs to be done, usually drawing on one or more case studies. Some critical work also exists within this tradition. It seems to have been provoked by dissatisfaction with attempts to measure and evaluate "successful" changes or innovation. While the management view predominates in studies of organizations, work has also been done on participatory communication (particularly in the field of development) that stresses the problems that

occur when plans are imposed from above without consultation with their supposed beneficiaries.

The more analytic the work on planned change, the more likely it is to question the assumptions of the group or organization under study. It will pay more attention to the power relations between groups involved in the plan, and take a closer look at the assumptions of those involved. For example, Peter Marris examined two efforts at inner-city regeneration in England. He found that different metaphors *of* the planning process tended to be favored by different interests *in* the process.<sup>21</sup>

The larger the scale of the plan, the more difficult questions of causation become. Planners seem less like independent actors and more like creatures of their environment. Interestingly, although plans may become increasingly decoupled from outcomes as their scale increases, it can be argued that this *improves* the chances of plans getting credit for whatever good things happen following their implementation. Some varieties of sociological research on institutions argue roughly this. For example, economic plans and policy interventions that are followed by the desired results will be “discovered” to have been effective. At the end of a depression, for example, whatever the government happens to be doing will be credited with pulling the country out of its slump. In such cases, simply having a plan goes a long way toward making everyone feel better, and a wide range of outcomes can be reconciled with the claim that the plan was a success.

Social scientists are very interested in why plans fail, spin out of control or rebound on their makers. In economics, there is a well-entrenched view that the complexity of human action makes planning impossible, whereas the market can be guaranteed to produce the most efficient outcomes. Sociologists have long been fascinated by the unintended consequences of human actions. The idea is periodically rediscovered every twenty years or so.<sup>22</sup>

The best recent study along these lines is James Scott’s *Seeing Like a State*, which should probably be read by confident planners everywhere. Scott describes the historical processes and ideological motivations behind South American urban planning, Soviet collectivization, and compulsory vil-lagization projects in Tanzania. In each of these cases, disaster was brought about by an authoritarian state staffed with planners who were convinced that life could be improved in a scientific manner. Against this tendency to generalize and simplify, Scott argues that successful planning requires *mētis*,

---

<sup>21</sup>Peter Marris, *Meaning and Action: community planning and conceptions of change* (Routledge).

<sup>22</sup>The opening article in the first issue of the *American Sociological Review* was a piece by Pitrim Sorokin called “Is Planning Possible?”

a (somewhat elusive) variety of practical, applied knowledge that blends experience and improvisation with an eye to the circumstances.<sup>23</sup>

The planners' main problem, according to Scott, was their need to simplify and regulate everything within their purview. A plan is like a map or blueprint: it provides an abstract guide to the world. Scott argues that his planners liked their maps to be as clean and well-ordered as possible. Success or progress was measured by the degree to which the world could be made as orderly as the plan. Plans conceived in this fashion lead to disaster because they can't tell the difference between necessary complexity and useless noise.

## **Organizations**

Organizational sociology has long been concerned with innovation. Owners, managers and workers have a vested interest in figuring out how organizations work and how they can be changed. Early studies looked at the question through the lens of organizational failure. Researchers found supposedly rational bureaucracies to be conflict-ridden and actively resistant to change on the one hand, or cumbersome and unable to react to or learn from it on the other.

Contingency approaches extended this view. Influenced by a narrow reading of Max Weber's theory of bureaucracy, standard management theories treated organizations as self-contained units whose problems were caused and solved internally. Contingency theory examined them in context. They found that organizations were better adapted to some environments than others. An organization in the wrong kind of environment generally did a bad job of responding to change. In the late 1950s and early 1960s, Joan Woodward examined the relationship between organizational form and industrial technology, arguing that the latter predicted the former for successful companies. A different kind of contextual argument was made by Arthur Stinchcombe, who observed that organizations founded at the same time tend to look and work the same. He also noted that new organizations fail more often than old ones. This general approach raised important questions about environments, information and uncertainty that have remained at the center of thinking about organizational change.

The study of organizations easily lends itself to metaphor, probably because its units of analysis can be treated as having the characteristics of persons (and by extension, of organisms generally): they can grow, learn,

---

<sup>23</sup>Metis, the wife of Zeus, was the Greek goddess who personified intelligence.

compete, fight and copy one another. The population ecology approach makes explicit use of the ecological metaphor, using the language of environments, resources and niches to explain the success rates of organizations of different kinds and the mix of organizations in society at large. Population ecologists have also examined how whole systems of organizations evolve, although this is more difficult than studying a homogenous population. A related problem is how new *kinds* of organization arise and establish themselves. The simplest “genetic” explanations suggest that random variations in individual organizations are analogous to genetic mutations which are then selected if they are favorable. An alternative approach, reminiscent of the contingency perspective, emphasizes contextual constraints on variation.

Studies of the origin of innovation often shade into analyses of its propagation through a population. Recently, researchers have paid a lot of attention to the importance of imitation as a mechanism. Organizations copy one another, imitating the successful in order to succeed themselves. Prominent organizations may also be copied just because they are prominent: doing what they do gives you credibility by making you look like a real organization. At a different level of analysis, ideas, theories and recipes for organization are also seen to diffuse. In her fascinating study *Innovation and Imitation*, Eleanor Westney investigates the remarkable transformation of Meiji Japan between 1859 and 1912, as the Japanese adopted many Western-style institutions. Through case studies of the police, the postal system and the newspaper industry, she traces this process of diffusion through the selective, deliberate and sustained emulation of Western forms of organization by Japanese institution-builders.

In much of this work, there is a tension between the processes of ecological competition and organizational learning. Natural selection is blind by definition, and the Lamarckian inheritance of characteristics is impossible. Your children won't be more musically talented just because you take piano lessons. By contrast, organizations can learn, copy and transmit information to one another. It is difficult to strike a balance between these processes. A number of scholars have made the attempt, presenting an evolutionary theory of the firm which tries to integrate the ability of organizations to learn with the idea that environments select for particular routines or practices.<sup>24</sup> The most difficult task seems to be to identify the selection mechanisms that determine fitness in particular environments. This leads to a concern

---

<sup>24</sup>See, in particular, Richard Nelson and Sidney Winter, *An Evolutionary Theory of the Firm* (Harvard).



with the emergence of the legal and political institutions of capitalism. The economic end of economic history argues that modern capitalist institutions are the efficient outcomes of long-term selection processes.<sup>25</sup> Pitted against it is a view that sees institutional development as driven by distributional conflict and the exercise of power, rather than efficient selection mechanisms.

## Institutions

Institutions are difficult to define. There are two general perspectives. Institutions may be thought of as sets of rules that actors abide by in specific contexts. On this view, institutions regulate action by providing systems of incentives and sanctions that affect the strategies and bargaining power of actors. Alternatively, institutions may be thought of as a body of taken-for-granted practices, routines and assumptions that can shape the interests and goals of actors. The two definitions are similar insofar as they both incorporate the path-dependence metaphor. Both suggest that institutions are bodies of rules that may accumulate over time and become difficult to change. The key difference between the two views is that the first sees institutions as external obstacles that people put up with, voluntarily or otherwise, whereas the second sees them as providing people with a cognitive framework that tells them how the world works and what their interests are. Actors think *about* institutions in the first case; they think *through* institutions in the second.

### The regulatory view

The regulatory picture of institutions has helped explain why equally strong interest groups in different countries are variably successful in pursuing their goals. The explanation is that institutions provide varying opportunities to actors to pursue their interests. Two similarly powerful groups might want to change government policy about something, but the group in country A has a harder time than the one in country B, because the law there prohibits certain kinds of lobbying. The degree to which a government can intervene in the economy is a function of its institutional structure. The problem for these views is to show how institutions ever change. It might be that the costs of maintaining an institution eventually become greater than its benefits, providing actors with an incentive to change it. This suggests that institutions might evolve towards increasingly efficient forms

---

<sup>25</sup>The Nobel Prize-winning work of Douglass North, and the corporate history of Alfred Chandler are two of the most prominent examples.

(though perhaps with the possibility of some inefficient survivals). This is an optimistic view: it's not hard to imagine institutions that seem almost entirely jerry-built — think of tax or social welfare systems — which satisfy no-one but which also resist attempts at reform.

A related body of work, still within this regulatory tradition, shows in detail how rational individuals will often get stuck with outcomes that, collectively, nobody wants. Game theory provides a variety of examples (the most famous being the prisoner's dilemma) where the achievement of some collective good is frustrated because it's not in any single individual's interest to take a step toward it. But there's a more interesting issue directly applicable to the study of change. In a brilliant essay, Thomas Schelling (an economist) showed that *even if* most individuals prefer living in a racially mixed neighborhood, it only takes a very small perturbation to begin a process that will result in two segregated neighborhoods. The argument doesn't just apply to racial segregation. This process has been observed in a wide variety of contexts. It's a "tipping phenomenon."<sup>26</sup> They go a long way toward explaining how large-scale outcomes are related to small-scale actions. In particular, they show how big changes sometimes need only a small push (and, conversely, how apparently big pushes may produce little or no change). In a useful article, Malcolm Gladwell draws on related work to describe patterns of crime.<sup>27</sup> If a process is controlled by a tipping point, then efforts to change it will not come to much unless you know where the threshold is.

### The constitutive view

The constitutive view sees institutions as providing the categories of our thought. The anthropologist Mary Douglas makes a particularly provocative

---

<sup>26</sup>Here's how it works. Imagine a checkerboard with alternate black and white pieces on the squares. The pieces represent the residents of a racially integrated neighborhood. Say residents want just 30% of their neighbors to be the same race as them — not a strong preference at all. The arrangement of pieces on our checkerboard meets everyone's preference for an integrated neighborhood. This is a *stable* equilibrium, but it's not *self-policing*. We can see the difference if we remove a few pieces at random, or replace just one or two pieces with opposite colors. This changes the balance of the neighborhood. Some people now have fewer than their preferred 30% of same-race neighbors. They will move to a place on the board where their preference is satisfied. But this further upsets the balance for others, who move as well. Very quickly, things cascade and we are left with two blocs of white and black pieces on the board, perhaps with a few isolated pieces of opposite color inside them. The equilibrium has tipped. The new equilibrium is stable *and* self-policing — and much harder to change.

<sup>27</sup>"The Tipping Point," *The New Yorker*, June 3rd 1996.

case along these lines. Institutions grow out of conventions. A *convention* will arise between individuals in cases of common interest in order to solve some problem of co-ordination. We don't care what side of the road we drive on, for example, as long as everyone drives on the same side. Self-policing conventions will naturally emerge in such situations.<sup>28</sup> Douglas argues that institutions are far more durable than conventions because, in addition to solving co-ordination problems, they rely on some powerful natural analogy, and thus "rest their claims to legitimacy on their fit with the nature of the universe." (Note that to "solve" such a problem does not necessarily mean everyone does equally well out of the solution.) Other versions of this view offer similar attractions and problems. The theoretical perspective is compelling in many respects, but it is difficult to see how change might be explained except in terms of some exogenous shock or untheorized "shift." An alternative way of putting this is to say that individual agents seem to get less agency than they deserve.

Some very interesting work does examine cases of institutional change, however. In *Canvasses and Careers*, Harrison and Cynthia White analyze the rise of the Impressionist movement in France in terms of the reorganization of the French art world that was happening at the time. They show how the dominant Académie des Beaux Arts disintegrated and was replaced by a dealer-and-critic system that was able to link the burgeoning middle class market to the hugely increased volume of paintings being produced (which the Académie was unable to show or sell). The professions provide excellent case studies of the social construction of legitimate, well-institutionalized knowledge. Andrew Abbott describes their historical development as the product of continuing conflict about appropriate jurisdiction between different occupational groups. Nancy Folbre's work integrates economic and institutional approaches in a creative effort to explain how the costs of caring for dependants come to be distributed in different societies, to the disadvantage of women. Neil Fligstein analyzes the role of professional managers from different backgrounds (such as manufacturing, marketing and finance) in the institutionalization of particular images of the firm.<sup>29</sup>

---

<sup>28</sup>In his book *Convention* (Blackwell), the philosopher David Lewis shows very clearly how this happens.

<sup>29</sup>Harrison White and Cynthia White, *Canvasses and Careers: institutional change in the French Painting world* (Chicago); Andrew Abbott, *The System of Professions* Nancy Folbre, *Who Pays for the Kids? Gender and the Structure of Constraint* (Routledge); Neil Fligstein, *The Transformation of Corporate Control* (Harvard).

## Culture

Until recently, culture explained why things stayed the same, not why they changed. Understood as a monolithic block of passively internalized norms transmitted by socialization and canonized by tradition, culture was naturally seen as inhibiting individuals. It compelled co-operation and prevented cheating, prescribed appropriate behavior and prohibited wrongful action, embodied tradition and abhorred novelty. Since the mid-1980s, however, the study of culture has been revitalized in ways directly relevant to the study of change.

Culture has come to be seen as disparate, fragmented and inconsistent. No longer thought of as a fixed and seamless body of norms and values, bits of culture are thought to provide the basis for organizing information and putting it to work. A cognitive view sees culture as made up of “complex rule-like structures that constitute resources that can be put to strategic use.”<sup>30</sup> At the same time, though, many of those who advocate this new view of culture want to hang on to the idea that the way you think can constrain your options. They are sympathetic to the path dependence metaphor, which suggests in this context that there is a substantial cognitive element to the sunk costs which constrain choices and close off options. So which is it to be? It would be nice to have it both ways, but this usually doesn't make for a good theory. Scholars committed to the claim that culture both constrains and enables action tend to equivocate about its causal role. To be fair, it probably just is the case that sometimes culture produces innovation and sometimes it stymies it. But at the moment, it's not unfair to say that theories of culture have a hard time saying clearly and in advance which it will be in specific cases.

## Public opinion and culture wars

Long-run trends in public opinion are an obvious kind of cultural change, but their diagnosis has proven to be difficult. In the United States, popular debate has raged over the “culture wars.” The central claim is that the structure of American values is undergoing a deep transition, with cultural conservatives lining up against cultural progressives. This process dissolves old divisions and creates new ones: on a range of issues, conservative Protestant, Catholics and Jews have more in common with one another than they have with the liberal adherents of their respective religions. This argument has been made most directly by James Hunter in his book *Culture Wars*.

---

<sup>30</sup>See Paul DiMaggio, “Culture and Cognition” *Annual Review of Sociology* 1997.

Others have seen different long-term trends in national culture. In *Habits of the Heart*, a group of American sociologists led by Robert Bellah argue that American individualism may be overwhelming other aspects of the culture, to the detriment of society. Robert Putnam traces a long decline in civic participation and political engagement, blaming the rise of television for the decay of civic culture. In Europe, Ronald Inglehart has claimed that his 20-year cross-national study of opinion gives evidence for a deep inter-generational “culture shift” toward “postmaterialist values.” This shift has been driven by economic and sociopolitical change and its consequences, in their turn, are increasingly shaping political life in Europe.<sup>31</sup>

These are big claims. Despite the attraction of these sorts of arguments — and the media attention which several of them have received — they can be difficult to evaluate. The causal connections between economic, technological or generational changes and their associated “value shifts” are often very general. In some cases, the phenomena themselves are open to question. It might be that many of the things we take for granted about public opinion, the burning questions of the day, or “the state of the culture” are really artificially generated and sustained by other forces. One recent study found no evidence that the opinions of Americans have become more polarized, which should give pause to heated talk about the culture wars. There are often big discrepancies between what people believe and what people think people believe (psychologists call this “pluralistic ignorance”). Such gaps may mean that an inordinate amount of time gets spent arguing positions that few really hold or trying to fix things no-one really believes are broken.<sup>32</sup>

### Other kinds of cultural change

A different way to think about the relationship between culture and politics is to see culture as a resource that politically astute individuals or groups draw on in order to change or preserve the *status quo*. In the short run, political entrepreneurs can draw on cultural resources to they appropriate the past for their own ends and generate political power for themselves. Studies of collective memory describe this process for whole societies over

---

<sup>31</sup>Robert Bellah, Richard Masden, William M. Sullivan, Ann Swidler and Steven M. Tipton, *Habits of the Heart: individualism and commitment in American life* (California); Robert Putnam, “The strange disappearance of Civic America” *The American Prospect* (Winter 1996); Ronald Inglehart, *Culture Shift in Advanced Industrial Society* (Princeton).

<sup>32</sup>Paul DiMaggio, John Evans and Bethany Bryson, “Have Americans’ Social Attitudes Become More Polarized?” *American Journal of Sociology* 102 (1996).

longer periods. Barry Schwartz traces the development of Americans' beliefs and memories about George Washington, focusing on the shift that occurred after the Civil War. In response to the political climate, Washington became an ordinary and accessible man, despite having before been described as remote, genteel and perfectly virtuous. Michael Schudson's subtle study of collective and institutional memories of Watergate describes an analagous process of selective remembering and forgetfulness.<sup>33</sup>

The most ambitious studies of culture ask how it is related to very large-scale features of social structure. Debates about globalization have a cultural component. Many explore the relationship between culture and capitalism, dissecting "postmodernism" in its many forms. In these studies, culture is, broadly, a dependent variable: cultural changes are the effects of economic or political causes. Other research sees a more active role for culture. For example, Robert Wuthnow's *Communities of Discourse* is a study of the huge social changes surrounding the Enlightenment, the Reformation and European socialism. It argues for a more complex interplay between culture and social institutions, mediated in part by ecological processes of selection and competition.

## Conclusion

What can social science tell us about social change? The answer seems to be both less and more than we might have expected of it. Books that reduce human society and history to a single analytic framework or determining factor sit in libraries, misconceived, irrelevant and forgotten. It's unlikely that people will stop writing them — the temptation to boil it all down to two principles, three causes or four sources is very strong, and there's a permanent demand for simple answers to big questions. (A recent example of the genre, biologist Jared Diamond's *Guns, Germs and Steel*, won a Pulitzer Prize.) The best of this work is written by scholars with remarkable breadth of vision and depth of knowledge. But although each generation produces at least one such virtuoso performance, it often remains unread by the next. Occasional fads for futurology suffer much the same fate. The year 2000 was a very tempting target for social forecasting in the 1960s and 1970s. Most of what got produced was what Daniel Bell once called "Future Schlock": it looked good as long as trends continued as expected, but it became worthless

---

<sup>33</sup>Barry Schwartz, "Social Change and Collective Memory: the democratization of George Washington" *American Journal of Sociology* 56 (1991); Michael Schudson, *Watergate and American Memory* (Basic).

as soon as anything actually *changed*. The 1974 oil shock, for example, invalidated most of the literature. This kind of writing more often survives, ironically, as a reminder of what we used to think: nothing defines a period better than its vision of the future.<sup>34</sup>

The really epochal predictions are probably best left to the pundits. Nevertheless, a rich body of scholarship produced in the last twenty years retains much of the ambition of the old modernization approach even as it rejects most of its assumptions. One of the most deep-rooted tendencies in Western social thought is the notion that societies or civilizations can be ranked according to how far they have advanced, or that they progressively develop through specific stages towards some end. It is an extension of the idea that the world is made up of some “great chain of being” that runs from the lowest to the highest forms of life.<sup>35</sup> This tendency has largely been purged from social science. If it is not gone entirely, at least it is no longer possible to unthinkingly apply organic metaphors to societies or their parts. People can still have their vision of the ideal society, but the claim that your utopia will result from some natural process of progressive change is no longer convincing. Comparative social scientists still work on a large canvas — there has been no retreat from the big questions — but their methods are certainly more careful and their judgements probably more reliable than their predecessors.

We have seen some of the alternative metaphors for change that have sprung up in the wake of the organic analogy. Most of them have been usefully applied in empirical research, and almost all of them are more sharply drawn than such metaphors used to be. At the same time, though, one wonders about their origins. Social science still draws heavily on the natural sciences — especially biology — for many of its ideas. The biological origins of selection, diffusion and contagion metaphors is obvious. But ideas like path-dependence also found their way into social science about ten or fifteen years after their appearance in biology. Chaos and complexity are the latest wave to hit the beach. Compared to other fields, social science isn't especially guilty. Our picture of the human brain is usually based on

---

<sup>34</sup>“Computers in the future may weigh as little as one-and-a-half tons and have as few as 1,000 vacuum tubes.” *Popular Mechanics Magazine*, 1949.

<sup>35</sup>“Through the Middle Ages and down to the late eighteenth century, many philosophers, most men of science, and, indeed, most educated men were to accept without question — the conception of the Universe as a ‘Great Chain of Being’, composed . . . of an infinite number of links ranging in order from the meagerest kinds of existents . . . to the highest possible creature” (Arthur Lovejoy, *The Great Chain of Being* [Harper]). The Great Chain is the organic metaphor writ large.

the most advanced technology of the day, for example. Nineteenth century philosophers spoke of the “engine of reason”; Sigmund Freud’s work is full of hydraulic metaphors of how the brain works; the dominant contemporary view is that the brain is like a computer. Something similar might be true of our overall picture of society, which has been seen variously as a healthy body, a smoothly-running engine, a machine that runs on information, and so on. These metaphors play a complicated role in our understanding of society and social change. They often cast new light on old problems, but they run the risk of being taken too seriously. Metaphors are suggestive, and it can be tempting merely to elaborate them, instead of converting them into more prosaic theories and causal explanations.

On a more empirical level, social science can tell us that simple stories about big changes are usually wrong. From well-documented skepticism about inventions that changed the world to post-mortems of grand plans that failed, sociologists, economists and historians have put together a detailed body of evidence that casts doubt on taken-for-granted ideas about how change happens. They’ve also gone a good way towards identifying sequences of actions and events that seem to pop up again and again in different contexts. This is the most exciting aspect of good work on social change. Most of the research described in this article consciously tries to identify robust mechanisms by which change happens. Schelling’s work on tipping phenomena is a particularly elegant instance — but mechanisms don’t have to be elegant, and other disciplines are not short of their own examples. Social scientists used to dream of a global theory that would explain everything. Now they are more likely to see themselves as discovering and labelling the heterogenous bunch of tools, recipies, tricks and strategies that get us from A to B, whether or not we plan for the trip.



## Appendix: An Annotated Bibliography

The literature on social change is as vast as the topic itself. For convenience, I have broken down this appendix into ten sections. The topics follow the discussion in the paper, with additional sections on gender, complexity theory, and social theory. I have tried to include books and articles that are important, accessible and comprehensive within their fields. Academic research (and writing) being what it is, not every entry in this bibliography possesses all of these qualities. Nevertheless, I hope each has at least one of them. It should go without saying that this bibliography does not claim to be exhaustive. Instead it should offer the curious a judicious taste of the issues, and provide a useful starting point to anyone who wants to look closely at what each field has to say about change.

### Demography and social change

Alter, G. 1992. 'Theories of Fertility Decline: a non-specialist's guide to the current debate. pp13-25 in *The European Experience of Declining Fertility, 1875-1970: the quiet revolution*. ed J.R. Gillis, L.A. Tilly, D. Levine. Cambridge: Blackwell

A clear and accessible introduction to the long-running debate about fertility decline in Western Europe. The debate is characterized by an overwhelming amount of data of various sorts, but remarkably little consensus on explanations, other than a broad agreement on the inadequacy of the original theory of the Demographic Transition.

Blum, Ulrich and Josef Schmid (eds). 1991. *Demographic Processes, Occupation, and Technological Change*. Heidelberg: Physica-Verlag.

Conference proceedings. The volume is comparative, with a focus on labor markets in the European Union. Articles offer a description of broad trends and some effort to theorize them.

Fogel, Robert W. 1994. 'Economic Growth, Population Theory and Physiology: the bearing of long-term processes on the making of economic policy.' *American Economic Review* 84:369-395.

A Nobel Prize lecture. Fogel is an economic historian whose work examines nutritional patterns both as causes of social change and as indicators of wider social conditions. He notes that material well-being and stature are closely correlated and that records of the latter can be used to infer information about the former.

Harris, Kathleen Mullan. 1996. *Teen Mothers and the Revolving Welfare Door*. Philadelphia: Temple University Press.

A careful study of demographic change and its relationship to social welfare policy. Harris argues that received wisdom is mistaken about both the makeup and motivations of typical AFDC recipients: welfare payments are not an incentive to have children. Family systems are changing as is clear from the rise in out-of-wedlock child bearing but AFDC payments cannot be held responsible. Data from a 20 year study of black teenage mothers and their welfare careers. A detailed study of how individual life histories intersect with institutions and policy regimes.

Hirschman, C. 1994. 'Why Fertility Changes.' *Annual Review of Sociology* 20: 203-233.

A discussion of the controversies surrounding (i) the fertility transitions that happened in Western countries from 1870 to 1930, (ii) the transitions that are underway in other countries and (iii) the status of the Demographic Transition Theory (DTT), which was worked out in the 1950s and tries to explain both these phenomena. The argument is that new data shows that the forces driving fertility change are more complicated and various than the classic theory of demographic transition allows. No compelling alternative is presently available, although a huge body of empirical work exists. Hirschman leaves his discussion open, but he does outline what an adequate theory would have to explain.

McGreevey, William Paul. 1985. *Economic Aspects of Historical Demographic Change*. Washington: World Bank

An analytic literature review that makes an argument about the relationship between economic forces and fertility change. The paper argues that technological change in rural agricultural production causes fertility to decline (the theory of 'demographic transition'). The author compares the experiences of now-industrial countries to countries where this transition has not happened (or 'has yet to occur', depending on one's belief in the theory). An example of standard demographic thinking about population change.

Olzak, Susan. 1992. *The Dynamics of Ethnic Competition and Conflict*. Stanford: Stanford University Press.

Event history analysis of historical data about patterns of immigration, ethnic collective action and social conflict. Olzak argues that ecological theories of competition and niche overlap explain the observed patterns. 'Factors that raise levels of competition among race and ethnic groups increase rates of ethnic collective action.' This thesis appears to have rather counterintuitive and controversial implications: for example, Olzak argues that the *desegregation* of labor markets intensifies ethnic competition and raises the rate of ethnic collective action.

Organisation for Economic Co-operation and Development. 1988. *Ageing populations: the social policy implications* Washington, D.C.: OECD Publications

A detailed statistical analysis of demographic trends in OECD countries, in particular the emergence of aging populations with low fertility rates. With the trends described, the authors work out the implications for social expenditure and evaluate the policy choices necessary in the wake of these changes.

Popenoe, David. 1987. *Disturbing the nest: family change and decline in modern societies*. New York: A. de Gruyter

Attempts to show that the family is in decline. This decline is institutional (the family is not reproducing itself or carrying out

the functions it used to) and cultural ('familism' as a value is in decline). Cross-national comparative study with a focus on Sweden as the an exemplar of this broad pattern of decline.

Portes, Alejandro. (ed) 1995. *The Economic Sociology of Immigration: Essays on networks, ethnicity and entrepreneurship*. New York: Russell Sage Foundation

A collection of papers that brings together theoretical developments in the new economic sociology with empirical findings from the studies of immigration. The authors examine ethnic and immigrant labor networks and social capital, entrepreneurship, and cultural assimilation. Subjects include the nature of immigrant labor markets, the construction of viable businesses through kin or ethnic ties, and the role of culture in determining economic success.

Portes, Alejandro and Ruben G. Rumbaut. 1996. *Immigrant America: a portrait* (second ed.). Berkeley, Calif.: University of California Press

An authoritative overview of the immigrant experience in the U.S. The authors give an overview of immigration patterns and trends but also seek to explain how first and second generation immigrants make a living, adapt to their environment and change the societies they live in.

Rotberg, Robert I. and Theodore K. Rabb (eds). 1986. *Population and Economy: population and history from the traditional to the modern world*. New York: Cambridge University Press

Though somewhat narrower in scope than its title suggests, nevertheless this is a useful series of essays on the historical background to the demographic transition in Western Europe (with a strong focus on England). Most of the contributors focus on the interactions between patterns of population growth and aspects of the economy, particularly agriculture.

Rindfuss, Ronald R. Philip S. Morgan and Gray C. Swicegood. 1988. *First Births in America: changes in the timing of parenthood*. Berkeley: University of California Press

An examination of parenthood timing and the life-course. Describes and analyses historical trends in the timing of parenthood, noting that the patterns of delayed birth observed today were also characteristic of the great depression. Various quantitative data sources. A rich source of information about historical patterns and the relationship between certain characteristics (age, religion, race, etc) and childbearing. Less theoretical focus.

### **Technology and change**

Bijker, Wiebe E. 1995. *Of Bicycles, Bakelites, and Bulbs: toward a theory of sociotechnical change*. Cambridge, Mass: MIT Press.

Three very interesting case studies of the relationship between society and technology. Bijker examines the development of the bicycle, properly synthetic plastic and fluorescent lighting. In the course of the case studies (which are interesting reads in themselves), the author examines the process of technical innovation, the politics of inventions, and so on. The theoretical orientation draws in part on constructivist work in the sociology of science. Excellent bibliography of case studies on technical change.

Brannigan, Augustine and Sheldon Goldenberg (eds). 1985. *Social Responses to Technological Change*. Westport, Conn.: Greenwood Press.

A collection of papers (from a conference) largely concerned with social responses to the environmental threats brought about by technological change. Sections are concerned with the role of social movements, the importance of the media and the control (via public policy) of the direction, extent and impact of technological change.

Douglas, Susan. 1987. *Inventing American Broadcasting, 1899–1922*. Baltimore: Johns Hopkins University Press.

An absorbing history of the early days of the present telecommunications regime in the United States. Beginning with Marconi, Douglas examines the emergence of the new broadcasting technologies, their transformation into viable business concerns, the influence of the military, the emergence of a popular culture of radio use, the institution of government regulation over the radio spectrum and the birth of the big broadcasting corporations. An excellent account of the institutionalization of technological change.

Fischer, Claude S. 1992. *America Calling: a social history of the telephone to 1940*. Berkeley: University of California Press.

A very rich, readable account of how the telephone became part of the furniture in America. A sceptic on the question of technological determinism, Fischer shows how people had to figure out what they could use the phone for. He also shows, in detail, how that figuring out process varied across classes, between genders and on various other axes.

Leeuw, Sander E. van der and Robin Torrence (eds). 1989. *What's New? A closer look at the process of innovation*. Boston: Unwin Hyman.

An unusual collection of papers about innovation. The contributors are theoretically-minded archaeologists concerned with the origins and adoption of technological innovations (rather than, say, institutional novelty). There are a number of general papers that try to theorize processes of innovation, taking sequences of invention, experimentation refinement as their data. Some are conceptual (analyzing these sequences), others more quantitative (trying to *model* such a process). Theoretical papers focus on self-organizing systems, risk and information exchange. Empirical studies range from the origins of pottery as an economic process, brass production in Nigeria, Indian fishermen and European farmers.

Ling, Peter J. 1989. *America and the automobile: technology, reform, and social change, 1893-1923*. New York: Manchester University Press.

A Marxist analysis of the economic impact of the development of the mass-production automobile in the Progressive Era. Ling argues that the car served to tie together previously disconnected parts of the U.S., both synchronising and accelerating processes of capital accumulation in the economy. On the ground, Progressivists were the ideological carriers of this process, as they embraced the automobile as a solution to problems of rural isolation, urban congestion and the social control of labor. Not many studies attempt to follow through in any specific way on the broad Marxist claim that technological change drives social change and pushes history along.

Mackenzie, Donald A. 1996. *Knowing machines: essays on technical change*. Cambridge, Mass.: MIT Press.

A collection of essays on high-technology, focusing on the relationship between technical development and self-validating beliefs about technology. Two conceptual essays are followed by seven empirical studies focusing on the laser gyroscopes that are central to modern aircraft navigation technology, on supercomputers (with a particular emphasis on their use in the design of nuclear weapons), on the application of mathematical proof in the design of computer systems, on computer-related accidental deaths, and on the nature of the knowledge needed to build a nuclear bomb. Technically sophisticated and conceptually rich.

Nash, June. 1989. *From Tank Town to High Tech: The Clash of Community and Industrial Cycles*. Albany: State University of New York Press.

A detailed ethnography of deindustrialization and 'economic adjustment.' What happens when a company town loses its company? Nash interviewed workers and managers at the General Electric plant that dominated the town of Pittsfield. As GE re-organized itself into a defense contractor, employment opportunities radically changed in the town, with knock-on effects in the community. Nash pitches her analysis in terms of corporate hegemony, and tries to show the deep connections between corporate structure and community life.

Pacey, Arnold. 1992. *The Maze of Ingenuity: ideas and idealism in the development of technology*. Second Edition. Cambridge: MIT Press.

A historical and sociological study of the relationship between technology and society with examples and case-studies from the great Cathedrals to Star Wars. Pacey is concerned with the roles played technical virtuosity and intellectual innovation in the development of technology. He also is attentive to the history of our ideas about the wider relationship between technology and society.

Schivelbusch, Wolfgang. 1995. *Disenchanted Night: the industrialization of light in the nineteenth century*. Translated by Angela Davies. Berkeley: University of California Press.

An exploration of the social and cultural consequences of the invention of efficient gas and later electric lighting. Schivelbusch draws on contemporary accounts to give a rich sense of how the new technology changed the way people did things in public and private, the implications it had for social control, and the re-organization of commercial and cultural practices (from shopping to theatre) that it precipitated. Organized in a slightly eccentric fashion, but very interesting.

Volti, Rudi. 1992. *Society and Technological Change*. (3rd ed.) New York: St. Martin's Press.

A textbook. Written in an accessible, journalistic style, the focus is on the examples and stories rather than on theories of change. Nevertheless, a good introduction to the wide variety of fields that the study of technological change touches.

## **Economic and political change**

Arrighi, Giovanni. 1995. *The Long Twentieth Century: money, power, and the origins of our times*. New York: Verso.

A huge, rather sprawling effort to track the relationship between capitalism and states since the 1200s. Inspired by the work of



Braudel, Arrighi argues that long-run cycles of capital accumulation are intimately bound up with the changing fortunes of hegemonic states and classes. An attempt to come to grips with social change at the very largest scale.

Best, Michael H. 1990. *The new competition: institutions of industrial restructuring*. Cambridge: Polity.

In the wake of Piore and Sabel (1984), Best examines the causes and consequences of industrial decline and restructuring in Europe and the United States. The book is self-consciously prescriptive in tone. Empirical elements include extended comparison of the U.S. to Japan and Italy, and a historical account of the decline of older mass production systems.

Beuchler, Steven M. 1993. 'Beyond Resource Mobilization? Emerging Trends in Social Movement Theory' *Sociological Quarterly* 34 (2): 217:235.

A review of developments in social movement theory. Buechler discusses the development of resource mobilization theory (RMT), which sees collective action as interest-driven, broadly rational and built around recruiting organizations. This view developed as a response to theories of collective action and change current in the 1950s which, to varying degrees, saw collective action and social protest as an irrational, spontaneous, short-term activity carried on by relatively deprived or socially isolated individuals. Beuchler acknowledges the fruits of the RMT approach, but raises a number of empirical and theoretical issues that threaten to undermine it. He suggests that the RMT perspective may be exhausted, but does not clearly delineate what its successor will look like.

Centeno, Miguel A. 1994. 'Between rocky democracies and hard markets: dilemmas of the double transition' *Annual Review of Sociology* 20:125-47

A discussion of the literature on the 'double transition', i.e. the parallel construction of politically democratic and economically

capitalist institutions. Centeno emphasizes that this transition is difficult to negotiate and dominated by uncertainty. He then discusses three mechanisms which are seen to ease it: the importance of social and political contracts, the role of the state or ruling class, and the place of trust and civil society.

Danziger, Sheldon and Peter Gottschalk. 1995. *America Unequal*. New York: Russell Sage Foundation.

An accessible and comprehensive analysis of the structure and extent of income inequality in the U.S. over the last twenty years. The authors want to explain 'why the incomes of the poor and the middle class have grown so slowly relative to those of the rich' and 'why inequality has increased even between workers with similar education and skills' (11). They locate the source of these changes in the restructuring of the domestic and international economy, and describe a policy agenda to deal with them.

Goldstone, Jack. 1993. 'Why we could (and should) have foreseen the Revolutions of 1989-1991 in the U.S.S.R. and Eastern Europe.' *Contention* 2: (2) 127-152.

Can social scientists predict what will happen? Goldstone thinks we can. He outlines the bones of his method for predicting revolutions, which tries to measure key indicators of revolutionary potential. Replies and respondents (like Kuran 1992) range from the enthusiastic to the dismissive. Goldstone treads a fine line between putting forward a genuinely *predictive theory* of when revolutions will happen as opposed to a tautological *analytic definition* of what a revolution is.

Gordon, David. 1996. *Fat and Mean: The corporate squeeze of working Americans and the myth of managerial 'downsizing.'* New York: The Free Press.

A trenchant analysis of patterns of change in working conditions, labor relations and corporate organization in the United States. Contrary to those who claim that corporate 'downsizing' in the

1980s and 1990s left American businesses better off, Harrison argues that a 'bureaucratic burden' of managers, supervisors and foremen still exists. Rather than evolving co-operative systems of labor relations with unions, corporations have instead relied on antagonistic strategies. They have also consistently refused to transfer economic benefits to workers, which explains the wage squeeze of the past 15 years. Gordon follows his analysis through to recommending new policy strategies. Reviews the existing evidence, provides some new quantitative analysis.

Haggard, Stephan and Robert R. Kaufman. 1995. *The Political Economy of Democratic Transitions* Princeton: Princeton University Press.

The comparative political economy of democratic transitions, with a focus on Latin American and Asian countries. The authors analyze the economic basis of 'authoritarian withdrawals'; the importance of economic reform in newly-established democracies (given economic and institutional hangovers from previous regimes); and the consolidation of democratic and market institutions in the longer run.

Harrison, Bennett. 1994. *Lean and Mean: the changing landscape of corporate power in the age of flexibility*. New York: Basic Books.

An accessible account of contemporary change in the organization of global capitalism. Harrison argues that, contrary to some received wisdom, small firms are neither engines of innovation nor sources of new jobs. Instead, global production has come to be dominated by networks of very large firms. Although production is becoming more decentralized, power, ownership and control remain concentrated in a small number of huge corporations. Harrison argues that this pattern has been helped by a vigorous paring down of central tasks, a process which involves computerization, flexible production and lots of layoffs.

Kuran, Timur. 1992. 'Why Revolutions are better Understood than Predicted: The essential role of Preference Falsification' *Contention* 1 (3):199-207.

A rational-choice alternative to Goldstone (1993). Kuran argues that the occurrence of an event like a revolution is in large part determined by unknowable and endogenous factors: people constantly revise their expectations and willingness to act on the basis of what's already happened and what they believe everyone else believes.

Krugman, Paul. 1996. *Pop Internationalism*. Cambridge: MIT Press

An economist takes issue with mainstream pronouncements about globalization and its effects. Krugman argues that world trade is not as important as people pretend it is (certainly not to the United States and its huge domestic economy). More importantly, he repeatedly emphasizes the standard economic view that world trade is not a competitive, zero-sum game where some countries must lose if others are to win. A direct attack on some of the most popular diagnoses of macroeconomic change. Well written and trenchantly argued. (Compare Reich 1991, Wood 1994.)

Langlois, Richard N. and Paul Robertson. 1995. *Firms, Markets, and Economic Change: a dynamic theory of business institutions*. New York: Routledge.

The authors provide a theory that tries to extend the economic/institutional transaction costs approach to explain why some firms innovate better than others. Drawing on Schumpeter's work on innovation, they argue that business institutions that can create and use 'superior capabilities' tend to perform better. Predicting and explaining innovation is dangerous: the authors do not clearly show how they avoid a tautology in their argument (superior firms do better). They try to apply their transaction-costs view to case studies in the early American auto industry, the computer business and the hi-fi and stereo market.

Lijphart, Arend and Carlos H. Waisman. 1996. *Institutional Design in New Democracies* Boulder: Westview.

Comparative analysis of how democratic institutions are designed, built and consolidated after the collapse of authoritarian regimes. The authors' empirical focus is on Eastern Europe and Latin America. Their more general interest is in the creation of institutions to serve market economies, run good elections and ensure that governmental power is transferred properly. Theories are tested by examining how countries vary the shape of their institutions and the pace and mix of their reforms.

North, Douglass C. 1981. *Structure and Change in Economic History*. New York: Norton

An economic, broadly rational choice theory of how institutions governing property rights are constructed. North's theory of the state sees an organization with a comparative advantage in violence and the ability to tax people. He claims to explain why states often produce inefficient property rights regimes and hence fail to grow economically. Exogenous shocks (changes in capital stock: relative prices, knowledge or military technology) alter the bargaining power of rulers, their agents and the ruled. Institutions work a filter between individuals and capital stock. But a clear statement of how (and under what conditions) these institutions generate inefficient outcomes is more elusive than North's early claim would lead one to believe.

Pichardo, Nelson A. 1997. 'New Social Movements: a critical review' *Annual Review of Sociology* 23:411-430.

The author reviews the literature on New Social Movements (NSMs) and evaluates the empirical evidence. He is very critical of the theoretical claims of this influential literature, and argues that the evidence supports neither (i) the claim that NSMs are the product of large scale social changes, e.g. a shift to post-industrial society, nor (ii) the claim that NSMs are genuinely new forms of collective action (as compared to social movements in the past).

Piore, Michael J. and Charles Sabel. 1984. *The Second Industrial Divide: possibilities for prosperity*. New York: Basic Books.

The classic account of the emergence of new production and manufacturing technologies. The authors describe a move away from mass-production technologies and towards ‘flexible specialization.’ They then outline the different institutional forms they see as suited to different modes of production.

Portes, Alejandro. 1995. ‘On grand surprises and modest certainties: comment on Kuran, Collins and Tilly.’ *American Journal of Sociology* 100:1620-26.

A brief, sensible note on the kinds of predictions that sociologists are able to make. Discussing the contrasting positions on revolutionary change held by three other writers, Portes introduces a useful distinction between steady-states, trends and events. Many events (like a revolution) are very difficult to predict. Trends and steady-states have been treated more profitably by sociologists. Portes also argues that particular sequences or processes (that are well-defined and well-bounded rather than unique or very large and complex) are predictable, too.

Reich, Robert. 1991. *The Work of Nations: preparing ourselves for 21st-century capitalism*. New York: Alfred A. Knopf.

A well-known analysis of America’s position in the global economy. Reich argues that the economic well-being of Americans depends on individual skills rather than the profitability of corporations. In particular, in order to make sure that people do well (and to reduce income inequality in the process) it is necessary to invest in training in the right way. The skills of ‘symbolic analysts’ (as opposed to routine producers or in-person services) are most in demand. We should therefore be making sure people acquire them. Secondary analysis. For a strong critique see Krugman (1996).

Sassen, Saskia. 1991. *The Global City*. Princeton: Princeton University Press.

Economic geographers argue that, if you want to see how the world economy is changing, look at the world’s cities. Sassen

sees a 'pronounced transformation' in economic activity from the late 1960s onwards, which expressed itself in the spatial form and economic function of big cities. Cities act as 'command points' in the global economy, as locations for finance and service firms, as R&D centers and as markets. Sassen compares London, New York and Tokyo under these headings, tracing in each the expansion of low-wage jobs, the increasing concentration of capital and ownership, and the changing relationship between cities and nation-states.

Wolf, Eric. 1982. *Europe and the People Without History*. Berkeley: University of California Press.

A *tour de force* of historical writing from an 'outsider' perspective. Wolf takes in the sweep of world history since 1400 and tries to keep the losers as well as the winners in the narrative. At the same time, he is committed to treating the history as a vast web of interconnected events and processes. By keeping such a catholic eye he hopes to avoid the teleological pitfalls of histories that have the winners and losers in mind from the beginning, and tell their story as though the outcomes were foreordained.

Wood, Adrian. 1994. *North-South Trade, Employment, and Inequality: changing fortunes in a skill-driven world*. Oxford: Clarendon Press.

An economist presents detailed evidence of the effects of trade between Northern and Southern countries. His argument is that increasing trade with the South has been beneficial in many respects, but has hurt unskilled workers in the North (reducing their wages or making them unemployed). Wood argues that unless Northern governments intervene in this process, their countries will suffer from rising inequality and mass unemployment. Presents detailed quantitative evidence about an important aspect of globalization. (But see Krugman 1996.)

### **Planned change and community change**

Cole, Robert E. 1989. *Strategies for Learning: Small Group activities in American, Japanese and Swedish industry*. Berkeley: University of

California Press.

Some private-sector firms are much more willing or able than others to institute small-group activities like quality circles and self-managing groups in their factories. Why is this so? Cole compares firms in three countries, arguing that historical and institutional differences explain the presence or absence of national organizations that promote small-group activities in businesses.

Elias, Norbert and John L. Scotson. 1994. *The Established and the Outsiders: a sociological inquiry into community change*. (2nd ed.) London: Sage.

An interesting study of a suburban community in England in the late 1960s. The authors describe some very interesting processes of social control and change within a small suburban area. As the community grew in size, the established members developed into a strong and exclusive status group who looked down on the newcomers as inferior to them in all respects (despite the fact that, by any socio-economic measure, there was no difference between them). Social control was maintained organizationally by local associations and through gossip. Useful because it shows how (partly in response to change) groups form out of whatever is to hand and establish patterns of expectations and behavior that exercise increasing force on those living in them.

Glaser, Edward Maynard, Harold H. Abelson and Kathalee N. Garrison 1981. *Putting knowledge to use: facilitating the diffusion of knowledge and the implementation of planned change* San Francisco: Jossey-Bass.

One of the better examples of the 'management approach' to planned change. The authors try to formulate rules for the successful execution of plans (usually from the top down).

Himmelstrand, Ulf (ed). 1981. *Spontaneity and Planning in Social Development*. Beverly Hills, Calif.: Sage Publications.

An interesting collection of essays that explore concepts of spontaneity and planning. Both terms carry strong normative weight



(whether positive or negative, depending on the context), as well as referring to substantively interesting processes. They also relate to other important ideas, like centralization and decentralization. Contributions are either self-consciously theoretical or illustrative case studies. The theoretical chapters contain some interesting reflections on the surprisingly close relationship between spontaneous action and careful planning.

Hosking, Dian Marie and Neil Anderson (eds). 1992. *Organizational Change and Innovation*. New York: Routledge.

Social Psychology and Organizational Psychology offer perspectives on planned and managed change. Sections on strategic change, innovation, technical change and methodologies for change. Case studies in each section. Mainly prescriptive in tone, but some articles are quite skeptical of the whole idea.

Jacobs, Bruce. 1981. *The Political Economy of Organizational Change: urban institutional response to the war on poverty*. New York: Academic Press.

A detailed case study of how the Community Action Program provoked change in the organizations it encompassed or affected. The study examines how environmental uncertainties or threats affected private social service agencies, public schools and private employers. Jacobs argues that the changes he describes and measures were rational responses by executives to wider environmental changes.

Legge, Karen. 1984. *Evaluating Planned Organizational Change*. Orlando: Academic Press.

A self-consciously critical attempt to decide whether it is possible to evaluate planned organizational change in any useful or objective manner. The author notes myriad problems and contradictions, but does not have a clear solution.

Mangham, Iain. 1979. *The Politics of Organizational Change*. Connecticut: Greenwood Press.

A micro-sociological approach to organizational politics: how does interaction happen when change is going on? Or rather, how is change made to happen through interactions? Inspired by symbolic interactionism, phenomenology (by Alfred Schutz; and more directly by Karl Weick.) A number of case studies.

Marris, Peter. 1987. *Meaning and Action: community planning and conceptions of change*. (2nd ed.) London: Routledge & Kegan Paul.

A thoughtful study of planned responses to change. The book studies two efforts at inner-city regeneration (London's Docklands and the British Community Redevelopment Project), examining the people involved, their differing interests and reactions, the role of the state and the theories used to justify policy. Marris tries to show how plans are conceived and argued for, and how they succeed or fail. The focus throughout is on the relationships between abstract planning, the different groups with a stake, and the difficulty of tying plans to action. There's also a reflective chapter on the metaphors that different plans were built around.

Mitchell, Clare and Fred Dahms. 1997. *Challenge and Opportunity: managing change in Canadian towns and villages* Waterloo, Ontario: University of Waterloo.

A series of studies of local-level responses to change in rural Canada. Not much theory, but some useful empirical material on typical responses of local groups and organizations to external, large-scale changes, together with some evidence for which ones tend to be successful.

Patickson, Margaret, Val Bamber and Greg Bamber (eds). 1995. *Organizational Change Strategies: studies of human resource and industrial relations issues*. Melbourne: Longman.

A collection of empirical case studies of managed organizational change from a management perspective. Theoretical perspective is a straightforward model where external pressures are mediated by managers (with other employees) and turned into organizational consequences. An applied business consultancy view.

Reinelt, Janelle (ed). 1996. *Crucibles of Crisis: performing social change*  
Ann Arbor: University of Michigan Press

An uneven but interesting collection of papers with an unusual focus: the authors examine the role of the performing arts in generating, reflecting upon and participating in social protest and change. The essays examine the way in which the theater, in particular, can become a focus for explosive political or cultural controversy by serving as a vehicle for usually unheard groups or ideas. The contributors generally discuss the impact a particular play or theater company had: examples run from an Irish Women's Theatre group at the turn of the century to African drama and nationalism in South Africa.

Rheingold, Howard. 1993. *The Virtual Community*. New York: Addison-Wesley.

An informal but informed study of how communities are created and maintained through Internet-related technologies. Part history, part analysis, part advocacy, the book lays out a broadly optimistic account of the different ways people have made communities on the Net. Personal, journalistic and anecdotal data sources.

Schein, Edgar. 1992. *Organizational Culture and Leadership* 2nd edition.  
San Francisco: Jossey-Bass.

An exhaustive treatment of the concept of organizational culture, premised on the idea that an understanding of it can help (i) reveal problems within organizations and (ii) be used by 'culture leaders' to decisively change how organizations work. Theoretical and methodological treatment of the culture concept, followed by chapters on how to change organizations. Empirical illustrations. One case study.

Scott, James. 1998. *Seeing like a State: how certain schemes to improve the human condition have failed*. New Haven: Yale University Press.

An interesting and detailed argument about why large-scale, generally authoritarian efforts to change, repair or otherwise reorganize bits of society have usually ended in disaster. Scott examines modernist urban planning, Soviet collectivisation and compulsory villagization in Tanzania. He argues that social systems are like ecologies: messy, complex, interdependent and not at all well-understood. Planners do their job by simplification and schematization. When combined with a belief in the efficacy of scientific intervention and in the absence of a vigorous civil society, Scott argues that top-down efforts at change can be relied upon to fail spectacularly.

Servaes, Jan, Thomas L. Jacobson and Shirley A. White. 1996. *Participatory Communication for Social Change*. Thousand Oaks: Sage Publications.

A policy-oriented collection of essays (with a strong development emphasis) exploring the concept of 'participatory communication.' The contributors explore the relationships between locals on the one hand and the efforts of researchers, officials and scientists on the other, with a view towards empowering the former. Papers stress the need for fair access, genuine participation and self-management if efforts at designing and implementing social change are to come to anything. Might usefully be read in conjunction with Scott (1998).

### Organizational change

Barnett, William P. And Glenn Carroll. 1995. 'Modeling Internal Organizational Change.' *Annual Review of Sociology* 21:217-236.

A review of the literature. The authors divide work into theories about the process and content of organizational change. The population ecology approach provides the main framework and assumptions.

Baum, Joel and Jitendra Singh (eds). 1994 *Evolutionary Dynamics of Organizations* New York: Oxford University Press.

A collection of essays and commentary on the population ecology approach (broadly conceived), with an emphasis on organizational change and development. Three introductory essays offer conceptual guidelines; subsequent sections debate evolutionary theory at four levels of analysis: intra-organizational, organizational, population and community change. Papers are divided about equally between theoretical discussion and empirical studies.

Burns, Tom and G.M. Stalker. 1962. *The Management of Innovation*. Chicago: Quadrangle.

An early attempt to relate technological change to organizational development in a systematic way. Burns & Stalker examine success and failure within the electronics industry in England and Scotland. They are particularly sensitive to the relationship between the laboratory (what we now call R&D) and the production line: technical changes affect existing practices, statuses and politics in the organization. They distinguish between mechanical and organic organizations on the basis of their adaptability to innovation. In the former, innovations are broken down into functionally specific tasks assigned to specific offices or people. In the latter, problems are not treated as easily divisible, and the organization has a more lateral form. One of the first studies to argue that an organization's form and success can be traced to its environment.

Burt, Ronald S. 1987. 'Social Contagion and Innovation, cohesion versus structural equivalence.' *American Journal of Sociology* 92:1287-1335.

A subtle and compelling re-evaluation of a classic study of social contagion, James Coleman et al.'s *Medical Innovation*. Burt re-analyses the original data and argues that his network-based account both characterizes and explains the process of contagion better than the original.

Chandler, A. 1977. *The Visible Hand: the managerial revolution in American business*. Cambridge: Harvard University Press.

The classic history of the emergence and triumph of the modern business enterprise. Chandler argues that the large-scale corporation organized as a hierarchy and staffed by managers arose because it permitted greater productivity, lower costs and higher profits than the small, traditional alternative. For Chandler, these benefits would not have been possible without a managerial hierarchy, and this hierarchy did not appear until the volume of economic activity made it a more profitable and efficient solution than the market alternative. This functional/efficiency theory of the rise of the modern firm has been the focus of debate in economics and sociology ever since. (Compare, for instance, Roy 1997.)

Cohen, Michael, James March and Johan Olsen. 1972. 'A Garbage Can Model of Organizational Choice.' *Administrative Science Quarterly* 17:1-25.

A classic study of decision-making in 'organized anarchies.' These are organizations (i) whose preferences are ill-defined, (ii) whose technology is unclear (that is, technology in the economic sense: the workings of the organization are not understood by the workers), and (iii) where the boundaries of the organization are fluid and participation varies. Universities are their example, but they include most public and educational organizations. On this view, these organizations are 'collections of choices looking for problems, issues and feelings looking for decision situations', 'solutions looking for issues' and 'decision makers looking for work.' On the basis of some simulations, the authors work out predictions for different sorts of universities.

Edelman, Lauren B. 1990. 'Legal Environments and institutional governance: the expansion of due process in American workplaces.' *American Journal of Sociology* 95: 1401-1440.

An event-history analysis of personnel policies in U.S. organizations. How do changes in the law affect organizations? And which organizations? The argument is that changes in the legal environment (civil rights mandates) precipitated normative pressures and led to the diffusion of formal grievance procedures

for non-union employees. Effects varied depending on the size, structure and public visibility of organizations.

Edwards, R. 1979. *Contested Terrain: the transformation of the workplace in the twentieth century*. New York: Basic Books.

An investigation of why corporations are hierarchically organized. Edwards argues that explanations that rest on the technological necessity or economic efficiency of hierarchies are false. He proposes instead that hierarchies exist because they are profitable (he distinguishes this from efficiency). Profits increase with control over the labor process. Examines the organizational histories of several large corporations (including AT&T, Ford, G.E. and U.S. Steel).

Fennell, Mary L. and Richard B. Warnecke. 1988. *The Diffusion of Medical Innovations: an applied network analysis*. New York: Plenum Press.

A dense but very thorough study. Integrates theory from medical, network and neoinstitutionalist approaches with detailed studies of innovation and diffusion in the treatment of head and neck cancer. Organized in a slightly inaccessible way. Develops a detailed model of innovation paths, network channels, gatekeepers and so on. Detailed policy recommendations.

Fligstein, Neil. 1990. *The Transformation of Corporate Control*. Cambridge: Harvard University Press.

Fligstein explains changes in corporate strategy during the twentieth century in terms of developments in federal policy and the subsequent reactions firms and professions. Federal policy changed the organizational field of big corporations, and led to new conceptions of the firm on the one hand and new distributions of power within firms on the other. CEOs were disproportionately recruited first from manufacturing, then from sales and marketing, and finally from finance backgrounds. Fligstein traces the interactions between state action, professional groups and firm structures.

Guillén, M. 1994. *Models of Management: work, authority and organization in comparative perspective* Chicago: University of Chicago Press.

Managers and employers need some theory of how their organizations work in order to run them, perceive problems and initiate solutions. This book argues that the framework they end up using is in large part a consequence of particular institutional conditions rather than the scientific value of the theory. Guillén examines the variable success of the scientific management approach in the U.S., Germany, Spain and the U.K. His wider argument is that managerial ideologies are strongly influenced by the political order. A corrective to any planned change literature which takes its organizational theory for granted.

Hannan, Michael T. and John Freeman. 1984. 'Structural inertia and Organizational Change.' *American Sociological Review* 49: 149-165.

A population-ecology perspective on organizational change. The aim is to define 'structural inertia' for organizations and to say what it does. The argument is that high levels of structural inertia are a consequence of rather than a precondition for the selection process. Quantitative evidence.

Haveman, Heather. 1993. 'Follow the Leader: mimetic isomorphism and entry into new markets.' *Administrative Science Quarterly* 38:593-627.

A study of how firms (in this case California S&L organizations) enter new markets. Haveman finds that organizations tend to copy organizations that are successful in new markets, following them into that market. As the number of firms in the new market grows, entry becomes less attractive. Haveman is concerned to map the relationship between the life-histories of particular organizations (as they enter new activities, and so on) and changes in the organizational field as a whole. Organizations will follow leaders until competition starts to weed out new arrivals. Quantitative data.

Lindblom, C. 1959. 'The Science of Muddling Through.' *Public Administration Review* 19:79-88.



A classic article that contrasts two ways to make decisions in an organization. The first is the rational-comprehensive, or 'root' method. Here, a policy maker systematically evaluates all possible methods to achieve a given policy goal and selects the one that maximizes important social values. The second is the successive limited comparisons, or 'branch' method. Objectives are established but rapidly compromised or mixed-up with other goals, administrators consider only a few incremental steps towards the goal and pragmatically select the one that satisfies the groups and individuals concerned. Lindblom argues, first, that the branch method is how decision-making actually occurs, and, second, that it is in fact the better method as it avoids really big mistakes (and also resembles the workings of the American political system).

Nelson, Richard and Sidney Winter. 1982. *An evolutionary theory of economic change*. Cambridge: Harvard University Press

An attempt to integrate perspectives on evolutionary competition and organizational learning to provide an alternative to what the authors see as the inadequate treatment of organizational change and development offered by equilibrium economics. They argue that their model is of broader applicability than the standard rational choice model, in part because its behavioral assumptions are different. Routines in organizations are analogous to genes (see also Runciman's [1989] concept of 'systacts'). The task of the theory is to identify what the environment is selecting for.

Pfeffer, Jeffrey. 1983. 'Organizational Demography.' pp299-357 in *Research in Organizational Behavior* vol.5 ed L.L. Cummings and B. Staw (eds). Greenwich: JAI Press.

A systematic exploration of the ways in which demographic patterns — e.g. waves of recruitment and retirement of employees with various characteristics — may shape the structure and performance of organizations.

- Powell, Walter. 1990. 'Neither Market nor Hierarchy' pp 295-336 in *Research in Organizational Behavior* vol. 12, L.L. Cummings and B. Staw (eds). Greenwich, CT: JAI Press

An attempt to characterize and explain a mode of organization that has recently been much-observed but remains under-theorized. Powell contrasts network forms of organization to the well-established alternatives of markets and hierarchies. He provides a variety of examples from the literature and his own research and discusses the conditions which give rise to network-like organizations.

- Powell, Walter W., Kenneth W. Koput and Laurel Smith-Doerr. 1996. 'Interorganizational Collaboration and the Locus of Innovation: networks of learning in biotechnology.' *Administrative Science Quarterly* 41:116-145.

The authors argue that when the knowledge base of a whole industry is complex and expanding then the source of innovation is in 'networks of learning' across the industry rather than in individual firms. Pooled time-series data from a four-year sample of biotechnology firms.

- Romanelli, Elaine. 1991. 'The Evolution of New Organizational Forms' *Annual Review of Sociology* 17:79-103.

A review of the literature on how new kinds of organizations arise and become established. The author sees three sorts of explanations: (i) 'organizational genetics', emphasizing random variation; (ii) 'environmental conditioning', emphasizing contextual constraints on variation; (iii) 'emergent social systems' which focuses on social-organizational interactions as the cause of new forms. The author examines a mix of sociological, economic and management work.

- Roy, William. 1997. *Socializing Capital: the rise of the large industrial corporation in America*. Princeton: Princeton University Press.

A large-scale historical and economic sociology of the rise of the modern American corporation. Against the argument that the modern corporation was the efficient outcome of economic or market forces (see Chandler 1977), Roy argues that it came about through a shift in the institutional form and organization of property, and that these changes were driven by individual and collective actors with the power to construct or foreclose alternatives.

Stinchcombe, Arthur. 1965. 'Social Structure and Organizations' 142-193 in *The Handbook of Organizations* James March (ed). Chicago: Rand MacNally.

A richly suggestive survey article dealing with questions of central importance to the study of organizations and organizational change. Stinchcombe raises at least three important problems and sketches theories about them: (i) the 'liability of newness', i.e. the problem of why and how new organizations fail more often than old ones; (ii) the link between an organization's form and the social structure of its origin, i.e. the fact that organizations founded at about the same time tend to look and work the same, even across different sectors; (iii) the relationship between communities and organizations.

Stinchcombe, Arthur L. 1990. *Information and organizations*. Berkeley: University of California Press.

A series of innovative and penetrating studies examining different aspects of organizations. Stinchcombe treats the broad problem of how organizations deal with information and uncertainty. He applies his perspective to such much-debated areas as the division of labor within organizations, the emergence of the multidivisional firm, the sources and process of innovation, the segmentation of labor markets and the management of risk.

Westney, D. Eleanor. 1988. *Imitation and innovation: the transfer of western organizational patterns to Meiji Japan*. Cambridge: Harvard University Press.

Investigates the remarkable institutional transformations that happened in Meiji Japan between 1859 and 1912. Who did it, and how did they manage it? Westney tracks the selective but deliberate and sustained emulation and diffusion of Western forms of organization by Japanese institution-builders. Three case studies: the police, the postal system and the newspaper industry.

Zald, Meyer and Roberta Ash. 1963. 'From Evangelism to General Service: the transformation of the YMCA.' *Administrative Science Quarterly* 8: 214-34.

A classic study of goal succession in an organization. The authors examine what drove the YMCA to transform itself. They argue that the goals of the YMCA were broad enough and its clientele unrestricted enough to make its activities diverse. Its federated structure meant it was controlled by local elites that were responsive to the needs of their clientele.

Zucker, Lynn G. and Pamela Tolbert. 1983. 'Institutional sources of change in the formal structure of organizations: the diffusion of civil service reform, 1880-1935' *Administrative Science Quarterly* 28: 22-39.

This paper presents an explanation of why a package of civil service reforms diffused as it did throughout a population of organizations. They find that although local governments that had functional needs for better authority were the first to adopt the reforms, once civil service reform as such was assumed to be modern and rational, large numbers of governments with no particular need for reform adopted the package anyway. Quantitative and historical data.

Zuboff, Shoshana. 1988. *In the Age of the Smart Machine: The Future of Work and Power*. New York: Basic Books.

A study of how organizations adapt to new information technologies and what happens to workers and management in the process. Zuboff sees computer technology changing the sorts of

skills that are needed in the workplace. (Rather like Daniel Bell she sees a shift from physical to 'intellective' skills.) This in turn changes the role of authority: I.T. can de-skill or re-skill depending on how it is viewed by managers and workers. Zuboff thinks that attempts by managers to use technology to control their workers leads to a further weakening of the former's authority. Technology does not determine de-skilling, rather this is a social choice. Detailed case studies from eight organizations including paper mills, a telecommunications company and a pharmaceutical corporation.

### **Gender and social change**

Bergmann, Barbara. 1988. *The Economic Emergence of Women*. New York: Basic Books.

Slightly dated, but still a comprehensive survey and assessment of the increasing participation of women in the formal economy. Bergmann discusses the historical circumstances, social consequences and policy implications of this transformation. She also examines labor market and occupational segregation, wage inequality and discrimination and the position of the housewife.

England, Paula (ed). 1993. *Theory on Gender/Feminism on Theory*. New York: Arline de Gruyter.

A wide-ranging collection of papers representing the main theoretical approaches to the study of gender: Marxism, functionalism, world-systems theory, rational choice and interactionist alternatives are all represented, amongst others. The emergence, persistence and reproduction of gender inequality is the object of explanation for all contributors. A series of exchanges between contributors and commentators follows the expository articles. A good introduction to the different ways in which it might be accounted for.

Folbre, Nancy. 1994. *Who Pays for the Kids? Gender and the structure of constraint*. New York: Routledge.

An examination of how the costs of caring for dependants come to be distributed in society, why such arrangements persist and how they change. The theory of the emergence of systems of constraint is grounded in rational choice accounts of collective action and the new economic institutionalism. The analysis is then applied to three historical case studies: Europe, the U.S. and Latin America.

Hochschild, Arlie Russell. 1990. *The Second Shift*. New York: Avon Books.

A sophisticated and sensitive investigation of what it is actually like to live through significant changes in the social organization of family life. Through a series of detailed (interview-based) case studies of different families, Hochschild shows how increasing female participation in the formal economy has not been accompanied by changes in family life (or the workplace) which would make this change easier for women to bear. Hochschild finds that women have an increasingly difficult time doing all that is expected of them while men in general fail to take up any extra responsibilities at home.

Johnson, Patricia Lyons (ed). 1992. *Balancing Acts: women and the process of social change*. Boulder: Westview Press.

Essays by anthropologists. The contributors show, in general, women losing out (or at least having a hard time of it) as they get caught between the effects of changing economic and demographic conditions on the one hand and the demands of well-established gender roles and social institutions on the other. Empirical cases range over Maori, Brahman, Nigerian and Latin American women.

Oppenheim-Mason, Karen and An-Magritt Jensen. 1995. *Gender and Family Change in Industrialized Countries*. Oxford: Clarendon Press.

A collection of papers that examine the relationship between change in the family and change in the roles of women and men in contemporary industrial societies. The authors try to establish whether change in gender roles has actually caused or has

merely been coincident with such changes in the family as rising divorce rates, increases in out-of-wedlock childbearing, declining marriage rates, and a growing disconnection between the lives of men and children. Quantitative, cross-national studies.

Perlmutter, Felice Davidson. 1994. *Women & social change: nonprofits and social policy*. Washington, DC: NASW Press.

Case studies and reports of nonprofit social service organizations run by and for women. These service organizations are classed by the editor as 'alternative organizations,' differing from typical forms of nonprofit service in their 'mission, governance and method of operation.' The emphasis throughout the book is on the importance of grassroots, egalitarian, participatory activism.

Reskin, Barbara F. And Irene Padavic. 1994. *Women and Men at Work*. Thousand Oaks: Pine Forge Press.

A useful introductory text that summarizes and discusses recent research on gender and work in a clear and systematic fashion. The authors describe trends in female participation in the workforce and examine the changes that have (or have not) come about as a result, ranging from wage differentials to work-family issues.

Scott, Alison MacEwen (ed). 1994. *Gender Segregation and Social Change: men and women in changing labour markets*. Oxford: Oxford University Press.

An edited interdisciplinary volume with papers describing research results from the Social Change and Economic Life Initiative, a British project studying six labor markets between 1985 and 1988 (including retail, textiles and finance sectors). Data are largely quantitative, longitudinal life and work histories. The book focuses on the dynamics of occupational segregation by gender.

Spain, Daphne and Susanne Bianchi. 1996. *Balancing Act: motherhood, marriage, and employment among American women*. New York: Russell Sage.

A thorough, accessible and informative overview of an important aspect of social change. The authors present data describing how women's roles and life-chances have been changing in areas related to work and family: fertility trends, marriage patterns, differences in education, labor force participation, occupational attainment, earnings and family well-being. They also give some data on changes in people's attitudes in many of these areas. No systematic effort to explain or theorize the trends, but a wealth of judiciously selected and intelligently presented information.

### Institutions and change

Abbott, Andrew. 1988. *The system of professions: an essay on the division of expert labor*. Chicago: University of Chicago Press.

A thorough comparative and historical examination of professions and professionalization. Abbott argues that the historical development of professions is driven by continuing conflict over their respective jurisdictions (the link between an occupational group and the work it does). A fascinating study that self-consciously examines the *process* of professionalization: how groups emerge, how they fight, why some win and how boundaries change. Three detailed case-studies from law, psychotherapy and information professionals.

Douglas, Mary. 1986. *How Institutions Think*. Syracuse: Syracuse University Press.

A brilliant theoretical study of social institutions understood as classification and categorization systems. Douglas's Durkheimian approach argues that interesting changes are institutional changes. Institutions provide the basic categories and distinctions which we use in our day-to-day thinking. She argues that institutions are based on analogies that have become naturalised i.e., are



taken-for-granted as real rather than used by convention for convenience and these in turn define the limits and contours of our thought.

Edquist, Charles (ed). 1997. *Systems of Innovation: technologies, institutions, and organizations*. New York: Pinter.

A systematic introduction to the 'Systems of Innovation Approach.' This framework aims to grasp how systems of institutions and organizations manage to innovate. Innovation here is primarily technical innovation measured in terms of economic success. The systems approach lays out the relationships between institutions, organizations and the state, and tries to relate them to patterns of economic success. The book also attempts to say how innovation systems may themselves change and evolve. The framework is not particularly rigorous, but the contributors are tackling a difficult task.

Hall, Peter. 1993. 'Policy Paradigms, Social Learning and the State: the case of economic policy-making in Britain.' *Comparative Politics* 27:275-296

Hall tries to show that the confluence of institutions and ideas shaped economic policy making in Britain in the 1970s and 1980s. He tracks the decline of Keynesianism and the rise of Monetarism as policy ideologies (or 'paradigms') and tries to explain why Monetarism won out by the early 1980s.

Knight, Jack. 1992. *Institutions and Social Conflict*. Cambridge: Cambridge University Press.

A thorough and wide-ranging analysis of social institutions and institutional change. The book works out a systematic theory of how institutions emerge and change. It begins from a game-theoretic perspective but rejects evolutionary- and efficiency-based theories, emphasizing instead the role of conflict and the associated distributional consequences of institutions. Theoretical focus, empirical examples and illustrations for the purpose of analysis.

Meyer, John W., John Boli and George Thomas. 1987. 'Ontology and rationalization in the western cultural account.' Pp12-37 in George M. Thomas, John W. Meyer, Francisco Ramirez and John Boli (eds), *Institutional Structure: constituting state, society and the individual*. Beverley Hills: Sage.

A compact and reasonably clear articulation of Meyer *et al*'s 'cultural world-systems' theory. They argue that what needs to be explained is the 'process by which a given set of units and a pattern of activities come to be normatively and cognitively held in place, and practically taken for granted as normal.' The empirical project implied by their approach entails an investigation of the emergence of Western institutions and cultural standards built around belief in individuals, organizations and nation-states, but virtually no other categories. Read with Frank *et al*, 1995.

North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.

North further develops his institutional theory set out in *Structure and Change in Economic History*, this time in more general terms. Frustratingly vague at important junctures, the book is nevertheless a central text in for economists seeking to explain why institutions exist and how they affect economic outcomes. The second half of the book is explicitly concerned with elaborating a theory that points to the role of exogenous changes in relative prices as the mainspring of institutional change.

White, Harrison C. and Cynthia A. White. 1993 [1965]. *Canvasses and Careers: institutional change in the French painting world*. Chicago: University of Chicago Press.

A superb study of institutional change. The authors describe and analyze the rise of the impressionist movement in 19th century France in the context of the reorganization of the French Art World that was happening at the time. They show that the dominant system, centered on the venerable Académie des Beaux Arts, disintegrated and was in large part replaced by a

dealer-and-critic system. The growth of the French middle class (in both size and wealth) created a potential market for paintings. Technological changes made it easier to become an amateur painter, or to paint outdoors. The number of artists boomed and produced a glut of art that the Académie system was unable to display, distribute or sell. The more disaggregated dealer-critic system was better able to shift paintings and give artists the living they wanted. A subtle and detailed study of how practices, rules and beliefs got reorganized. Quantitative and qualitative evidence.

Wuthnow, Robert. 1989. *Communities of Discourse: ideology and social structure in the Reformation, the Enlightenment, and European socialism*. Cambridge, Mass.: Harvard University Press.

A comparative-historical study of large-scale institutional change. Wuthnow is primarily interested in the age-old problem of the relationship between ideology (or discourse) and social structure. Do ideas drive change or does history have an engine of its own? Eschewing simple dualisms, he presents a subtle argument about the complex ways that economic growth, cultural innovation and institutional structures mutually accommodate, articulate with and adapt to one another.

## Culture and social change

Bellah, Robert N., Richard Masden, William M. Sullivan, Ann Swidler and Steven M. Tipton. 1996. *Habits of the Heart: individualism and commitment in American life*. Updated Ed. Berkeley: University of California Press.

A rich interpretive empirical study of the relationship between national culture and individual character. The authors are concerned that American individualism may be overwhelming other aspects of the culture. They trace the historical development of individualist tendencies in American culture and try to see what the future holds. The *locus classicus* of recent debates in this area. Interview data.

Ben-David, Joseph. 1991 *Scientific Growth: essays on the social organization and ethos of science*. Berkeley: University of California Press.

A comprehensive collection (edited after the author's death) that brings together Ben-David's work in the sociology of science. His work is comparative and historical and focuses on the institutional basis of scientific activity. Ben-David represents perhaps the most sophisticated structural-functional approach to science.

D'Anjou, Leo. 1996. *Social Movements and Cultural Change: the first abolition campaign revisited*. New York: Aldine de Gruyter.

An effort to put together a theory about the relationship between collective action and cultural change. Social movements are attractive research points for investigating the part individual actors play in transforming social structures. D'Anjou draws on action theory, recent sociology of culture and social movement theory, although it is not clear whether he succeeds in his effort. The first half of the book is theoretical, the second a case study of campaigns for the abolition of slavery in the eighteenth century.

DeNora, Tia. 1991. 'Musical Patronage and Social Change in Beethoven's Vienna.' *American Journal of Sociology* 97:310-346.

An explanation of an episode of cultural change: the early emergence of a 'serious music' ideology in late 18th and 19th century Vienna. The article shows how organizational change (the decline of private house ensembles) tended to erode the basis of aristocratic authority in musical culture. The rise of an ideology of 'serious music' filled the gap and reaffirmed cultural boundaries via cultural rather than institutional means.

DiMaggio, Paul. 1991. 'Constructing an Educational Field as a Professional Project: U.S. Art museums, 1920-1940.' pp267-292 in *The New Institutionalism and Organizational Analysis*, ed. Walter W. Powell and Paul DiMaggio. Chicago: University of Chicago Press.

A historical study of how the organizational field of art museums emerged and diffused. DiMaggio highlights the role art professionals played in this process, focusing on three points: (i) the conflict over the proper form and function of museums that dominated this early period; (ii) the tense relationship between professionals and social reformers on the one hand and local elites on the other; (iii) the way in which little conflict took place within organizations, with reformers instead using field-wide organizations to attack the system that employed them.

DiMaggio, Paul, John Evans and Bethany Bryson. 1996. 'Have Americans' Social Attitudes Become More Polarized?' *American Journal of Sociology* 102:690-755.

Asks and answers a straightforward question, and in the process raises a variety of interesting issues about social change. While there has been much talk about the 'culture wars' supposedly dividing America, the authors find no evidence that people's opinions have in fact become more polarized. This raises some interesting questions about how people collectively represent their views to themselves. The authors lay out a number of mechanisms that might account for the large discrepancy between what many commentators assert and what the evidence suggests is in fact the case. Quantitative analysis of opinion poll data.

Dobbin, Frank. 1994. 'Cultural Models of Organization: the social construction of rational organizing principles' in *Sociology of Culture: Emerging theoretical perspectives* ed Diana Crane, Oxford: Basil Blackwell.

A clear and comprehensive analytical review of cultural approaches to the study of organizations and institutions. Dobbin focuses on the rise of the neoinstitutionalist perspective and its efforts to explain 'hard' areas of social life (such as the economy) in cultural terms.

Eidson, John. 1990. 'German Club Life as a Local Cultural System.' *Comparative Studies of Society and History* 32:357-382.

Eidson pays attention to how the past can be used by those in the present to initiate, legitimate and disguise change. He describes the case of a German who, through deft political and cultural manoeuvring, managed to become a community leader and turn an organization to his own ends.

Frank, David John, John W. Meyer and David Myahara. 1995. 'The Individualist Polity and the Prevalence of Professionalized Psychology: A Cross-National Study.' *American Sociological Review* 60:360-77.

A cross-national quantitative study that tries to show strong institutional and cultural convergences in modern polities. The substance of the convergence is a widespread similarity in institutionalized concepts of the individual; this is visible in the widespread prevalence in professionalized psychology in modern polities as compared to others.

Featherstone, Mike. 1992. *Cultural Theory and Cultural Change*. Newbury Park: Sage Publications.

A collection of papers addressing the relationship of different aspects of culture and cultural change. Papers run from analyses of the role of cultural specialists (Nancy Fraser, Randall Collins, Bryan Turner) to speculative macro-sociology (Ulrich Beck, Alain Touraine).

Hannerz, Ulf. 1996. *Transnational Connections: culture, people, places*. New York: Routledge.

A thoughtful collection of essays on a difficult issue. Hannerz reflects on the meaning of 'global culture' and its ramifications for individuals, their communities and the states they live in. It seems clear that the quality of lived experience is changing: one's job, personal network and shopping basket are all more likely to be thoroughly international than in the past. Hannerz wants to know what this means. With a theoretical focus on developing the concept of culture, he focuses on how places have changed and how people manage. Written with an anthropologist's eye for the significant difference or telling anecdote.

Harvey, David. 1989. *The Condition of Postmodernity: an enquiry into the origins of cultural change*. Oxford: Blackwell.

A marxian analysis of the cultural phenomenon of postmodernity. Harvey argues that cultural changes in the last thirty years including deep changes in our experience of space and time has been driven by the rise of new modes of capital accumulation and production. These social changes thus signal the latest phase of capitalism, rather than the emergence of a new postindustrial or postmodern kind of society.

Hirsch, Paul. 1972. 'Processing Fads and Fashions: An Organization-Set Analysis of Cultural Industry Systems.' *American Journal of Sociology* 77:639-59.

Hirsch examines the set of organizations involved in producing books, recorded music and films. These organizations differ from standard hierarchically organized mass-production firms because their inputs (from authors, musicians and other 'talent') cannot easily be homogenized or routinized and consumer reactions to their outputs is very uncertain. Hirsch shows how the industry is organized to deal with this uncertainty through such strategies as overproduction, selective promotion, craft-based supply and royalty agreements. An early treatment of how organizations operate in systems to reduce and hedge against uncertainty, unpredictability and changing tastes.

Hirsch, Paul. 1986. 'From Ambushes to Golden Parachutes: corporate takeovers as an instance of cultural framing and institutional integration.' *American Journal of Sociology* 91: 800-837.

A study of the diffusion of a once-deviant innovation, the hostile takeover. Hirsch ties changes in business practice to changes in business culture. The language used to talk about takeovers helped propel their diffusion and recreate or sustain order in the face of change.

Inglehart, Ronald. 1990. *Culture Shift in Advanced Industrial Society*. Princeton: Princeton University Press.

A large synthesis and analysis of nearly twenty years of European opinion survey research data (known as the Euro-Barometer series). Inglehart identifies enduring national and temporal patterns, and links changes in such expressed opinions to large-scale change in social values and cultures.

Latour, Bruno and Steve Woolgar. 1986. *Laboratory Life: The construction of scientific facts*. Princeton: Princeton University Press.

An anthropological study of how science gets done. The authors argue that scientific facts are constructed through laboratory work and the arguments of scientists with one another: ‘reality [is] the *consequence* of the settlement of a dispute rather than its *cause*’ (236). Science is a competitive and political affair. A radical account of how science develops and changes, fundamentally at odds with any view of science as a progressive or evolving enterprise that systematically acquires more and better knowledge of the world. Ethnographic evidence from biology labs.

Lynch, Aaron. 1996. *Thought contagion: how belief spreads through society*. New York: Basic Books.

A popular account that articulates a strong recent trend in the analysis of society and change that has grown up outside of mainstream sociology. Drawing on the work of biologist Richard Dawkins, Lynch tries to explain the success of a wide variety of beliefs, ideologies and practices in Darwinian terms. The key concept is that ideas are subject to the same selection pressures as organisms, with the mental analogue of the gene being the ‘meme.’ The study of memes is likely to show up with increasing frequency in sociology, as modern evolutionary psychology and biology make inroads into its domains. The chief criticism of these arguments is that by claiming memes are selected for their appeal, they simply affirm the consequent.

Pekonen, Kyösti. 1992. ‘Symbols and Politics as Culture in the Modern Situation: The Problem and Prospects of the ‘New.’’ pp127-143 in John R. Gribbins (ed) *Contemporary Political Culture* London: Sage Publications.



How are new events understood and talked about? Pekonen discusses how the symbolic and cultural aspects of politics interact with changes or new events: changes are in part constructed and shaped by political talk. Pekonen shows how our thinking and talk about change or new things is closely bound up with our ideas about legitimation and consensus.

Schwartz, Barry. 1991. 'Social Change and Collective Memory: the democratization of George Washington.' *American Sociological Review* 56:221-236.

A study of how collective memory works and changes. Schwartz traces the development of Americans' beliefs and memories about Washington, focusing on the shift that occurred after the Civil War (when Washington became an ordinary man, having been remote, genteel and of perfect virtue).

Wuthnow, Robert. 1988. *The Restructuring of American Religion: society and faith since World War II*. Princeton: Princeton University Press.

A deep and wide-ranging study of how religion has changed in America since the War. Wuthnow examines how the symbolic boundaries of religion have changed, focusing on the emergence of new religious communities, identifications and categories. He sees these changes as reactions to wider demographic, institutional and economic changes especially the increasing role of the state in American life but insists that the outcomes he observes came about through the complex interplay of these external forces with the active role of religious institutions, the cultures embedded in them and the efforts of communities and leaders to understand and respond to their changing environment.

Zelizer, Viviana. 1985. *Pricing the Priceless Child: The changing social value of children*. New York: Basic Books.

A historical study of how cultural ideas about the value of children radically changed in the U.S. between 1870 and 1930. At

the beginning of the period, children were economically worthless; at the end, they were emotionally priceless. Zelizer argues that this shift was a consequence of changes in occupational and family structures and the organization of economic life. While identifying these causes, Zelizer rejects the view that rationalized market economies have necessary effects, stressing instead the extent to which markets are deeply embedded in cultural and social systems.

Zukin, Sharon. 1991. *Landscapes of Power: from Detroit to Disney World*. Berkeley: University of California Press.

Akin to Harvey's (1989) analysis, Zukin argues that the political economy of capitalism proceeds in Schumpeterian waves of creative destruction that give rise to new cultural forms (the most recent wave being, broadly, postmodern in character).

### Complexity theory

Anderson, Philip W., Kenneth J. Arrow and David Pines (eds). 1988. *The Economy as an Evolving Complex System*. Redwood City, Calif.: Addison-Wesley.

One of the earliest efforts to apply complexity theory to social processes. This book is difficult to read. The first half of the book presents (often technical) applications of non-linear dynamic models to economic phenomena. The second half is largely a series of debates between the participants of the conference the book was culled from.

Arthur, Brian W. 1990. 'Positive Feedbacks in the Economy' *Scientific American*, February. 92-99.

A straightforward introduction to work by Arthur and other Santa Fe economists on positive-feedback models of the economy. He notes precursors to this approach (particularly John Hicks) and gives a series of examples where economic outcomes are better explained by his approach than the standard view. The key

to the approach (not explicitly outlined here) is that Arthur has a theorem that allows him to model increasing returns and identify equilibrium points through simulations. Arthur believes he can show rigorously how processes of path-dependence (which he calls 'lock-in') can be modeled, predicted and explained.

Brown, Shona and Kathleen Eisenhardt. 1997. 'The Art of Continuous Change: linking complexity theory and time-paced evolution in relentlessly shifting organizations.' *Administrative Science Quarterly* 42:1-34.

Arguing against the punctuated equilibrium model of change, the authors examine organizations that continuously change. They analyse (i) the ways in which successful organizations are flexible (i.e., how they combine structure and freedom) (ii) how successful firms manage to prepare for the future in cheap and effective ways, and (iii) how these firms operate over time. Data are from six innovating firms in the computer industry.

Epstein, Joshua M. and Robert Axtell. 1996. *Growing artificial societies: social science from the bottom up*. Washington, D.C.: Brookings Institution Press.

An application of agent-based computer modeling techniques to the study of such social phenomena as trade, migration, group formation, networks, war, cultural diffusion and demography. Using computer simulations and theory derived from the analysis of complexity and self-organization, Epstein and Axtell argue that they can derive models of complex social phenomena from first principles. The sceptical reader might argue that the impressive graphics linked to real social processes only in a metaphorical way, and no information is given about simulations that failed. Nevertheless, the book is ambitious and consistently quite fascinating. Both technically and sociologically sophisticated.

Eve Raymond A., Sara Horsfall and Mary E. Lee (eds). 1997. *Chaos, Complexity, and Sociology: Myths, Models, and Theories*. Sage.

A wildly variable collection of essays that offers a picture of a field in flux rather than a coherent new approach to the study of social phenomena. Essays try to make the concepts of chaos, complexity and emergence relevant to sociology, but often the ideas seem to remain at a strictly metaphorical level.

Gell-Mann, Murray. 1994. *The Quark and the Jaguar: adventures in the simple and the complex*. New York: Freeman.

A popular introduction to the idea of complexity theory. Taken with a grain of salt, it gives a sense of the excitement generated by this new perspective, while leaving the skeptical reader wondering whether it amounts to a self-organized hill of beans. Gell-Mann brings together many separate disciplines to investigate the similarities and differences among complex adaptive systems. These include 'a child learning his or her native language, a strain of bacteria becoming resistant to an antibiotic, the scientific community testing new theories, or an artist implementing a creative idea.'

Krugman, Paul. 1996. *The Self-Organizing Economy*. New York: Blackwell.

In his characteristically clear prose, Krugman manages to be both somewhat skeptical and broadly enthusiastic about the applicability of the new sciences of complexity and self-organization to economics in particular and social science more generally. He argues that concepts and methods from complexity theory can be applied to questions of economic organization in space and over time. He applies these principles to models of urban development and the business cycle. Written up from lectures, the book conveys much of the excitement of these new methods while insisting all the while that much has to be done before they become well-established, or even well-understood, in a social-science context.

Nicolis, G. and I. Prigogine. 1989. *Exploring complexity: an introduction*. New York: W.H. Freeman.

A better introduction than Prigogine and Stengers (1984), but also more technical. A wide range of examples, some more speculative than others. The authors see complexity as a phenomenon that appears at all sorts of scales and in many different contexts. The economic and sociological examples seem often to be the least well worked out.

Padgett, John and Christopher Ansell. 1993. 'Robust action and the rise of the Medici, 1400-1434.' *American Journal of Sociology* 98:1259-1319.

A study of political power struggles and network change. In the context of class revolt and fiscal crisis, the Medici family obtained political control of Florence through their position in the network of powerful families. The broader argument is that states and organizations emerge and change most vitally at the level of individual relations and networks. In the background, we can see a sociological version of the idea that small actions or events can have large consequences, in this case for social control.

Prigogine, I. and I. Stengers. 1984. *Order out of Chaos* New York: Bantam.

A general introduction to complexity theory from one of its founders. The book contains a lot of useful information about this exciting field, but is rather marred both by some muddled philosophy of science and the (understandable but unfortunate) tendency of the authors to relentlessly cheerlead for their view.

Schelling, Thomas. 1978. *Micromotives and Macrobehavior*. New York: W.W. Norton.

A really impressive piece of work. Schelling examines the relationship between individual actions and large-scale outcomes in a consistently fascinating way, clearly anticipating ideas of self-organization and criticality. The book contains his famous paper on neighborhood segregation. His analyses are elegant, accessible and deep explorations of how the individual decisions may over time give rise to stable macro-outcomes that are usually unexpected and often unwanted.

## Social theory and social change

Alexander, Jeffrey C. and Paul Colomy (eds). 1990. *Differentiation theory and social change: comparative and historical perspectives*. New York: Columbia University Press.

A collection of theoretical and empirical papers. These are neo-functional analyses emphasizing differentiation as the master process in the evolution of modernity. The evolutionary arguments (concerned with efficiency and 'adaptive upgrading') are somewhat tempered by attempts to incorporate less unidirectional elements into the theory. Contributors describe 'backlashes' and their discontents. Wide empirical net, geographically and historically.

Axelrod, Robert. 1984. *The Evolution of Co-operation*. New York: Basic Books.

A classic study in evolutionary game theory, that raises fascinating questions about the co-operation between otherwise self-seeking and selfish agents. Axelrod modelled agents with a variety of survival strategies (attitudes towards other agents) in order to discover which strategies best prospered over time. He found that, over many iterated prisoner's dilemma-type games a simple 'tit-for-tat' strategy was the most successful. Stable co-operative equilibria could emerge from otherwise self-seeking individuals.

Bell, Daniel. 1976. *The Coming of Postindustrial Society: a venture in social forecasting*. New York: Basic Books.

One of the earliest systematically sociological efforts to chart the emergence of postindustrial society. Bell argues that a number of institutional and functional shifts are occurring in the U.S. that, taken together, amount to a significant new form of social organization. These include the increasing centrality of theoretical knowledge, the spread of a knowledge class, the shift in production from goods to services and the increasing role of science as a

locus of research and innovation. Bell's analysis does not focus so much on the importance of information technology. His analysis stands out for the way it rejects any account of some historical 'master process', and instead consistently tries to assess change as a multi-faceted process operating in several dimensions and directions.

Boudon, Raymond. 1986. *Theories of Social Change: a critical appraisal*. Cambridge: Polity Press.

A survey of different kinds of theories of change. Boudon distinguishes and discusses four: (i) stage theories, (ii) covering law or conditional views, (iii) theories about the 'form' rather than the content of change, (iv) causal theories of change. Even these categories turn out to be rather unhelpful, his discussion of specific examples is often worthwhile. One of the few books published in the recent past to explicitly deal with theories of social change, broadly conceived.

Bury, J.B. 1955. *The Idea of Progress: an inquiry into its origin and growth*. New York: Dover.

An old book, but nevertheless an engaging and informative historical account of the development of one of the West's Big Ideas. Belief in progress is out of fashion, but the idea's historical resilience is such that it pops up in unexpected ways in contemporary work. Bury traces its development through the writings of European intellectuals since the 1400s.

Castells, Manuel. 1995. *The Rise of the Network Society*. Cambridge, MA: Blackwell.

First of three volumes (all are now published). A huge, synoptic and somewhat sprawling effort to grasp and theorize the economic, social and cultural transformations of the last thirty years. Castells argues that societies are increasingly dependent on information flow, and thus on the actors who control this flow. The book most likely to convince you that the global information economy really exists. A wealth of specific and compelling examples of globalization; perhaps less theoretically coherent.

Chirot, Daniel. 1994. *How Societies Change*. Thousand Oaks, Calif.: Pine Forge Press.

A condensed version of a historically-grounded view of long-term social development and change. Chirot works with a familiar division between hunter-gatherer, agrarian and industrial societies. He pays close attention to explanations of the shift from one type of society to the next. His overall framework is Parsonian, though it is unclear how much of Parsons' evolutionism he accepts (as opposed to his analysis of social structure). The final chapter argues that periods of technical, intellectual and institutional innovation are associated with demographically dense and heterogeneous populations, and that innovation is further associated with marginal groups (like immigrants or religious minorities). The validity of all this is, of course, open to argument.

Collins, Randall. 1986. 'A theory of technology' pp 77-116 in Randall Collins, *Weberian Sociological Theory* New York: Cambridge University Press.

Collins incisively outlines a Weberian approach to the study of technical innovation. He argues that, contrary to much accepted wisdom, technological innovation is relatively easy: new ideas are 'rarely the crucial part of any invention, and, indeed, possible ideas seem to be far more widely available than their utilization.' Rather than looking at inventions as miraculous breakthroughs, we should instead examine the social context in which they emerge. Drawing on the historical literature, Collins lays out some conjectures about the origins of innovations, the role of diffusion, the impetus provided by economic and geopolitical conditions and the variation in rates of innovation across different sectors of society.

Elster, Jon. 1978. *Logic and Society: contradictions and possible worlds*. New York: John Wiley.

A rare attempt to show that sociological theory can profit from modern analytic metaphysics and philosophical logic. Elster tries



to ground sociological talk about possibilities and counterfactuals what might happen, what might change in the machinery of quantified modal logic (the logic of possibility and necessity). Difficult in parts, but the logic is systematically applied to empirical cases.

Elster, Jon. 1983. *Explaining Technical Change: a case study in the philosophy of science*. Cambridge: Cambridge University Press.

An excellent analysis that does two things. First, Elster discusses three modes of scientific explanation (causal, functional and intentional modes). He argues persuasively that functional explanations have no place in sociology. Second, armed with this analysis he tackles four kinds of theories of innovation and technical change: neoclassical theories, Joseph Schumpeter's theory of capitalist development, evolutionary theories of change and Marxist theories. A trenchant, intelligent and well-informed view of what a theory of social and technical change might look like and the explanatory criteria it would have to fulfil.

Haferkamp, Hans and Neil J. Smelser (eds). 1992. *Social Change and Modernity*. Berkeley: University of California Press.

A collection of papers. Most of the contributors to the volume accept that some very large-scale theory of social change is possible (hence the tendency of many contributors to speak of 'the' theory of social change, as though it were a well-understood idea). Of these, a majority are committed to some broadly functionalist or evolutionary theory (or both). Some, most notably John Goldthorpe and Robert Wuthnow, go against this grain in different ways, and are much more skeptical about the whole enterprise.

Hedström, Peter and Richard Swedberg. 1998. *Social Mechanisms: an analytical approach to social theory*. New York: Cambridge University Press.

A stimulating collection of essays that reflects the recent attempt to study processes of change without falling into the traps of

older, more general theories of social change (particularly the tendency to identify large changes or patterns without any plausible causal mechanisms). Though the various authors have different views on the matter, they generally see mechanisms as robust and reasonably general causal sequences that can be seen happening in different areas of social life. Identifying them helps us construct better theory. The book raises a variety of complex philosophical and theoretical problems (some are deliberately brought to the fore, others lurk unanalyzed) that look set to become important issues in social theory during the near future.

Herman, Arthur. 1997. *The Idea of Decline in Western History*. New York: Free Press.

While this book's intellectual project is interesting, its execution is uneven. Herman traces the intellectual history of the idea of decline. He follows a chronological path, beginning with de Gobineau and Burckhardt, moving on to Henry Adams, Oswald Spengler and Arnold Toynbee and finishing up with the Frankfurt school, Foucault, Fanon and others. However, the author has a strong political agenda. A little ironically, the book's quality deteriorates as it progresses. The last chapters give up on analysis and launch a long polemic against various forms of multi-culturalism. This is a pity. However, though the later part of the book is an uninteresting salvo in the culture wars, the early chapters can profitably be read in conjunction with, say, Bury (1955) or Nisbet (1969).

Kumar, Krishan. 1986. *Prophecy and Progress: the sociology of industrial and post-industrial society*. London: Penguin

A first-rate intellectual history of sociological theories of industrial and post-industrial society from the late 18th century to the early 1970s. Kumar argues that the transformation of European society in the 1800s was heralded by avatars of progress (such as Saint-Simon), brilliantly analyzed by Marx, Durkheim, Weber and others and then, unfortunately, taken for granted by later sociologists. An inaccurate 'image of industrialism' dominated,

with industrial society representing a definitive break with the past. In the 20th century, the First World War shook confidence in progress, but the idea recovered and expressed itself in theories of post-industrial society, which Kumar skeptically reviews in the second half of the book. An enlightening, lucid and compelling book.

Kumar, Krishan. 1995. *From Post-Industrial to Post-Modern Society: new theories of the contemporary world*. Cambridge, Mass.: Blackwell.

An intelligent (and skeptical) survey, analysis and evaluation of recent theories of large-scale social change. Kumar sees recent theories of post-modernity in relation to earlier work on post-industrialism (cf. Daniel Bell). The book first reassesses post-industrial theories and then analyses theories of post-modernity. It has a useful bibliography.

Merton, Robert K. 1936. 'The unanticipated consequences of purposive social action.' *American Sociological Review* 1:894-904.

A classic theoretical discussion of change and stability, the way actions get out of hand and why this makes social control and organization difficult. Merton makes a series of important points, though his writing can be a little overwrought. The article remains valuable even if you don't accept the functionalist premise of the argument.

Nisbet, Robert. 1969. *Social Change and History: aspects of the western theory of development*. New York: Oxford University Press.

Part history of ideas and part theoretical critique, Nisbet's book traces the intellectual development of the western idea of growth through its many forms, from the Greeks to the great theorists of the 19th century. Whether as a theory of growth and decay, repeating cycles or illimitable progress, the notion of intrinsic, immanent, organic change has had an enormously powerful hold on people's minds. First, Nisbet traces the metaphor of growth from Greece to the late 18th century. Second, he describes the

theories of social evolution that dominated the 19th century (and the comparative method that grew out of them). Third, he offers an excellent critique of (then) contemporary theories of social change that is still well worth reading. The book is essentially a sustained argument for empirical historical analysis as against metaphorically driven sociological theory.

Prada, Valentin Vasquez de (ed). 1995. *Understanding Social Change in the Nineties: theoretical approaches and historiographical perspectives*. Hampshire: Variorum.

Conference proceedings. A very wide-ranging (and therefore somewhat uneven) collection of conference papers. Theoretical and empirical papers. Transcripts of debates between contributors are appended to each section.

Runciman, W. G. 1989. *A Treatise on Social Theory, vol. II: substantive social theory*. New York: Cambridge University Press.

A subtle and extraordinarily wide-ranging attempt to account for long-term, large-scale patterns of historical development in terms of an evolutionary theory of roles and practices. This kind of project is no longer fashionable (or generally even believed feasible), but Runciman offers a coherent and challenging version of social evolutionism, informed at every turn by historical and anthropological evidence.

Runciman, W.G. 1998. 'The selectionist paradigm and its implications for sociology' *Sociology* 32(1): 163-88.

A comprehensive and lucid (though partisan) review of recent evolutionary theorising and an argument that selectionism provides a coherent perspective from which to generate a useful research program. Runciman raises and disposes several objections to this program and offers an example of it in use. A usefully corrective review if you only know of the sociobiology controversy of the 1970s.

Schumpeter, Joseph A. 1961 [1911]. *The Theory of Economic Development*. New York: Oxford University Press.

The core of Schumpeter's ideas on the role of entrepreneurs in the development of capitalism. The argument of the book is that conventional economic theory allows no room for profit in its picture of the circular flow of factors of production, commodities, prices, consumption and rents. Schumpeter points to the role of time, taken advantage of by the entrepreneur, who finds new ways to organize factors of production: this is where profit comes from. By juggling factors of production through time, entrepreneurs are at the heart of the process of creative destruction that drives economic change in capitalist economies.

Smith, Anthony D. 1976. *Social Change: social theory and historical process*. New York: Longman.

A brave effort to make a short, lucid case for 'theories of social change' as a coherent intellectual project. Smith recognizes the problems involved and tries to overcome them by narrowing the legitimate focus of such theories a little they need to explain how a change originated, what mechanisms produced it and what effects it had and by introducing a good dose of history. The scope remains broad and the focus very general, however, and the reader may similarly remain unconvinced of the project.

Sztompka, Piotr. 1993. *The Sociology of Social Change*. Cambridge, Mass.: Blackwell.

One of the few books to appear in the last ten years that explicitly tries to work out a sociologically informed theory of social change. Sztompka touches on many aspects of the issue, discussing in their turn some metaphors for change (organic and system models), concepts of tradition, modernity and globalization. He then describes a number of (now more or less defunct) grand visions of social change evolutionism old and new, modernization, cyclical theories and historical materialism. Finally, he outlines his own theory of 'social becoming.' Something of a curate's egg, the book is written in a rather vague style. It

contains good summaries of many authors and approaches, but the author's own theory is very unsatisfying.

Tilly, Charles. 1998. *Durable Inequality*. Berkeley: University of California Press.

An innovative account of how inequality is created and institutionalised. Tilly sees similar patterns across a wide range of empirical cases and is convinced that the same broad processes underlie them all, despite superficial differences in kind. (For example, an occupation may become a job ghetto for women in place A or Hispanics in place B.) To explain these different cases, Tilly works out a theory of how categories interact with networks to produce inequality. Exploitation and 'opportunity hoarding' create inequality, while emulation (by others) and adaptation (by those victimised) make it durable.

Tilly, Charles. 1984. *Big Structures, Large Processes, Huge Comparisons*. New York: Russell Sage Foundation.

A bracing and constructive critique of theories of large-scale social change. Tilly argues that Social Change as such does not exist (as a coherent phenomenon that we can sensibly have theories about). He identifies and discusses eight serious errors that have dogged such theories. He goes on to lay down rules about the what kinds of statements about change are useful, how we can go about validating or refuting them and at what levels of analysis.