

coefficient estimates as variables are introduced; evaluate conceptual constructs by the combinations of variables included in a model; discover unanticipated complex patterns of multiple causality through identifying statistical interactions between two or more variables; and construct more elaborate models by stringing a number of equations together.

An early use of multivariate techniques in sociology that explicitly claimed to be a model was the use of path analysis by **Otis Dudley Duncan** and **Peter M. Blau** to introduce the “status-attainment” model of **social mobility** in the United States (*The American Occupational Structure*, 1967). Working with **data** from a large-sample **survey** of United States men, Blau and Duncan put together the display of results of a series of regression equations into a single figure, a “path diagram.” Their basic diagram is an attempt to depict the process of intergenerational (inheritance) and intragenerational (career) social mobility in the United States. In it, an index of current occupational position (indexed by a scale of status) is seen as being driven by point of entry into the labor market (indexed by “first job”), educational attainment (indexed by “years of schooling”), and social origin (indexed by “father’s job” and “father’s educational attainment”).

The original status-attainment model has prompted four decades of subsequent work and controversy about its validity around issues such as its exclusion of women, the basic conceptualization of its core **values**, and its implicit stance on **social stratification**. The salient point here, however, is that it displays the characteristics of a multivariate causal model: a vastly complicated process of social mobility is distilled down into a set of essential relationships. Furthermore, the construction of the model displays dynamic characteristics since it is possible to trace indirect causal effects along the “paths” of coefficients in the model (for example, **education** may have a direct effect on current occupational position but also could have an indirect effect since education can affect level of “first job,” which in turn affects current **occupation**). In addition, a change in a parameter, such as increasing the level of education attained, would result in a change in an “output” estimate: for example, the predicted level of “first job” would be higher.

The number of multivariate statistical techniques is legion, including: (1) analysis of variance techniques; (2) techniques of regression analysis (general linear analysis of parametric data; logistic regression techniques where the dependent variable is a quality, a nominal category;

multilevel modeling where the independent variables exist on at least two levels of aggregation, such as individual data plus group, area, and/or organizational data) that have in common the prediction of the values of a dependent variable based upon the values of one or more independent predictor variables; (3) techniques of data reduction, such as factor analysis in which the values of a number of observed variables are assumed to reflect the presence of a smaller number of unobserved “essential” variables; (4) “measurement models” that are a combination of prediction of regression with data reduction; and (5) log-linear analysis techniques for the multivariate modeling of relationships between non-parametric data. Like modeling in general, all of these multivariate techniques have simplification and essentialism in common.

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model(s)

– see **modeling**.

modernity

Modernity is a civilizational epoch in the same sense as Greco-Roman antiquity. Though modernity originated in western Europe and North America over two centuries ago, today it extends to cosmopolitan centers around the globe and its consequences affect all but the most isolated **communities** in every country on earth. Modernity, like all epochs, includes distinctive forms of economic and political organization, characteristic cultural **institutions**, and persistent tensions between antithetical civilizational trends. It is also an epoch that generates a distinctive set of ambivalent reactions. A number of these tensions and ambivalent reactions will be discussed in itemized fashion in later sections of this entry.

Social theory as we know it today developed when **intellectuals** began trying to make sense of modernity as it matured during the nineteenth century. However, early modern theorists disagreed on how modernity should be defined, and many of these disagreements have continued in subsequent generations, albeit with numerous additions and revisions. The parameters of modernity can be grasped by noting the dynamic forces that various early modern theorists maintained were the prime movers of the history of modernity. For Adam Smith (1723–90) and **Karl Marx**, **capitalism** in the form of **markets** (Smith) or profit-oriented production (Marx) was the main-spring of modern social life. **Henri Saint-Simon** and **Auguste Comte** maintained that scientific

knowledge and **technology** ultimately would direct modernity in a rational, orderly manner. **Alexis de Tocqueville** stressed the transition from aristocratic political **organizations** and the cultural **values** of aristocratic **elites** to representative democratic institutions and a **culture** based upon egalitarian values. **Émile Durkheim** stressed the modern culture of **individualism** and the division of **labor**. Until quite recently (see especially Michael Mann's *The Sources of Social Power: Volume I*, 1986, and *Volume II*, 1996), social theorists had dealt with the intensively developed and extensively organized nation-state as a central feature of modernity only obliquely (see especially the works of **Max Weber**). However, most contemporary theorists consider the nation-state, including its military forces, social services **bureaucracies**, judicial system, educational systems, and sources of revenue, as yet another dynamic force of modernity.

Each of these dynamic forces contributes to modernity's most obvious defining trait: namely its endless bouts of disruptive change. In fact, it can be said without hyperbole that modernity is the most unstable epoch that humanity has ever known. The radical mutability of modernity is most easily understood against the backdrop of premodern cultures and **civilizations**, most of which did not welcome dramatic change. Prior to modernity, most rulers discouraged all but the most pragmatic changes in the societies they controlled. Abrupt change, with its unforeseeable results, might threaten their dominion. (The conduct of **wars** and the construction of empires were notable exceptions in this regard.) Rulers sought the stabilizing support of orthodox **religions** and they also encouraged stable customs and **traditions** that made commoners as suspicious of change as were the rulers themselves. Only incremental changes were quietly absorbed into **everyday life**.

Modernity makes the sharpest possible break with the propensity for stasis in premodern social epochs. Each of the dynamic forces of modernity, capitalism, scientific technology, the nation-state, and the culture of individualism not only pushed through the cake of custom during the historical transition to modernity, but also proceeded to foster change after change so that the social circumstances of each generation differed from those of its predecessors.

Intellectuals have been profoundly impressed by the sharp contrast between the tradition-bound cultures of the past and the ever-changing social conditions of modernity. For example, Marshall Berman entitled his influential commentary on modern cultural ways of life *All That Is Solid Melts*

into Air (1982), echoing the powerful closing trope of a passage from Marx and **Friedrich Engels**, *The Communist Manifesto* (1848), that evokes the agitation and disruption caused by capitalism and, by extension, modernity at large. Agitation and disruption were on the minds of other early modern thinkers as well. In *Democracy in America* (1835 [trans. 1966], p. 298), de Tocqueville correctly foresaw that the rise of democratic political institutions would generate chronic instability in which governmental regimes and even basic principles of government would recurrently come and go without relief. In his well-known essay, "The Metropolis and Mental Life" (1903 [trans. 1971]), **Georg Simmel** went so far as to propose that human beings were incapable of taking in all of the rapidly changing experiences they encountered in a typical urban environment. To fend off excessive stimulation, individuals were forced to distance themselves psychologically from many of the people they encountered and the events they observed.

Until the last decades of the twentieth century, social theorists were divided on a key question about the history of modernity: does modernity have a historical teleology with a foreseeable destination, a *terminus ad quem*? The question itself is thoroughly modern. No other epoch in any civilization has ever been as unsettled by what the future might hold. If social thinkers knew where modernity was headed and if they knew the mechanisms that were propelling it in this direction, then they could recommend rational steps to hasten the day when the best possible organization of society would finally emerge. Smith, **Georg Wilhelm Friedrich Hegel**, Comte, Marx, **Herbert Spencer**, Durkheim, and **Talcott Parsons** all did their best to discern systematic trajectories in the history of modernity. However, even in the nineteenth century, de Tocqueville and Weber maintained that the history of modernity rarely runs true to a teleological course for very long. By the late twentieth century, most social theorists had come around to the open-ended historical view that modernity has no ultimate destination. The disintegration of the Soviet Union marked a theoretical watershed in this regard, since very few social scientists foresaw these world-historical events. But, in retrospect, no theorist of modernity foresaw the onset or the profound consequences of two world wars, multiple instances of **genocide**, the rapid collapse of colonial rule in the Third World, and the transformative power of information processing and global communications technologies.

No single force is responsible for the relentlessness of modern **social change**. Capitalism is subject to cycles of expansion and contraction in all of its markets from investments and finance to job markets and markets for consumer goods. Equally important, capitalism endlessly seeks to increase profitable operations and reduce costs, a trait that leads to swift transitions between geographical locales of operation, constant searches for cheaper sources of labor, and a host of other propensities to change as well.

Modern scientific technology is a vast engine of unpredictable change. Members of modern societies in the nineteenth century had to adjust to the steam engine, the industrial factory, the railroad, the telegraph, and electrical power. In the first half of the twentieth century, people had to adjust to the mechanized assembly line, automobiles, movies, radio, and telephones. And today we are adjusting to computerized information processing, global communication via satellites and the worldwide web, and new forms of **biotechnology** that have the potential in the not-too-distant future to change the definition of human life itself.

Modern **states** are engines of change as well. From global and regional wars fought with mechanical weapons of previously unimagined power, to more benign changes such as state-run schools and social health and welfare institutions, the modern state recurrently transforms the social circumstances in which its citizens live. Even modern culture, with its multivalent emphases on the **rights**, prerogatives, and opportunities that encourage individuals to pursue changes for the better in their own lives, creates expectations that the future will not be the same as the past.

Not only is it impossible to foresee where the open-ended history of modernity will lead, it is also impossible to say when modernity began. If we again focus independently on each of modernity's dynamic forces, the exception to the rule is the modern state, which many historians believe emerged in its distinctively modern (albeit not very democratic) form in Otto von Bismarck's (1815–98) Germany after 1870. Beyond this there is little consensus on when any of the principal forces of modernity began. Consider modern capitalism. Some elements of capitalism, such as long-distance trade and short-term profit-seeking investments, were already on the scene before 1500. According to Weber in *The Protestant Ethic and the Spirit of Capitalism* (1905 [trans. 2002]), the cultural ethos of the profit-oriented entrepreneur first evolved during the seventeenth and

eighteenth centuries. However, capitalism as the primary system for the provision of material goods in **everyday life** did not fully supplant local agrarian production until sometime after 1750, and then only in the most advanced cosmopolitan centers of Europe and North America.

Next, consider technology. According to Lewis Mumford (1895–1985) in *Technics and Civilization* (1934), the development of the modern machine predates the industrial revolution of the late nineteenth century by at least 700 years. But modern machinery entered the factories of western Europe only during the nineteenth century, and only during the period from 1880 to 1920 did modern technology reach into the households and everyday lives of modern populations at large.

The origin of the culture of modern individualism is difficult to date as well. According to Jacob Burckhardt (1818–97) in *The Civilization of the Renaissance in Italy* (1860 [trans. 1954]), the humanistic appreciation of the power and the beauty of the individual began in the time of Michelangelo (1475–1556). But the belief in the **equality** and liberal rights of human beings as citizens moved from the pages of political philosophy to the constitutions of governments only following the American Revolution of 1776, and even today these values are still partially ideals rather than realities. The idea that every individual should be entitled to realize her or his own potentials and choose her or his own **lifestyle** is more recent still. Even in the 1950s cultural critics such as **David Riesman** worried about the degree to which modern, middle-class individuals conformed too closely to homogenizing cultural **norms**. It is only in the current generation that theorists such as **Anthony Giddens** and **Ulrich Beck** highlighted new trends towards alternative lifestyles and self-identity that carry the culture of individualism into how citizens of modernity pursue their personal lives.

One final point on the history of modernity. While it is true that modernity is driven by multiple engines of social change, what makes the history so difficult to predict is that all of these forces interact with one another in complex ways. For example, it is easy to see that capitalists were already investing in potentially profitable developments in industrial technology as far back as the late eighteenth century. But technology has produced surprises to which capitalists have had to adjust as well. This is no more evident than in the transformative effects of modern information and communications technology which have dramatically accelerated everything from the

intensity of economic competition, to the rapid intensification of global markets and **networks** of production, to new means of data gathering and analysis that enable sophisticated **firms** to market their wares in different forms to targeted consumer groups in every corner of the world. Equally complicated interactions are found between capitalist industries and nation-states. On the one hand, nation-states depend upon a prosperous capitalist **economy** for their economic well-being. Therefore they must adapt and adjust to changing commercial and industrial conditions. However, when states are engaged in warfare, capitalist firms are compelled to support the war effort even if this reduces their profitability. Nation-states also adjust their operations to new technologies as well. However, states also sponsor a great deal of technological innovation. This is especially true with regard to the military. Indeed, things as various as computers and global satellites were promoted and perfected to suit military needs.

Modernity as an epoch may have no determinate starting point nor a historical destiny, nor even a predictable historical trajectory, but if the epoch at large lacks a teleological pattern, modernity has generated a number of less enveloping developmental trends. Some of these trends emerge in many institutional contexts; others are confined to a specific institutional order. But the most important trends almost inevitably encounter paradoxical opposition. Paradoxical opposition refers here to trends and countertrends that are each evident in the fabric of modernity, yet radically inconsistent with one another.

Democratic ideals such as equality, liberty, and impartiality in the **public sphere**, and the right to **privacy** in personal life, are modern values. Though never fully realized, they are proclaimed in the constitutions of most modern states and judicial levers that **social movements** use for social change. If modernity has a creed, it is grounded in what Durkheim terms the cult of the dignity of the individual, where human dignity is the lowest common denominator for all of the values. But the paradox is that, though these values apply universally as ideals, state policies determine to whom they apply. All modern states leave some populations unprotected. Some exclusions do minimal harm. But many render certain groups (for example, racial and ethnic minorities, immigrants, gays and lesbians) vulnerable to damaging **discrimination** and harsh stigmatization. Even worse, states sometimes pursue barbaric policies to punish and slaughter peoples they leave

unprotected. Modern states have been responsible for the worst genocides in history. **Michael Mann**, in a controversial argument in his *Dark Side of Democracy* (2005), argues that strong modern states, mainly in the northern hemisphere, may now be less inclined to genocide than weak states south of the equator. Even if this speculation proves true, modern states are still capable of ruthless war, systematic torture, and callous oppression of minority groups. Paradoxically, the only institution that can pursue democratic ideals can sometimes cynically forsake or ignore them with cruel, inhumane results.

Weber coined the phrase “disenchantment of the world,” by which he meant the replacement of belief in other-worldly forces such as the will of God that once were held to govern the world by impersonal scientific laws and formal **rationality** that leave no room, at least in public life, for unfathomable forces of any kind. Disenchantment need not imply an end to religious faith in private life, but it does signify the end of religious faith as a basis for modern forms of jurisprudence, legitimate government, economic enterprise, and knowledge of the natural world. The accent placed on spirituality in public life in many premodern societies disappears.

As demonstrated by recurrent waves of religious **fundamentalism** in western societies, even a trend as broad and seemingly ineluctable as disenchantment cannot sweep through modernity without encountering paradoxical opposition. Such waves are nothing new. Papalist political and cultural movements have been a recurrent feature in reaction to the rise of modernity in Spain and France, and waves of Protestant fundamentalism have opposed the disenchantment of public life in the United States periodically since its origin. Fascist **ideologies** (including Hitler’s Nazi ideology) stem from passionate sacralization of secular **symbols** (for example, the motherland, ethnic purity) in opposition to the disenchantments of modernity as well. Less inflammatory **civil religions** and **nationalism** may serve as vehicles for reactions to disenchantment as well.

Material **inequalities** are not unique to modernity; however, as Karl Marx observed, material inequality takes a unique form in capitalism. The bourgeoisie and the managerial classes are not just rich, as were aristocracies in the past: these classes systematically prosper, their **wealth** expands. Classes in poverty lack structural possibilities to prosper. Though some individuals may increase their wealth, the entire class cannot escape in this way. Like all elements of capitalism,

today poverty must be understood globally. Large populations of the desperately poor reside in every Third World conurbation. Meanwhile, local and global capitalist enterprises generate prosperity for the upper classes.

In *The Great Transformation* (1944), **Karl Polanyi** identifies a historical cycle in the relations between capitalism and the state that can be generalized as one of the great paradoxes of modernity. Capitalism as an economic system prefers unregulated **markets** for wage-labor, which generally allow capitalists to pay the lowest possible wages and thereby increase their profitability. However, when wages sink too far (and/or the cost of living rises), workers mount political movements (often in alliance with other **groups**) to enlist the state in protecting them from impoverishment. States often respond with extensive welfare services for the economically disadvantaged. This constitutes the first phase of Polanyi's double movement. The second phase develops on two fronts: on the one hand, workers ultimately become excessively reliant on state aid and withdraw from the labor markets. On the other hand, states reach certain practical limits to the amount of funds they can spend on social services to the poor. In a very simplified sense, over time the double movement operates like a pendulum pushing towards free labor markets until a reaction sets in and the pendulum moves back towards the protective policies of the state, and then a counterreaction sets in and the pendulum begins to swing back the other way. Though Keynesian policies of state regulation seemed to moderate the double movement for a period after World War II, reactions set in against the **welfare state** in the mid-1980s, and the "double movement" once more asserted itself.

Consider a paradox of modern development that was already evident 100 years ago. On the one hand, the increasing division of labor in capitalist production and in bureaucratized organizations of all kinds was dividing labor into a vast array of highly specialized tasks and establishing deep divisions between public and private life. But counterposed to these trends towards **differentiation**, there were also trends towards centralization, the most obvious being the centripetal forces that drew (and still draw) people from the countryside into densely populated **cities** and conurbations.

The same paradox is evident on a global scale. On the one hand, capitalism, both historically and in recent times, has established regional sectors of global inequality based upon what **Immanuel Wallerstein** terms the principle of unequal exchange. There are shifting global divisions based upon

military and diplomatic alliances as well. Moreover, as peoples come into closer contact with one another around the globe, certain cultural differences (for example between China and the West) loom larger than they did in premodern times. Yet there is no denying that modern modes of communication and transportation, from the telephone and the steamship to data transmission by global satellites and transportation by jet aircraft and high-speed pipelines and ships, increase both the velocity and intensity of global interaction that enable durable economic and political **networks** to concentrate the control of many resources on a global scale.

In the early days of the modern era, technology was often welcomed as an unalloyed good. No one regards technology as thoroughly evil today. Very few critics would completely eliminate industrial production or modern medicine. But technology now seems a two-edged sword. Pollution, the most obvious byproduct of technology, threatens our **health**. Global warming is changing our climate with as yet unforeseeable consequences. And it is already evident that biotechnology will change the very meaning of life during the twenty-first century. But there is more. Technology facilitates unprecedented forms of total war in which the object is to destroy civilian populations. Moreover, though genocide is possible without technology, the Nazis demonstrated the horror of genocide by industrial means. Technology is simply a means to make tools, and, as with all tools, the virtues and vices of technology depend upon how it is used.

From Marx's notion of the **alienation** of the proletariat to **Jürgen Habermas's** writings on the excessive colonization of cultural life-worlds by impersonal and lifeless social systems, social theorists have been sharp, sometimes hostile, critics of the inequalities, injustices, and oppressive conditions and consequences of modernity. Modernity is certainly open to criticism on many counts, from capitalism's exploitation of labor to the practice of total war, where the object is not to defeat a rival military force but to destroy the homeland of the enemy by lethal technological means. Yet even the most comprehensive and justified criticism of modernity contains a certain degree of ambivalence. Modernity, as previously said, is easily the most comfortable set of material circumstances human beings have ever established for themselves. Where is the Luddite who would forfeit central heating in the winter or air conditioning when the temperature is high? Modernity has also spawned a portfolio of political and cultural values such as the equality

and rights of individuals, and the notion of social justice to which even the most acerbic critics of modernity subscribe, even as they use these values to highlight modernity's shortcomings and its hypocrisies.

As Durkheim observed, the moral ideals of modernity treat the rights and prerogatives of individuals as sacred. Each of us should possess these rights to an equal extent. But these ideals are contradicted by some very deep-seated modern realities. Capitalism intrinsically generates vast inequalities between the rich and the poor, whether it is in the British slums Dickens described in nineteenth-century England or the slums found in every Third World conurbation today. Merely noting the vast difference between average age of death among modernity's rich and poor alerts us to how dramatic these inequalities are. But, as **Pierre Bourdieu** observes, modernity also includes many forms of cultural inequality that are insidious insofar as people unselfconsciously reproduce their **habitus**, even though in doing so they may put themselves at a cultural disadvantage vis-à-vis dominant groups. Some prominent inequalities between women and men, racial and ethnic minority groups, and minority groups based upon sexual differences can be understood in this way. But critics of these inequalities have had a measure of success. From socialist movements a century ago to women's movements today, periodic rebellions against inequality are as modern as the forms of inequality to which they object.

Social estrangement has been a recurrent theme in **social theory**. Marx's notion of alienation refers both to the loss of control over labor by workers and to the estrangement of workers from their material relations with fellow workers and members of their community. In *Suicide* (1897 [trans. 1951]), Durkheim conceived estrangement in two forms: anomie, which is the sense of profound confusion brought about by the social disruptions to which modernity is prone, and egoism, an excessively selfish, utilitarian form of individualism which is the unappealing underside of the moral individualism of which Durkheim approved. **Georg Lukács** saw modernity in Kafkaesque terms as subject to **reification**, that is, the sense that we live a social world with hard realities that seem too vast and powerful to change. Habermas's notion of the colonization of the life-world speaks to estrangement in the sense that the instrumental policies of capitalism and the modern state invade areas of public culture and private life, suppressing meaningful ties of social integration in favor of calculations of organizational

advantages and efficiencies. (A good example is the bureaucratization of universities and schools.)

Though each of these notions of estrangement makes a specific point, all of them underscore one of modernity's enduring problems, the inability of modern **civilization** to generate groups to replace the local communities that provided cultural meaning, moral **solidarity**, and spiritual assurance in premodern forms of social life. There is no single great impediment to the maintenance of communal ways of life in modernity. Capitalism, the bureaucratized **social policies** of the state, the impersonality of scientific technology, and modern individualistic culture – each adds its own share of obstacles in this regard. However, estrangement is not an all-or-nothing matter. Community groups, stable intimate relationships and personal **friendships**, and close extended **families** remain a part of the modern social scene. But, then, there is no denying that feelings of powerlessness, meaninglessness, loneliness, and insecurity are common experiences in modern social life. And to the extent that these feelings are found, the critics of estrangement in modernity are right.

Ironically, all of these complaints hinge on modern values. Other epochs had different complaints.

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modernization

As the United States emerged as the world's hegemonic **power** after World War II, the structural-functional modernization **paradigm** became the dominant perspective in United States **sociology** and world **social science**. Elaborated by Harvard's **Talcott Parsons**, the lead figure in American sociology, the modernization paradigm saw **societies** as a relatively stable set of inter-related parts changing along similar lines, from traditional agricultural to modern **industrial societies**, part of a global pattern. The models for this transition from developing to developed societies were the industrialized **states** of western Europe and their settler offshoots in Australia, Canada, New Zealand, and the United States, along with countries such as Japan. Poor underdeveloped traditional societies were believed to be in the earlier phases of this transition, having yet to go through the modernization process. Here, the weight of traditional cultural beliefs and practices supposedly inhibited the industrialization, **differentiation**, and specialization of occupational roles necessary for success. Parsons aimed to provide a holistic analysis of this process, discussing the host of structural requirements necessary for