Social Science

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The idea of social science is distinctively modern. Four developments set the stage for its emergence between the 17th and 19th centuries.

First, the 17th century revolution in science was pivotal. It generated the notion of science as a cumulative empirical project, and complemented this with an ethos favoring the public sharing of knowledge and the foundation of social institutions to further both inquiry and publication. Science, in this new sense, combined inductive inquiry with explicit testing of propositions and formulation of theories based on empirical evidence.

Second, the rise of the modern state (in both its domestic and colonial forms) gave social science both a topic and a client. States sought knowledge as the basis for policy. And the state itself could be an important object of science, as scholars sought to understand which policies worked and which did not, what factors made for better rule, and what organization of the state advanced human liberty. Closely related, the notion of nation as a prepolitical definition of the people who rightly belonged in a given state, helped frame "society" as bounded, integrated, and developing through history.

Third, the dramatic expansion of trade, division of labor, industry, and capital accumulation that marked the modern era provided both an impetus to study society and a basis for differentiating directly societal sources of change and self-organization from the effects of political rule. If the idea of nation suggested seeing society as a culturally unified entity with its own history, the modern idea of economy added the notion that society could develop on its own through material transformations in its productive capacity as well as through knowledge.

Fourth, Europeans in the early modern era undertook projects of exploration and eventually empire on a scale the world had never seen before. These paved the way for social science by making manifest the enormous diversity of human cultural forms and practices. Both missionaries and administrators—as well as eventually anthropologists--sought to understand kinship, family, the organization of household economies, hierarchies of power, specialization of religious responsibilities, and approaches to educating the young—as variables in a complex collection of social structures, and inquired into what function each might serve. Knowledge of human diversity helped to break the assumption that locally observable social organization needed no explanation.

From Classical Philosophy to Modern Social Science

From the renaissance through the 18th century, scholarship on political and social subjects remained largely commentary on ancient texts. Thomas Hobbes' *Leviathan* (1651) drew in important ways on classical sources, but also marked a transition to modern social science. It presented a theory of the state formulated through what Hobbes claimed were strict deductions from empirical bases. To be sure, the notion of social contract at its center was either a thought experiment or a metaphor, not a statement of factual history. But Hobbes based his arguments about the legitimacy of government on reasoning from what he took to be facts and logical necessity, not tradition or divine

inspiration. Criticism and revision could (and did) focus on both the putative facts and the reasoning without (always) going back to first principles.

John Locke made political theory depend more on an idea of society (and the benefits that language and money as well as government could bring). Among the first great works of comparative social science was Montesquieu's *Spirit of Laws* (1748). Montesquieu made a more systematic effort than Locke to account for the differences in legal and governmental systems by differences in environmental context, social organization, and culture. Adam Ferguson took this further, developing the notion of "civil society" as a counterpart to government (and indeed to the derivation of social laws from theology). In 1767, Ferguson presented the history of civil society in a series of stages, prefiguring 19th century evolutionary thought. Much less empirical, Jean-Jacques Rousseau nonetheless contributed to social science a theory of learning from experience, a strong idea of the social whole, the idea of alienation, a skepticism about progress, and an alternative construction of the social contract to that of Hobbes and Locke.

The Physiocrats in 18th century France introduced the powerful notion of system, suggesting that the accumulation of wealth was based on circulation in society, not the action of the state. At least in its economic aspect, society could therefore be largely self-regulating. This paved the way for Adam Smith's (1776) suggestion that a market ordered "as though by an invisible hand" could be a model for social self-organization with minimal government interference. But Smith importantly rejected the physiocrats' notion that all wealth derived from nature, especially agriculture, insisted that human labor was itself productive, and that the social organization of production, as through the division of labor, could make it more so.

Smith used the notions of division of labor and market to theorize the ways in which interactions among individuals could produce a self-regulating system. The behavior of each conditioned that of all. The capacity of the market to turn private greed into motivation for publicly useful work was testimony to the extent to which civil society could organize itself outside the control of the state—in noneconomic as well economic dimensions. Thomas Malthus (1798) gave the idea of system a different twist, arguing that the growth of population followed "natural" laws that would periodically result in social catastrophe. Like the proto-evolutionary analyses of Ferguson and other Scots, that of Malthus influenced Charles Darwin and the formulation of a theory of biological evolution. Indeed, in the 19th century, biological and sociological thought were not altogether distinct—as the career of Herbert Spencer reveals. Spencer contributed the phrase "survival of the fittest" to an evolutionary theory he thought equally applicable to biological and social life.

In every European country, the state had become a dramatically larger set of institutions, and had begun to penetrate much more basically into the daily lives of its citizens. This was among the pivotal occasions for the development of social science, not only because the state demanded knowledge to guide its actions but because the state's very efficacy suggested the potential for remaking society. At the same time, thinking in terms of the state, rather than simply the ruler (as in Machiavelli's *Prince*), not only stressed the extent to which the government was a complex social organization, but also stressed the extent to which a public, political order defined a whole country. This is the sense in which the state, not the government of that state, enjoyed sovereignty.

The American and French revolutions symbolized this. Alexis de Tocqueville combined the influences of the two, studying the interrelationship of an individualistic culture and an egalitarian political economy in *Democracy in America*, and of the nature of politics itself in *The Old Regime and the French Revolution*. His work formed part of the lineage of both liberal political theory and of sociology. John Stuart Mill integrated Tocqueville's insights with Jeremy Bentham's more systematic approach in his account of utilitarianism—the identification of the social good as the greatest good of the greatest number, and of social science as inquiry into how best to achieve that. But while Mill and Bentham approached society as aggregation of individuals, other social scientists stressed the importance of social structure.

The idea of structure received a dramatic articulation in Karl Marx's theory of capitalism. This centered both on a view of history as class struggle and on an analysis of modern society as grounded in an economic structure that transformed the production and accumulation of value, more or less independent of the intentions of individuals. Marx's theory was not only more social, in the sense that it emphasized the analysis of an emergent whole not the individuals who made it up, it was more systemic, in seeking to grasp how the complex patterns of that whole could be traced to certain fundamental causal influences and their interrelationships. Marx relied on a labor theory of value and agreed with Smith about the importance of social organization to making labor more productive, but following Rousseau he was much less willing to accept private property as a given. He insisted both that capitalism (like all earlier economic formations) was a system of constraints, not the achievement of freedom that Smith had extolled, and also that it was unstable, prone to crises but also transcendable. The socialism that would follow could rely much more directly on social science (than on inefficient and unfair markets) to guide production and distribution. Building on the classical political economists, thus, Marx insisted that capitalism was a historical stage, not simply an expression of timeless natural laws.

In this, Marx shared much with other evolutionary thinkers of the 19th century (and indeed, he praised Darwin warmly). In Herbert Spencer's evolutionary theory, individualism itself would be seen as an outcome of evolutionary change in social structure. Some social scientists, like the American William Graham Sumner would however develop Spencer's thought into "social Darwinism," a rationalization for unfettered competition in capitalism, since only the fittest would survive (and in unDarwinian fashion, they equated fitness with virtue).

Disciplines

The differentiation of social science into a set of distinct intellectual disciplines dates only from the 19th century. This involved first a growing distinction of the social sciences from the natural and physical sciences on the one hand and what came to be called the humanities on the other. Secondly, the social sciences separated from each other.

Increasingly economics was defined by the study of market (and related) phenomena that could in principle operate independently of direct government intervention (whether or not a specific intervention might be beneficial as economists sometimes argued). Economics included studies of the relative merits of organization through markets and through hierarchical power, of nonmarket allocation of goods, of

regulative action, and of macroeconomic factors shaped by governments on nonmarket bases. It also addressed questions of the nature of rationality and purposive action and of the relations among different factors of production. Nonetheless, market exchange was definitive; nonmarket phenomena were on the frontier between economics and other fields. Economics is distinctive for much greater use of mathematics than the other social sciences, a development made possible by the development of a concept of utility (pioneered by Jeremy Bentham and made more operational by W.S. Jevons). This allowed for the modeling of otherwise disparate market phenomena, involving seemingly incommensurable goods, in terms of units of "good" as such. The very success of mathematical modeling, however, has been the occasion for recurrent debates over the trade-offs between theoretical elegance and empirical veracity.

Political science correspondingly grew up as a field studying, and sometimes advising, modern states. It developed out of a much older tradition of advice to rulers and philosophical consideration of themes like justice. Machiavelli is often taken to mark a turning point, as the first modern political theorist, though his modernity (like that of the Italian city states in which he lived) is ambiguous. Hobbes was more decisively modern. At least as important, however, was the late 19th and early 20th century redefinition of the field in terms of the empirical study of states (and sometimes power more generally). A further "behavioral revolution" (mainly after the Second World War) refined this idea of an empirical science of politics, and the distinction from older fields like normative political theory and diplomatic history, but the discipline retains a hybrid character. Unlike economics or sociology, it is united more by a concern for certain "dependent variables"—political outcomes—than by a focus on the effects of certain sorts of independent variables (such as supply and demand, population structure, or group dynamics).

The term sociology was coined by August Comte in the 1840s, though like other social sciences sociology can claim an older ancestry. It was shaped by the growth of industrial organization, studies of population change, patterns of immigration, changes in family structure, and concern for the "social question" of how the poor would fare economically in modern societies and inequality would shape modern political systems. Never altogether distinct from economics and political science, thus, sociology nonetheless developed a focus on the dimensions of social life that were organized at least largely on bases other than market relations and governmental dictates. Significantly engaged with empirical data collection from its origins—for example in the studies of working class families by Frederic Le Play—sociology increasingly developed a distinctive body of theory addressing questions of social structure, orientations to social action, and processes of social change.

If economics, politics, and sociology constituted the core of the social sciences, this is not because they were larger or more important intellectual fields, but because they fit more squarely and completely into the social sciences, overlapping less with the natural sciences and the humanities. Most of the time, they were also more closely related to each other than to the rest of the social sciences. Anthropology, psychology, geography, history, and statistics have also been central to the growth and improvement of the social sciences. But, cultural anthropology and archaeology have always been closely linked to the humanities while physical anthropology (and certain versions of archaeology) has been more centrally involved in natural science. Social psychology has

always been among the social sciences, but the extent of emphasis on the social dimensions of human mental and emotional life in the rest of psychology has varied. In the decades after World War II, an effort to integrate psychology and social sciences in the paradigm of "behavioral sciences" flourished. More recently, much of psychology has tended away from social science and towards the natural sciences and cybernetics. Similarly, geography has always been divided between an emphasis on social and cultural dimensions and on physical dimensions (with the two partially joined in work made possible by technologies like satellite imaging). History is part of the older intellectual tradition out of which social science emerged, and most often understood as part of the humanities; at the same time, several branches of historical research have been transformed by social science and historical research remains central to social science. Not least, though last for this list, statistics grew up in significant part as a social science—for example in the pioneering social statistics of the Belgian, Adolphe Quetelet, who invented the notion of the "average man"--and the work of many social science disciplines is organized largely in terms of statistics. Statistics remains, however, a partially autonomous discipline and heavily influenced by biological and medical statistics, and models from the physical sciences.

Into the Academy

Each of the social sciences was shaped importantly by the ways in which it was institutionalized during this period, and the contrasts used to distinguish it from others. Crossing all the social sciences was a struggle over methods, or *methodenstreit*, which pitted more objectivist, universalizing sciences against more subjectivist, particularizing humanities, dividing the social sciences between the two. Economics and psychology have been the most universalizing, while politics, sociology, and anthropology have been internally divided.

National contexts also mattered. In France, for example, Emile Durkheim fought to distinguish sociology from psychology, following Comte in claiming that each science needed its own distinct subject matter and arguing that sociology should study "social facts" that were irreducible to more individual level phenomena. In the United States, economics was the more influential counterpart discipline (and remains so to this day). Sociology was initially organized as an interest area within the American Economic Association, and then split off to form the American Sociological Association in 1905. In Germany, sociology was commonly taught in faculties of law and the distinction between normative and empirical theory especially salient. But the most important founder of German sociology, Max Weber, was keenly interested in maintaining the relationship between economics and sociology, and approached both in with a comparative-historical historical method that remained a hallmark of German sociology. Great Britain was strong in economics but particularly weak in sociology.

Or again, German anthropology (and that of countries influenced especially by Germany) was more closely tied to historical ethnology, linguistics and folklore than most other national variants of the discipline. Both French and British anthropology were closely linked to exploration and colonial rule. The French emphasized cultural and psychological inquiries—including questions about whether "savages" were mentally equipped to assimilate immediately to "civilization". The British, by contrast, placed greater emphasis on problems of colonial administration and "native" political and legal

systems, partly because of the strategy of "indirect rule"; accordingly they produced a more social anthropology. In America, overseas colonies figured less but the effort to "salvage" a record of the rapidly vanishing diversity of Native American "Indians" shaped the dominance of a "four fields" approach in which physical anthropology, archaeology, linguistics, and cultural anthropology were combined (with the last heavily influenced by German ethnology).

Other social sciences were similarly shaped by the contexts in which they matured. Economics was stronger in relation to neighboring disciplines, but heavily influenced by expectations that it would deliver immediately useful advice to governments and businessmen. Though the world depicted by neoclassical economic theory is generally devoid of historical specificity and political action, from the late 19th century introduction of marginal utility theory, through the work of John Maynard Keynes and other efforts to address the great Depression, and on into the development of monetarism, economics has been closely linked to policy-making.

Political science had if anything a greater difficulty emancipating itself from political commentary and history, and in some national settings from law. Indeed, the very name of the discipline was contested—with some calling it politics, some government, and others political science. Though its origins are old, the last of these grew in popularity in the mid-20th century as many leaders in the field sought to stress the objective, especially quantitative study of political "behavior" rather than more interpretative or normative relations to or preparations for politics as such.

Quantification and Comparison

Across the social sciences the second half of the 20th century was an era of growing emphasis on quantification. This accompanied efforts to make the social sciences more scientific, understood largely in terms of an objectivistic orientation to knowledge and a belief in the accumulation of truth. There were innovations in techniques of empirical data collection, perhaps most prominently in sample surveys, but also in censuses, experimental research (especially in psychology), and secondary analysis of data produced as byproducts of market transactions, elections, and other processes. And there were new approaches to both analytical statistics and mathematical modeling. While certain multivariate methods, like regression and path analysis, form a sort of centerpiece to this process, becoming standard in the 1960s and 70s, the overall pattern is not only advancement but proliferation of different techniques, often linked to different theoretical assumptions (but also to different empirical challenges, like handling the massive data of censuses and global surveys versus the smaller populations more common studied in psychology). Network analysis and nonlinear models have grown in importance, sometimes in competition with conventional multivariate methods.

In economics, and to a much lesser extent in other social sciences, empirical quantification was complemented (or even overridden) by theoretical mathematicization. Both trends reflected the computational power made available by the increasing improvement of electronic computers. But the competition between them represented also a return of the 18th century opposition between empiricists and deductive theorizers. The distinction was never hard and fast, but significant. Econometric statistics made major advances in the mid-20th century; theory in the form of mathematical models dominated from the 1970s to early 1990s. In economics a recent trend has been for

renewed prestige to empirical inquiry, especially where this examines whether important basic assumptions are in fact valid, or perhaps operated only under restricted conditions. Behavioral economics, produced largely by economists drawing explicitly on psychological research, but also by researchers in new fields like "decision sciences", has proved especially fertile in this regard.

Quantification and mathematics introduced a greater division among social science disciplines (and within disciplines between lines of work in which quantitative methods figured more or less). It sharply reduced the connections between anthropology and the other social sciences, for example, reinforcing closer links between cultural anthropology and the humanities.

Qualitative research methods also underwent continual improvement. Among the most significant was the development of "ethnography" within anthropology and to a lesser extent sociology. This signified efforts, usually based on long-term "participant-observation" fieldwork, to document the different aspects of a way of life and how they fit together. Ethnography integrated cultural and social organizational analysis, and was typically a strongly integrative, holistic perspective. Later developments included both a growing reflexivity about the location and perspective of the ethnographer within the field site, and attention to the limits of what could be known through first-hand observation and conversation (as for example ethnography tended to explore the local thoroughly but state-level structures minimally).

The same postwar period that saw the "behavioral revolution" in political science, the rise of quantitative methods in sociology, and in economics first a growing sophistication of econometrics and then a growing interest in mathematical models (which would become dominant by the 1970s), also saw the rise of predominantly qualitative fields of international and comparative research. The most visible institutionalizations of this new emphasis on international knowledge were the "area studies" fields—African Studies, Latin American Studies, South Asian Studies, and so forth. These were organized in varying degree on notions of ancient civilizational roots, contemporary political concerns, linguistic commonalties and artifacts of history such as the way the United States divided the world into regions for military organization in World War II. The demand for such knowledge was itself stimulated by the simultaneous processes of decolonization and the intensification of the Cold War.

The area studies fields were distinctively interdisciplinary, combining not only different social science disciplines but history, literature, and other humanistic inquiries as well. Though the area studies fields flourished and produced major and influential research, they were in tension with the "core" social science disciplines. To some extent, the terms of this tension replayed the *methodenstreit.* The area studies fields were seen by many social scientists as producing particularistic knowledge while the disciplines sought universal truths. To a very large extent, mainstream economics withdrew from the area studies project. Political science and sociology were split, but by the last third of the century the non-context-specific approaches had the upper hand.

Struggle and Renewal

If the growth and spread of social science looked smooth in the 1950s and early 1960s, it suffered a shock in the late 1960s and early 1970s. Each of the themes basic at the beginning came back into dispute. The idea of an objective social science was

challenged by complaints about the hubris of those who believed knowledge was more perfect than the freedom of human beings or the complexity of culture and society allowed. There was accordingly a renewal of interest in interpretative approaches, in critical theories that sought to avoid generalizing from what currently existed, and in reflexivity, especially the ways in which the sociocultural location of the researcher shaped his or her perspective.

The close relationship of many social scientists to their states was also challenged. The most visible version of this was the implication of some social scientists in American government counterinsurgency programs, but there was also a more international wave of critique of the way anthropologists had served colonial states, of how political scientists were embedded in domestic power structures, and so forth. But the debate was vigorous, for at the same time certain links of social scientists to states were challenged, there were also calls for social science to me more "relevant," less abstractly academic and more directly engaged in efforts to solve social problems. In some cases this meant that social scientists allied themselves more with social movements and less with states. In economic affairs too, on the one hand more social scientists were engaged in market research and other work done specifically on behalf of for-profit clients. On the other hand, there was a renewal of interest in Marxism and more generally in social science that challenged existing political and economic arrangements.

Not least of all, the independence struggles of former European colonies occasioned a rethinking of the relationships between power and culture. This included a critique of the ways in which Europeans had viewed the cultures of non-Western societies and constructed evolutionary schemes that implied that there was only one form of advancement—and that it called for non-Western societies to become more like the dominant countries of the West. Even the idea of modernity came under attack, partly because unilinear evolutionary ideas had been incorporated into the notion of modernization. In the 1960s and 70s, this critique came often in the framework of Marxism or other alternative modernist programs. Soon, though, postmodern thought (rooted more in the humanities) criticized the mainstream social sciences as embodiments of a modernity that was built around notions of unidirectional progress, reductions of diversity, and the imposition of power even through the forms in which knowledge was produced. False universalisms were challenged by social scientists writing from the perspectives not of the ivory tower or what Karl Mannheim had called the "free-floating intelligentsia" but of different social locations: women, people of color, postcolonial subjects; or of engagement in one or another movement or struggle.

This struggle was played out against the background of more material transformations in the social sciences. The postwar era was marked by dramatic growth in higher education generally and in the social sciences in particular. This came sooner and was more pronounced in the United States, and that accelerated a second trend which was a growing prominence of American social science on the global scene. Where the roots of social science lay mostly in Europe, at least the largest scale of new development came from the US. Without comparable resources, there was nonetheless also a growth of social science outside the Euro-American countries. India was perhaps the single most influential setting for the growth of non-Western social science, and by the late 20th century fields like Subaltern Studies had become influential throughout the world. International social science associations were founded (often under the auspices of

UNESCO) to complement the national societies. International social science was also significantly influenced by the major ideological and political economic struggles of the era, from the Cold War and decolonization through the non-aligned and non-proliferation movements to the intensification of capitalist globalization and opposition to it—and the American model for it--in the 1990s and early 21st century.

Even while the social sciences were most engaged in political disputes in the 1960s and 70s, the seeds were being laid for another material change that would change their engagement with practical affairs and political policy-making. This was the growth of professional schools, and with them new fields of social science organized outside the traditional disciplines, and usually with a more "applied" orientation. Business schools, for example, have departments of finance that have largely supplanted one of the core fields of economics. Sociology and psychology figure prominently in both organizational behavior and marketing programs, but each of these fields now offers its own PhD programs, making for a greater distance from the "parent" disciplines. Schools of education, public health, medicine, nursing, engineering and communications have also both employed social scientists in large numbers and in varying degree produced parallel fields of social science focused on their specific professional domains.

Conclusion

The social sciences have expanded enormously since their early modern origins. They have become impressively international, though in all countries they are still (with the partial exception of anthropology) disproportionately domestic in focus. They have been at once part of the spread of a dominant version of Western culture, and one of the resources for developing critical analyses of that culture—as indeed of other dominant cultural and institutional formations.

The social sciences have also become a great deal more methodologically sophisticated, and now use a variety of both quantitative and qualitative techniques to advance knowledge. Theory too has advanced from several early contending grand systems to a range of middle range theories and several theoretical frameworks with different strengths and weaknesses and potential for mutual engagement. Most importantly, substantive knowledge of different problems and empirical topics has grown exponentially. From inequality and organizational processes through market structures, voting procedures and behavior, decision-making, to kinship, family dynamics, and migration social scientists have created numerous fields of cumulative research and scholarship. Neither the creation nor the reform of modern health care or welfare systems, business organizations or trade unions, humanitarian assistance or peacekeeping operations, mass media or movements for cultural survival happens without the involvement of social scientists or intellectual tools they have created.

For further reading:

There are multiple and useful entries on each of the social sciences, and references to other sources, in the *International Encyclopedia of Social and Behavioral Sciences*. I have not attempted to list the many sources on specific disciplines here.

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