Chapter 6
Disciplinary territories
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Chapter presentation

It is usually said that it was in nineteenth-century Europe that social science emerged as a specialized activity distinct from religion and politics, and developed into the disciplines we recognize today. These disciplines, in the social as in the natural sciences, can be regarded as social structures for teaching and research, represented by professional associations and departments within universities. But they also represent cognitive frameworks determining legitimate sets of problems for scientific research and the methods, concepts and traditions used to solve them. Disciplines are thus a constraint for professors, scientists and students as well as a guide for learning and research. They have been separated from one another and have more or less rigid borders and gatekeepers. Disciplines are to the scientific sphere what nation-states are to the global political sphere.

This means that knowledge divides in the social sciences are not only divides between national traditions and research systems, they also take the form of divisions between and within disciplines, and this leads to the formation of specialisms and subdisciplines. And there are divisions between the social sciences and other forms of disciplinary knowledge such as the natural sciences and the humanities.

For some observers, recent trends show that social science will soon enter a post-disciplinary age. Depending on the authors, this change may be a trigger for a new integration of the social sciences and the hard sciences, or may mean that knowledge will be oriented increasingly towards local, context-dependent problem-solving, integrated into ‘epistemic communities’ with actors originating from different social activities outside science. This report does not take sides in this debate. This chapter deals solely with some of the contemporary social science issues raised by current disciplinary divides.

Mapping the disciplines and describing the current ecology of social scientific knowledge is not sufficient to deal with these issues. Disciplines are not naturally differentiated once and for all: new ones may appear while others disappear. In order to understand disciplinary divides, the dynamics of the disciplines must be taken into account. The power and exchange relations between disciplines are as complex as the international circulation of science described in the previous chapters (see especially Chapter 4). Disciplinary divides may well be sites of conflict, but they have also offered opportunities for connection. Are these complex and contradictory processes moving us towards a more unified or a more differentiated social science? What are the opportunities and the risks of the unification or the fragmentation of social science? These are the questions that disciplinary divides and their history are now raising (Section 6.1).

Wherever divides exist between disciplines, bridges are built to cross at least some of them. These research-crossing disciplines and specialties occur not only within the social sciences, but also between them and other sciences and forms of knowledge. They are currently driven by external forces, as new policy agendas, both local and global, enhance new research agendas. What are the intellectual or institutional strengths and limits of this trend for going beyond disciplinary divides and pushing the boundaries of social science? Is the social science perimeter about to change? Do interdisciplinary, cross-disciplinary, multidisciplinary and transdisciplinary networks impose themselves on top of existing disciplines, or between or below them? Will disciplines last as the dominant way of organizing social-scientific knowledge? These questions remain open, but they need to be dealt with. Contributors to this Report find their clues in the history of specific disciplines and from current practices in social science. Within this general picture, contemporary climate change research and psychology are dealt with more extensively. Both are close to experimental research and are situated at the crossroads of the social and natural sciences. Other choices could have been made, and the questions raised here will need to be pursued in the future (Section 6.2).

Mapping the disciplinary territories requires attention to local contexts. Regional variations are very important, and the same discipline is considered and practised differently in various locations. Two authors accepted the challenge of capturing the trends of social sciences in their regions, North America and India, to help us better understand the dynamics of disciplines (Section 6.3).

The history of science shows that radical innovations and new disciplines often stem from connections between previously existing disciplines. As long as they are laboured on and worked through, disciplinary divides might be fruitful under certain conditions. In this chapter we examine recent social science trends which challenge existing disciplines and displace their boundaries to illustrate this point. Some of these trends are disciplinary, while others
are interdisciplinary or transdisciplinary. All of them challenge current disciplinary divides.

All these innovations are simultaneously intellectual, technical and institutional. Using recent encyclopaedias of the social sciences, eight new trends have been selected to reflect the variety of social science innovation and to give a taste of a few ongoing debates among social scientists. Some of these trends are more or less recent: their newness itself depends on the position and situation of the researchers in the international and disciplinary distribution of knowledge. But our selection does not pretend to be exhaustive. Other fields of inquiry have been developing quickly in the past two decades. Among the more prominent are gender, health, security, migration and urban studies. Yet the trends we have picked play an important role in today’s social sciences and bring together specialists from various social science disciplines. The use of objective tools to assess innovation in social science is a research task that should be developed in the future.

6.1 Disciplines and their divides

Introduction

We live in an age in which disciplines are important institutions of knowledge production in the social sciences. But can we account for the evolution in the number and size of the social science disciplines? What are the mechanisms that explain how disciplines behave and change? Can we predict how disciplines will develop in future, and whether they will remain the main social organizations for social scientists’ teaching and research?

All these questions usually bring a variety of answers. This section only deals with a few of them. Its main goal is to better understand the present and future of the divides between and within the social sciences.

The first group of papers focuses on the dynamics of these divides. Two general approaches are contrasted, historical and formal.

The history of the social sciences over the past 200 years tends to show that the disciplines are becoming destructured more or less rapidly. This evolution supposedly goes hand in hand with ‘plural regionalization’ and a decline in the neutrality and universality of social-scientific knowledge. In this scenario, the age of disciplines may not yet have reached its end, but other ways of organizing knowledge are set to emerge on a local level, and sometimes a regional and supranational level. New forms of cooperation between scientists from various disciplines and other types of social actors might be produced in these new settings (Wagner).

But the formal approach to the internal logic of knowledge changes does not necessarily lead to the same diagnosis of the evolution of the social science disciplines. Some of these theories of science have even argued that divides and splits are natural and necessary mechanisms in the evolution of any form of knowledge. According to these analytical frameworks, there will always be disciplinary and subdisciplinary divides in the social sciences even if there are changes in their location and their rigidity. Such divides are essential for the renewal of knowledge and for the creativity of scientists.

The second group of papers provides some examples of contemporary relations between social science disciplines. In principle each discipline’s status is the same, and we could maintain that social science disciplines are intellectually equal. But in reality, disciplines do not have the same weight in the overall visible production of knowledge (Jonkers). Some observers of science have claimed that their relations can more often be analysed as relations of power and competition than as relations of cooperation and exchange. In past decades, the relationship between sociology and economics has been an interesting case of the complex interactions that occur at the divides between the social sciences. Sociology, like many social sciences, is more embedded in national contexts than is economics. Today it is also more oriented towards universities and academic circles and is less related to public policy-making than economics, and provides a less legitimate discourse in most political and international institutions than economics does. Nevertheless, and despite their important differences and their often conflicting interests, sociology and economics have slowly multiplied their intellectual and methodological relationships in recent years (Lebaron). The socially accepted hierarchies between the social science disciplines are not perpetual, and nor is the rigidity of their borders and divides. Nonetheless, interdisciplinarity does
not take place with scientists from various disciplines on an equal footing.

Despite the increasing specialization of social-scientific knowledge, the perspective of an integrated social science is a recurrent one which has raised numerous epistemological debates. The arguments for integration often hide the imperialism of some disciplines, whether of their paradigms or their methods. Here one of the most acute observers of the evolution of the social sciences, Jon Elster, gives his view on the current state of the debate on the potential unification of the social sciences. He also develops an original take on the question of whether there is progress and cumulativeness in social-scientific knowledge. His answer may not be as optimistic as that of most others in the heyday of the development of social sciences as disciplines, but it is certainly not pessimistic either.

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**Rethinking the history of the social sciences and humanities**

**Peter Wagner**

The importance of history is widely recognized in many fields of social science knowledge production. As other histories, history of social science cannot be conceived either in terms of steady progress, or as a period of decline from a Golden Age. An alternative view needs to pay more attention to a detailed reconstruction of the history of scholarship in the social sciences and humanities. This paper also suggests concepts for interpreting the recent past of these disciplines.

The social sciences and humanities are disciplines in which the present cannot simply be regarded as superseding and erasing the past. The importance of an interest in history is widely recognized in these fields of knowledge production. Nevertheless, it has been notoriously difficult to escape the dichotomy of two standard ways of conceiving this history.

An evolutionary perspective on the steady, but perhaps slow, progress of knowledge undoubtedly remains widespread, despite recent strong and compelling criticism of such a view in the sociology of scientific knowledge and in the historiography of the humanities. Drawing playfully on Isaac Newton, Robert Merton (1993) emphasized that sociologists in the present always stand on the shoulders of the giants of the past. He meant to acknowledge a debt, but also to suggest that we contemporaries see farther than our predecessors. Since it is difficult to believe that what we do today could be less insightful or nuanced than the knowledge we possessed previously, we are inclined to believe that we do see farther. So we conceive those giants of the past as being both large and immobile, like the sculptures of US presidents on Mount Rushmore. However, it is more appropriate to assume that those giants are capable of sudden movements, and that many a dwarf has already fallen, and will still fall, from their shoulders.

The alternative view regards the recent history of the social sciences and humanities as a period of decline from an earlier Golden Age. This age was supposedly one in which scholarly autonomy prevailed and research agendas were determined by nothing but the insights of the leading scholars in each field. Conversely today, numerous ‘outside’ interests intervene in those agendas, and deteriorating working conditions disturb the calm pursuit of the truth. Most recently, the first chapter of the Metris Report on *Emerging Trends in Socio-Economic Sciences and Humanities in Europe* (European Commission, 2009) paints just such a picture. But while the Report justifiably describes certain ongoing trends in institutional

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1. This article is an abbreviated version of a presentation given at the conference ‘Social sciences and humanities: emerging trends and future prospects. Europe in global context’, SCAS, Uppsala, 24–25 April 2009; for more information see [http://www.globalsocialscience.org](http://www.globalsocialscience.org)
arrangements, funding modes, evaluative practices and research careers, it fails to show when exactly the era of ‘autonomy of the scientific field’ existed, in contrast to which this picture of the present is painted.

Here, we want to suggest that both of these perspectives are untenable. Furthermore, an alternative view needs to pay more attention to the details when the history of scholarship in the social sciences and humanities is reconstructed. The remainder of the paper briefly proposes some concepts for such a detailed investigation, and then applies them in the form of hypotheses for interpreting the recent past.

The first group of these concepts encompasses the disciplines, institutions, associations, journals, funding mechanisms and forms of evaluation that guide research orientation and have a grip on scholarship. They both enable and constrain research activity. They give research practices structure, so we could apply the term ‘structuredness’ to the shape and size of the influence of these phenomena on practice.

Next, such structures have dimensions in space, so we use the term ‘spatiality’ for the global distribution of knowledge forms and the relations between them.

Finally, scientific knowledge production has often been defined by the distance between the knowledge seeker and the object of knowledge. This is a distance that, in the ‘spectator theory of knowledge’ (criticized by John Dewey among others), was seen as the very precondition for truth. On closer inspection, however, knowledge production in the social sciences and humanities was often marked by a struggle for the appropriate relation between ‘distance and involvement’ (Elias, 2007).

We shall briefly try to put these concepts to use by considering recent transformations in the conditions of knowledge production.

Over the thirty years since 1980, we have witnessed a move from a highly structured mode of knowledge production, centred on nation-states and associated national fields of scholarly work, towards rapid and sometimes radical destructuring. The social sciences and humanities provided the intellectual underpinning for the earlier structures; this is why they are centrally at stake in the current destructuring.

The modern polity is built on broad ideas of individual freedom and popular sovereignty, or on individual and collective self-determination, to use less historical terms. But once this double commitment reigned in the realm of political thought – roughly from the late eighteenth century onwards – it was increasingly regarded as risky. It appeared to provide a rather empty shell that could not sustain a polity alone. The idea of collective self-determination introduced dangerous arbitrariness, as it gave no indication of the membership of the self-determining collectivity. On the other hand, the notion of individual freedom appeared to reduce the social bonds that prevailed in the ‘old regime’ or in ‘traditional society’, depending on the viewpoint. The humanities addressed the first problem by investigating culture, language and interpretation, suggesting that an answer to the ‘national question’ arose from such interrogations. The social sciences addressed the second problem by observing and conceptualizing new forms of social bonds related to interest, status and class, suggesting that an answer to the ‘social question’ arose from the antagonisms or solidarities that such bonds created throughout society.

In Europe, at least, these two responses strongly shaped polity formation for better or worse. The European nation-state was the institutional solidification of these answers, and the national university systems were the structures in which the underlying knowledge forms could develop.

Much of the spatial history of the social sciences and humanities can be captured by dividing it into three epochs: one of their European origins; one of a first globalization with the emergence of US hegemony, particularly for the social sciences but less so for the humanities; and a third epoch of more truly plural regionalization which is currently at its beginning.

Each of these assertions can be and has been contested. But if they are phrased without conceptual excess, there can be little doubt about their adequacy. The claim for the European origins of these disciplines is sometimes seen as evidence of a narrow Eurocentric view. Indeed, nobody can deny the existence of systematic social knowledge before and in parallel with the rise of the European social sciences and humanities. But as a combined result of colonization and the radical way in which problems of human social life were expressed in European social thought, many conceptual claims of European origin have become inescapable worldwide (Chakrabarty, 2000).

In turn, the claim of subsequent US hegemony is sometimes regarded as the nostalgic and ideological view of Europeans who cannot accept their loss of centrality. Again, however, a combination of politico-economic power and intellectual perspective has been at work since the middle of the
twentieth century. The hegemony of this combination is difficult to overlook, and its emergence clearly took place in the USA. In their various guises, individualism, rationalism and quantitative methodology have found very fertile ground in North America and have spread from there, precisely because the deconstructing of knowledge contexts elsewhere seems to make every alternative less viable (Wagner, 2008, ch. 11).

Finally, we may doubt the existence of true pluralization in the face of the persistent and crushing dominance of US universities in all global rankings and of US-based scholars in global evaluation indicators such as citation indexes. Pointing to biases in these measurements is valid and necessary, but the imbalance would not disappear entirely even were other measures to hand. US universities are the basis on which scholars all over the world work, but they often do work that cannot be regarded as falling under US hegemony. More recently, there have been steps towards actively rebuilding ‘research areas’, to use the current European term. The aim is not merely to ‘catch up’ with the USA, but also to sustain innovative intellectual work on European terms. These two observations may not seem to suffice for contesting US hegemony. After all, the global attractiveness of leading US universities is nothing but a sign of hegemony, while the building of other regional research settings is, at best, in its beginnings and has as yet borne little fruit. Nevertheless, we dare say that some erosion of US intellectual and institutional hegemony is visible. Whether this process will continue is more difficult to predict. It will ultimately depend on the capacity of scholars all over the world, including in the USA, to pluralize their intellectual endeavour beyond the approaches mentioned above. Furthermore, research policy-makers will have to design viable tools for building research areas that provide effective communication structures without setting boundaries for those on the outside. The creation of the European Research Council may be the foremost example of the design of such a tool.

The social sciences and humanities have always been diverse in their views on the required distance from their ‘objects’. This has led to highly abstract reasoning and claims to universal knowledge, or alternatively, to claims of the need for hermeneutic involvement, leading in turn to more contextual and particularistic knowledge. Positions here are partially characteristic of disciplines, but there is often diversity within them. Economics has often been the most ‘distance-minded’ of the social sciences, but has also experienced the most clear-cut emergence and persistence of explicit heterodoxy. In turn, the humanities are often seen as the most context-bound and ‘interpretation-minded’. However, they too have experienced their own universalizing movements. There have been times when the claim that only distant knowledge is good and certain knowledge has appeared convincing. But these periods have mostly been short and counter-claims have been quick to re-emerge in various guises (Santos, 2007). By now, the persistence of this issue seems to be widely acknowledged. The problem, though, is that ‘science’ seems to be easier to define by distance-taking than by anything else, and alternative formulations are either too problematic or too subtle to become widely influential.

If the general contours of the above ultra-brief history of the social sciences and humanities are acceptable, then some conclusions for research policy follow. First, it should not merely accept the recent deconstructing and assume that novel structures will just emerge as the aggregate of numerous individual decisions, or through the imposition of some ill-conceived ‘best practice’ or measure of ‘excellence’. Rather, research policy should involve conscious efforts to restructure the research landscape in these fields of knowledge production. Given deconstructing, the role of the nation-state as both the funder and ‘problem provider’ of the humanities and social sciences has declined. But the key problems of human social life have not disappeared. They have been transformed, and need to be reconceptualized and researched in their transformed state. Restructuring along regional lines, supported by a plurality of national, local and private funding agencies, seems to be the most promising bet for the near future. The regional perspective offers opportunities to operate effectively in the competitive global knowledge community, and to keep open the innovation-rich dialogue on the adequacy of more distant or more involved forms of social and human knowledge.

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The share of major social science disciplines in bibliometric databases

Koen Jonkers

Analysts and commentators make general statements about the decline in disciplines like sociology or anthropology and the growth in economics and psychology, but these assessments tend not to rely on international quantitative data. This paper discusses the weight of the disciplinary fields in the Thomson Reuters Social Sciences Citation Index (SSCI), measured in terms of publications, and stresses some of the limitations inherent to this sort of analysis.

The limited availability of statistical data on social science researchers, and the different definitions of social science disciplines used in different countries (Kahn, in Annex 1 to this Report), make it difficult to embark on an international study of the relative distribution of material and human resources in specific social science fields. But it is interesting to have some idea of the relative production of the different social science disciplines and how it has changed over time.

Such a study would face all the limitations inherent in the analysis of social science bibliographical databases such as Thomson Reuters Social Sciences Citation Index (SSCI). These include restricted coverage, geographical and linguistic bias, the variation in publication practices between fields, and their omission of material published in books (Archambault, in this Report). Consequently, this paper only discusses the weight of the disciplinary fields in the SSCI database, rather than the weight of the fields in the global science system or within specific research systems. The weight of the different fields is measured in terms of publications rather than in terms of the number of social scientists. The fact that some fields have a large number of practitioners who apply their knowledge in government or elsewhere and do not actively publish journal articles is not addressed in this analysis either.

Between 1980 and 2007, the annual number of articles contained in the SSCI grew from around 55,000 to almost 93,000.¹ This growth indicates that the database is dynamic – new journals have been added over time, while others have been removed (Thomson Reuters, 2009). The weight of each field is measured by dividing the total number of publications by the total number of publications in the SSCI database.

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¹ Throughout this paper, the publications of the forty-seven countries with highest gross domestic products are considered as a proxy for the world total. This is because of the technical limitations of the SSCI’s online version.

Figure 6.1 — Weight of the disciplines in SSCI output

Source: Thomson Reuters Social Science Citation Index online version (accessed 22 September 2009).
The share of major social science disciplines in bibliometric databases

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Law and social science

The current integration of law and social science involves the renewal of a long-standing idea. Affinities between law and social theory are old – some even consider law to be the ‘oldest social science’ – and so are attempts at integrating them. The idea of a connection between law and a science of society can be found in the works of Montesquieu and Bentham. In the context of the social movements of the 1960s, research programmes in law and social science were developed in US and UK universities. Their prestige faded in the 1980s, but they have found new popularity in recent years. Today, the integration of law and social science is more internationally widespread, and is attempted by social scientists from many disciplines. History of law and comparative law are more open to other social sciences such as anthropology and sociology. Legal activity is studied by political theorists and by political scientists working on policy-making, state formation or social movements. Legal professions and the process of law-making are more often studied by sociologists. Scholars from the humanities are interested in the relationships between law and literature, or law and drama, at various moments of history. Law and economics is another distinct approach for legal studies: it includes the use of economics to explain the effects of laws, to assess which legal rules are efficient, and to predict which ones should be promulgated. Psychologists contribute to the practice of legal judgment. Courts and dispute resolution are other topics in which disciplinary crossings between law and social science are common. Recent scholarship focuses on articulating a plurality of legal orders rooted in the community, the region and the state, and on the complexity produced by globalization or postcoloniality.

This new cycle of integration between law and social science has been important in the USA under the label ‘Law and society,’ and has now spread to Europe, Latin America, India and Japan. Since the 1990s, institutions such as the World Bank have been interested in the relations between law and development. This approach analyses law as an instrument to promote economic development, democracy and human rights. All these trends tend to push law to the centre of policy-making and social science.
Communication studies

Communication studies is a relatively new field of research. It has some of the traits of a cross-disciplinary and interdisciplinary field, yet it has recently acquired many of the institutional and professional trappings of an academic discipline, including increasing offers of college courses resulting in a higher number of hired scholars, departments at universities, and new professional associations and conferences. ‘Communication’ is now identified as a separate category in social science bibliographical databases such as Thomson Reuters SSCI, and the number of papers published under this category shows an upward trend. Even this may not reflect the even greater number of textbooks published annually in this field.

Despite this rapid change, communication studies remains radically heterogeneous as an intellectual field (Craig, 2003). Defined as the ‘study of the verbal and non-verbal exchange of ideas and information’, it covers a broad range of topics such as ‘communication theory, practice and policy, media studies (journalism, broadcasting, advertising and so on), mass communication, public opinion, speech, business and technical writing as well as public relations’; this is the definition of the Institute for Scientific Information (ISI) subject category ‘Communication’. From these topics, Rogers (1999) distinguishes two major and coexisting research interests: mass communication (mainly investigated by political scientists) and interpersonal communication (investigated by sociologists).

Communication studies is not only diverse in research interests. Craig (1999) maintains that it has multidisciplinary roots, as this field has historically been created by scholars from a wide variety of disciplines such as political science, sociology, psychology and mathematics. He distinguishes different traditions in current research, each of them reflecting a different accepted meaning of communication. They include rhetoric (the study of the practical art of discourse), semiotics (the study of intersubjective mediation by signs), phenomenology, cybernetics (the study of the circulation of information in communication systems), the sociopsychological tradition (the study of the psychological aspects of communication), the sociocultural tradition (the study of the transmission of sociocultural patterns) and the critical tradition (the study of the principles of communicative rationality).

Some scholars paradoxically note the lack of communication between these different schools of thought (Craig, 1999), and call for a productive dialogue to enhance the scientific consistency and fruitfulness of the discipline. This lack of communication can be verified empirically in terms of the lack of cross-citation between the set of journals identified as dealing with communication (Leydesdorff and Probst, 2009). The rapid institutionalization of communication owes much to the economic importance of communication skills and occupations, but the scientific construction of the discipline is still in progress.
Economics and sociology in the context of globalization

Frédéric Lebaron

Heightened interest in the cultural, institutional and historical dimensions of globalization could mean that asymmetries between economics and sociology could gradually disappear, giving rise to more balanced exchanges. In recent years, scientific developments within each disciplinary field indicate an increase in the number of intellectual links between them.

Two institutional contexts

The relations between economics and sociology are far from equal and symmetrical, especially in the present era of globalization. The primary difference is cultural and is related to the norms of evaluation.

Economics is characterized by its generalized use of English in scientific communication. Sociology, on the other hand, is largely embedded in national contexts and a significant part of its scientific production is published in national languages. The importance of English is evident in the various professional sectors that are linked to economics, such as banking and finance. Sociology has close affinities with sectors that are established in historically specific national institutions, such as those relating to social policy, education and health.

Economics is often described as an avant-garde discipline, especially in its scientific evaluation and management. It has contributed to the creation of standards for the classification of scientific content and of journals, based on ‘scientometrics’. The ‘productivity’ of researchers, laboratories and institutions is evaluated quantitatively. A system of scientific awards has been set up, of which the Prize in Economic Sciences in Memory of Alfred Nobel is the most prestigious. These awards help to uphold internal hierarchies within the research field. The adoption of a normative system by most countries has contributed to homogenizing the discipline (Coats, 1997).

Sociology, on the other hand, still tends to be shaped by national and cultural forces (Berthelot, 2000). Nonetheless, Anglo-American sociology in particular has taken on a number of criteria and norms that can be found in economics and in the natural sciences, and similar forms of evaluation also influence the humanities. This became clear in France during the debates on journal classification in 2009. The adoption of these norms in the humanities and the social sciences was interpreted as the transposition of criteria that already exist in economics.

Two social ‘subsystems’

A second aspect of the current relationship between economics and sociology relates to their contrasting configurations as social ‘subsystems’ – or fields, as Bourdieu (1988) would call them. Both economics and sociology are considered to be scientific disciplines. However, they diverge in their approaches to and relations with social and institutional structures, including their relations to non-academic sectors, their insertion in institutional social networks, and their contribution to public policy debates and practices.

Market mechanisms play a stronger role in economics than for the social sciences, especially after the implementation of institutional reforms which have created new evaluation processes affecting the careers and incomes of individuals. This is particularly visible in France with the ‘Toulouse School of Economics’ and the ‘Paris School of Economics’, two higher education and research institutions which are experimenting with new incentives and income models, each based on economic theory.

The key social differences between economics and sociology are related to the fact that they imply participation in extremely different networks of social actors, and in different sectors of public action. For a long time, economics has had privileged contacts with public policy actors and institutions (Coats, 1997). This is particularly visible at the national level in statistical institutes, finance ministries and central banks. The high concentration of economists within international and regional
organizations’ has reinforced this presence at the national level. Additionally, many participants in local government have a background in economics. In other words, the non-academic facet of economics tends to overshadow the academic one.

Economics contributes directly to the existence of ‘epistemic communities’, professional or social groups that share a set of beliefs and cultural aspirations. Their members favour economic reform in various spaces, from central banks and international organizations to national or more localized circles. These often involve associations and lobbies devoted to ‘structural reform’, meaning liberalization and the implementation of market mechanisms. By contrast, sociology is still mainly an academic discipline, related to specific national cultural, intellectual or political contexts. Sociology is also often associated, especially in Western Europe and the Nordic countries, with the support and promotion of specific social institutions, leading to the creation of new opportunities for sociology students. Social workers, for instance, often have backgrounds in sociology.

Changing intellectual relationships
Emerging subfields such as economic sociology, socioeconomics and international political economy have contributed to the formation of a large scientific space at the crossroads of these two disciplines. ‘(Neo-)institutionalism’ can refer to the extension of economics into the relationships between markets and organizations. For many neo-institutionalists, economic rationality remains a central assumption. However, it does not necessarily imply a complete denial of the constraining institutional conditions of economic action, already emphasized by sociologists including Emile Durkheim (Campbell and Pedersen, 2001). These exchanges can also, especially in political science, refer to a ‘political economy’ which places the emphasis on power relations and the institutional condition of economic activity, and in particular, on present-day capitalism’s shifting patterns.

The recent development of ‘economic sociology’, grounded on broad social and intellectual dynamics within the field of sociology, is also related to the re-emergence of questions that have been imported from economics and are studied from an empirical sociological viewpoint (Swedberg, 2003). The pursuit of sound empirical foundations to explain economic behaviour has also led to the re-evaluation of classical and recent sociological analyses on the subject. Experimental economics research tends to show that restrictive hypotheses on rationality should provide greater space for more integrative approaches.

The interdisciplinary success of the notion of ‘social capital’ has revived debate in such domains as growth theory, institutional change and international comparisons. Its importance in international organizations such as the World Bank and the OECD has helped to legitimize cross-fertilization between different disciplinary traditions, especially in sociology, economics and political science (Svendsen and Svendsen, 2009).

The use of common statistical methodologies has also partially loosened the boundaries between economics and sociology. A newfound interest in such statistical traditions as data analysis (especially correspondence analysis) has contributed to the development of joint methodological and empirical issues that integrate the multifaceted character of social and economic life. This trend also challenges the domination of abstract statistical modelling in favour of a more empirically based, descriptive and inductive approach (Le Roux and Rouanet, 2004).

Will these changing intellectual relations produce institutional or political outcomes? One important issue could have to do with the current discussions on the measurement of well-being and the quest for better indicators that do not solely rely on dominant economic indicators such as gross domestic product (GDP) (Gadrey and Jany-Catrice, 2007). While it is dominated by economists, the ‘Stiglitz Commission’ appointed by the French Government highlights the need for plural as well as multidisciplinary approaches to socio-economic well-being. We can hope that the new intellectual conditions described above will lead to the renewal of various public policy issues.

1. International Monetary Fund, World Bank, Organisation for Economic Co-operation and Development, World Trade Organization, European Commission, European Central Bank and so on.

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I want to start by saying that the social sciences are cumulative, in the sense of acquiring more and more mechanisms. Each new mechanism is added to the toolbox or repertoire of the social scientist. This progress is irreversible, since mechanisms identified by Aristotle, Montaigne and Tocqueville are still with us today. I can now begin to answer the question in the title. My answer is that there is only one social science, but that it is not unified.

When I accepted the invitation to give the talk on which this paper is based, in the autumn of 2007, I did not expect that the social sciences, notably economics, were about to be forced into a deep self-examination triggered by a world financial crisis. It seems as if the Hollywood slogan about the prospects of a newly released movie, ‘Nobody knows anything’, was suddenly applied to basic issues of economics and finance. The status of macroeconomics as a science now seems less compelling than before, to put it mildly. As for microeconomics, its status as a science has become increasingly fragile over the thirty years or so since 1980. The other social sciences, notably sociology, had less to lose, as their reputation was not that high in the first place.

In my understanding, the goal of social science is to uncover proximate causes of behaviour. According to this definition, the historical sciences are part of the social sciences, since they also are concerned with the causes of behaviour. Although we might try to draw a distinction between historians as consumers of mechanisms and social scientists as producers of mechanisms, this attempt would be quite misleading. Tocqueville’s study of the ancien régime and Paul Veyne’s study of civic giving – evergetism – in classical antiquity both contain more fertile mechanisms than almost any work in social science I can think of (Elster, 1979, 1993). Conversely, most economists, sociologists and political scientists are tool-users rather than tool-makers.

By proximate causes, I mean mental phenomena such as beliefs, desires, perceptions and emotions. As this shows, I am firmly committed to the principle of methodological individualism. All social phenomena should be and in principle can be explained by independent variables at the level of the individual. In practice, individual-level explanations may be intractable and may require data that do not exist. My point is that the use of aggregates as the unit of analysis is always a second-best option, and that there is never any reason to choose it for its own sake.

Before I try to answer the question in my title, I need to explain the ‘science’ part of ‘social science’. The aim of science is to offer verified – or not yet falsified – explanations of observed phenomena. This is why some alleged social sciences do not count as science. Large chunks of anthropology, for instance, are closer to literary interpretation than to causal analysis. In addition, functional explanations of social phenomena in terms of their consequences rather than their causes do not count as science. An example is the explanation of vendettas as a ‘device’ for keeping a population within sustainable limits. Maybe vendettas do have that effect, but this cannot be cited as an explanation for them unless we also demonstrate the existence of some kind of homeostatic feedback loop. To my knowledge, nobody has even tried to do that. In a broad perspective, the work of Foucault and Bourdieu has been especially important in licensing claims of this sort (Elster, 1983). As I know from my own exposure to current French social science, their influence is persistent.

I also stipulate that science is cumulative, a claim that can be taken in one of three senses. First, scientists explain more and more facts over time. Better telescopes permit the exploration of deeper parts of space. Second, new scientific theories build on previous ones, generalize their results and, when necessary, explain their failures. The relations between Newton and Einstein, or between Condorcet and Kenneth Arrow, illustrate this idea. In this sense, cumulativity also implies irreversibility. There are no neo-Newtonians in physics, in the way there are neo-Marxists, post-Keynesians or neo-Austrians in economics. These are marginal sects. Yet the current revival of
Keynes in mainstream economics shows that even here, in the allegedly most scientific part of the social sciences, cumulativity and irreversibility are lacking.

I do not believe there is cumulative theory-building in the social sciences, since I do not think there are any successful theories in the social sciences. By a theory, I mean a set of interconnected universal propositions from which, given the initial conditions, unique predictions can be derived. Although the social sciences do contain would-be theories in this sense, none of them are successful in the sense of their predictions being routinely verified to a reasonable degree of precision. The main candidate for a social science theory is rational choice theory, including game theory. In contemporary social science, it is the dominant paradigm in economics and to a lesser degree in political science. I shall have more to say about rational choice theory later. For now, let me only note that the field of sociology, which has a proud tradition of theory-building, seems to have lost its self-confidence. Unlike rational choice theory, network theory and agent-based modelling do not pretend to yield strong predictions across large varieties of behaviour.

Let me now state the third sense in which the social sciences can be cumulative. This relies on the idea that the basic units of social science are mechanisms rather than theories. By mechanisms, I mean frequently occurring and easily recognizable causal patterns that are triggered under generally unknown conditions or with indeterminate consequences. Since this bare statement may be close to unintelligible, let me offer two examples inspired by Tocqueville’s writings.

If a king offers tax exemptions to the nobility but not to the bourgeoisie, the latter might react with either envy towards their rivals or anger towards the king. Even if we cannot predict which of these two reactions will occur, whichever of them does occur can be explained by the king’s behaviour.

If a king enacts repressive measures, his action can make his subjects less likely to rebel, because the measures heighten their fear, but also more likely to rebel, because the measures increase their hatred. Generally, the net effect is unpredictable, but if in a given case we observe that repression causes rebellion, we can conclude that the second effect dominated the first.

I can now begin to answer the question in the title. In his massive treatise *Foundations of Social Theory* (1990), James Coleman argued that rational choice theory could be a unified and unifying theory of all of social science. Yet in many well-documented cases, agents fail to live up to the prescriptions and predictions of rational choice theory. They behave irrationally. In a general way, this is not exactly news. The Allais paradox and the Ellsberg paradox, stated in 1953 and 1961 respectively, showed that most people violate a standard version of rational choice theory. For a long time, these and other anomalies, such as the gambler’s fallacy, were not taken very seriously, as nobody could propose an alternative theory to account for them. Since you cannot beat something with nothing, and since rational choice theory definitely was something, with many achievements to its credit, it remained in place as the dominant paradigm. Although irrational behaviour was recognized, it was only viewed as a residual category. There was no positive account of irrational behaviour. At the same time, rational choice theory had – and still has – undisputed success in many policy areas. The assumption that economic agents respond to incentives has been shown to be valid in numerous instances.

This situation changed in the mid-1970s. In 1974, Daniel Kahneman and Amos Tversky published the first of their major papers on decision-making under uncertainty, in which they introduced the heuristics of availability and representativeness that I mentioned earlier. In 1975, George Ainslie resurrected the theory of hyperbolic time discounting proposed by R. H. Strotz in 1955, and showed that it could account for many puzzling inconsistencies in behaviour. A later landmark was the 1979 paper by Kahneman and Tversky on prospect theory, one of the most influential papers in the history of economics and the one for which Kahneman, after the death of Tversky, received the Alfred Nobel Memorial Prize in Economics.

In the years that followed, the research programme of behavioural economics has unearthed a vast number of positive mechanisms that generate irrational behaviour. Although it would be impossible to attempt a complete statement of these irrationality-generating mechanisms, I shall try to produce a representative shortlist. If we go by the literature, the two most important ones are probably loss aversion, an aspect of prospect theory, and hyperbolic discounting. In my view emotions are at least equally important, although for reasons I shall explain, they have proved less tractable for experimental purposes. Among other mechanisms, the following may be cited:

1. Since there is no full-scale comprehensive treatment of behavioural economics, the reader is referred to the following edited volumes: Kahneman, Slovic and Tversky, 1982; Slovic and Elster, 1992; Kahneman and Tversky, 2000; Connolly, Arkes and Hammond, 2000; Gilovich, Griffin and Kahneman, 2002; Camerer, Loewenstein and Rabin, 2004.
the sunk-cost fallacy and the planning fallacy (especially deadly when used in conjunction)
the tendency of unusual events to trigger stronger emotional reactions (an implication of ‘norm theory’)
the cold–hot and hot–cold empathy gaps
trade-off aversion and ambiguity aversion
anchoring in the elicitation of beliefs and preferences
the representativeness and availability heuristics
the conjunction and disjunction fallacies
the certainty effect and the pseudo-certainty effect
choice bracketing, framing, and mental accounting
cases when ‘less is more’ and ‘more is less’
sensitiveness to changes from a reference point rather than to absolute levels
status quo bias and the salience of default options
meliiorizing rather than maximizing
motivated reasoning and self-serving biases in judgment
flaws of expert judgments and of expert predictions
self-signalling and magical thinking
non-consequentialism and reason-based choice
overconfidence and the illusion of control
spurious pattern-finding.

I present this list mainly to underline the fact that unlike rational choice economics, behavioural economics is not based on a unified theory. Rather, it consists of a bunch of theories or mechanisms that are not mutually deductively linked. Nevertheless, there is only one social science, because all practitioners can use the same toolbox. There is no reason why an economist should refrain from using a mechanism developed by a historian of classical antiquity.

From this perspective, human behaviour seems to be guided by a number of unrelated quirks rather than by the consistent maximization of utility. In fact, there are so many quirks that we might suspect there would be a quirk to fit any observed behaviour. Many mainstream economists seem to shy away from behavioural economics because they think it invites ad hoc and ex post explanations.

Another problem is the plethora of motivations invoked by writers within behavioural economics. As we all know, *homo economicus* is supposed not only to be rational, but also to be consistently self-interested. This second feature of his make-up is less central than the first. Gary Becker, a staunch defender of the rationality assumption, has done much to further the study of altruism in economics. Yet many economists assume self-interested motivations for theoretical simplicity and parsimony. Paraphrasing Tolstoy, every selfish person is alike, but all unselfish persons are unselfish in their own way. Behavioural economists have come up with an amazing range of unselfish motivations, including altruism, envy, resentment, inequality aversion, fairness and many others. Once again, there is a suspicion that for any observed behaviour, we can find an unselfish motivation that would fit. And once again, the risk of ad hoc and ex post explanations seems very real.

However, I want to distinguish sharply between ex post and ad hoc. Of course ad hoc explanations should be avoided. A genuine explanation has to do more than merely provide a hypothesis from which the phenomenon to be explained can be deduced. Given any social event or fact, any social scientist worth their salt should be able to come up with half a dozen possible accounts that could explain it. But additional steps are needed to argue that one of them in fact does explain it. Plausible rival accounts have to be set up and then shot down, and the favoured account’s additional, testable implications have to be derived and verified. If these are novel facts not previously observed, they lend even more strength to the explanation.

In contrast, there is nothing wrong with ex post explanations provided they follow the procedure I just stated. Let me take a trivial but typical puzzle based on my own experience: why are there so many more standing ovations on Broadway today than twenty years ago? The playwright Arthur Miller proposed this explanation: ‘I guess the audience just feels that having paid $75 to sit down, it’s their time to stand up. I don’t mean to be a cynic but it probably all changed when the price went up.’ When people have to pay $75 or more for a seat, many cannot admit to themselves that the show was poor or mediocre, and that they have wasted their money. To confirm to themselves that they had a good time, they applaud wildly. So far, this is no more than a ‘just so’ story, one possible account among many. It would gain in strength if it could be shown that there are fewer standing ovations when large numbers of tickets to a show are sold to firms and then given to their employees. This would count as a novel fact. Even if these tickets are expensive, the spectators have not paid for them out of their own pocket, and hence do not need to tell themselves that they are getting their money’s worth.

In my vision of the social sciences, both microeconomics, updated as behavioural economics, and social psychology have a privileged role. They illuminate the individual choices and actions that are the building blocks of more complicated phenomena. Nevertheless, they face the challenge of how we link behaviour observed in the laboratory to spontaneous behaviour outside it. Many critics deny that findings from an artificial experimental setting can be generalized to other contexts. To address that issue, psychologists and behavioural economists
should go outside the laboratory. The great psychologist Leon Festinger can serve as an example. In the process of arriving at the theory of cognitive dissonance, he was influenced by a puzzling finding by an Indian psychologist, Prasad, who reported that the vast majority of the rumours following the great Indian earthquake of 1934 predicted even worse disasters to come. Here is the puzzle and Festinger’s solution.

Certainly the belief that horrible disasters are about to occur is not a very pleasant belief, and we may ask why rumours that were ‘anxiety-provoking’ arose and were so widely accepted. Finally a possible answer to this question occurred to us – an answer that held promise of having rather general application. Perhaps these rumours predicting even worse disasters to come were not ‘anxiety-provoking’ at all but were rather ‘anxiety-justifying’ (Festinger, 1957, p. vi).

Although the theory of cognitive dissonance arose in response to a real-world puzzle, Festinger went on to derive and test additional implications in the laboratory. At the same time, he carried out fieldwork to confirm and develop the theory. He infiltrated a group of people who believed the world was about to end on a specific date and who had taken decisive action based on that belief, in order to observe what they would do when the prophecy failed. If you do not know what they did, I shall not tell you. The book he wrote about it, When Prophecy Fails, is a wonderful read, and I recommend that you find out for yourself (Festinger, 1956). I mention the study here only because of the exemplary methodology it embodies, combining theory, experiments and fieldwork.

Amos Tversky once told me about a meeting he had attended with the foremost psychological scholars in the USA, including Festinger. At one point they were all asked to identify what they saw as the most important current problem in psychology. Festinger’s answer was ‘excessive ambitions’. The social sciences more generally have also been suffering from excessive ambitions. The aspiration of rational choice theory to become the master theory of human behaviour offers one example. Another is provided by the strong claims often made for statistical models. As was emphasized by the late David Freedman, data analysis often aspires to do more than it can deliver. In one of his comments on the use of regression models in the social sciences, he asserted that in his view the truth of the matter was somewhere between the following: ‘regression sometimes works in the hands of skilful practitioners, but it isn’t suitable for routine use’ and ‘regression might work, but it hasn’t yet’ (Freedman, 1991).

If social sciences have to lower their aim, what should they do? Two proposals are implicit in my argument: we should keep accumulating mechanisms, and use them to carry out fine-grained case studies. Needless to say, simplicity and robustness are not enough: good ideas are also needed. To this end, I recommend that all social scientists spend a large part of their time immersing themselves in the classic writings of history, which can provide them with both the ‘telling detail’ and the ‘provocative anomaly’. Thomas Schelling once told me that before writing The Strategy of Conflict, he read widely and randomly on military history. This is not the preparation that current social science departments give their students. Within economics, economic history is almost at the bottom of the prestige hierarchy, just a notch above the history of economic thought. Within political science, students do read the history of political thought, but virtually no political history. In sociology, they may read Marx, Weber and Durkheim, but to the best of my knowledge, little social history. Perhaps the best way of creating a unitary social science with a common language would be for all social scientists to have a grounding in history.

Jon Elster

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Global history

Universal, world, and more recently global and ‘new’ global histories are new fields of study. They share a common object: to narrate past events using a perspective that transcends national and regional boundaries. On closer scrutiny, each has its own distinctive attributes. With the growth of global exchanges, global history and ‘new’ global history represent more recent attempts at narrating the world’s past. ‘New’ global history has a specific focus on present-day globalization. A key feature of global history – as opposed to universal and world history – is its aspiration to break away from a Eurocentric approach. For advocates of global history, Western-produced metanarratives lure us away from the true explanations of the changes taking place. The solution to this problem consists of breaking away from previous approaches, which are based on paradigms that divide the world into the West and the rest, core and periphery, and into national histories.

While there is agreement on global history’s main subject of study – globalization – and on the need to integrate non-Western approaches, there are divergences in terms of the meanings that are to be attached to the ‘globalization’ concept and the historical moment in which it came about. Globalization is associated with a variety of innovations and developments in a broad set of fields: communication, trade (with the emergence of multinational corporations), the globalizing political system, the globalization of culture and the spread of human rights as a global standard of behaviour. As a result of this, certain academics point to the emergence of a ‘global consciousness’. While global exchanges have existed for a long time, contemporary globalization has expanded our consciousness of space and time, producing new approaches to globality. In other words globalization allows humans to analyse the world from a new global perspective.

This approach accentuates the break with past historical approaches, producing demands for a new history of globality. This history acknowledges the multiplicity of the world’s pasts and the fact that all these pasts are simultaneously present, colliding, interacting and intermixing (Geyer and Bright, 1995). Acknowledging the multiplicity and nonlinearity of local histories, global history seeks to understand the collage of present histories. The question becomes one of knowing when and how the world’s history became autonomous from the many histories of the world’s pasts and set itself on a separate course. A core source of debate among global historians relates to whether accelerated integration (the universalizing tendency) and proliferating difference (the particularizing tendency) took place simultaneously or not.

Spatial analysis

Space has returned in recent years to centre stage in a number of research programmes and disciplines. Some scholars now speak of a ‘spatial turn’ in the humanities and social science, because of the increasing use of spatial metaphors and because space and location are more often used as variables that help explain the structuring of people and societies. There is an increasing interest in several disciplines in the incorporation of spatial effects, as in spatial economics and spatial ecology. In psychology, orientation and space construction has been an active field of research since Piaget’s studies. Area studies, developed during the Cold War, have found a second life in the past decade thanks to the new global geopolitical situation after the fall of the former European communist regimes. Political science is also reflecting upon global governance and the new spatial organization of sovereignty. Many disciplines now acknowledge that the structures and behaviours of individuals, societies and cultures change from place to place. In other words space and location are now accepted variables of social science analyses.

Obviously space has always been a central concern for at least one of the social sciences, geography. Yet the regional focus which was dominant in that discipline has been declining for many decades now, despite its partial renewal since 1990. Cultural geography or social theories of space have developed, as did more formal and quantitative analyses in ‘spatial science’. In this latter area of research, the diffusion of geographical information systems has transformed the use of data and the tools of representation. The treatment of geographic information through information technology will continue to grow in the future. Thus geography is constructing new objects of inquiry and new methodologies in the search for spatial orders stemming from behaviours or from the environment. Different techniques of spatial inquiry, mapping and the building of networks will become widespread in disciplines and fields of inquiry that attempt to analyse individual and social phenomena.
6.2 Crossing disciplinary borders

Introduction

Even though academic disciplines have been effective in organizing knowledge production on a large scale, every generation of researchers contains at least some who wish to overcome what they believe to be the potentially harmful consequences of the divides between and within disciplines. When scientists from various disciplines gather to deal with a problem, the talk is of multidisciplinarity and interdisciplinarity. When scientists coming from various disciplines gather to deal with a problem and take into account each other’s constraints, the talk is of transdisciplinarity. Contrarily to interdisciplinarity, transdisciplinarity is said to be more integrative and seeks to go beyond disciplinary knowledge.

Interdisciplinary, multidisciplinary and transdisciplinary tendencies have existed ever since disciplines themselves emerged. They have sometimes been the origin of new disciplines, including some that did not crystallize and which finally disappeared. This dynamic of cross-fertilization between disciplines does not only exist between the social sciences, it is also an element of the interactions between social sciences and other fields of knowledge, especially the humanities and the natural sciences.

Academic knowledge has also been structured by epistemic cultures encompassing many disciplines. Physical or natural sciences on the one side, and arts and humanities on the other, can be considered the two oldest of these cultures. Social science is the third and youngest one. This section deals with some of the most recent questions raised by the existence of intellectual and institutional divides between these three cultures, and the crossing of the disciplines that they call for.

For various reasons, the divides between social sciences and other forms of knowledge are currently being challenged, or should be. Transdisciplinarity or multidisciplinarity is sought for in order to deal with complex phenomena. The reasons can be social and political, for example when social movements and policy issues such as climate change or poverty exert pressure on knowledge producers to change their habits and institutional settings and to deal with topics of general interest. Globalization also offers new opportunities for collaboration between scholars and professionals from various disciplines and epistemic cultures. New scientific fields of studies (including cognitive science, new evolutionary theory, bioethics, environmental studies, law and literature) involve people who are crossing the boundaries of epistemic cultures (Wittrock).

Crossing disciplines remains a difficult task. Roberta Balstad draws from her experience as the former director of the Division of Social and Economic Science at the US National Science Foundation in order to list the obstacles that have to be overcome for multidisciplinarity to develop within climate change research (see also Piot, in Chapter 9). Balstad’s opinion is that new global challenges will require more funding for the social sciences, but will also call for changes in the habits of social scientists. Interdisciplinary research should become more institutionalized, interdisciplinary researchers should be hired, and interdisciplinary departments should be created. Yet disciplines and epistemic cultures should also remain strong in this process. How can interdisciplinary training be enhanced while the disciplines are strengthened? This may be tomorrow’s practical question for social science research.

Among the social sciences, psychology is a discipline that has been stimulated by its position as part of the social and biological sciences. Owing to its internal diversity and large size, it provides many examples of interdisciplinarity, and of contacts with and collaborations between various forms of knowledge. Psychology’s recent creativity and its permanent position as a site of disciplinary crossings can be observed in social change research (Silbereisen, Ritchie and Overmier). This case provides interesting clues about the articulation between experimental research and other ways of practising social science. Applications of such new interdisciplinary research can be imagined when investigating immunization behaviours as well as the complex processes of decision-making. Others are currently interested in the sources of sustainable behaviours (Corral-Verdugo). Human well-being is another fast-growing concern for social scientists ready to work with researchers from other disciplines.
The triple legacy of the humanities

With some simplification, we can suggest that the humanities have developed in the course of the past 200 years in response to three broad types of engagement. First was a persistent effort in Europe to articulate the heritage of Greek and Roman antiquity in linguistic, historical and philosophical terms. Ever since the neo-humanists of the fifteenth and sixteenth centuries, this heritage has been interpreted in universalistic terms. Developments in the late eighteenth and early nineteenth centuries involved the rebirth of the idea of the university in the German countries under the influence of idealistic philosophy, and the reaffirmation of the universalism of the classical heritage.

At roughly the same time, similar rearticulations of learned traditions occurred in other parts of the world. This is true, for instance, of the flowering of Sanskrit knowledge between the sixteenth and eighteenth centuries. By and large, however, these traditions remained closer to pre-eighteenth-century European conceptions than to the disciplinary and university-based humanistic scholarship that subsequently evolved in the region.

Second, the building of different national traditions in linguistic, ethnic and historical terms was a key process shaping the humanities in nineteenth and early twentieth-century Europe. The evolution of the humanistic disciplines in their modern form is intimately linked to these developments and to the various European nation-state projects. This is true of their role in institutions of higher education, in the construction of national museums, in the preservation of folklore, and in the quest for archaeological and ethnographic traces of national pasts.

The current context for the social sciences offers possibilities for conceptual innovation and for empirical testing on a previously unheard-of scale. The fulfilment of this potential will call for institutional initiatives on a transnational scale. There is an urgent need for new research capacities and environments in social sciences to help humankind grasp and master current global transformations. While new economic, cultural and scientific centres are emerging, the landscape is still one in which deep knowledge divides persist.

Intellectual and institutional constraints hamper social sciences from contributing to the understanding of current global transformations, and from innovating as much as they should. One such dilemma concerns shifts in their epistemic ordering and in their relationships to other forms of knowledge, in the public sphere, in the humanities, and in the natural sciences.

From their inception as distinctive forms of knowledge, the social sciences have distinguished themselves from alternative, and sometimes competing, disciplines. Philosophical, historical, judicial and literary discourses, but also fields such as medicine, biology, genetics, neuroscience and even physics, have at times exerted a profound influence on the social sciences. In a historical perspective, the social sciences emerged largely from pre-disciplinary forms of what nineteenth-century Europe thought of as the humanities. This is particularly true of the relationship between the political, sociological and economic sciences and eighteenth-century moral and political philosophy. Many of the demarcations that became accepted and entrenched in the late nineteenth and early twentieth centuries are currently being reopened to questioning and critique.

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Third, encounters between European and extra-European nations, ethnic groups and spaces exerted an important influence on the humanities in the nineteenth and early twentieth centuries. This was most clearly the case for anthropological and ethnographic research, but also for the study of languages and cultures.

Throughout the late nineteenth and early twentieth centuries, these different strands of inspiration developed in mutual interaction, and often led to unresolved tensions for the humanities. The traumatic events of the mid-twentieth century forced a reappraisal in most European countries, with various outcomes. This was clearly the case in Germany, where the historical, literary and philosophical sciences had been intimately linked to the project of constituting identity and nation, and had conflated with the practices of Nazi Germany. A profound rethinking was unavoidable. In most other countries, the humanities could point to a more mixed record. They had helped to raise a spirit of resistance and national independence ahead of occupation and war, but had been also involved in defining exclusionary national traditions, and had been associated with colonial practices that were to become challenged in the post-1945 era.

This post-war period involved a weakening of the humanities in all European countries relative to the technical, natural and medical sciences, but also in the face of the emergence of the social sciences as autonomous disciplines. In this era the social sciences prevailed over the humanities for several decades. But recent mass migration, increased global economic interaction and renewed religious fervours have put social scientists’ claims of the advent of purely secular societies into question. These phenomena confirmed how crucial the humanities were for understanding the world, and called for renewed collaborative relationships between the social and the human sciences. Nevertheless, policies regarding the humanities tend to be cast either in technocratic terms, calling for them to respond to concerns for immediate usability, or as appeals for a revival of past times when the humanities underpinned national cultures and canons.

Rethinking the relationships between the social and the natural sciences

The social sciences and the humanities emerged in the late eighteenth and early twentieth centuries, not only out of moral and political philosophy but also through interactions with botany, medicine and agriculture, and in the context of reflections about the divide between the human and the non-human. This period of ‘Inventing Human Science’, as the title of a famous book (Fox, Porter and Wokler, 1995) has it, drew a very thin line, if any, between the social and the natural sciences. Hence, the clear-cut distinction that we know between the cultural and the natural sciences has existed only for 150 years or so. It is also a demarcation that has rarely been fully accepted.

Biological and evolutionary thought continued to influence the social and human sciences during their disciplinary consolidation in the late nineteenth century. The frequent use of evolutionary metaphors in the analysis of the history of human societies and states shows this influence. The elaboration of public policies for the genetic ‘improvement’ of populations was another, pervasive influence, propagated by scholars from the entire political spectrum, and particularly significant for disciplines such as statistics, demography, criminology and sociology.

The horrendous experiences of the 1930s and 1940s, and the realization that European colonies and settler societies often violated indigenous populations’ rights, dominated most interactions between social and natural sciences for a few decades. Today these boundaries are being assailed from different sides again, and many cutting-edge research projects are based on collaboration between social and natural or medical scientists. They include:

- Studies of the long-term development of languages and linguistic families are jointly led by linguists, historians, archaeologists and geneticists.
- Studies of the human mind, of the philosophy of mind, and of consciousness rely increasingly on collaborations between philosophers, psychologists, neurologists, brain researchers, and specialists in cognitive science and artificial intelligence.
- Long-term collaborations between mathematicians, logicians and computer scientists are now extended to historians and biologists. They constitute a field in which aspects of classical humanistic scholarship meet with application-oriented engineering.
- The ancient problem of the distinction between humans and nonhumans is reopened by medical and genetic engineering today, as shown by the growth of bioethics.
- Virtually all policy-oriented studies now require collaborations between social, human and natural scientists. This is evident in studies on environmental change, but also in cases where public policy requires human–machine interactions, where the social embeddedness of technologies is at stake, or where innovation challenges previous beliefs and practices.
Dramatic advances in evolutionary biology inspire the study of human societies.

Military and security concerns have instigated new methods of surveying and tracking the movements of individuals and populations.

In other words, there is a need for close collaboration between the cultural and the natural sciences. That being said, the autonomy of the social and human sciences also needs to be protected. The paradoxical combination of the small material demands of the social and human sciences and their great potential contribution makes it all the more important that a strong element of critical and historical self-reflection be preserved in the major research institutions, such as universities, institutes for advanced study and centres of excellence. One of the great challenges of the period concerns the support and development of centres and institutes which are open to cooperation between the cultural and the natural sciences, but which maintain scepticism about proposals that the social and human sciences break with their own theoretical traditions.

Rethinking knowledge divides: centres and peripheries

Human activities are characterized by varying degrees of inequality and asymmetry. Some individuals and populations have greater access to resources, lower transaction costs, better social reputation or more political influence than others. Concentrations and movements of people, capital and other resources occur in centres and peripheries.

Geographers have long since developed concepts in time–space geography to capture the formation of and movements between centres and peripheries. Historical sociologists depict long-term developments in similar terms of relationships between the centre and periphery in particular epochs, or they combine macrosociology with the analysis of networks and with interactions between individuals and groups of thinkers. World systems theories have served as a backdrop for global histories of the social sciences.

At any point in time, some centres concentrate people, capital and other resources. In terms of scientific and scholarly interactions, we may envisage networks based on an analysis of references, acquaintances or even spatial movements. On a global scale, such analyses undoubtedly yield interesting and important insights.

Torsten Hägerstrand, a pioneer of time–space geography, was interested in analysing phenomena of innovation and diffusion, and argued that research became innovative when it brought together strands of research which had hitherto developed separately within a new conceptual framework. It is, he writes, as if a window suddenly opened and allowed us to see the world in a new light, to scrutinize new empirical relationships. This window metaphor belongs to a specific tradition of knowledge, but more significantly it calls our attention to some determinant aspects of social and human sciences.

First, the social and human sciences do not merely describe, retell and count the already familiar; they provide new conceptual tools and expressions to let us learn about the world.

Second, no public policy can be developed, no market interaction can occur, and no statement in the public sphere can be made, that does not refer explicitly or implicitly to the findings and concepts of the social and human sciences.

Third, modern research depends upon public support and the willingness of governments and peoples to guarantee the resources they require. In the case of large surveys of the population, these can be significant, but most social and human science projects need comparatively few resources. The most important may well be intellectual openness and the toleration of thoughts with potentially far-reaching effects.

In other words, the history of the social and human sciences in modernity can be analysed in terms of intellectual, institutional and political centres and peripheries. At any point in time there is one or a number of such centres. They are surrounded, not by an undifferentiated periphery but rather by potential alternative centres, challenging their power.

As has been pointed out by the historical sociologist S.N. Eisenstadt, these dynamics between the centre and peripheries have important implications for the understanding of what he terms the ‘age of multiple modernities and globalization’. Even though most states still uphold their monopoly of the use of violence, none of them, not even the superpowers, uphold a monopoly of interpreting realities or of assigning value to their policies. The social and human sciences provide interpretive tools which enable contenders and critics to question the interpretations of societal reality, the legitimacy of policies, and the terms used by the centres themselves. Many of
the scholarly and political debates of recent decades share precisely such critical features, and in this respect, the social and human sciences are indeed a very important element of modern tensions and antinomies.

In institutional terms there can be no doubt that various countries, universities and disciplines have served as models to be emulated. More often than not, such emulation has amounted to creative misunderstanding, for instance when leading US academics attempted to reproduce German scientific institutes and universities between the 1870s and the 1920s. In fact they developed a system that today’s academic leaders, Europe and China, are trying to replicate themselves, although with much more limited resources.

The transformative force of the social and human sciences may never have been greater than today, as are their intellectual vigour and innovative capacities. Consequently, there is a greater need than ever for intellectual sites where these potentials can come to fruition and where independent and innovative theoretical work is encouraged on the same level as large-scale empirical and policy-oriented studies.

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Body

The human body is far from an obvious object for the social sciences. Its study has for long mostly been the territory of medicine and biology. Yet since the 1990s, the body has been an interdisciplinary meeting point for various social sciences and for some of the natural sciences. It has also compelled the social sciences to contemplate their epistemic assumptions more deeply.

This process of ennoblement of the human body within the social sciences took almost a century. Until the first part of the twentieth century, the human body did not have the dignity of an object in these disciplines. Then anthropology, history and psychoanalysis started questioning the body and its functions. Its role in the construction of selfhood and personality was the main focus of these first studies. The human body’s expressive qualities, its movements and its gestures were later topics of interest, covering such areas as nonverbal communication, bodily styles, and cultural variation in bodily behaviour. This work generally tended towards a critique of the biological essentialism that usually dominates commonsense approaches to the body. Later on, changes in the body through time, sports and their evolution, and medical technologies and the ways they construct an imaginary body became the focus of interest. And since the 1970s, the human body is no longer an immutable substrate of human nature for the social sciences. Rather, it is a historically variable entity, which can be transformed by technologies, discourses and situations. The self-control of bodies, as illustrated in modern etiquette and in professional sports, is a good example of the effects of long-run historical processes on bodies.

In the 1990s, political science also started to pay greater attention to the ways in which governments regulated populations and all aspects of human life and bodies through ‘biopower’. The field of politics and the life sciences has been growing since.

For some feminist and postmodern theoreticians, the body is just the effect of discourse rather than a stable site of experience. At the same time, the human body is at the core of many debates in cognitive sciences and biomedicine. Those approaches are not contradictory, since contemporary technologies also create new bodily abilities and functions, and transform our senses and our body images. Thus, the human body is currently a cross-disciplinary object par excellence.
Environmental and ecological economics

Environmental and ecological economics are good examples of new scientific specialties emerging at the boundaries of other specialties or disciplines, and crossing the borders of social science to reach out towards the natural sciences. But whereas environmental economics remains in the realm of economics, ecological economics aims at creating a new and distinct field of studies with its own basic assumptions and paradigm.

Neoclassical economics describes people’s behaviour regardless of the environmental systems that sustain their existence. However, since 1970, there has been a growing realization among ecologists and economists that this approach can lead to serious mistakes, as the market does not allocate scarce natural resources to generate the greatest social welfare. Since the late 1970s, the field of environmental economics has developed to understand and correct market failure in the environmental domain, as well as to assess the costs and benefits of alternative policies (meaning policies that are alternatives to the free market) (Smith, 2001). One of the early challenges of environmental economics was to internalize environmental externalities in order to make ecological realities (which might be either pollution and destruction of the environment, or conversely, ecological restoration) visible in macroeconomic accounting. This involves assigning money values to environmental services and losses. Many authors also assign specific economic characteristics to environmental amenities, such as fish stocks or air quality. Nonexcludable is the term used for goods whose access cannot be limited; nonrival is used for goods whose consumption by one person does not reduce the amount available to others. These characteristics define an ‘international public good’, and can have an impact on the way these goods are managed. Nonexcludability favours ‘free-riding’ behaviours in that others can ‘free ride’ on one agent’s effort to improve a good. In the case of carbon emission reduction, for instance, national incentives would only be effective if they were coordinated with other countries. The development of studies in this field responds to a strong demand from decision-makers for simple tools with which to assess and compare the efficiency and relevance of different environmental policies (see, for example the Report on the Economics of Ecosystems and Biodiversity, which was commissioned by the European Commission in 2007; and the Stern Review on the Economics of Climate Change for the UK government, released in 2006, which assesses the costs of failing to act in the face of climate change).

A more recent development has gone further in integrating environmental and economic issues: this trend is embodied by the International Society for Ecological Economics launched in 1987. Mainly founded by ecologists trained in economics and vice versa, ecological economics considers the economy as a subsystem of a larger, finite global ecosystem (Martinez-Alier, 2001). This transdisciplinary perspective questions the sustainability of economies based on infinite growth and with both strong environmental impacts and high material and energy needs. Hence ecological economists are very interested in developing physical indicators and indexes of sustainability. Their view also includes issues such as property rights and rules of access to environmental resources and services, the social distribution of power and income (including gender and caste issues), irreversibility, risk assessment, the diversity of environmental value systems, and their weak comparability in the frame of economic models. Ecological economists distance themselves from environmental economics by claiming that cultural, ethical or enjoyment value, which is often associated with the preservation of nature, has little commensurability with money and cannot be reduced to a price. They propose alternative methods such as multicriteria evaluation to capture the value of environmental services and losses. These research interests definitely make ecological economics a transdisciplinary field, which bonds with political ecology, geography, anthropology, philosophy and other subjects in response to worldwide concern about the ecological, social, economic and political dimensions of sustainability.
Social scientists often employ a wide range of theoretical approaches.

Social scientists are particularly sensitive to small differences of time, space and culture.

Disciplinary loyalties in the social sciences often interfere with multidisciplinary collaboration.

But we also recognize that these are not insurmountable barriers; they are intellectual and stylistic differences between scientific fields that can eventually enrich multidisciplinary research.¹

However, other types of barriers have been more difficult to overcome. The social science community has been ambivalent about climate research. Although some social scientists initially participated enthusiastically in this research, others objected to joining what were predefined projects in which their role was subordinated to that of the climate or biogeochemical sciences. They argued that climate scientists had initially defined the role of social science too narrowly, and that what they actually needed was not new research but a basic understanding of what was already known in the social sciences. The perception that the social science research challenges in interdisciplinary projects were too limited led some social scientists to avoid collaborative projects with natural and physical scientists.

Another barrier was the high entry threshold for conducting research in the climate and environmental fields. Graduate training, and indeed most research in the social sciences, is focused on social, behavioural, economic and institutional interactions between human beings.

¹. I am indebted to Professor Ortwin Renn for contributing to this list.
The nineteenth-century focus on the social implications of the physical environment had faded by the 1950s and 1960s, a formative period in which the social sciences expanded rapidly. With the advent of climate and Earth systems science research in the late 1980s and early 1990s, few social scientists had the necessary physical science background to exchange ideas with climate scientists or identify the flaws in their ways of conceptualizing either the human contributions to, or the impacts of, climate change.

Still a third barrier was the discomfort that some social scientists felt with the idea of social engineering, that the social sciences should provide the social equivalent of engineering applications for climate change policy. Climate scientists often suggested that the social science contribution to their work should be in the definition and implementation of government policies for climate change adaptation and mitigation. This reliance on the social sciences to stimulate specific types of behaviour is contrary to major currents in the social sciences in the twentieth century.

For many social scientists, the history of their disciplines since the early 1960s has involved a movement away from politically oriented social engineering towards a more basic, and by implication more scientific, form of social research. The social sciences were often harmed by their forays into policy, including the close association of anthropology with colonialism in the early twentieth century, the US Defense Department’s use of research funding in Latin America in the 1960s as an instrument of foreign policy in Project Camelot, and the justification of apartheid in South Africa on a ‘scientific’ basis by so-called social engineers. In short, the misappropriation of their research in public policy has led some social scientists to embrace a pure rather than an applied approach to research, an approach that is distinctly at odds with the expectations of many physical scientists.

One consequence of the early barriers we have discussed here was that social scientists who were drawn to climate change research often attempted to create a purely social science research agenda for climate and environmental change that was scientifically divorced from the research of climate scientists – just as the climate scientists had conducted their research for decades without mapping the underlying anthropogenic influences on physical processes. For some research topics, this social science-centric approach was obviously legitimate and valuable. But by itself, it was insufficient to meet the growing scientific needs of the field of climate change. Such disciplinary segregation ignores the fact that climate change is a multifaceted interdisciplinary problem that requires an understanding of the full range of interactions between the Earth and its inhabitants.

This brings us to a fourth, very serious barrier, which has nothing to do with ambivalence or misunderstanding but which is almost certainly the major reason for the limited involvement of the social sciences in climate research. Social scientists have never had access to the same level of research funding as their climate science counterparts. Apart from a few notable exceptions such as Norway, social scientists have mostly had to make do with existing and often inadequate research funds. In the USA, it has been estimated that as much as 98 per cent of all climate research funding goes to the physical and biogeochemical sciences. The remaining 2 per cent has to cover all social science research in a set of disciplines that are increasingly considered as crucial to understanding the social impacts and causes of climate change.2

Having said this, the major challenge that confronts us does not relate to the capacity of the social sciences to contribute to climate change research, but rather to their ability to fill their rightful place as full participants and even leaders of interdisciplinary research planning for climate change science. The physical and biogeochemical sciences have done a great deal to identify, clarify, and map out climate-related problems and processes. Yet the social science contribution is equally essential if we are to understand the critical problems we now face, including the role of human action in climate change over time and space, and the short-term and long-term impacts of climate change on individuals, economies and societies.

Assuming a more active role in the climate research enterprise will not be easy for the social sciences. Although the current climate research leadership believes in the importance of interdisciplinary research, and specifically in the need for the social sciences to contribute to the climate research agenda, few social scientists have experience of planning for multidisciplinary climate research. If social scientists are to assume a greater role in research planning, we will need a series of changes in the social, physical and biogeochemical climate sciences, as well as in the funding structure for climate research.

This will involve social scientists changing some of their attitudes about the dominance of traditional disciplinary departments and disciplinary research. Disciplinary

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institutions will remain important as the source of graduate and undergraduate training, focused research projects, and new scientific hypotheses. In the future, however, the traditional disciplines will compete against interdisciplinary research and education projects. If social scientists are to advance scientific knowledge on climate change, they will need to strengthen their disciplinary bases at the same time as they open their disciplines to greater interdisciplinary training and education. This is a very difficult balance. Most human dimensions specialists receive their initial training in specific social science disciplines. In the future, however, they will probably spend shorter periods in these fields. More people are already being trained in one discipline and working in another. The traditional disciplines need to build upon their strengths and encourage the growth of new, collaborative fields of research rather than competing with them.

Social scientists also need to engage in a major new educational effort which involves both educating physical scientists in the social sciences and educating social scientists in climate science. This will require that the foundations of graduate and undergraduate education in the climate sciences be rethought. Social science knowledge cannot be limited to social scientists. Basic undergraduate social science courses, including economics, demography and social statistics, and possibly cognitive psychology and decision-making, are needed for all climate scientists. Similarly, social scientists need to learn more about the basic elements of the physical and biogeochemical sciences.

There must be new career paths for social scientists who are active in interdisciplinary climate research. Students are attracted to courses and research on anthropogenic influences on the climate and to the study of the role of policy, economics, governance and communication in dealing with climate change. But there is also a need for research scientists who combine the human, physical and biogeochemical sciences to address these issues. In order to produce this new generation of academics, there must be many more interdisciplinary fellowships and postdoctoral positions that are open to social scientists.

Once this new cohort of interdisciplinary research scientists has emerged, an institutional reward structure will be needed that is comparable to the rewards structure for more traditional research. This is particularly important in the social sciences since there is no established career path for the human dimensions of climate science. If support for the hiring and promotion of interdisciplinary social scientists is not provided within the traditional disciplines, new interdisciplinary departments will form and draw scarce resources from the traditional disciplines. In this situation, the contributions of the traditional disciplines to climate science could be weakened and their role in the university diminished.

Solving the problem of underfunding for social science research on climate change is critical to meeting the scientific challenge it poses. If the social sciences are to respond to the scientific challenge, it is essential to persuade those who provide research funding to increase support for human dimensions research. Equally important, financial support for data collection on human behaviour and climate impacts must be increased. Social scientists should enlist their colleagues in the physical and biogeochemical climate research communities to join in calling for increased funding for social science research on climate, even if, as is likely, some of those funds will come from the same pot as their own research funding.

Meeting the challenge of climate change will not be easy. Social scientists have strong incentives to do so, and bring valuable assets to the task. Many excellent and experienced social scientists are already working in the field. But there is a great deal more that must be done. Some of it involves conducting research that crosses new scientific frontiers, which is exciting, and some of it involves slogging through the difficult institutional, educational and research policy changes required to support integrated, interdisciplinary research. Some of it requires changes in the organization of the social science community, and some of it requires changes in the traditional climate science community. The first phase, getting social science research on the climate change agenda, has been completed. Dedicated individuals have successfully shown the value of social science for the broader climate science enterprise. In the next phase of climate change research, social scientists must consolidate these gains, find ways to obtain the necessary fiscal and institutional support for integrated, interdisciplinary research, and take their rightful place among the broad leadership of the climate change research community.

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Psychology at the vortex of convergence and divergence: the case of social change

Rainer K. Silbereisen, Pierre Ritchie and Bruce Overmier

Accelerated social change in many societies has brought macro contexts and their cascading effects on individuals’ adaptation to the attention of psychologists. In recent decades, psychological knowledge of the vast effects of broader contexts on behaviour has grown, particularly concerning phenomena such as how people deal with economic hardships and other manifestations of social change.

Psychological science has always been informed by, and is part of, the biological and social sciences. While the biological connection has recently become prominent again, the social science dimension too has gained in importance. This can be attributed to the pressure of accelerated social change. Globalization, migration, demographic shifts and political transition illustrate the increasingly normative instability of societal conditions, even within the span of a single generation (Hofäcker, Buchholz and Blossfeld, 2010).

The concept of psychology as focusing on the individual (for example, as an actor in society, as an agent in economics or as a role player in institutions) is increasingly recognized from different perspectives and by research bodies in various disciplines. Hence it is important to consider the relationship between psychology and the social sciences in general, and between psychology and other fields of study such as economics and sociology. There are many ways to illustrate the relationship between psychology and social science. All human beings live in societies, both influenced by social structures and shaping them. Likewise, we are influenced by and shape our biology. Such observations are explained by the ‘epigenetic systems’ view advanced by Gottlieb’s (1991) theory of human development. It posits a bidirectional interchange between heredity and the environment.

In this paper social change is the vehicle for discussing psychological science as a source of convergence and divergence in its relationship to the social sciences. It is accompanied by two boxes, one drawing more on cognitive dimensions and the other on psychology as a health science.

Social change research

Research on the role of social change in family and individual development exemplifies the fruitful collaboration between psychology and sociology. Bronfenbrenner (1979) alerted developmentalists to their subject’s social context. He distinguished between micro, meso, exo and macro contexts. Briefly, the main micro context is the family; the meso context is constituted by interactions between micro contexts (for instance, family and work); the exo context is represented by neighbourhoods and community institutions; while the macro context addresses societal structures and belief systems. These contexts are not constant but change as a function of both life stage and social change. Furthermore, these contexts are thought to have a cascading influence on behaviour through their effect on ‘proximal processes’. Such processes promote development through individuals’ active participation in progressively more complex and reciprocal interactions with persons, objects and symbols over extended periods of time. An example of research focusing on these contexts is disorganization within a poverty-stricken neighbourhood characterized by an absence of social cohesion and control, thus increasing the risk of delinquency in adolescents via a lack of positive, caring role models. This could reduce the proximal processes’ quality of developmental instigation (Sampson, 1993).

An emerging sociological research tradition founded by Elder (1974) endeavoured to explain the consequences of the Great Depression of the 1930s – a cataclysmic period of economic and social upheaval which was of renewed interest in the 1970s – for families and individuals. Interestingly, the data were originally collected by psychologists. Compared with past research on contexts of development, the progress made with assessing proximal processes was evident. This research tradition successfully addressed various crises at the macro level. It also provided the blueprint for research on the consequences of political transitions and transformations after the break-up of...
the Soviet political system in the late 1990s. Research on the unification experience in Germany illustrates how the approach identifies and assesses new micro-level demands on families and individuals created by political change. The processes generating the demands, such as the need for individual responsibility in adapting to a profoundly changed work environment, created distinct challenges. For example, a mismatch developed between the society’s ideological basis and the behaviour of its institutions, resulting in responses that undermined the system’s legitimacy. Typically, we would expect a change in the learning environment at the micro and meso levels, influenced by changes at the exo and macro levels.

China provides an example of research on the effects of large-scale economic reforms on human development. Parental goals and teacher behaviours in favour of the traditional ‘shy-withdrawn’ pattern of child behaviour changed (Chen and Chen, 2010) in response to the economic reforms that required behaviour favouring individual responsibility, proactive social relationships and motivation for excellence. These changes in care-taker goals and behaviours were rooted in changing contexts at higher levels: from the ideological basis of the society, which valued new forms of enterprise and related work requirements, to the composition of social networks.

Social scientists refer to structural uncertainty when describing political transformation and the effects of globalization in countries such as Germany and China. For instance, rapid technological development and the global dissemination of communications technology dislocate labour markets. Given the current financial and economic crises, employers tend to reduce their uncertainty about profitability by transferring the risk to workers, who then face precarious employment. Those most affected are also those who are the least protected by qualifications or seniority (Hofäcker et al., 2010). Such social science analyses, based on data from many countries, allow psychology to map the dimensions and levels of the new demands confronting people in their daily lives. This requires systematic endeavour, resulting in psychologists developing instruments to assess uncertainties experienced in domains such as work and family (Tomasik and Silbereisen, 2009). An example is the perception that people have, which grows over time, that their employment is at risk because their expectations exceed their qualifications.

The division of labour between sociology and psychology is reversed when conceptualizing individual-level response to challenges and demands. Whereas Elder and others used topic-specific and data-driven categories of economic pressure, recent research has moved away from intuitive categories of action. It has turned instead to established psychological models of motivated behaviour to consider how people respond to challenging situations. Heckhausen’s model of developmental regulation is of particular relevance for psychosocial development. It distinguishes two dimensions of action. The first is primary (outwardly directed) versus secondary (inwardly directed) control, while the second is selection (choosing from alternative goals) versus compensation (changing goals or means when confronted with failure).

This results in the classification of four generic types of regulation (Heckhausen and Schulz, 1995). Thus, actively pursuing a particular goal and staying on target by strengthening motivation are a combination of primary and secondary selection, such as looking for a job whatever it takes. Primary compensation refers to situations in which extra efforts and new means are required, such as improving one’s qualifications or changing direction. These three goal engagement strategies are beneficial for well-being and other psychosocial outcomes, even when structural opportunities are unfavourable (Haase, Heckhausen and Köller, 2008). If obstacles to goal pursuit persist despite all efforts, people may need to turn to disengagement strategies, such as finding excuses or giving up entirely, saving energy for new attempts in different fields and thereby preserving their well-being. Thus, whether goal engagement or goal disengagement is adaptive depends on the context.

The developmental regulation model has features in common with other psychological approaches which have more or less explicit conceptual relationships with psychosocial development. Recent German social change research – prompted by the breakdown of the Soviet socialist order – demonstrated that people who maintain primary selective behaviours in pursuing new claims are better adjusted in terms of well-being. This was confirmed in the work and family domains (Pinquart, Silbereisen and Körner, 2009). Similarly, studies on the demographic shift toward an ageing population – characteristic of many Western societies – refer to the increased need for lifelong learning and for staying productive even after the traditional retirement age.

The nature of research at the nexus of the social sciences and psychology

Following Coleman (1990), the analysis of change in social structures is undertaken in a three-step procedure. Change at the macro level results in particular demands with which individuals deal in specific ways; the outcome
of these activities potentially leads back to the societal level, thereby influencing the social structure. For Hedström and Swedberg (1996), the three steps represent the following kinds of causal ‘mechanisms’, by which they mean small-range theories that explain the bidirectional flow of effects between levels of society and the individual. The three are situational, individual action and transformational.

The modes of developmental regulation distinguished by Heckhausen and Schulz (1995) can be conceived as an example of individual action mechanisms. As psychologists, we are not only interested in the situational emergence of behaviours, but also in their role as proximal processes that promote psychosocial development. Heckhausen and Schulz’s model is attractive because it addresses the relationship between pursuing age-typical goals and life-course achievements. For example, how young people dealt with the demands of finding a job after graduation determined their actual occupational success and their well-being more broadly.

For social scientists such as Elster (2007), mechanisms at the individual level are at the core of their discipline and are indispensable in explanations of societal phenomena. Interestingly enough, this view omits the two other mechanisms (noted above) distinguished by Hedström and Swedberg (1996), which psychologists regard as integral to social science. Clearly, there are many more individual action mechanisms studied by the cognitive psychology tradition than have been used in research on social change. Researchers such as Kahneman (2003) have shown that individuals often do not act according to rational choice; rather, their behaviour is characterized by various biases. One example is ‘hyperbolic discounting’; that is, people prefer smaller, more immediate pay-offs to larger, later pay-offs. This tendency may be triggered by contextual conditions. In the case of the German unification, the East’s aspirations for improvement were high as a result of the West’s higher prosperity. An unintended consequence was that communities accepted higher debts to satisfy expectations quickly. In times of financial crisis, this became a severe liability (Sackmann, 2010).

Psychological research has utilized only a few of the mechanisms that could explain how people deal with the demands of social change. Nonetheless, psychologists interested in families and children are motivated to go beyond the situational emergence of behaviour. Instead, they study ontogenetic implications, in particular, the advantage of mechanisms such as those spelled out in Heckhausen and Schulz’s (1995) model.

The nonexperimental nature of most research on social change probably accounts for much of the divergence between psychology and other social sciences. The result is a discrepancy between the numerous potential mechanisms known from psychological research and the few mechanisms utilized in naturalistic studies on large-scale social change. In contrast, research on decision-making in complex and nontransparent situations often uses abstract scenarios, with experimental manipulation of the conditions. This allows causal interpretations, but is associated with problems of validity and generalization to real behaviour under conditions of social change.

There are few experimental studies that are as explicitly focused on social change as discussed here. One example is randomized control trials to improve parenting and child adjustment by providing employment and income to families suffering from economic hardship, regarded here as a prototypical manifestation of social change’s negative effects. Houston (2005) reported that increased income, but not employment by itself, had an impact on children’s adjustment, measured by factors such as school achievement. The pathways through which the effects were channelled seem different from those examined in previous research. Rather than improved parenting, it was qualitatively better childcare and opportunities for out-of-school experiences, received after the intervention that generated improvements. Such research yields further insight into the processes by which a variety of contextual conditions influence the development of children and adolescents.

Interdisciplinary research on social change in general, and on political transformation in particular, has high relevance for social policy formation. Examples include comparisons of cohorts that indicate different stages in the social change process within a society (Schoon, 2006), comparisons between countries representing different levels of change in political conditions (Kohn, 2010), and longitudinal studies following economic change within a society as it evolves (Chen and Chen, 2010). There are also quasi-experimental comparisons, such as studies on comparisons between East and West Germany (Silbereisen and Youniss, 2001). Together these approaches provide policy indices by identifying social groups that require extra support to cope with the challenges of political transition and globalization.

Prospects for constructive convergence and divergence

Attractive prospects for collaboration between psychologists and social scientists include integrated
research endeavours utilizing a combination of correlational surveys and longitudinal studies, experimental modelling and randomized field trials, all with an explicit policy perspective. Psychologists are receptive to learning more about situational mechanisms at, and transformational mechanisms from, the individual action level. By studying the effects of social change on individual adaptation and development, psychologists address the limited scope of actual social mechanisms studied thus far (Mayntz, 2004). The consequences of individual adaptation to change in societal structures are rarely addressed, except by some community and social psychology research. Wright (2002) found that people are driven to collective action by the perception of disadvantages for their own group and of the weakness of their opponent. Some social institutions’ inherent flexibility may also contribute to their malleability (Macmillan and Biaocchi, 2010).

Beyond a certain universality which is often emphasized in experimental psychology and cognitive science, collaboration with social science will strengthen the understanding of how psychological phenomena are influenced by societal forces, especially during accelerated social change. Kohn (2010) found that changes due to political transformation in people’s position on a social stratification ladder influenced aspects of personality that are often conceived as stable during adulthood, such as intellectual flexibility. A knowledge-based society needs to promote such change. But we know that in one extreme case, the collapse of the Soviet Union and its allies, there was clear continuity across historical time. Those higher up in the social stratification were more intellectually flexible because they enjoyed more complex working conditions, which promoted intellectual development.

The reality that human development is shaped by changing societal constraints requires more interdisciplinary research with the social and also the biological sciences. Broader interdisciplinary collaboration helps by capturing ‘bio-psycho-social’ functioning (Caspi et al., 2003). Champagne and Mashoodh (2009) showed that people sharing a particular allele tolerate life event stress better at the physiological level. This has consequences for outcomes such as depression. Such research marks the beginning of interdisciplinary endeavours to study social change, reminiscent of Gottlieb’s (1991) epigenetic systems view.

Accelerated social change in many societies has brought macro contexts and their cascading effects on individuals’ adaptation to the attention of psychologists. In recent decades, psychological knowledge of the vast effects of broader contexts on behaviour has grown, particularly concerning phenomena such as how people deal with economic hardships and other manifestations of social change (McLoyd, 1998). Nevertheless, a new effort at orchestrating resources to explain pertinent phenomena and inform policy decisions that can facilitate positive adaptation to change is both timely and promising.

Obstacles to cooperative efforts remain. One is compartmentalized funding of research strategies, which offers little encouragement for collaboration across disciplines. Another is the training of the next generation of scientists. Although there have been modest efforts to look beyond disciplinary boundaries, much remains to be done to promote interdisciplinary concepts and methodologies that address social change. The international ‘Pathways to Adulthood’ collaboration (2009) is an exception. This initiative brings together various sociological and psychological research groups, fosters comparative secondary analysis that addresses social change and psychosocial development, and offers postdoctoral fellowships. It is a beacon of hope for a new generation of policy-relevant research that constructively struggles with issues of convergence and divergence (www.pathwaystoadulthood.org).

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Applications of psychology to human health and well-being

Health and well-being are integral components of public policy in most countries. While anchored in values that approach universal acceptance, they also reflect enlightened self-interest. Economists recognize that they are central to economic performance in industrial and knowledge-based economies. Those experiencing social change, for example those who operate in economies in transition, or who experience institutional instability or migration, may be doubly challenged to manage the effects that generate poorer health outcomes.

To advance the World Health Organization (WHO’s) objective of ‘achieving health for all’, the International Union of Psychological Science (IUPsyS) established official relations with WHO to bring science-informed psychological knowledge to targeted WHO programmes and policy development. In the context of health and well-being, social change is a particular concern for established societies undergoing rapid transition as well as those striving for rapid development, including the countries and regions cited in the article above. Drawn from the IUPsyS–WHO collaboration, the challenges of adherence to health interventions generally (WHO, 2003) and of achieving immunization in particular (Carr et al., 2000), illustrate how psychological research supports health and well-being in the midst of social change.

Adherence to treatment is essential for the efficacy of any health intervention. Since 1960 there has been a dramatic increase in new treatments for chronic and acute health problems. Notwithstanding these science-based breakthroughs, a major contemporary challenge is increasing effectiveness by creating conditions that enable people to derive maximum benefits from available treatments. Adherence early in the treatment process enhances long-term maintenance. Psychological science and practice concerning adherence looks at contributing factors which may be systemic, biological, social, cognitive, behavioural or emotional.

Contrary to some popular beliefs, the greatest challenge to achieving immunization today is behavioural – in terms of the initial immunization and the follow-up often required for effective immunization. To address this challenge, IUPsyS collaborated with WHO to produce a behavioural science learning module on immunization (Carr et al., 2000). Saxena (2000) noted that immunization is one of the most cost-effective methods of decreasing mortality, morbidity, disability and the overall burden of disease, making it a public health priority. Drawing on a wide range of psychological and other research focused on changing health behaviour and communication, the module identified factors that determine the effectiveness or failure of immunization interventions. These factors included knowledge (including perceptions and misperceptions), religious and philosophical concerns, socio-economic status, birth order and family size, family mobility, and social and political instability. It is evident that the frameworks for analysis of behaviour mentioned in the accompanying paper by Silbereisen et al. are especially pertinent, especially those of Bronfenbrenner, Elster and Heckhausen. Policy-makers may question the value of such theories or of related psychological and social science research, but when their pertinence is directly applicable to such basic components of health and well-being as immunization, the relevance is immediately obvious. (Rainer K. Silbereisen, Pierre Ritchie and Bruce Overmier)

Psychology applications to human challenges

As the science of the motivation, thinking, and behaviour of individuals or groups, psychology contributes to the resolution of many challenges that humans face in their daily lives. Here we hint at a few such challenges.

The 2008–2009 worldwide economic crisis sprang, inter alia, from badly managed personal economics regarding home-buying, savings and retirement planning. This means that a better understanding of human decision-making in the economic arena is important. From research initiated by the psychologists Kahneman, Slovic and Tversky (1982), we have a better understanding of how people make choices and how heuristics and biases determine them. Their work suggests that classical economics’ description of how people make economic decisions is unnatural for humans and at best incomplete. People are not usually rational in their decisions and choices, as their actions are influenced by a wide variety of ‘default shortcuts’ that are intuitive, automatic, unconscious and associationistic, reflecting impulsivity and discounting future values. Even analytical and conscious human decisions are distorted by a variety of biases, such as risk aversion, loss aversion, status quo preferences, self-esteem needs and altruism (Kahneman, 2003). In cognitive neuroscience (such as Smith et al., 2002), psychologists are actually mapping the operation of these mental biases in the brain using brain imaging.

Modern knowledge of human decision processes can guide public policies on default conditions that favour societal goals, while allowing the individual free choice. Default examples are found on a driver’s licence for organ donation, and on contributing to retirement savings plans (allowing opt out in both cases). This approach, rather than the more common one of the default requiring no contribution but allowing opt in, saves lives and makes them more secure, consistent with contemporary social values in the societies that have adopted them (Johnson and Goldstein, 2003; Madrian and Shea, 2001).
Furthermore, knowing how humans perceive, learn and think can contribute to safety and justice. Attention is one of the issues that cognitive psychology has studied intensively. When attention is focused on some goal object or transactional partner, all other issues are unlikely to be seen or heard. This ‘inattention blindness’ reflects the limitations of human information processing. In many situations, inattention blindness is a hazard. One example of critical importance is for driving behaviour in more urban environments. Cell phone use by both drivers and pedestrians has been of special interest. Psychologists have provided the data that has led governments to ban the use of cell phones, even hands-free ones, while driving because it impairs driving, perhaps as much as being intoxicated (Strayer and Drews, 2007).

Cognitive psychologists are also interested in the teaching and learning of skills. The methods that are best for different forms of learning and for maximizing job transferability and usefulness (Healy and Bourne, 1995) are especially relevant when job training is increasingly carried out in simulators or in virtual reality environments for cost reasons.

Another contemporary area of relevance, especially in respect of justice, is the new understanding of the accuracy of memory and of eyewitness reports of events. Both have been shown to be subject to error. Errors arise from bias and even from information received after the event in question. Indeed, it is possible for clever questioners to create circumstances in which eyewitness memories, descriptions and testimony are proven unintentionally false (Loftus, 2005). Psychologists are developing ways to query eyewitnesses and to conduct eyewitness identifications that minimize such errors (for instance, Wells and Quinlivan, 2009). (Rainer K. Silbereisen, Pierre Ritchie and Bruce Overmier)

**Flash**

**The psychology of sustainability**

Consumerism, the deprecation of natural resources, overpopulation, social inequity and pollution form important human sources of environmental degradation. While seeking solutions to the current environmental dilemma, we must consider variations in human behaviour. In so doing, we can hope to ensure that human lifestyles not only meet the needs of present and future generations but also contribute to the protection of the environment.

Environmental psychology is the branch of science that deals with the study of interactions between human behaviour and the environment, including those whose objective is to preserve our planet’s natural and social resources. It studies the psychological dimensions of sustainability. Research in this field since the late 1960s has provided us with valuable information on the underlying reasons explaining individual support for sustainability, and their wider repercussions. Environmental psychology has demonstrated that sustainable behaviour finds its origins in pro-environmental psychological antecedents, and produces positive psychological consequences.

Sustainable behaviour comprises a series of actions: pro-ecological, altruistic, frugal, equitable … All these forms of behaviour seek to strike a balance between human needs and environmental protection. The psychological antecedents of sustainable behaviour encompass a variety of tendencies or mental states: favourable attitudes; affinity towards social and biological diversity; environmental emotions; pro-ecological beliefs, motives, norms and values; and behavioural capacities such as environmental knowledge, pro-ecological skills and competencies. Physical contexts (weather, access to natural resources, access to technology and so on) as well as normative ones (laws, customs, religion and so on) also play an important role and can be powerful stimulators for sustainable lifestyles. What is more, research in environmental psychology has demonstrated that contacts with nature help in the recovery of exhausted mental capacities, and that the perception of the restorative properties of natural environments determines a significant part of people’s pro-ecological behaviour variance. The promise of a better natural environment is a good incentive for sustainable behaviour.

Sustainable behaviour has a distinctive purpose: achieving people’s well-being in the various spheres of human existence. These spheres include the enjoyment of a healthy and meaningful life and subjective well-being. In other words, ‘happiness’ forms a visible psychological outcome of a sustainable lifestyle. One of the challenges for environmental psychology is to enhance our understanding of the causal relations between pro-ecological behaviours such as frugality, fairness and altruism, and well-being.

The expanding field of environmental psychology will continue to provide valuable information on ways of achieving more sustainable lifestyles, as well as on the benefits that are associated with such a transition.★★

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6.3. Regional variations

Introduction

Trends and innovations across the social science disciplines should also be considered regionally, since research agendas may vary from one area to the other. Craig Calhoun, a privileged observer of social science in North America for many years, gives his view of the recent social science trends in his region. Since it is the most productive in the world and because many observers believe its research agendas have tended to be hegemonic since 1960, this overview might also suggest some elements of the immediate future for the social sciences. U. Kalpagam provides us with a trend report on current social science research in India, a fast-growing producer of social science knowledge. Like Calhoun’s, her insight is individual. But it is informed by years of observation and practice in both anthropology and development economics.

As readers will see, these two views, one from the North and the other from the South, are different and contrasted. Other cases could have been selected (for Japan, see Brisson and Tachikawa in Chapter 5) and should be studied in the future. Obviously, social science research agendas and innovations are not alike everywhere (see also Chapter 2). Recognizing and encouraging their diversity should be an important element of future science policy-making.

North American social science: trends in and beyond disciplines

Craig Calhoun

Summarizing intellectual trends in North American social science is a challenge. All the disciplines are large and internally heterogeneous. All are methodologically diverse. All include sharp critics of the dominant tendencies. Moreover, there are major interdisciplinary fields that both have their own character and shape the participating disciplines. Not least, there has been a major growth in advanced professional training in fields related to social science, and these too exert an influence.

Only a few emerging patterns cut across the various fields, and most involve research methods or analytic strategies. One is increasing formalization and quantification. This is contested and far from universal, but undoubtedly significant. It is partially counterbalanced by strong qualitative research traditions, some of which have become more explicit about methodological issues. Another general pattern is a resurgence of experimental research, not only in psychology – where it has long been central – but in economics and to a lesser extent other disciplines. Closer ties to biomedical science have reshaped parts of a range of disciplines, from neuroeconomics to medical sociology and physical anthropology. Network analysis and the use of techniques drawn from complexity theory have been influential in several fields. Historical social science grew dramatically in and after the 1970s; its growth slowed in the 1990s but seems renewed. Interdisciplinary political economy is enjoying a resurgence boosted by analyses of the current economic crisis.

North American social science is highly international. Researchers from many different countries work at North American universities, and with US and Canadian researchers, study other parts of the world and transnational
Chapter 6

Disciplinary territories

or global phenomena. The extent to which internationally oriented researchers from different disciplines are connected through area studies has declined since the early 1990s, though there are some indications of renewal. Increased attention to India and China reflects both their growing global prominence and substantially increased academic linkages to the USA. At the same time, international studies has itself become a substantial interdisciplinary field with global-scale issues enjoying increased attention. Security is perhaps the most prominent.

Some substantive issues have attracted major attention across the disciplines. Health and health care have surged as themes for North American social science, partly reflecting the availability of funding, partly the problems of the US health care system, and partly the global prominence of issues such as AIDS and other infectious diseases. Life course research is prominent, for example on childhood and ageing. Environmental issues are equally prominent, and the attention paid to them is growing rapidly, though the social science engagement in environmental research is smaller than the public prominence of the issues would suggest. Migration research has seen rapid growth since the early 1990s, influenced both by immigration into the USA and by more global patterns. While this sustains interest in ethnicity and diversity, engagement in ‘multiculturalism’ and ‘identity politics’ has declined from a late-twentieth-century peak. Urban issues command increasing attention as the proportion of the world’s population living in cities expands. There has recently been a significant increase in research on religion and related themes like secularism.

Some trends are new enough that we cannot confidently predict they will take root. Two seem significant enough to mention. Social science is beginning to connect more and more to the field of design, which has grown rapidly in recent years and itself connects architects, product designers, graphic designers and a range of others. The connections are perhaps strongest in anthropology, but also include sociology and other fields. Studies of technological innovation seem to be gaining attention not only in science and technology studies, which has been a relatively compartmentalized and separate field from the main social science disciplines, but also in economics, sociology, anthropology and other fields.

Anthropology

US anthropology has long been shaped by its four major subfields: cultural anthropology, linguistic anthropology, physical anthropology and archaeology. This has been the source of division, not least because some physical anthropology programmes have shifted to biomedical sciences. It has also been the basis for a greater engagement in environmental research than has applied to most other social sciences.

While many anthropologists continue to study small-scale or low-technology societies, the discipline has increased its attention to state-level organization, to smaller populations in large, complex societies (whether classrooms, gangs or clinics), and to questions about postcolonial and global relations, including human rights, cultural survival and media. Particularly active fields include medical anthropology (together with studies of the body, suffering, political economy and the cultural contexts of specific diseases such as AIDS), urban anthropology, with its close links to migration and transnational research, and environmental research, in which archaeologists as well as physical and cultural anthropologists are active. Studies of religion have enjoyed a recent renewal, and studies of science and various other fields of expert practice have become more prominent.

One of the most striking developments is in the ethnography of design. There is a growing demand from the design industry for anthropologists to study the ways in which people use consumer products and inhabit larger-scale designs such as buildings or even bureaucratic systems. Numerous anthropologists are now employed in design; academic research and training are following this trend.

Communication

The field of communication has grown dramatically in recent years. It has incorporated research from several distinct traditions: rhetoric and speech, small-group and interpersonal communication, performance studies, film studies, public relations, political communication, mass media, journalism, and now new media and information technology (IT). It has also overlapped and contributed to the growth of interdisciplinary cultural studies and critical theory.

Journalism remains for the most part a separate professional field, though connections are growing, not least due to new media’s impact on traditional print and broadcast journalism. More generally, communication studies have grown partly because of high student demand and the need to instil the professional skills required by various media industries. There is no single, dominant model for how this emerging field should be organized, so there are examples of communication as a department of social sciences and others of it as a professional school.

Among the big questions in communication research today is the fate of the ’legacy media’ such as newspapers.
The issues include business models, intellectual property regimes, shifting text-based technologies, and the rise of visual media and with them, visual rhetoric. More generally, the field of rhetoric is making a comeback, not just as the pursuit of persuasion but also as the study of situated reason (important in political theory too). Related to each, there is considerable engagement with questions about the organization and vitality of the public sphere, both in democratic societies and on a global scale.

**Economics**

Economics has perhaps the greatest internal agreement about the standing of different sorts of work, and yet researchers differ on theories, empirical methods, and analyses of major events such as the current economic crisis. There are differences within the dominant disciplinary mainstream, and between it and self-identified ‘heterodox’ economists. There is a resurgence of Keynesian analyses in the wake of the financial crisis, and there are those who think this is folly.

Since the late 1970s, American economics has grown larger and somewhat apart from the other social sciences. A basic intellectual theme was rethinking the structure of economic analysis from the ‘micro’ upwards, relying on models of strategic action, rational choice, game theory and individual decision-making. Microfoundations were the key to major advances in mathematical models and formal theory, and came to exert a dominant influence. Macroeconomics languished. While much of disciplinary economics focused on explanatory models grounded in accounts of representative (that is abstract) economic actors, finance grew as a field largely based in business schools rather than in arts and sciences and economics departments. Its focus was partly on the development of predictive models, and also on ‘financial engineering’ or the development of instruments and operations (for example pricing algorithms) to accomplish various kinds of transaction.

Since the 1990s, there has been a growing trend towards empirical studies of economic behaviour. Many of these have focused on limits to the assumptions underpinning formal models. Behavioural economics has addressed the limits of rationality, decision-making with imperfect information, and the role of culture and emotion in economic decisions. There has also been some renewal of institutional economics, with more activity in the wake of the massive market crisis of 2008. This has been linked to increased attention to social and cultural issues. Not least, there is resurgent interest in political economy, growth and development, with economic history informing approaches to each – and possibly some renewal of connections to other social science disciplines.

**Geography**

Satellite-based global information systems are producing a host of new data about the spatial organization of human life. Changing patterns of urbanization and migration are calling attention to the rescaling of social and political life. Climate change is just one of the factors demanding more studies on human–environment interaction. Shifting patterns of globalization call for the renewal of place-specific accounts of resources, shortages and transnational relationships. Prominent issues and new tools are thus converging to bring geography more centre stage than has been typical in the past.

Geography in the USA got its start mainly as physical geography. Cultural and human geography lagged (though less so in Canada). The discipline has long been divided between more ‘scientific-technical’ geographers and those with social science and humanities leanings. Some of the new trends may be reducing that division. In any case, they are bringing geographers into renewed interaction with anthropologists, sociologists and other social scientists. Perhaps the single most active shared endeavour is grasping the implications of massive urbanization, with its juxtapositions of highly planned and professionally designed developments and the ‘spontaneous’ (that is, locally and often illegally planned) slum settlements. Almost as active are closely related questions about multiple and overlapping agencies of power, and the ways in which government and political economy are being rescaled (not so much reduced, as ideology would have it) in the context of neoliberalism.

**History**

Long organized overwhelmingly in terms of period and place, history has in recent years engaged more with cross-cutting thematic issues. These include the impacts of colonialism and the challenges facing postcolonial societies, questions about women’s history, gender construction and sexuality, and the analysis of different cultural forms. Examples range from popular entertainment to elite political culture, and from religion and religious dissent to cultural influences on economic life and constructions of ideas such as nature.

History is linked to all the other social sciences, particularly through the historical subfields that exist in all disciplines. The Social Science History Association is a particular hub for these connections. From the 1960s through to the 1980s, questions of class, state and political economy informed
perhaps the strongest links, along with gender, family and demography. The links to sociology, politics and economics were especially close. While these remain important, connections to anthropology and literary studies have grown stronger. Historians have recently asserted their identity as humanists more than as social scientists, though the field encompasses both.

The teaching of history remains largely organized in national terms, but this approach is increasingly complemented by other viewpoints. World history has become a rapidly growing focus, both through new research on transnational and global patterns and by changes in the syntheses of history for teaching and broader audiences.

Likewise, although the teaching of history in both the USA and Canada has long focused disproportionately on Europe and North America, attention on other parts of the world has expanded in recent years, and historians are even more central to area studies than before. The history of Europe has been rethought as simply one part of a broader world history. Even approaches to national history have become increasingly transnational. US history now puts more emphasis on migration, shifting international contexts, and ideas from abroad.

**Political science**

Political science is organized into four main subfields only loosely integrated with one another. The largest in the USA is American politics. Canadian politics is correspondingly the major field in Canadian political science. In both, case studies of elections, campaigns, political organizations and legislative processes loom large. The academic research emphasis is on the analysis of underlying causal relationships rather than immediate events.

Political theory is largely focused on normative theory, and on the history of political thought. After many debates over the relevant merits of liberal and communitarian perspectives, attention has shifted to questions of rights, including issues of migration, multiculturalism and cosmopolitanism. Democratic theory is enduringly important. Recent years have seen substantial work in the neo-Kantian tradition, renewed engagement with Hannah Arendt, and greater attention to poststructuralist theory. Recently, religion in the public sphere and questions about secularism have also become prominent.

One of the biggest changes in the discipline in recent years has been an analytic turn in comparative politics. This has sharply reduced the participation of political scientists in area studies research and has emphasized formal analytic methods, including game theory and rational choice theory. At the same time, there have been significant debates over the role of culture in politics. Transitions to democracy have been a central focus, but often redefined with attention paid to the efficacy of democratic institutions. An emerging trend is to pay more attention to institutional structures that enable democratic governments to be effective.

International relations is both a subfield of political science and a quasi-autonomous discipline. For many years it has been informed by the dominance of a ‘realist’ perspective that emphasizes the extent to which state interests govern international relations. This has been both contested and complemented, notably by ‘constructivist’ arguments, which emphasize the extent to which state interests are neither purely instrumental nor fixed. Increasingly, simple argument has given way to incorporating both perspectives. The field is engaged with the transformations of international politics post-1989, post-2001 and post-2008. Perhaps the most distinctive trend is an effort to understand the role of religion in international politics. This is a challenge because the field was founded on the idea that, since the 1648 Peace of Westphalia, religion has been a domestic matter and international relations are secular.

**Psychology**

New trends in psychology have pulled academic research increasingly into the domain of natural science. While social and developmental psychology remain active, they are less closely connected to other social sciences. Leading trends in the field (including cognitive studies) have linked to computer models of the mind and to empirical biological studies of the brain as well as to behavioural experiments, psychopharmacology and related studies of the psychological impact of physiological and metabolic factors, and evolutionary research.

Psychology is distinctive partly because experimental research is a dominant methodology. Few other social sciences work largely through experiments, though their role is growing in economics. More formal decision theory and more empirical studies of economic behaviour have built links between economics and psychology. These extend to studies of cognitive and neural processes, which in psychology are pursued using a wide range of non-economic questions.

This academic research trend towards natural science is paralleled by the engagement of many professional psychologists in practical work linked to hospitals and biomedically oriented social service agencies, and by the rise of drug therapies in clinical practice. At the same time,
many psychologists continue to work in education and testing, in clinical and counselling practices not primarily oriented to psychopharmacology, and in fields such as industrial psychology and human resources management. Many research psychologists continue to focus on issues related to these varied contexts as well as on issues like the impact of poverty on children. The very scale of the field allows for enormous internal diversity. Non-academic employment has contributed dramatically to the growth of the discipline. Academic programmes exist to train clinicians, counsellors and other practitioners, and these fields also produce research, some of it more closely related to other social sciences.

**Sociology**

Sociology is among the most internally diverse of the social sciences. In recent years, it has been marked by such contrasting trends as a renewal of ethnographic research and increasing emphasis on complex quantitative methods. It is a sign of the field’s diversity that the American Sociological Association is not organized into a handful of divisions but into some 45 sections with anywhere from less than 300 to more than 1,000 members. Among the largest are crime, law, and deviance, medical sociology, and the sociology of culture, although the size of the subfields does not strongly correlate with their prominence.

Sociology has long been pulled towards both science and professionalization, and towards informing public discussion and direct engagement with social problems. A renewal of ‘public sociology’ has been prominent in recent years, and appears in the emphasis on teaching, reaching broader audiences and informing policy. It is also reflected in the choice of research problems. Many US sociologists have taken up such issues as incarceration, inequality, and sexualities, which are at the root of major social controversies in the USA. Canadian sociologists have historically had strong engagement with social problems and the state delivery of social services. The sociology of health and health care is particularly strong in Canada. Other major issues are clearly of interest in both countries, from migration to the intersection of race, class, and gender, ageing, shifting patterns of urbanization and the impacts of globalization.

Areas of sociology that have been especially active in the recent past include network analysis and formal techniques for the study of social structure, economic sociology (which combines cultural and organizational research in an approach to economic institutions), and, after some years of relative stagnation, political economy. Sociologists are making more links to natural sciences, with research on health and a growing engagement with cognitive science and genetics.

Interest in culture remains high, and overlaps the growing interest in religion and in studies of science, knowledge and technology. Happily, research combining quantitative and qualitative methods is also becoming more common.

**Interdisciplinary fields and connections**

Exciting new work flourishes at the intersections of disciplines – as psychology informed the development of behavioural economics and anthropology informed cultural history, work on religion is now informing international politics. Most of these intersections do not become new fields. However, like historical work in social science, some do achieve enduring intellectual connections supported by publications and associations, albeit without establishing bases in specific university centres.

The most enduringly important interdisciplinary fields in North American social science have addressed area studies. These flourished especially in the post-war era until the 1980s, but then lost some support – ironically amid enthusiasm for globalization after 1989. A renewal seems underway, this time with an emphasis on different definitions of areas, and on issues that connect or cut across areas. The renewal is guided partly by recognition of the complexities of globalization, and the understanding that context-specific knowledge is both more accurate and more practically useful. It is also informed by the decline of US hegemony, the emergence of a new set of global powers with different regional zones of influence, and the question of how multipolar or multilateral relations might develop.

A number of other interdisciplinary fields have also become more important. Among them are demography and population research; studies of gender, race and sexuality (which are disciplinarily cross-cutting); cultural studies (which link the humanities and social sciences), and cognitive science (which links psychologists and other social scientists to neurologists, physiologists, computer scientists and philosophers). Studies of new media, though still underdeveloped, are also growing, and link researchers in anthropology, sociology and communication to those in engineering and computer science.

**Professional schools**

Social scientists are also active in interdisciplinary research and teaching focused on fields of professional practice taught in professional schools, such as business, law, education, social work and different health fields.

Professional schools have accounted for most of the recent growth in US academia. This has changed the circumstances of US social science. Business schools, for example, employ...
economists (focused especially on finance), psychologists, sociologists (focused especially on organizational behaviour) and historians (focused especially on business history) in an interdisciplinary milieu – alongside other fields that draw on social science, including operations research and marketing. Medical anthropology and health economics are prominent in schools of public health; sociology and psychology are important in the training of nurses and teachers; and research on law and economics has become prominent in many leading American law faculties, often supplanting previous links to political science through constitutional law.

Professional schools provide jobs for new Ph.Ds from the social sciences. Likewise, links to professional fields are a source of vitality, new questions and access to new data. But professional fields are organized differently and often draw social scientists into different publishing, research and teaching agendas. This means that intellectual links are weaker than might be wished. Historically, social scientists often kept professional, applied work at arm’s length because they regarded ‘pure science’ as more prestigious. Now professional schools are often moving to develop their own Ph.D. programmes, many of which are substantively focused on social science but are in competition with disciplinary departments.

While this trend is true of both Canada and the USA, it is much sharper in the USA – not least because inequalities among US universities (and among faculties or schools within the same universities) are more pronounced.

**Background resources**

*Annual Reviews*: these are published for most disciplines by Annual Reviews, a non-profit scientific publisher, and provide bibliographical resources for recent trends.

Many disciplines publish relatively general, non-specialist journals; see for example:

- *American Psychologist*
- *Canadian Psychologist*
- *Contexts (sociology)*
- *Perspectives in Economics*
- *Perspectives in Politics*

**Craig Calhoun**

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Images

Images are a new concern for social science, despite the fact that they have been studied for centuries in the humanities. Triggered by the new status of the image in contemporary societies, a whole project of cross-disciplinary studies, sometimes called visual studies, has developed since the late 1980s. Images are both an object and a method of inquiry in this new field of research. Its growth started when art historians and media theorists extended the boundaries of their specialties in order to analyse today's massive production and circulation of images on television, in the entertainment industry and on the internet. Much has yet to be done in this latter subfield. Using semiology, iconology and other techniques and theories, researchers look for analogies and hidden subtexts in the images. The relative concentration or scarcity of the images shown to audiences on the mass media is also a topic of inquiry. Sociologists, psychologists and anthropologists are interested in the ways individuals build their self-images and use images and visual signs to draw social boundaries between themselves and others. Iconoclasm and iconophilia as well as the strategic uses of symbols and images in politics and social movements are among the other emerging topics related to this new interest in the image. Computer games and a whole range of amateur productions of images are also being studied. However, ways of looking critically at images are not taught in most schools and universities.

Instruments of visualization are also becoming direct elements in the process of knowledge production and diffusion, and not merely tools of representation. The visualization techniques of the sciences and the social sciences are being researched more intensively. This raises new epistemological questions. It also implies new questions about cognition and its visual dimension. Brain research is thus part of social science’s ‘iconic turn’. Brain imagery has long been a major tool in the development of the neurosciences. However, only recently have research programmes like neuroaesthetics, which looks for the invariable criteria for beauty or aesthetic pleasure in the human brain, developed at the borders between these sciences and the social sciences.

Research on the image is thus another example of the diminishing divides between the social and natural sciences. Studying images requires both types of sciences to be more aware of their cognitive procedures. Images could thus become interesting loci of self-reflection for the social sciences.

International databases and data archives

International databases and data archives are essential tools for overcoming knowledge divides between different areas of the world, and for opening up the possibilities of international and interdisciplinary research. The collection and the circulation of these data have seen considerable changes since the 1990s. At first, social science data were local or were organized at a national level through censuses and sample surveys of various kinds. The development of international databases and data archives started with economists and political scientists in the 1950s. They developed data on national incomes, the stability of nations and political cultures. The early programmes to create international comparative databases were often supported by international organizations such as the United Nations and the Organisation for Economic Co-operation and Development (OECD). Other examples of such databases were National Election Studies, General Social Surveys, Eurobarometers and Latinobarometros, and the International Social Survey Programme. An International Federation of Data Organizations was created in 1977. The International Association for Social Science Information Service and Technology represents the new professions of data archivist and data librarian.

In the past decades, data with different statistical and technological formats have been made more interoperable. Access has been extended, thanks to the internet. Technological changes have also enabled some researchers to tabulate their data online. The development of global research programmes on the environment and its interactions with demographic, socioeconomic and behavioural changes triggered growth in the number and quality of international social science databases. Data from satellites and geographic information systems have become more widespread and more important for social and natural scientists.

These developments have numerous scientific consequences. Many researchers agree that the recent accumulation and standardization of data are a precondition for developing new and more robust theories in the social sciences in the coming decades. Moreover, globalization requires the development of large-scale and global studies and inquiries. The growth of, and wider access to, international databases and data archives have raised expectations. However, this growth is not going as fast as it should to deal with many complex topics.
Trends in social science research in India in recent times

Umamaheswaran Kalpagam

The post-liberalization period in India (generally noted as the period since 1991) has seen marked shifts in the focus of the country’s social science research. This inference and the following analysis are based on a study of India’s leading social science journals and books of recent times, as well as on the debates between social scientists in the weekly journal Economic and Political Weekly, which is widely considered a leading national social science journal.

The Indian Council of Social Science Research (ICSSR) undertook a review of social science in the country in 2007. My analysis was informed by this review, along with another evaluation of the state of social science in India, this time conducted by a team headed by Partha Chatterjee for the Social Science Research Council (SSRC) (New York) in 2002. The review of the trends that follow is, nevertheless, largely the perspective of an individual who has formed her opinions and views through active engagement in the years she has been a member of the Indian social science community.

Social scientists have reconfigured their domains and objects of analysis, which has led to certain issues moving into the foreground while others seem to have receded. The newly emerged disciplines of development studies, gender studies and urban studies gained vitality even as they became more interdisciplinary, while transdisciplinary awareness grew with the emergence of new fields like social studies of science, human development, and the cognitive and behavioural sciences.

Development economics constitutes a substantial part of development studies, encompassing areas such as development planning and policy, labour economics, environmental economics, rural development and urban economics. Empirical and policy-oriented studies on liberalization and the reform process have moved to centre stage, displacing the earlier focus on planning studies (Nayyar, 2008). This work focuses on regulatory frameworks, macroeconomics, sectoral analysis within a global open-economy framework, and cross-border causes and effects. Management studies have grown in an unprecedented manner, and business economics grapples with the impact of globalization on Indian business. Labour economics has concentrated on informal-sector workers, who account for 93 per cent of the workforce, from a largely policy perspective given the International Labour Organization (ILO) thrust on ‘decent work’ and ‘social protection’ (Oberai and Chadha, 2001). An awareness of the increased vulnerabilities of informal-sector workers due to globalization and the liberalization process has led to informal-sector studies focusing on issues of livelihood security and social protection. Further labour studies have focused on the workers in the new global economy, such as those in the IT sector (Jhabvala, Sudarshan and Unni, 2003).

Environmental economics has received some thrust, with more attention being paid to links between poverty and the environment and to the degradation of common property resources – especially water, land and forests – as well as to appropriate institutional mechanisms to prevent such degradation. The economics of climate change is only now gaining attention.

Perhaps the most remarkable shift in development studies is the focus on social sector development, especially education and health (Dreze and Sen, 2005). Such studies have highlighted the problems of public service delivery by state agents, calling attention to the issues of development governance (Rustagi, 2009). The possibility of public–private stakeholders in the social and physical infrastructure has also received attention. The impetus for studies on social sector development is unarguably the attainment of the UN Millennium Development Goals (MDGs). Inspired by the work of Amartya Sen, food security, nutrition and employment security studies have brought governance, accountability and participation issues to the fore, and development studies are increasingly grappling with issues of rights-based development. Decentralization, democracy and governance issues, which have been highlighted by
was due to protective discrimination policies and caste-based mobilization in electoral politics (Gupta, 2004). A remarkable development was the increase in cultural studies of Dalit (the Untouchable and other low castes), which coincided with the national emergence of Dalit political power. While there have been some initiatives to study Indic religions, they have lagged behind the extent of India’s religious resurgence, probably because social science in India carries a secular image, thus inhibiting social scientists. Cultural anthropology has made great progress in studying marginalized communities, highlighting human development and cultural issues. Anthropology lags, however, in analyzing the cultural dimensions of global change.

Historical studies have been popular as well, with subaltern studies gaining international repute. In recent years, scholars of historical studies have creatively amalgamated subaltern studies with Dalit and cultural studies. Power, hegemony, dominance and resistance remain popular and useful frameworks of analysis in both historical and contemporary social analysis, overshadowing the earlier emphasis on class to some extent.

Research on the nation-state has gained momentum and an analytical focus, perhaps due to the influence of postcolonial studies. This research has highlighted the crisis of secular nationalism; the state’s inclusive and exclusive practices; the attenuated rights of citizens, refugees and those living at the margins; and democracy and elections (Bhargava and Reifeld, 2005; Guha, 2007). While elsewhere in the world, political violence, terrorism and the role of religion in politics have caught the attention of social scientists, especially after 9/11, this is not so in India, although security issues in South Asia have received some attention. Given the frequency of terrorist attacks and the increase in political violence, it is expected that social scientists will soon be compelled to direct their attention to these issues.

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References and background resources


References and background resources

Chapter 6

World Social Science Report


References and background resources


Girl from the Rayerbazar slums of Dhaka, Bangladesh, wins race
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