



Economics in the Social Science Spectrum: Evolution and Overlap with Different Academic Areas

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Abstract Causes for the distinct and growing separation of the academic domains of economics and neighboring fields are ongoing processes of specialization, fragmentation, and evolution. Thanks to the proliferation of publications and knowledge in economics, degrees of specialization have emerged. One of the great paradoxes in economics is the existence of mainstream economics, which is taught to undergraduate students and dominates textbooks, alongside new contributions that enter the arena via other disciplines (e.g., psychology, history, and law). The paper delineates some developments in economics over the last 100 years oscillating between continuity and change. Especially, the interplay between different domains in the social sciences is discussed as fields of tension and cooperation between economics and other disciplines. The message of the article is that economics is not a homogeneous body of being, content, and learning. Economics has a diverse knowledge base on a theoretical and methodological level with different forms of economic capacity, conceptual sensitivity, and methodological rigor. Many different approaches coexist with corresponding camps of authors. A multiplicity of topics and discourses can be observed with an interesting division of economics with one branch focused on mathematics, econometric tools, and applications, and the other branch moving towards increasing social scientification with strong links to psychology, history, philosophy, and sociology. The Oxford credo of politics, philosophy, and economics (PPE) has undergone a revival in this respect.

Keywords Economics · Sociology of Economics · Interdisciplinary Thought · Methodology · Teaching of Economics

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Introduction

Joseph A. Schumpeter, in his *History of Economic Analysis*, posed the question “But is economics a science?” (Schumpeter, 1954) concluded that the answer almost certainly depends on the definition of what is science. Economics is clearly part of the social sciences and differs from the formal or natural sciences for several reasons. However, economics is not, and never has been, a homogenous body with a firm canon of knowledge, methods, paradigmatic world views, or topics. Analogous to other sciences, it is in a permanent dynamic state of flux with earlier positions replaced by newer ones. Additionally, a broad variety of different approaches, theories, and applications of economics exist. Since the beginning of the twentieth century, lessons from the past have not been very informative, nor are there significant prospects for the future because more in-depth discussions about what economics is and what it should become rarely occur.

The question of what the subject of economics encompasses has a long tradition. The oft quoted statement by Jacob Viner, “economics is what economists do” (quoted in Barber, 1997, p. 87), turned full circle when Frank Knight added “and economists are those who do economics” (quoted in Buchanan, 1964, p. 213). The ‘doings’ of economists reveal that the domain of economics is always in transition. Since no clear boundaries exist for the field of economics, current understanding of the discipline is no more advanced than in the days of Viner or Knight. The divisional order of economics is characterized by practice that mirrors the multiplicity of academic production. Of course, the twentieth century was largely a century of evolution and revival for neoclassical economics based upon earlier forms of marginal utility theory. Neoclassical economics was the focus of many decades of research and publishing, dominating textbook knowledge and student education. However, occasionally new forms of doing (and labeling) economics emerged with new applications and assumptions. Economics is a field with contributions oscillating between applied areas (e.g., tourism economics, agricultural economics, industrial economics, financial, economic and social inequality, sports or leisure economics, historical economics, cultural economics, gender economics, or economics of religion) and manifestations or approaches taken from mathematics, philosophy, psychology, engineering, (or medicine and biology, when neuroeconomics is considered). This article builds on these developments, discussing the question of *quo vadis* economics.

The Economy and Society Viewed Academically

History of economic thought can and must be seen through different lenses. The economy and society take place in different settings, yet can be treated as a singular concept when thinking abstractly about the bond between them. When thinking about the economy and society in a more applied way, with concrete

applications specific to different locations and times, the economy and society must be thought of in the plural sense, as economies and societies. Practically speaking, economies differ globally and historically. Theoretical reflections must take those differences into account. An economy never exists in a vacuum but rather in a field of social coordinates determined by space and time as well as in a related framework of culture and other institutions. This is why one of the major theorists in economics and sociology” (Weber [1921], 1972) included the words economy and society in the title of his book, turning it into a kind of manifesto with the economy and society mentioned in the same breath. The “and” then gives us the idea of a peaceful co-existence between the two spheres, which have since evolved to become separate domains of scientific treatment. Following Max Weber ([1921] 1972), Parsons and Smelser (1956) expanded on the topic with the book “Economy and Society”, explaining that these terms became increasingly separated in the early decades of the twentieth century. Causes for the distinct and growing separation of academic domains in the social sciences included ongoing processes of specialization and fragmentation. Thanks to the growth in economics publications and knowledge, which can be separated into management sciences and pure economics, degrees of specialization emerged. The two subjects expanded in both horizontal and vertical directions, giving rise to a wealth of sub-disciplines that were related to specific new universes of discourse with their own research organizations, networks, journals, curricula, career paths, and publication routines. A process of growing academic fragmentation was observed which permanently generated new islands of academic activity and knowledge, through bridges between them were often non-existent or at least invisible. Ultimately, academic development in the twentieth century may be classified as a process of ongoing vulcanization within the landscape of the economic and social sciences (Gulbenkian Commission on the Restructuring of Social Sciences, 1996).

With this ongoing division within economics and the social sciences, individual units became their own worlds in and of themselves. Max Weber (1988, [1919], p. 588) issue discussed this more than 100 years ago in his famous lecture on “Science as an Occupation” when he claimed that individual authors only experience excellence and exclusivity in science when referring to the smallest niches of specialization. In more recent times, individuals are increasingly unaware of the inter-relationships and resonances between disciplines and they “become slaves of their discipline’s approach” (Hunt & Colander, 2011, p. 19).

When discussing the relationship between society and the economy, what undergraduates learn as textbook knowledge at the beginning of their studies is very much a stereotype (Weber, 1990) of the discipline since many different applications and interpretations exist in reality. In fact, no clear lines of demarcation exist between economics and neighboring academic subjects. The topics of economists’ works show that the content of what economists do has shifted and broadened on numerous occasions. For example, the expansion of economics by Becker (1981, 1993, 2010) to cover explanations of family behavior and other fields of human activity (addiction, sports, restaurant visits) has changed and enlarged the terrain of economics (also Herfeld, 2012). It is difficult to clearly define where one academic domain starts and ends as well as where and when another academic domain takes over

clear responsibility. Those examples also come up in the works of Sen, North and Kahneman.

Since no such clear frontiers exist for the social sciences, the task of mapping out territories has remained difficult. Over the last 150 years, academic fields have not only increased in breadth, with new areas and labels, but also internally in depth, with the emergence of new curricula, final degrees, associations, and journals. Over the same period, the number of publications has increased exponentially.

Historically, the emergence of modern economics is closely related to the ascent of neoclassical economics, which evolved from marginal utility theory established in the 1880s and 1890s (Louzek, 2011). Economists attempted to establish a new approach to economics which would be both theoretical and universal. Genuine or pure economics, as Walras ([1874] 1954) described it, was the credo behind a new way of doing economics in imitation of the natural sciences, namely with clear methods and the ambition to arrive at precise laws. The idea was to make the discussion of economic affairs applicable to modern capitalism at a universal level, independent of whether economists were reflecting on the economies of Belarus, Belgium, Bolivia, or Botswana in the eighteenth, nineteenth, twentieth, or twenty-first centuries. In other words, the discussion of economic affairs should apply to economies irrespective of their culture and historical setting.

In order to achieve a higher level of abstraction, the involvement of mathematics was considered essential. One of the originators of marginal utility theory alongside Walras and Menger, Jevons (1871) wrote in the introduction to his seminal book: “It is clear that Economics, if it is to be a science at all, must be a mathematical science” (Jevons, 1871 pg. 3). In fact, economics has become increasingly associated with “mathiness” (Romer, 2015). Several systematic studies describe the historical process of integrating mathematics into economics (McCloskey, 1987; Weintraub, 2002; Morgan, 2012). In an attempt to consolidate the numerous developments within economics in the twentieth century to one common factor, the birth and subsequent development of neoclassical economics was that factor. Economies are generally observed and treated on a universal level as if they existed in a vacuum with no institutions or contextual time–space framework. Pure economics focused on abstractness which was a paradigm for most of the twentieth century (Nelson, 2001).

Economics may have generally increased its coverage in terms of the number of people, topics, journals, and societies involved but has also undergone a major split into pure economics versus business administration and management. It is sometimes difficult to determine where exactly the border runs between those two camps:

“Gradually abandoning the view of society as a functional whole, with its various segments playing an instrumental role, in favor of a conception of society in which they are considered in isolation from each other, social scientists could entertain the belief that the logic of society could be reduced to the working of one of these segments only” (Backhouse & Fontaine, 2010, p. 6).

As previously mentioned, the semantic bracket of the economy and society has a long tradition, but the earlier consolidation of economics, philosophy, behaviorism, history, and sociology has broken up. Over the decades, philosophy lost ground after

economics laid claim to being a positive science based on data, in juxtaposition to a normative science. Sociology was increasingly abandoned by economics, and society became less acknowledged as well. Social institutions and their inherent dynamics, culture, and questions of social stratification as well as the behavior of different social classes were no longer on the agenda. The trappings of history and society were abandoned for abstract theorizing in economics, which increasingly became a kind of mono-discipline without overlap.

Divergencies and Pluralism in Economics

The concept of *homo oeconomicus* was already discussed in the early decades of the twentieth century, partly under the label of heterodox economics (Dorfman, 1949). In order to achieve maximum applicability, neoclassical mainstream economics operated under the assumption of *homo oeconomicus*, a type of actor who is rational and profit-seeking with no allowance for changing preferences or emotional considerations. All human attributes were reduced to an economic calculation of maximization. A further assumption of neoclassical thought is that all actors share the same information: Knowledge in an economy is equally distributed to all members of society. Finally, economies are perceived as being in a state of equilibrium (Hodgson, 1994; 2007).

Of course, each of these three assumptions leads to different forms of discussion and related criticisms. Modern economies cannot be conceptualized adequately if the unequal distribution of knowledge is not taken into consideration, a fact that was centrally addressed by Hayek (1945) in the mid twentieth century. In fact, information asymmetries are driving engines for sources of innovation, new markets, and growth.

One of the great paradoxes in economics is the existence of mainstream economics, which is taught to undergraduate students and dominates textbooks, alongside fresh and provocative new contributions, which enter the arena via other disciplines and become established by public and academic debate, being awarded prestigious prizes in the process. Psychologist Herbert Simon (1982), for example, received a Nobel Memorial Prize in Economic Sciences for his critique of *homo oeconomicus* with his famous concept of bounded rationality (Bögenhold, 2016), which made a major contribution to decision theory. His principle research question was: “How do human beings reason when the conditions for rationality postulated by neoclassical economics are not met?” (Simon, 1989, p. 377). Hodgson (2012, p. 46) identified several Nobel laureates in economics since the 1970s as being very critical of the rational egoistic man concept. The list includes Herbert Simon, Douglass North, Amartya Sen, Daniel Kahneman, and George Akerlof, but the list can be extended to Richard Thaler (1994, 2016) as well. Each of these economists clearly rejected the idea of rational behavior as taken for granted in previous decades.

According to psychologist and economist Kahneman (2012), social action must be interpreted as a choice between alternatives (Kahneman and Tversky, 2013). Therefore, social action is difficult to predict since human beings often act intuitively and are driven by emotions:

“The central characteristic of agents is not that they reason poorly but that they act intuitively. And the behavior of these agents is not guided by what they are able to compute but what they happen to see at a given moment” (Kahneman, 2003, p. 1469). Douglass North (1990) (Nobel laureate in institutional with economics), in a chapter on behavioral assumptions in a theory of institutions argued:

“Although I know of very few economists who really believe that the behavioral assumptions of economics accurately reflect human behavior, they do (mostly) believe that such assumptions are useful for building models of market behavior in economics More controversial (and less understood) among the behavioral assumptions, usually, is the implicit one that the actors possess cognitive systems that provide true models of the worlds about which they make choices ... ” (North, 1990, p. 17).

It was increasingly argued that economics must express interest in openness to behavioral and cognitive approaches (Akerlof, 2007; Akerlof & Kranton, 2000; Akerlof & Shiller, 2009) in order to map economic phenomena and their developments more realistically, which was a credo of new economics. Behavioral economics can be ‘done’ at different levels, either at the level of individual actors or groups and their ways of decision making, or at a macro cultural level, involving animal spirits as first discussed by Keynes ([1936] 1964, p. 161) and later more broadly by Akerlof and Shiller (2009). The concept of animal spirits refers to a kind of spontaneous optimism or pessimism toward evaluation of future developments and whether to make investments or purchases. It is clear when referring to these terms that economics derives its perspectives from different academic domains and tool boxes.

These shifts toward increasing acknowledgement of motivation in macroeconomics are not only connected with an emphasis on behavioral aspects, but also with the need to consider sociological competencies:

“Sociology has a further concept that gives an easy and natural way to add those norms to the utility function. Sociologists say that people have an ideal for how they should or should not behave. Furthermore, that ideal is often conceptualized in terms of the behavior of someone they know, or some exemplar whom they do not know” (Akerlof, 2007, p. 10).

Especially the social context seen by Akerlof (2007) provides a frame work for social action and learning processes. Finally, religion is also considered a tool to socialize an individual’s economic behavior: “Sociology is dense in examples of people’s views as to how they and others should behave, their joy when they live up to those standards, and their discomfort and reactions when they fail to do so” (Akerlof, 2007, p. 10). Acknowledging sociology helps economists to understand consumption processes, including consumers’ inherent preferences for choices, which are sometimes hidden, but almost always in contrast to those abstract utility functions used in economics. In other words, “sociology gives motivations for consumption that are very different from the reasons for it in the life-cycle model” (Akerlof, 2007, p. 15).

It is noteworthy that Nobel laureate Akerlof not only referred to the relevance of social norms, but also to sociology as a pertinent academic discipline in general to deal adequately with social behavior. Here, one sees the opposite of Nobel laureate Becker's imperialism, which tries to operationalize behavior and every form of social activity into categories of maximization utility. Akerlof (2007) discussed sociologists Goffman and Bourdieu as if no border existed between economics and sociology.

Examining different topics reveals considerable thematic analogies in neighboring disciplines which should be analysed and explored in order to understand how the contours and borders of the academic landscapes are changing and in which directions developments are evolving (Rosenberg, 2018). It is interesting to see the overlaps between individual subjects. Historian Robert William Fogel (1994), was awarded a Nobel Prize in economics (in the year 1993) for his work on economics and social history. Three psychologists also received the Nobel Prize in economics (Simon in 1978; Kahneman (in 2002; Thaler (in 2017) for establishing and expanding behavioral economics. Definitions of what economics is not only arise from the inside but are also proposed from the outside, namely by prestigious committees and their authority. This further underlines the blurred boundaries between these disciplines. Scientific progress is often contingent and never rational, in the sense that it follows arithmetic rules of combinations. The market for ideas is neither efficient nor perfect.

Decoupling Economics and History

In order to enhance the universal applicability and theoretical depth of economic theories, economics had to strengthen its abstractness and reduce concrete links to specific times and spaces (Schumpeter, 1926). The solution was to discuss the economy *in abstracto* rather than *in concreto* and to construct clean and proper models of the functioning of a capitalist economy. The twentieth century made substantial progress in elaborating and consolidating a new foundation for economics, mostly as a neo-classical conception, which is still, for the most part, textbook knowledge. Much of this new style and form of economics can be studied by focusing on the cosmos of Chicago economics which included much of the twentieth century state of economics (Emmett, 2010). In parallel, different applications multiplied, from household economics to agricultural or industrial economics, welfare economics, public choice theory, sports or transportation economics, broadening the terrain of economics. The conclusion to draw may be that economists have entered *The Age of the Applied Economist* (Backhouse & Cherrier, 2017) at the same time as elegant theoretical reasoning is in the process of losing its former historical nexus and foundation. In other words, a tricky situation exists in economics which shows increased specialization, abstractness, and mathiness on one hand, and ongoing tendencies toward processes of an increased pluralization of economics (Hodgson et al., 1992; Schabas, 1992; Davis, 2016) on the other.

The more complex economics became, the smaller was the real terrain of neo-classical theory, although the general image of economics, especially when looking at it from the outside, still retains the dominance of neoclassical orthodoxy.

However, mainstream economics is also, fragmented and ever changing (Cedrini & Fontana, 2018). The twenty-first century looks back on this scientific period of development, differentiation, and consolidation as a feature of the twentieth century. The link which was formerly maintained by economics and other domains in the social sciences, especially to philosophy, was exchanged for new links to econometrics and mathematics (Chichilnisky, 2017). In other words, economics started to forget history (Hodgson, 2001).

Historical analyses and observations fall into at least two different categories. One area is concerned with the history of economic thought as academic discussion of the scientific evolution of and change in economics, the other area is concerned with (material) social and economic history, which means trying to analyse patterns of real historical change in the economy and society. The *Cliometric Society* examines such circumstances using history as a crucible to examine economic theory in order to deepen knowledge of how, why, and when economic change occurs (Hauptert, 2016, p. 4).

Goldin (1995) discussed the relevance of both Nobel recipients Fogel and North, underlining the importance of their work for economics:

“What is it then that makes economic historians, such as Robert Fogel and Douglass North, unique among economists? It is not that they study the past, use historical data, exploit the past for natural experiments, use a particular methodology, are open to the ideas from other disciplines, or find lessons in the past for developing countries. Rather, it is all of these plus one indispensable ingredient. Economic historians study economies over the long term. The evolution of economies is their particular niche” (Goldin, 1995, p. 207) (see also Hodgson, 2017 for a discussion of North).

What Boulding (1971) reported more than 50 years ago, namely that graduates at the time rarely read literature which was more than 10 years old, is still true (Roncaglia, 2014). The half-life knowledge of publications is getting increasingly shorter. The number of publications on the history of economics thought has also been declining compared to the total number of publications in economics. A large body of these publications are concentrated in just five highly specialized journals (Marcuzzo & Zacchia, 2016, p. 36). Ideas have their own history. Telling the story of an idea's development is internal or absolutist history (Emmett, 2003, p. 533).

Kurz (2016) indicated that not only is it important to remember that the huge changes in the economy over the last few centuries have also changed our view of the economy and society (Kurz, 2016, p. 3), but that the history of economic thought is also changing. Each generation writes its own history, new knowledge is created, and each generation is “keen not only on being original but on being perceived as such. But each generation also searches for meaningful progenitors so it can share in their renown and brilliance” (Kurz, 2016, p. 2).

Along with their corresponding times and spaces, cultures bring with them different considerations of individual rationality. Culture can be seen as an analytical variable that is indicative of different constellations of norms and corresponding behavior (North, 1990, 1991; Jones, 2006). Accordingly, culture operates as a framework of and for behavior and is a factor that represents real (as opposed to abstract) economies

and societies. Assuming this to be true, then one conclusion must be that not merely sociology but also historical science is vitally important for the adequate examination of socioeconomic processes. Economic historians consistently stress the tremendous importance of cultural factors in economic growth (Cochran, 1960) and from this conclude that the “really fundamental problems of economic growth are non-economic” (Buchanan & Ellis, 1955, p. 405).

The role of gender has also been increasingly encountered as an important research topic in economics (Becchio, 2019; Goldin, 1992, 2021; Naz & Bögenhold, 2020; Sevilla, 2020; 2020) which explores social and economic diversity rather than just operating with the axiom of an (a male) agent. Another method of practising economics is by integrating developmental perspectives, such as globalization (Stiglitz, 2002, 2006; Milanovic, 2016, 2019; Rodrik, 2011) and human capabilities in combination with ethics and inequalities (Sen, 1987, 1992). Choosing a topic is already a specific heterodox way of doing economics. Poor economics (Banerjee & Dufo, 2011) specifying and addressing social and geographical groups, strata, and regions in the world dealing with poverty, shows that economics has (and must have) different lenses if it is seeking *in concreto* problems and solutions rather than *in abstracto* discussion. It is interesting that the highly cited book by Piketty (2014), *Capital in the 21st Century*, which focuses on wealth and income inequalities since the early twentieth century, has inspired many economic conferences worldwide to adopt social and economic inequalities as a general conference theme.

Conclusion

Mainstream economics is fragmented and ever changing (Cedrini & Fontana, 2018). Former links between economics and other domains of social science, especially philosophy, were exchanged for new links to econometrics and mathematics. Mainstream economics became increasingly associated with abstractness and formalism, which went hand in hand with the history of economic thought being increasingly forgotten. One of the main take-aways here is that, most recently, many substantial concepts from psychology, history, and sociology have been adopted by economists and incorporated into their body of knowledge without being fully informed by the original sources. This transfer of ideas could be seen negatively or, positively as new interdisciplinary domains and synergies emerge. From the perspective of philosophical economics, one can speak of an ongoing social scientification of economics (Bögenhold, 2018), which is increasingly incorporating ideas brought forth by neighboring social science disciplines. In addition, increasing complexities in parallel with digitalization are creating completely new zones of scientific interaction, which raise new questions on the relationship between economics and engineering (Mariotti, 2021, 2022) and require a rethinking of the academic landscape and its subdivisions. The social sciences can be regarded as an orchestra with different instruments and roles. Psychology, history, and sociology can certainly play a crucial part in that orchestra.

Following Akerlof's (2020) argumentation, economists should be much more liberal and tolerant and much less rigid regarding the correct way of doing economics.

Too often these ways have changed. Too random is that matter which is just at the forefront of the truth and power of definition. Too visible are the shortcomings and misconceptions in economics that show, time and again, that economics is far from being a hard science like physics. Akerlof writes:

“The norms regarding how economics should be done should call for flexibility of methodology—instead of insistence on methodological purity that might be perfect for some important problems, but leaves other problems and other approaches outside the domain of economic research. Historically, those paradigms—norms for how economic research should be done, and also for what constitutes ‘economic research’—have developed out of an evolutionary process” (Akerlof, 2020, p. 416).

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