

FOCUS ON ECONOMIC SOCIOLOGY

Theory, Reality, and Performativity in Markets

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ABSTRACT. The purpose of this article is to analyze the relation between scientific knowledge in the form of theories and the world that such theories are about. The focus is on market theories. I argue that everyday knowledge, conceptualized using the notion of “life-world,” is the bedrock of scientific knowledge. I also make two distinctions, one between types of markets and one between principles of order in markets. There are two different types of markets, fixed-role markets and switch-role markets, and no existing theory can be used to explain both of them. In fixed-role markets, such as a producer market of garments, actors are identified as either sellers or buyers. In switch-role markets, such as the stock exchange market or currency market, actors are not identified with one role. The other distinction is between standard and status markets. In a status market, order is maintained because the identities of actors on both sides of the market are ranked according to status, which is a more entrenched social construction than the commodity traded in the market. In a market characterized by standards, the situation is reversed: the commodity is a more entrenched social construction than the social status of actors in the market. These distinctions are the backdrop of my analysis of the idea that markets are performed. It is concluded that

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the performativity approach is useful today for analyzing switch-role markets. A further conclusion is that neoclassical economic theory can be used in understanding switch-role markets, but not fixed-role markets.

I

Introduction

THE PURPOSE OF THIS ARTICLE is to analyze the relation between theories and the world that such theories are about. More specifically, I analyze the relation between market theories and markets. My aim is to discuss this issue, which is triggered by the ongoing discussion on performativity that focuses on Michel Callon's economic sociological works (e.g., 1998, 1999, 2005; Barry and Slater 2000a, 2000b, 2005; Miller 2002; Fine 2003). Callon's argument is that the economy is essentially a construction based on pure neoclassical market theory, and I discuss to which extent economic theories are used as blueprints for implementing certain market structures in the economy.

The relationship between theoretical knowledge and the actual world is highly relevant, not least today, when greater proportions of people go to university to learn about theories and knowledge generated by social scientists. What is the consequence of educated people entering the real world and implementing these theories as project consultants, in everyday business, and so on? The empirical consequences reach further than the scope of this article. I restrict my analysis to the relation between reality and theories of reality, which also is of fundamental importance for empirical research.

This article begins with a discussion of the phenomenological tradition in which the relation between scientific theories and the world has been analyzed. Then I briefly discuss what a market is. I make two distinctions. I begin by outlining two types of markets called *fixed-role markets*, that is, markets in which economic actors are identified as either a seller or a buyer (a "permanent" role), such as the final consumer markets for garments or the market for undertakers, and *switch-role markets*, in which economic actors shift roles between seller and buyer, which is the case in the stock exchange market and in a car boot sale, where the partakers both buy and sell. This is an

empirically observable distinction between markets based on social structure that enables us to better understand the relation between theories of the world and the world. The other distinction is between standard and status markets. In a status market, order is maintained because the identities of actors on both sides of the market are ranked according to status, which is a more entrenched (stable) social construction than the commodity traded in the market. In a market characterized by standards, the situation is reversed: the commodity is a more entrenched social construction than the rankings of actors in the market. These two distinctions clarify the possibilities and shortcomings of Michel Callon's performativity approach, which I then turn to. The article ends with a summary of the findings.

II

Double Hermeneutics and Back

AS SOCIAL SCIENTISTS, we develop theories to account for and explain the complexity of our subject matter, the social world. Theories imply, by necessity, abstraction; a theory that is of the same scale as reality would be useless. Further, economic theories aim at giving an efficient and useful account of the world they are of; what we call the economy.

How can we understand the relation between economic theory and economic life? The philosopher Nelson Goodman claims that we should not make the traditional distinction between an "independent world" and the theories of this world. Instead, he suggests that:

the forms and the laws in our worlds do not lie there ready-made to be discovered but are imposed by world-versions we contrive—in the sciences, the arts, perception, and everyday practice . . . The arts and sciences are no more mirrors held up to nature than nature is a mirror held up to the arts and sciences. (1984: 21)

This argument means that the stuff of the world is as created as the theories accounting for the "world" made by humans to cope with the environment (cf. Goodman 1984: 34).

The relation between ordinary life and scientific theories was analyzed by the philosopher Edmund Husserl in a text from 1936, *The Crisis of European Sciences and Transcendental Phenomenology*

([1954] 1970). This idea was later taken up by Heidegger and Gadamer. Husserl ([1954] 1970: 379–383) discusses the relationship between scientific theories and what he calls the “lifeworld.” The lifeworld is the world in which human beings are born, which we internalize in the process of socialization. Husserl defines it as “the world in which we are always already living and which furnishes the ground for all cognitive performance and all scientific determination” ([1948] 1973: 41). According to another phenomenologist, Alfred Schütz, the researcher should start with the lifeworld, where the person acts within the natural attitude, and that the actor takes for granted (Schütz [1966] 1975: 5, 51). The lifeworld is treated as empirically existing by Schütz (Costelloe 1996: 249–250). In other words, actors’, including researchers’, meanings are based on their experiences as “inhabitants” of the lifeworld. Knowledge is also part of the lifeworld, and knowledge—both scientific and everyday knowledge—can, for example, be stored in language. The lifeworld-knowledge is a precondition for the knowledge that scientific theories represent. In other words, scientific concepts, hypotheses, and assumptions are grounded in everyday life (cf. Duhem [1914] 1954).

Scientific theories can be virtually meaningless if they become detached from people’s everyday lives. Thus, the meaning foundation of theories may be lost (cf. Ströker 1997: 303), which is to say that although they may be expressed systematically, they are not empirically valid (cf. Quine 1981: 31) or they fail to connect to the meanings of real people. Several economic anthropologists and sociologists who want to add “flesh and blood” to economic man (cf. Bourdieu 2005) have made this point.

Husserl argues that scientific theories gradually become taken for granted and in this sense become part of the lifeworld.¹ Giddens, who draws on the phenomenological tradition, talks of the “double hermeneutic” (1984: 32–33; cf. Luhmann [1984] 1995: 18). This concept also refers to how scientific knowledge becomes part of everyday life. When people start to make use of this knowledge, it may lead to changes in society. Giddens says, in a text analyzing economic theories, that “theories, concepts and findings of social science, or versions of them, are routinely drawn back into the social environments they analyze” (1987: 197). This is a fact that is unique to social science and

that separates it from natural science. In concrete terms: ants do not read human-made theories about their behavior and, consequently, do not behave differently because of these theories. People, in contrast, have reflexive capacity, which includes reflecting and changing their behavior if there are reasons for changing. Theoretical knowledge is one reason out of many for changing behavior.²

This discussion suggests that one cannot talk of a pure prescientific world (Ströker 1997: 304). Social science knowledge, then, is part of the world. This idea finds support in the following quotation from Pierre Bourdieu:

[M]ethods (economic accountancy, for example) or concepts (such as the notions of interest, investment or capital) which are the historical product of capitalism and which include a radical transformation of their object, [are related] to the historical transformation from which they arose. (1980/1990: 113)

A further consequence, discussed by Giddens (1987: 197), is that theories can become what Merton called self-fulfilling prophecies. The economic rational expectation theory is seen by Giddens as intimately linked to the world: “The predictability of economic phenomena, like other social phenomena more generally, is in substantial part ‘made to happen’ via the knowledgeability of its constituent actors” (1987: 200–201). In other words, the knowledge that actors possess, which to a large extent can be scientific or derived thereof, makes reality become more like the theory. This effect is especially likely if many people orient their behavior to one specific theory.

Consequently, agents who can use the same theory as the state may counteract the state’s interventions in the economy since they also know the goal of the state and the toolkit that it can use. Giddens makes this point when he talks about the possibilities of Keynesianism, which, he says, “can only be effective in circumstances in which the majority of the population, or certain key sets of business actors, do not know what Keynesianism is” (1987: 201; cf. MacKenzie 2004: 306).

This short discussion proposes that scientific theories are built on a nonscientific foundation. It also suggests that the knowledge generated by the different sciences and stored in scientific theories can become part of the lifeworld. In the next section, I will continue to

discuss if and how market theories may affect and eventually construct what we call reality.

III

Markets

MARKETS ARE TRADITIONALLY SEEN as a field studied by economists.³ Economists focus on the price mechanism of markets. It is clear nonetheless that new economic sociology, here viewed broadly enough to include anthropological studies, has generated studies that give a good description of real markets (e.g., Swedberg 1994, 2004; Lie 1997; Aspens 2005b). Sociologists and anthropologists have said less on prices but more on social structure, culture, and institutional conditions for markets.

I argue that there are two types of markets, switch-role markets and fixed-role markets (Aspens 2005b). This distinction refers to difference in social structure. The other distinction, between status and standard markets, refers to market orders. My point is that these empirically grounded distinctions have far-reaching implications for how we should view the relation between market theories and the world. I also claim that markets are so different that we need different theories of them.

A market, to provide a minimal definition, is:

a social structure for exchange of rights, which enables people, firms and products to be evaluated and priced. This means that at least three actors are needed for a market to exist; at least one actor, on the one side of the market, who is aware of at least two actors on the other side whose offers can be evaluated in relation to each other. (cf. Aspens 2005b: 427)

Thus, rights, either formal or informal, are exchanged in a market, and prices are means for economic evaluation of the at least two competing items offered. A premise is that the actors are independent.⁴ To fully capture markets, we need to include culture, values, and so on.

Let me first clarify the distinction between switch- and fixed-role markets. This separates markets according to different social structure or, more concretely, according to different ways of identification with social roles over time (and not according to calculability, interest, or

different values).⁵ In switch-role markets, economic actors, individuals and firms, do not hold permanent roles as buyers or sellers. Instead, actors may switch roles so that one is first a buyer and later a seller of the same or another item. Swap meetings, financial markets, currency markets, and stock exchange markets are examples of switch-role markets, in which actors switch roles and appear on both sides of the market interface (for example, operate as buyer of a stock in the morning and as seller of the same stock in the afternoon). Markets for futures of metals and other rights, which can be exchanged many times before the contract is due to expire, also are instances of switch-role markets. The market for pollution rights is another example of this kind of market.

The crucial notions are identity and role. Actors in switch-role markets are not identified with any side of the market. An actor in a stock exchange market, for example, has an identity as trader, agent, dealer, and so on, but not an identity as seller or buyer (cf. Smith 1981). The neoclassical theory of markets, to be further discussed below, is a theory of the switch-role type of markets.

Most real markets, such as the market for garments, cars, computers, or accounting are not switch-role markets but fixed-role markets (Aspers 2005a). This means that the market identity of an actor is fixed (tied) to only one side of the market (producer/seller or consumer/buyer).⁶ Thus, car manufacturers (such as Ford or BMW) have identities (White 1992; Cerulo 1997)—a theoretical notion that covers the economic idea of brand names—as producers of cars. These roles are fixed to production and firms are identified as sellers (and producers) in the consumer market, which means that they do not also operate as consumers (buyers) of cars.⁷

I will now make another distinction, one between status and standard markets (Aspers 2005c). This distinction has to do with the order of the market and the evaluation of the items traded in it. In status markets, it is not possible to adjudicate quality independently of the actors who trade, which means that it matters who the partakers in a market are. It is known from art and aesthetic markets (e.g., Aspers 2005a; Velthuis 2005; Plattner 2000) that the value of products is set when the buyers and sellers come together, and that that depends on who the actors are. Fashion consumer markets are

Figure 1

A Typology of Markets: Kinds of Markets, Given Fixed and Switch Roles and Standard and Status

Typology of Markets	<i>Fixed role</i>	<i>Switch role</i>
<i>Standard</i>	Flower growers	Stock exchange
<i>Status</i>	Consumer market for garments	The bazaar

organized in the same way. This kind of market is made up of ideal-type consumers and sellers of differentiated products who have identities in relation to each other. Actors on both sides are ordered according to status; some have more than others do.

Status can also be the ordering principle when actors have the same role. Geertz describes how status is crucial in bazaars or *pasars* (Geertz 1963). The participants in these markets are traders, so they switch between being sellers and buyers. Moreover, they trade with all kinds of products. Their identities must be understood in relation to their status as traders.

In a standard market, products are measures according to a standard that, for example, can be entrenched in material conditions or in a contract. The standard means that there is no longer a connection between the actors and the items traded. The item “is what it is,” and who has produced or delivered it to the market does not matter as long as it is according to the standard. Although the stock exchange is the paradigmatic example, the flower market in Aalsmeer in the Netherlands also exemplifies this kind of market.⁸ The difference between the two is that stock exchange market actors switch roles between seller and buyer and the flower market actors do not.

The discussion so far indicates that there are different kinds of markets, and Figure 1 outlines them.

These distinctions, as well as the more fundamental idea of knowledge based in the lifeworld, will be used to analyze a recent

contribution to the economic sociology literature, Michel Callon's idea of performativity.

IV

Performativity

THE APPROACH DEVELOPED BY Bruno Latour and Michel Callon for the sociology of science studies, called Actor-Network-Theory, also has been used by Callon to study the economy. The notion of performativity refers to the interplay between theories of the economy and the economy ("reality"). Callon says that his position "consists in maintaining that economics, in the broad sense of the term, performs, shapes and formats the economy, rather than observing how it functions" (1998: 2).⁹

Performativity, according to Callon, means that economic actors, much like scientists who develop theories of the world, use these theories when interacting with the world, thereby shaping it according to their theories. In this way, they perform the economy, making the real economy more like the theories of it. Callon argues: "[The] economy is embedded not in society but in economics" (1998: 30). He also stresses the role of economics in explaining how the economy performs (Callon, in Barry and Slater 2002b: 286). A key idea of Callon's is that the economy is produced in relation to increased codified economic knowledge. This knowledge includes neoclassical theory, as well as accounting techniques and marketing (Callon 1998: 28). Neoclassical theory has a special place in the discussion on performativity, although economics at large is the main issue (cf. Callon 2005: 9, 11).¹⁰

Given this position, it is logical that Callon states: "Yes, *homo economicus* does exist, but is not an a-historical reality; he does not describe the hidden nature of the human being. He is the result of a process of configuration" (1998: 22). Only in relation to the set of tools and knowledge that has been added by human production is it possible to understand *homo economicus*; he is not born with those capacities.

How can the idea of performativity be controlled and evaluated? That is, how can one know if the economy is performed or not?

MacKenzie (2004) suggests that Callonian performativity can be evaluated according to the Popperian principle of verisimilitude. Scientist can study if there is an increased fit over time between the model and what the model is about because of the introduction of the model.

It follows from Callon's approach that social researchers should study the economic profession, since this profession has produced the knowledge that agents use when they perform the economy (Callon 1998: 30). Sociological studies, he says, should generate "not a more complex *homo economicus* but the comprehension of his simplicity and poverty" (Callon 1998: 50). Callon is clearly critical of economic sociological attempts to either enrich or replace *homo economicus*. Instead, we should study how he comes about. However, the literature and the debates on the relation between theory and the world that I refer to above have not been mentioned in the discussions of Callon's approach.

V

Performing Markets

CALLON, THEN, ARGUES THAT the sociological focus should be on economics, which today is largely identical with neoclassical theory. To make it simple, Callon claims that markets should be understood as consequences of theories, whereas most economic sociologists say that the theories must also reflect the variety of real markets.¹¹

What implications do my distinctions have for Callon's argument? They suggest that Callon can be correct in saying that markets can be performed using the neoclassical price mechanism as a paradigm.¹² Thus, in switch-role markets with standard products, it is particularly likely that the market and the economy are quite similar.¹³ Why this is the case will be discussed in the next section.

A correlated point is that the neoclassical price equilibrium theory is the best theory when it comes to explaining what goes on in some real markets, and that Harrison White's approach is the best we have for other markets. To be concrete: "economics" has essentially developed a price theory of switch-role markets, whereas the theories developed in new economic sociology are about fixed-role markets. What Callon has suggested that I see as important is how the price

mechanism can be used also in markets where you have fixed roles, such as growers of flowers who sell them to buyers who will resell them to others or directly to consumers. Thus markets can be *performed*, either directly by market actors themselves or indirectly through the state or any other “political” organ.

I argue, however, that in most markets neither neoclassical economic theory nor any other theory is performed.¹⁴ It is likely, instead, that the approach that White has developed to study modern production markets is a good account of what goes on in many these markets. But White’s theory is not in the business school curriculums. This means that White’s theory will not be performed.

It follows that Callon is likely to be wrong when he says that we should study economics to understand the economy. The reason is that many—I would say the bulk of—markets do not “behave” as the neoclassical model predicts. They should be seen as another “species,” as White says (1992). In other words, most fixed-role markets are not mirroring neoclassical theory. In these markets, such as fashion garment markets, actors have learned the basics of neoclassical economics but do not perform this theory in reality. They instead have learned the tricks of the trade, and are, I claim, more likely to operate according to White’s theory.¹⁵ What I think Callon wants to say is that we should pay attention to how economic theories are used in “political” struggles to shape reality.

It is possible to create markets that operate as the neoclassical model. The most important condition is that the product is standardized. Standardization can be created by political force. But it is not a natural equilibrium. A firm is more likely to make money if it can create a restricted market, either by differentiating its product (for example, by patent) or by creating a value based on status (differentiation between market actors).

VI

Practice, Theory, and Performativity

I MADE THE CLAIM ABOVE that Callon has a good point regarding at least some switch-role markets. I argue that it is not surprising that many markets function according to the predictions of the neoclassical

theory as outlined by Callon. In fact, a different result would be a surprise. Why? Early economists, who developed the market theory that still is the starting point for most economists and sociologists who try to understand markets, did not “invent” the market theory that Callon refers to; they developed it in close relation to real markets. Both Marshall and Walras developed their theories in relation to the real economy. Marshall developed his version of the theory by combining deduction and induction (Aspers 1999). Walras developed his market theory in relation to actually existing markets (cf. Kregel 1998).¹⁶ He had analyzed and, above all, experienced the real economy long before he turned to economics. This experience, according to Jaffé’s foreword to Walras’s *Elements*, comes from his many jobs as “a journalist, a clerk in a railway office, a managing director of a Bank for co-operatives, a newspaper editor, a public lecturer, and a bank employee” (1954: 6). It is then not a surprise that Walras ([1926] 1954: 58–59) stresses the interdependency of theory and practice, or “science,” and “applied science” or “art,” as he calls them.¹⁷

What, then, is the empirical reference point of Walras’s market theory? The following quotation indicates an answer:

The markets which are best organized from the competitive standpoint are those in which purchases and sales are made by auction, through the instrumentality of stockbrokers, commercial brokers or criers acting as agents who centralize transactions in such a way that the terms of every exchange are openly announced and an opportunity is given to sellers to lower their prices and to buyers to raise their bids. This is the way business is done in the stock exchange, commercial markets, grain markets, fish markets, etc. (Walras [1926] 1954: 83–84)

But how did Walras, who Schumpeter regarded as the “the greatest of all economists” at least “as far as pure theory is concerned” (1954] 1981: 827), come up with a theory? Walras has a straightforward suggestion to understand markets and competition in organized markets: “Let us go into the stock exchange of a large investment centre like Paris or London” (Walras [1926] 1954: 84). He did not invent a theory that later was performed; in fact, Walras modeled his theory on the real economy, more specifically on a particular market, the Paris Bourse. This means, as Van Daal and Jolink say, that “Walras’ models not only bear resemblance to the actual exchange mechanism

at a stock exchange, but are, in fact, modeled to reflect this mechanism" (1993: 110). Consequently, Walras built his theory of ideal relations based on "real-type" concepts, in other words, those based on experience (Van Daal and Jolink 1993: 110–111). In this case, and I think it is a telling example, economics mirrors economic practice, rather than the other way around. This suggests that even though markets obviously are social constructions, they may not be performed; it is often better to say that some markets are modeled on other markets.

VII

Conclusion

THE POINTS MADE HERE ultimately aim at developing economic sociology, and especially our understanding of markets. Callon's work certainly has contributed to the field of economic sociology. My critical comments should be seen in this general light.

It is my view that to understand the relation between theory and the world, a distinction that we make for pragmatic reasons, we should draw from the tradition of phenomenology. I have argued that theories are part of the world. The discussion of lifeworld, however, makes it clear that theories can be related to "the world" in many different ways.

This article addresses the relation between theories of markets and empirical markets. Some markets correspond to the model of the market presented by neoclassical theory. This does not imply that these theories are performed. I have shown that the causal order is more complicated than Callon suggests. To make my argument I have referred to the phenomenological tradition, the history of economics, and contemporary economic sociology. My conclusion is that Callon's approach is more restricted than some of his supporters claim: it can be used to analyze the political process of creating the neoclassical price mechanism, since the neoclassical approach lacks a broader theory of the market (which would include values, culture, and so on). It follows that I see the market as a broader notion than the price mechanism.

Callon's contribution should be seen in light of the thinkers who have analyzed similar issues and in light of fundamental distinctions.

His ideas may eventually “trickle down” to practitioners. Until then, we can at least say that his ideas have furthered the process of the double hermeneutics within social science.

Given the literature discussed here, it is clear that Callon’s notion of performativity is not entirely new.¹⁸ A further point follows from the discussion of markets, namely, that we need a different theory than neoclassical theory to account for many of the markets we observe in reality. This is the case if we want phenomenologically more correct theories of markets. This issue is discussed neither by Callon nor in any detail within economics. The reason is that economics has essentially, since the time of Walras, assumed that there is one kind of market, namely, the one that Walras modeled his theory upon, the stock exchange (Walras [1926] 1954: 83–91).

I also think, as Barry and Slater suggest in their conversations with Callon (Barry and Slater 2002a, 2002b 2005), that we need to pay larger attention to the “political” dimension of market construction that Callon has stressed, that is, that many actors want to construct markets according to the price model presented in neoclassical economic theory (a switch-role market ordered according to the principle of standard). A more general point that grows out of this article is that we must do more empirical studies of social sciences, the practice of social science, and its implications.

Notes

1. Long before Kuhn, George Herbert Mead pointed out that scientists become socialized into scientific theories. This is to say that scientists do not reflect on the foundation of theories; they take it for granted (Mead [1938] 1964: 50).

2. Habermas (1974) also discusses similar ideas about the role of scientific knowledge in everyday life.

3. They are nonetheless less studied than many seem to think (Coase 1988: 7).

4. This means that there is no “organization” that decides the terms of trade and the interest of the actors involved in market transactions. This is to draw a line between markets and so-called internal markets, which consequently are not markets according to this definition.

5. The social structure, in addition to the culture and the associated values of a market, corresponds to a market phenomenology. From this

distinction follows that, for example, narratives binding identities over time differ in the two types of markets (cf. Aspers 2005b; White 1992, 2002).

6. That the bulk of markets in the economy are fixed-role markets is reflected in the existing studies on markets. Hence, most studies are on various types of producer markets. This body of sociological literature usually draws on the works of Harrison White (e.g., 1981, 2002). White credits Edward Chamberlin, and to some extent also Alfred Marshall, for initiating this stream of thought that acknowledges how markets function in the real economy (White 1992).

7. Each producer operates, however, as a buyer in many other business-to-business markets. In the car market, for example, each producer buys commodities such as steel, glue, gearboxes, and numerous other components needed for the production of cars. These things are bought from other producers, typically called suppliers, that are located upstream in the production chain. Car producers, as economic actors, are identified as producers, not as buyers. This is the case also in many service markets, for example, plumbing and home insurance, in which actors are identified with the role as seller in their respective market.

8. See <http://www.vba.nl/> (accessed July 28, 2006). In this market, actors have only one role: seller (grower) or buyer. But the flowers are coded into different categories according to a system and are sold only in standardized qualities. One does not know from whom one is buying; the starting price ticks down on the wall of the auction hall, and the first one who pushes his or her buying-button gets the order. This means that prices descend until someone makes a call.

9. See also MacKenzie (2004) for a insightful discussion of the two poles of Callon's notion of performativity: the generic, which simply means that categories (such as gender) are not given by nature but are created by actors who perform them, and the "Austinian" (after J. L. Austin), which refers to a relation between discourse (for example, an economic theory or model) and practice. I fully agree with MacKenzie that the first is almost self-evident. The Austinian form is more interesting. It refers to sociology of knowledge in a more problematic way: What is the relation between theories of the world and the world that the theories are about?

MacKenzie comes up with an innovative notion of "counterperformativity," which means that widespread adoption of a model "can undermine the preconditions of its own empirical validity" (2004: 306). This is a similar point to the one made by Giddens.

10. The neoclassical approach grew out of the work of Jevons, Marshall, Menger, and above all Walras and is presented, though not labeled, in the works of Knight (1921: 76–81). It was Veblen who first used the notion of "neoclassical" in referring to the economics of Alfred Marshall (Aspromourgos 1991: 625). Marshall, together with Menger, Jevons, and

Walras, is mentioned as important for the development of marginal utility theory in economics (Schumpeter [1954] 1981: 825, 836). The notion of “neoclassical,” as we think of it today, has its origin in the 1920s, when it referred to the marginalist economists. The notion became fixated when Paul Samuelson used it in the third edition of *Economics* (Aspromourgos 1991: 625).

The neoclassical approach is still the baseline in most textbooks of economics, and appears as the only systematic and coherent theory of switch markets. Though other bodies of research exist within economics, such as behavioral economics and the closely related behavioral finance, they are not systematized enough to be called theories.

Thus, despite the fact that some very good sociological and anthropological research has been done on financial markets (e.g., Smith 1981; Abolafia 1996; Knorr-Cetina and Bruegger 2002; Hasselström 2003), it is early to talk about a sociological theory of prices in markets, for example.

11. Callon’s approach has some empirical support (especially MacKenzie and Millo 2003, and the famous example of one strawberry market in France, analyzed by Marie-France Garcia-Parpet; but see also Smith, Munro, and Christie 2006).

12. What, then, is the difference between a price mechanism and a market? The same price mechanism can be identified in many markets, each of which has potentially different institutional underpinnings, cultures, and in part values (cf. Hasselström 2003; Abolafia 1996; Smith 1981).

13. This, however, is not per se evidence that markets have been performed.

14. What I mean is that there is not one dominating theory, so to speak, that is performed. Obviously, this is not to deny that actors’ perceptions and knowledge are used as frames of reality, as well as ways of framing and shaping reality.

15. So far I have done a slightly narrow interpretation of Callon’s idea of “economics.” One may focus instead on his more general claim that “several types of organized market exists” (Callon 1998: 32). Following this, Callon (1998: 48) foresees studies that result in the presentation of different types of calculative agencies. However, there is a problem with Callon’s approach via this route; it risks becoming so wide that it lacks specificity. Callon (1998: 39–40) says that calculation is not restricted to the West; it also takes place in so-called traditional societies. But if this is the case, his statement becomes extremely general. Apparently, all economies are performed regardless of the level of theoretical and practical knowledge that has been codified. This merely means that he repeats the idea that the economy is a social construction. This raises the question of what the idea of performativity adds if it is expanded; this wider interpretation of Callon’s theory and his notions is in my opinion less interesting.

16. Though Walras's theoretical and abstract model may seem unrealistic, one may, in the words of Schumpeter, "learn from Marshall how to put flesh and skin on Walras' skeleton" ([1954] 1981: 1015). One reason for this need is that Walras's market model presumes an imaginary auctioneer (cf. Schumpeter [1954] 1981: 1002).

17. Walras makes a distinction between science, art, and ethics, each with a separate goal. He says: "Their respective *criteria* are the *true*, the *useful*, meaning material well-being, and the *good*, meaning justice" (Walras [1926] 1954: 64).

18. It is more accurate to see it as a new discourse that sociologists and others have begun to use. But, as Don Slater points out, discourse does not inform us about practice, and he claims that there must be an "open-ended and indeed an ethnographic approach to the ways specific markets are constructed" (2002:245).

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