INTRODUCTION

How to Study a Global Market

WHAT IS A GLOBAL MARKET? *Market Threads* addresses this question by empirically analyzing the world cotton market and bringing together insights from the social sciences and new directions in the study of markets. For more than a quarter of a century, a social experiment unprecedented in world history has been in progress: neoliberal market reform on a global scale. This experiment has revealed a remarkable fact: we do not know how markets work, let alone what the term "global market" means in practice. This book presents a study of the making and maintenance of a global commodity market, drawing on twenty-four months of fieldwork on four continents. The research was carried out in seven market places that cover the rural and urban sites of the world cotton market: three cotton-growing villages—ʿIzbet Sabry and Kafr Gaffar (Lower Egypt), and Pamukköy (Western Turkey)—and four merchant cities—Izmir (Turkey), Alexandria (Egypt), Memphis (TN), and New York City.[1]

Markets are elusive. Disciplines have been established to study their nature; entire libraries are filled with accounts of how they work; and global institutions have been formed to facilitate their expansion. Nevertheless, a quick look at ambitious projects aiming to analyze markets reveals the striking and complete absence of an answer to the question "what is a market?"[2] Douglass North, the 1993 Nobel laureate in economics, has stated this point better than anyone else: "It is a peculiar fact that the literature on economics [. . .] contains so little discussion of the central institution that underlies neoclassical economics—the market."[3] More arresting still, this curious silence about the market is shared by competing social research paradigms that ostensibly represent different political aspirations. Hayek is considered the ultimate ideologue of market expansion. His oeuvre does not offer concrete insights into how markets work, but rather a set of theoretical assumptions about how markets disseminate subjective information by converting knowledge into prices and serve as a mechanism of resource distribution.

[1] All the names of villages, hamlets, their neighboring towns, and informants are pseudonyms, unless otherwise stated.

[2] For a review of this gap in market literature, see Lie (1997).

[3] Cited in Callon (1998).

For Marx, too, markets are elusive. *Capital* opens with a discussion of commodity markets, drawing on a hypothetical trading example of cotton. In his famous discussion, in which he discloses the "general formula for capital," perhaps one of the most important arguments in the history of political economic thinking, Marx presents the following statement: "If I purchase 2,000 lbs. of cotton for £100, and resell the 2,000 lbs. of cotton for £110, I have, in fact, exchanged £100 for £110, money for money" (Marx 1995). Because another trader could appear and take the very profit one makes during a market exchange, Marx concludes that one can make money, but not create value in markets.

A Review of Literature on the Market

The study of the market was a formative research engagement during the period when all social science disciplines emerged. Anthropology began with studies of the human condition with a focus on various market and nonmarket exchange relations. The discipline of economics presents a variety of means to understand the market; one of its main branches, microeconomics, is entirely based on market analysis. Both sociology and political science have subdisciplines that study the market and the way markets relate to social and political worlds. Yet, we still do not know how markets work on the ground. How is it possible to address this puzzle within the existing literature on markets and their agents?

All sciences studying forms of the human condition have a subdiscipline studying economic phenomena. This vast literature falls into three broad categories, which only partially address the problem of the market: (1) the neoclassical approach, (2) institutionalism, and (3) social studies of the market. According to neoclassical researchers, the market refers to any domain of economic interaction, where prices are responsive to supply and demand. Unless impeded by nonmarket forces, all markets have a natural and spontaneous inclination to evolve into a perfectly self-regulating one, where resources are distributed efficiently, if not justly (Becker 1976; Marshall 1982; Balassa 1986; De Soto 1989). To ensure both the evolution of markets toward a perfect version and the market setting its prices freely, neoclassical researchers argue that nonmarket forces should not intervene in the delicate balance of supply and demand.

The neoclassical approach has been extremely influential, not necessarily in understanding markets, but in making them. These researchers' perception of the market as a natural balance of the forces of supply and demand has contributed to the making of markets by informing the construction of various options markets, ranging from agricultural commodities to securities (MacKenzie 2006). The neoclassical approach supplies options markets with a standard method for pricing the interaction of risk and time, thus exerting an effect on the price movements in futures and spot markets. One mirroring the other, the distinction between the theory of markets and the reality of exchange has become blurred. As I will argue in chapter 1, the Black and Scholes formula, the fundamental building block of all options markets, draws on the main assumptions of the neoclassical approach to the market.

Furthermore, most of the early experiments in neoliberal market reform took their inspiration from neoclassical research. The primary assumption was that, once the state was rolled back from intervening in market affairs, the rules of the market would ensure growth and development. As the early results proved disastrous, policy and academic circles gradually replaced market universalism with a hybrid approach located somewhere along the continuum between market universalism and institutionalism.[4] As many critics have noted, the neoclassical perspective is analytically weak; it cannot account for the conditions that sustain the very self-regulating market it prescribes. Critiques of neoclassical research have chronicled the empirical shortcomings of the approach and its neglect of the historical and social conditions that sustain even the market it imagines.[5] One of the strongest arguments has come from institutionalism.

Institutionalists have diverged from neoclassical researchers by arguing that all free markets require an institutional structure to mediate the convergence of market forces. Moreover, spontaneous development of markets could be stalled by nonmarket factors such as the state. From this perspective, institutions directly affect economic outcomes, and the agents of markets use them to reach their individual ends (Coase 1937; Williamson 1975; North 1977; Bates 1981; Wade 1988; Thompson 1991; Ensminger 1992).

Social Studies of the Market

Anthropological and sociological approaches, at times drawing on institutionalism, have contributed to a better understanding of markets in a variety of ways. The study of exchange and production relations has formed anthropology as a discipline. Although Barton and Seligman had

[4] Many differences within these approaches exist, such as an emphasis on transaction cost reduction in markets (Working 1949; Telser 1958; Williams 1986), or a stress on the idea of insurance (Keynes 1936; Hicks 1939; Johnson 1960; Williams 1986). For a review of this literature, see Goldberg (1988).

[5] For comprehensive reviews of this literature and its critiques, see Chaudhry (1993); Leys (1996).

touched on economic relations, it was the work of Malinowski (1922) and Mauss (1925) that contributed the most important theoretical building blocks to the incipient discipline of economic anthropology (Seligman et al. 1910; Malinowski 1922; Mauss 1954 [1925]).

Anthropological approaches to the market have created one of the discipline's longest debates between formalists and substantivists. Polanyi's *Great Transformation*, drawing on the work of early anthropologists such as Malinowski, prefigured the emergence of the substantivist approach to markets (Polanyi 1944). Substantivists derived inspiration and many central concepts from Polanyi; they argued that the study of markets in non-Western contexts requires the study of local relations of exchange, which are embedded in various sociocultural settings, whereas in the West the market has become mostly "disembedded" (Arensberg 1957; Chayanov et al. 1966; Kaplan 1968; Dalton 1971; Sahlins 1972; Halperin and Dow 1977). Echoing some of the institutionalist arguments, substantivists saw the emergence of markets as dependent economic encounters, always made and embedded in society or culture.

Formalists, on the other hand, while accepting the institutional power of the cultural contexts of markets, have argued that, regardless of the specifics of market or exchange contexts, the long-term economic rationality of individuals is universal. A student of Malinowski himself, Firth formulated the earliest formalist position and paved the way for methodological individualism in the social study of markets (Firth 1929, 1939). Formalist anthropologists, mostly following Firth's footsteps, borrowed their framework from neoclassical economics. They applied these assumptions to the non-West and held the view that, when it comes to economics, individuals in all social contexts behave in similar, universally recognizable ways (Bohannan and Dalton 1962; Salisbury 1962; Belshaw 1965; Bohannan and Dalton 1965; Burling 1968; Cancian 1968; Cook 1968; Epstein 1968; LeClair et al. 1968; Swetnam 1973; Schneider 1974).

Although formalists seem to have lost the debate to a variety of substantivist and institutionalist approaches, one strong point they have sustained is to resist essentializing a categorical difference in the logics of economic encounters in the West and the rest. Ironically, they achieved this by imposing a universal rationality across the board. Ethnographic research became synonymous with locating the emergence of these assumptions in fieldwork and recording an increasing number of empirical findings to show the validity of a few universalist assumptions.

Despite the fierce struggle between formalists and substantivists, there was still an important agreement between them.[6] They disagreed on the roles and importance of institutions, on the one hand, and individual

[6] For a more detailed discussion of this point, see Çalışkan and Callon (2009).

agencies, on the other hand. However, both the universal rationality of the individual and the embedded nature of institutional settings—the cornerstones of the difference between substantivists and formalists—are located in a universally accepted ground, defined by "the economy," drawing on the unquestioned distinction between production, consumption, and exchange. Wherever researchers go, whether their goal is to locate the rational individual or the embedded institution, they are certain to find a universalized understanding of a "society" and an "economy" that operate by producing things and exchanging them to finally consume the produced and exchanged goods (Çalışkan and Callon 2005, 2009) Formalists and substantivists were allies in pursing a specific anthropology of "the economy" as the making of either a universal individual or a deified society.

Another dimension of the silent peace between substantivists and formalists is their mutual construction of each others' explanatory space. Formalists have carved out an independent economic space of market rationality and located a universal individual in it as the agent of change. Substantivists, however, have located a different logic for nonmarket conditions, by building the very boundary between the market and its exterior. Finally, substantivists have problematized formalist theses on the workings of "the economy" as we know it in the West. The problem area here is the economy of the other. This, perhaps more than anything else, sealed the peace between the seemingly different strands of thought in economic anthropology.

It was a curious coincidence that in the late 1970s the entire debate between substantivists and formalists vanished at a time when the study of markets constituted the most urgent research program. The world entered an age of neoliberal reforms aimed at allowing domestic national markets to set their prices freely and then connecting them to an all-encompassing global market. A reconstruction of anthropology's curiosity and an internal critique of functionalist and/or structuralist tendencies in the discipline made the tacit peace visible (Clifford and Marcus 1986). As the debate waned, anthropologists realized that it narrowed research options, rather than opening them.

In the 1980s and 1990s, however, a number of new interdisciplinary approaches challenged both the terms of the formalist-substantivist debate and the main arguments of neoclassical and institutionalist research. These developments also provided revolutionary theoretical possibilities for field research (Mintz 1985; Thomas 1991; Gibson-Graham 1996; Wells 1996; Callon 1998; Elyachar 1999; Koptiuch 1999). Opening the black box of markets revealed that it was no more than a blank space, occupied by a diversity of struggles in both the West and the non-West (Tribe 1981). It was argued that the assumed characteristics of markets that facilitated economic analysis—such as information or rationality—were highly relative and contextual, and that, for instance, it was very difficult not only for the market agents but also for social scientists to acquire information (Dilley 1992). Hence, Gudeman has argued that many existing analyses drawing on formal economic models continually reproduce and discover their own assumptions in actual market relations (Gudeman 1986).

In 1985, with the publication of Granovetter's essay on the problem of embeddedness, the main arguments of substantivism reemerged in economic sociology (Granovetter 1985). A renewed interest in Polanyi's work in economic sociology prefigured the shaping of the debate, the development of which is reminiscent of the emergence of substantivism itself. Polanyi's statement that "human economy [. . .] is embedded and enmeshed in institutions, economic and noneconomic" became the point of entry to the neosubstantivism of embeddedness literature (Polanyi 1957). According to this approach, economic processes take place within social networks. In a move reminiscent of Durkheim's precaution concerning the noncontractual universe of every contract, this approach underscores the noneconomic universe of economic markets.

Without changing the theoretical cartography of the substantivist argument, sociologists have dragged the explanatory frame from the exotic non-West to the West. The critical potential of this operation is immense, for it shows in multiple ways the potential flaws of the formalist description of economic processes. However, the neosubstantivist approach has pursued a new objective with an old theory, which led its proponents to theorize the blurred boundary between the society and the economy and make the case for the embeddedness of the economic in the social.

Neosubstantivism provides for social theory a precaution against the universalizing tendencies of neoclassical logics.[7] Research has shown that the making of market prices and the organization of market places take place in socially embedded institutional forms and that due to their embedded nature markets connect social positions to power (Fligstein 1996; Uzzi 1996; Swedberg 1997; Carruthers and Stinchcombe 1999; Podolny 2001; Le Velly 2002; Velthuis 2003; Duina 2004; Uzzi and Lancaster 2004; Aspers 2005). It has also shown that markets and their prices are produced in settings embedded in cultures or systems of meaning (Velthuis 2003).

New Directions in the Social Study of Markets

Implicitly informed by a Foucauldian agenda of making visible the relationship between modern forms of scientific knowledge and power, and

[7] For a review of this literature, see Friedland and Robertson (1990); Lie (1997); Swedberg (1997).

explicitly drawing on Austin (1962), a group of researchers has revealed that modern economics and modern economic markets are mutually constructive. Bringing the insights of social studies of science and technology to the study of markets, these researchers have demonstrated that modern markets are not only represented but also manufactured by the institutionalization of neoclassical assumptions in market architectures (Callon 1998; Desrosieres 2001; Maurer 2002; Callon and Muniesa 2003; Lepinay 2003; Muniesa 2003; MacKenzie 2004; MacKenzie et al. 2007). *Market Threads* contributes to this literature in that it shows how global market prices of cotton are realized through the ways in which neoclassical assumptions have been deployed in futures and options markets.

Another related issue that has emerged in recent anthropological research is the increasing importance of research conducted by nonscientists and the ways in which it informs market agency (Callon 2003). *Research in the wild*, as Callon calls it, seems to be a central activity conducted every day by market agents; yet the everyday research of these subjects of research has not made it into sociological analyses so far (Callon et al. 2001). Especially in the working of markets, this insight seems to be central, because the very market work of traders starts with market research and continues with trying to make sense of the market in which it operates (Zaloom 2003; Levin 2004). The ways in which traders and all other market agents carry out research in the wild seems to be a crucial market activity that has yet to be researched extensively. Moreover, in combining nonprofessional and professional research in the university, market agents also contribute to the making of markets by imagining novel market designs.

A new strand of market research problematizes the ontological distinction that causes the gap between objects and subjects, between things and their circulation. According to this body of research, the anthropological terrain of markets is not a world of anthropogenic agents only. This research has two concentrations; the first shows that market agents and their tools interact in multiple and heterogeneous ways. The tools of market agents contribute to the making of the universe of possibilities, which make the economic action itself. The argument here is reminiscent of the difference between the lobby of the National Rifle Association (NRA) and their critics. The NRA argues that it is not guns that kill, but people. Their critics, being aware that guns are not just tools, argue that controlling them would have a direct effect on limiting their use.

Market tools are not just tools. As shown in the work of Knorr Cetina, and Brugger (2002), computers that are used to screen the markets can be the very market locations that make the terrain of trading possible. Similarly, the formulas used by traders to put together calculative capacities can further make and perform markets (Çalışkan 2003; Lepinay 2003; Muniesa

2003; Beunza and Stark 2004; Callon et al. 2007). This book contributes to this literature by arguing that even the market price itself is a mercantile tool produced to make traders trade cotton in international markets.

Social studies of science and technology, the second concentration of research that problematizes agency in markets, bring into focus the contribution of nonhumans to the making of markets and economic phenomena. Written from an ethnographic viewpoint, this literature underscores the inherent contingencies of social phenomena and how they take shape in the interaction of humans and nonhumans—such as insects, viruses, animals, or other incipient agencies (Latour 1999; Callon et al. 2001; Mitchell 2002). The contribution of nonhumans to the world in which humans live seems to be more visible in the making of world markets. As we will see in the last three chapters of the book, the fields where cotton and markets are produced are locations of a struggle between many actors, ranging from merchants and farmers to worms and weeds.

The concrete practices of everyday market maintenance represent another research site that has gained attention in the new directions in market research. Granovetter's work has shown that it requires endless everyday work of investing in relations and networks in order to make a market function (Granovetter and McGuire 1998). Similarly, Smith and Swedberg's work in securities has pointed toward a similar conclusion: it is crucial for markets to draw on a universe of everyday market work, from networking to research (Smith 1981; Swedberg 1990).

Social studies of finance have further created problems for the distinction between the seemingly different forms of capital—the productive and the financial. By focusing on the materiality of financial products and the sites of their creation, ethnographic work has demonstrated that what was taken to be a representation of the industrial has become a building block of an economic composition made up of cascading derivations. If this is the case, as Lepinay has argued, the question we should pursue is not the accuracy of representations assumed to be categorically separate from the realities they represent, as in the case of asymmetrical price information arguments. The main question for Lepinay is to understand how the economic arrangements that take place in indexical fields are made stable and maintained anew (Lepinay 2003). This book's findings on how the realities of world commodity markets derive from their representations complement Lepinay's work.

Even in situations where the actual workings of markets come close to their depiction in formal models of market behavior, the very correspondence between model and reality can be sustained only by continuous market maintenance work, carried out by market boards, regulatory bodies, and formulary formatting of market exchange (Lepinay 2003; Muniesa 2003; Zajac and Westphal 2004). This is why Callon has argued that *homo economicus* may be alive, but that one has to carry out ethnographic research on the very conditions that produce the context that makes it possible to proclaim *ecco homo economicus*! (Callon 1998) This work, however, does not indicate the need to simply register the inherently social character of the instances of economic encounters. Callon shows the emergence of a field in which agents, nonhumans, and the tools they use interact in a field of power that transcends the mere topography of the embeddedness of the social and the economic.

Commodity Chains, Systems of Provision, and the Social Lives of Things

Although rich and exciting, the new directions in the social study of markets still lack a case study of a global market that simultaneously connects and disconnects millions of market agents from different locations in the world. It is not a coincidence that new research began with financial markets. These markets are defined by organized and neoclassically disciplined exchanges, such as the Chicago Board of Trade, the Paris Bourse, New York City's trading houses, or London banks.

The commodity chain approach aims to address this missing link (Gereffi and Korzeniewicz 1994 [1986]; Wallerstein and Hopkins 2000; Daviron and Gibbon 2002). Mostly by drawing on the work of world systems and dependency theories, researchers advancing this approach have located three main forms of commodity chain: buyer-driven chains, producer-driven chains, and trader-driven chains (Gereffi and Korzeniewicz 1994). According to this approach, commodities circulate in the world to reach their consumers through their chains of production and distribution. This strand of research is one of the best examples of how the normalized distribution of the economy among the three spheres of action—exchange, production, and consumption—can have a direct effect on the ways in which world trade is imagined.

The commodity chain approach has yet to present a convincing account of the workings of markets and trading in the world. Its most serious weakness is its exaggeration of the power of commodity chains. Research has shown that capitalists strive to create a chain of the type theorized in the commodity chain perspective; however, the chain makers of capitalism have yet to create such a commodity chain in the world (Cox 2002). Moreover, in the commodity chain perspective one does not see the everyday work of chain making. Interestingly, the theory is silent on the very construction of the chain whose name it carries.

The commodity chain perspective also lacks an analysis of the nature of the commodity, the routes of its exchange and sustenance, and the agents who incessantly negotiate a space of encounter in order to make a living from the commodity assumed to flow through the chain. Finally, actors in these chains perform roles with a set of fixed, stable preferences assigned by the theory. These actors cannot move away from the functional and structural unity of the global chain of a certain commodity (Raikes et al. 2000; Pietrobelli and Sverrisson 2003; Skov 2005). The workings of the world market of the underlying commodity are completely invisible in this approach. Furthermore, those sociologically informed approaches that focus on trade networks in a global context, like that of Gereffi and Korzeniewicz (1994), neither present an account of these networks from the vantage point of their agents, nor describe the nature of local power struggles carried out within and outside the chains of production and exchange.

The rigidity of the commodity chain approach has been softened by Fine and Leopold's systems of provision approach (Fine and Leopold 1993; Fine 2002). Their research focuses on the world of consumption and studies the relations of production and exchange in specific systems of provision, such as those of food and garments. Although corrective of the oversimplifications of the commodity chain approach and taking into consideration that economic agents do not necessarily follow the disciplinary taxonomy of the social sciences, this approach still limits itself in registering the material limits defining the world of the system in individual sectors. What happens in the sector itself, how its markets are organized, how its prices are set, networks built, and research carried out—these questions still do not figure in the systems of provision approach.[8]

There is another possibility that seems to offer a more convincing perspective than the commodity chain and systems of provision approaches: the theoretically sophisticated (but ethnographically still unsupported) account of the *social life of things*. Appadurai's edited volume presents the idea that operating on analytical distinctions between consumption, production, and exchange is problematic. Instead, he proposes that ethnographers should follow the social lives of things as they circulate. He argues that "from a *theoretical* point of view human actors encode things with significance, [while] from a *methodological* point of view it is the things-in-motion that illuminate their human and social context" (Appadurai 1986).

However, the argument remains theoretical. Ironically, as Ferguson has shown, the ethnographic material following Appadurai's introductory essay presents contradictory evidence (Ferguson 1988).[9] The theory

[8] For an internal critique of this approach, see Skov (2005).

[9] One good example is Kopytoff's problematic acceptance of money and its destructive force, which dissolves a multicentric economy into "the" economy. However, less than a decade later Zelizer's ethnography has shown exactly the reverse to be true (Zelizer 1994).

seems to be suffering from a kind of formalism surprising to observe in an account that critiques formalism. Appadurai problematizes the approach of locating the creation of value in the relations of production, because, as he suggests at the beginning of his introductory essay, "economic exchange creates value" (Appadurai 1986). For Appadurai, it is not the idea of a universally normalized conception of value, but the location of its emergence that is problematic.[10] This replacement of a hierarchy of determination between production and exchange not only deifies their analytical separability, but also obscures what really happens in a relationship of exchange.[11] Analysts following in Appadurai's footsteps have located the same dynamic in finance (Lee and LiPuma 2002), and their general conclusions have been shown to be empirically problematic in ethnographies of financial production (Lepinay 2003).

Why Cotton?

My choice of cotton is deliberate. No other commodity gives us a better vantage point to study the making of global markets in all of their main production fields. Cotton is located at the intersection of industrial, financial, and agricultural relations of exchange and production, connecting more than a billion people to each other through routes that span agriculture, trade, and textile manufacturing.

Every year, more than fifty million farmers from eighty-one countries produce around ninety million bales of cotton, a nonperishable cash crop whose only usage is to exchange it for money. This amount of cotton is more than enough to produce eighteen T-shirts for every person in the world.[12] The total surface of the agricultural land used for cotton farming is slightly larger than Britain and Switzerland combined. Compared to other cash crops that farmers all over the world rely on—excluding those that farmers can consume directly, such as wheat—cotton has the largest area of production in the world, followed by sugar cane, sunflowers, coffee, and tobacco.

[10] Ferguson rightly criticizes Appadurai's problematic and to a certain extent his selective reading of Simmel (1978) (Ferguson 1988).

[11] Appadurai's account has also been critiqued for its inability to bring together the larger picture that it seeks to paint by looking at three locations or vantage points, belonging to traders, consumers, and producers, respectively. Skov has shown that "each scenario is analyzed as a world unto itself which can only be understood from within, and at the expense of its relation with other nodes on the chain" (Skov 2005).

[12] 480 pounds of cotton can make approximately 1,217 men's T-shirts, 3,085 diapers, 1,256 pillowcases, 4,321 women's socks, and 3,557 men's socks. Source: www.econcentral.com.

In terms of trade volume, no other agricultural commodity can come close to the circulation of cotton in the world. Every year, one-third of the cotton produced globally crosses the boundaries of nation-states and is consumed in a country other than its original location of production. This is the largest share in the world of any agricultural market. Historically, too, the cotton trade has put its mark on world trade, with its total value twice that of gold and silver combined in the late nineteenth century (Farnie 2004). Thus, the global cotton trade and the technologies of its marketing offer a unique site for studying a global phenomenon in one of its most obvious manifestations.

In addition, cotton has other qualities that make it an ideal subject for the study of markets. Raw cotton is at the same time a fiber, food, and feed crop. Approximately two-thirds of the harvested crop is composed of the seeds, which are processed to separate their three components: oil, meal, and hulls. Cottonseed oil is a major component of cooking oil. For example, in Turkey cottonseed oil composes twenty percent of the total vegetable oil used, while in Egypt it is almost eighty percent. In the United States, cottonseed oil is used extensively in the production of snack foods: almost all junk food is cooked in cottonseed oil. Furthermore, most farm fish is fed with cottonseed hulls. Cotton meal and hulls are also used as animal fodder and fertilizer. The remaining part of raw cotton is called lint. After it is ginned, the plant's fiber, or lint cotton, is processed for different uses, as in yarn. We dress ourselves in cotton textiles. The plant's fibers cover the most personal parts of our bodies, the most vital sectors of our economies, and the busiest intersections of our social relations. Even money is made out of cotton. Seventy percent of the U.S. dollar bill, effectively the currency of the world, is made of cotton.

The historical importance of the plant's commercial growth and trade also played a role in my choice. Cotton was frequently referred to as the source of power that made the modern world. Because the plant was located at the heart of the making of the Industrial Revolution, no other commodity has contributed to the emergence of capitalism and colonialism more than cotton. Its production fueled colonial struggles to secure the main input product for the textile factories. The institutions of its trading contributed the earliest financial instruments to the workings of capitalism. Trademarks were developed to locate the specificity of cotton bales, and in 1875 forty-five percent of all marks in Britain were registered as cotton marks. Cotton merchants were the first market actors in the world to imagine a world of markets. The Atlantic cable was laid by a merchant who owed his wealth to cotton. Cotton merchants were the first to use the telegraph to exchange quotes. John Jones's *Annual Cotton Handbook* was the first publication that made visible a global commodity market.

In 1880, the world's major cotton exchanges—Alexandria, Le Havre, New Orleans, New York, and Liverpool—were created as sites of a global market, exchanging spot and futures contracts by cross quotations with the help of specialized cotton trade codes sent via telegraph (Garside 1935). As we shall see in chapter 4, the expansion and globalization of markets were a direct result of colonialism and its imperial technologies; this was the only time in world trade when more than half of the bales produced in the world crossed national borders to be opened in a different location. After decades of neoliberal reforms and regimes of exchange imposed by the World Trade Organization, only about thirty percent of cotton is now being exported.

The unmatched importance of cotton is also evident in the emergence of political economy and its critique. From Adam Smith to Karl Marx, analyses of commodities began with agricultural products and never ceased to mention cotton or textiles. When Adam Smith was a customs official, his main task was to observe cotton's circulation and production in the world. Karl Marx's famous argument on the impossibility of producing value by exchange drew on a trading example of 2,000 lbs of cotton. Marx's most important research entailed visiting Manchester's mills at least twenty-four times between 1845 and 1880 (Farnie and Jeremy 2004).

Finally, the global growth and circulation of cotton contributed to the imagination of various paradigms of the global economy. Hobsbawm has proposed that the most telling visual image of the world economic order is Edgar Degas's famous painting of cotton merchants in New Orleans, *Un bureau de coton à Nouvelle-Orléans, 1873* (Hobsbawm 1975).

How to Follow Cotton?

In order to study a global market, one first has to locate the "global." As will become clear in the first two chapters, the location is not geographical, although it is produced in geographically bounded fields of encounter. I argue that the global market is an indexical possibility. We see this by following cotton's growth and circulation which map the multisited fields of a global market. The research on which I draw in order to follow cotton is informed by recent theoretical contributions of multisited ethnographies, as discussed in Marcus (1998). On a methodological basis, my research relates to emergent multisited fieldwork studies that connect various research locations through which the ethnographer passes (Mintz 1985; Haraway 1991; Myers 1992; Martin 1994; Latour 1999).

Rather than seeing the global market as an external entity imposed on various articulations of the local, I approach each point of this nexus—whether nominally "global," like Memphis-based global merchant houses, or "local," like farming villages of some two hundred households—as sites in which the global and the local are mutually constitutive. I began conducting my research with the assumption that the global is integral to and embedded in the practices of the agents who themselves actually make the market (Marcus 1998). Yet, like so many fertile grounds, this one is also somewhat muddy. Where should one begin to follow cotton? What exactly does it mean to follow a thing? Which locations of the plant's growth and trade would provide the analysis with the best ethnographic engagement? Study of the making of global markets in one country can only partly address these questions, because such a study cannot incorporate the varying experiences of cotton farmers and traders in a transnational field of trade relations. On the other hand, enlarging the scale of comparison too much would hinder an in-depth analysis of particular market practices.

Where to Follow Cotton?

Egypt, Turkey, and the United States present an excellent context in which to study a world commodity market, for a number of reasons. First, they cover all main geographic regions of economic encounter at various levels of development in the world. As the largest national economy, the United States is a test case of the developed West. Contrary to many theorists' expectations, this industrial giant is the main agricultural export country that fulfills the cotton requirements of less developed and less industrial Turkey. Turkey represents an ideal case for a middle-income country, wedged between the developed West and the underdeveloped East. As a candidate for the European Union, one of the largest producers and consumers of cotton in the world, and the largest buyer of U.S. cotton, Turkey presents an ideal case to study the making of a world market.

Finally, Egypt—once the host of the first cotton futures market and the second commodity futures market in the world—is now struggling to continue the production of the world's best cottons. Moreover, the country has been a test case for almost all major global social experiments of modernity. It was during the colonization of Egypt that modern technologies of governing populations and their political economy were developed. Following decolonization, the country again became the center of global attention, making it an exemplary forerunner of planned development projects in the era of import-substitution industrialization. Egypt's first president, Nasser, was the beacon of Third World development. The policies of Sadat and those of his successor Mubarak prepared the ground for making Egypt a test case of the last major global transformation, neoliberal reforms. A study of the lives of Egyptian traders and cotton farmers, therefore, also adds to the analysis a perspective that takes into account the geography of all the major market and development experiments of world history.

Furthermore, Egypt and Turkey were among the first states to initiate market reforms in the late 1970s; United States–based international financial institutions have since described the results as a "remarkable success" in the case of Egypt and an "undoubted success" in Turkey (Bank 1988; IMF 1998). Turkey in particular has been the recipient of one of the two largest World Bank Structural Adjustment Loans, receiving over one-third of the World Bank's policy-based lending in the 1980s (Öniş 1998). For many scholars, Turkey's success presents a model for Arab states (Richards 1995). Egypt, on the other hand, as the largest Arab economy, has been considered a pioneer of free market reforms. As the second largest recipient of American foreign aid in the world and ranked as the world's fourth most successful case of privatization (IMF 1998), Egypt's encounters with a world market present an interesting comparison to Turkey and the United States.[13]

The book focuses on the experiences of cotton farmers in three villages in Egypt and Turkey. There are two main reasons for my choice of Pamukköy in Turkey, and Kafr Gaffar and ʿIzbet Sabry in Egypt. First, they were among the first cotton-producing villages in the two countries when cotton was introduced to the Ottoman Empire, of which both were formally a part at the time. Second, their population is close to the average size of Lower Egyptian and Aegean villages in Turkey, which make them representative of the rural conditions of production and exchange. I carried out the urban component of the field work in the two busiest cotton trading hubs of the respective countries, in Izmir and Alexandria.

In the summer of 2000, I spent a total of three months in the field and completed my final preparations for the following year's fieldwork. While in the countryside, I worked in the fields with several farmers and became better acquainted with the practicalities of growing cotton. My discussions with cotton farmers and a few local traders convinced me to incorporate port cities into the research framework, because these villages are well connected to closer and more distant market fields via polymorphous links. Following these links brought me to Izmir in Turkey and Alexandria in Egypt. I spent a total of forty days in these cities and met various cotton traders and international merchants. Their views on

[13] In a book on the world cotton market, it would be better to incorporate local and regional markets in large producers such as India and China. Yet, practically it would not be possible for me to pursue further research if I had taken that route. Moreover, lack of empirical data on other geographies of cotton markets would not change the theoretical approach the book proposes to understand world markets and their prices.

the idea of the market, coupled with those of the farmers, made me seriously question my own ideas. I was particularly struck by one "global broker," as he called himself, who told me during the open cry-out cotton trading session in the Izmir Mercantile Exchange that "I could never understand cotton markets because they operate on invisible networks and the statistics did not speak about the market, they were part of it." This important comment further convinced me to focus not only on practices of production and exchange, but also on how such practices take shape on the ground.

I started fieldwork in April of 2001 and completed it in October of 2002. I lived for six months in Pamukköy and spent my days observing cotton farmers' everyday lives, from the time they broke the ground to sow cotton until they sold their crop. Following the cotton, I moved to Izmir and observed cotton trading in the Izmir Mercantile Exchange and the trading houses of Izmir merchants and traders. Finishing my research in Izmir in December of 2001, I moved to Alexandria to work with Egyptian cotton traders whom I had met previously. At the end of March of 2002, just before the beginning of the new cotton season in Lower Egypt, I moved to the Egyptian countryside and began studying the fields of global markets from the vantage point of Egyptian farmers. I had to take a break to move to Memphis, Tennessee, to be trained as a spot, futures, and options trader for two months in the professional degree program of the American Cotton Shippers Association. This experience effectively put me in contact with all the major cotton trading houses in the global market and provided me with an important experience of the way in which global traders relate to other sites of trade in the world. I also found time to observe trading and even traded myself in one trading house based in Memphis. In July of 2002, I went back to the Egyptian countryside and completed my fieldwork as the crop of the two villages was sold on the market. I returned to New York in October of 2002 and continued my research on the New York Board of Trade, while organizing the data. Based on this research, I wrote a Ph.D. dissertation with a focus on the everyday practices of merchants and peasants. Between 2005 and 2008, I made various short-term visits to all the main fieldwork sites except Memphis and revised the data. I wrote the book between September 2008 and March 2009 in Istanbul.

Summary of Arguments

The six chapters of the book each focus on one general question and one specific site of production and exchange. Chapter 1 discusses the process of price realization in the world cotton market. It argues that the market is made in multiple fields that produce not only its commodities, but also their prices. The market price is a *prosthetic device* realized by world traders and market analysts to trade cotton on the ground. Yet this price form is not used as an actual price of a transaction. Based on the shaky ground of indices, on a bridge of encounter between the realities and their representations in world markets, the chapter shows that the realities of world commodity markets derive from their representations. It concludes by showing that markets are neither embedded in social relations, nor disembedded from them. They are fields of power operating on dynamic and heterogeneous platforms of power/knowledge relations. The making of prices is carried out through constant interventions in the markets by different forms of perception, standardization of the object of exchange, prostheses, rumors, indices, research in the wild, scientific statements (such as neoclassical assumptions), and their rejection. Market fields are also at times formatted by the direct intervention of market boards and formulas, utilizing assumptions about the neoclassical economy of things. The chapter demonstrates that markets are constantly intervened in and maintained, even when there are no government regulations.

Chapter 2 furthers this argument by changing the vantage point from market price realization to commodity circulation. As the chapter follows two thousand bales of cotton from the United States to Turkey, it documents how two parallel routes of circulation are forged in world trade by various agents of global markets. It shows that the very circulation of commodities requires everyday maintenance work. This work also makes possible the stabilization of price realization processes, for without execution no market exchange takes place. Taking a price is a promissory act only. For the exchange to take place, traders forge a documentary circulation that informs promissory trade itself and either maintains and concludes the making of the price, or challenges and revises it, depending on what happens during different rounds of renegotiation and arbitration. The execution cannot be seen as a function or determination of the trading decisions only, for the ways in which trades are executed, revised, or dissolved after the prices are made inform future rounds of exchange. In other words, all trading decisions incorporate different effects of previous contract executions.

Redefinition of the market action to cover the very execution of buying and selling decisions opens an entirely new avenue for understanding world commodity markets. The agents of these world markets, as chapter 2 shows, build a platform from the interaction of capital, knowledge, and networks in order to relate to and profit from the market. On these platforms of trading, human and nonhuman agents are simultaneously constructed, such as “human bridges,” by means of networks ensuring that traders concurrently know and make the market. On this platform, gift and commodity exchange do not exclude each other. Gift exchange is a technology of power for those who exchange commodities and who need to network to be able to know and make the market. However, these global traders need thousands of other agents to maintain the world market and continue working on bridges of commodities, gifts, and documents.

To understand the world markets of cotton better, one has to write the story of global market-making from the vantage point of the other side of the bridge constructed by global merchants. Following the trading bridge of chapter 2, chapter 3 reaches Izmir, Turkey, to discuss how market prices are made in locations such as the Izmir Mercantile Exchange (IME), which inform and are informed by the realization of global prices of cotton. It is only by bringing together all building blocks of this globality that one can see the larger picture. The chapter on Izmir begins to draw a more complete depiction of a world commodity market, by showing how the practices of global price- and market-making are articulated in locations where the global and the local interact, such as the IME.

The nature of this interaction between Izmir and its external world, however, is not merely a trade relationship between a global and a local site. The relationship is between different agents who have asymmetrical mercantile platforms in terms of capital, knowledge, and network; yet, global and regional merchants are still local agents. The interaction between global and local markets is a relationship of derivation, not of encounter. Chapter 3 shows that global things are derivatives of their local articulations. In that sense, the global can be seen more vividly as a universe of indexical possibilities from/in Izmir. The location of the global market is not geographical, but graphical. It is made up of documentary, technological, and indexical tools. The global market and its prices are made in indices, reports, and market pictures. Such a site of globality is deployed every day by traders in order to govern local acts of trade. These individual acts of trade are then used by market experts, researchers, and traders, ensuring the further maintenance of global markets. The market fields of the world are produced not only by bringing together dyadic encounters of exchange, but also through the making of the very prices of distant yet related local markets. The IME's realization of a unique price form—*the rehearsal price*, made in a limbo between indexicality and actuality—presents the empirical framework of the discussion.

Moreover, chapter 3 demonstrates that, similar to other fields of market encounter, the market in Izmir has multiple boundaries, drawn according to specific negotiations in the production of exchange relations. In this sense, the market and the nonmarket are strange bedfellows that together inform the realization of market prices. The theoretical consequences of this conclusion are vast, for they make the outcomes of and political stake in locating the boundaries of markets visible. Setting the boundary becomes the very power that makes the market. Moreover, showing that a boundary is not a line demarcating two worlds, but a field of the market itself, reveals the weakness of theoretical attempts to construct different forms of embeddedness of markets in their nonmarket externalities, be they cultures or societies. The market is a power field in itself.

Chapter 4 examines how cotton trade is carried out in Alexandria, Egypt, by locating this new market field in relation to the previously analyzed sites of exchange. Unlike Izmir or New York City, Alexandria seems to lack a mercantile architecture that contains scattered instances of trade and brings merchants together under one roof. There is no "organized market" in the city. However, the city was home to the first cotton futures market of the world, which no longer exists. By historically locating this interesting trajectory of market development in Egypt, chapter 4 shows the colonial background of the rise of market orders. Then, the chapter analyzes the making of market prices in Alexandria and their contribution to the realization of prices in the world market. The city contributes another price form to the rich universe of prosthetic prices, the *associate price*.

Alexandria's price is categorically different from both the prosthetic prices of cotton and the IME's rehearsal price. The associate price is not produced as an index; yet, like an indexical price, it does not refer to the actual worth of a bale of cotton. It is not a rehearsal price either, for it is not produced in a pit where traders exchange cotton by rehearsing the crop's price. However, similar to prosthetic and rehearsal prices, the associate price of Alexandria draws on everyday politics of market-making in associated practices of trade. The discussion of the price realization and market-making technologies of Alexandria's merchants helps to break up the naturalized world of prices which creates an effect of a nonpolitical, almost natural characteristic of the market price. It is misleading to assume that markets or prices are things that we can know without carrying out concrete research on their making on the ground. Any a priori assumption about how markets work or prices are made necessarily becomes a condition of market-making. As chapter 4 will demonstrate, the market price is not realized in the geographical coming together of the two lines of supply and demand. The making and realization of market prices—whether they are associate, rehearsal, or strictly global prosthetic—reflect the rich platforms of power relations that manufacture the prices in their multiple forms.

However, when the neoclassical political interventions of economists, such as those of the World Bank and the IMF, are taken too seriously by policy circles, as was the case in Egypt, the markets are made in ways totally alien to their functioning as assumed in scientific statements.

Egypt lost its world market share to the United States, precisely because U.S. growers and merchants could afford not to take the economists too seriously; Egyptian public companies and farmers did not have such a choice.

Chapters 5 and 6 analyze the universe of cotton markets from the vantage point of cotton farmers in Western Turkey and Lower Egypt. The everyday engagement of cotton growers in their fields of production and exchange does not confirm assumptions about sites of life as being analytically distinct between market or nonmarket, capitalist or noncapitalist, exchange or production. Neither farmers nor traders in these multisited fields of work engage in only either exchange or production. The very growing of cotton, its "production," entails a simultaneous engagement of relations that consists not only of exchange and production, but also of a series of activities that make up a rich and undertheorized world of encounters and struggles among pests, children, merchants, migrant workers, women, *khoulis*, farmers, cotton, cows, *gamusas*, economists, ginners, *elchis*, and so on.

Chapters 5 and 6 also show how cotton is grown and its global market made on the ground in Pamukköy, Kafr Gaffar, and ʿIzbet Sabry, by many forms of cooperative living among farmers, animals, plants, and their environment. By following cotton's growth, the chapters discuss the struggles in which farmers are engaged in order to continue growing cotton in the context of the political economy of life and death based on neoliberal reforms in the countryside.

Furthermore, the chapters discuss the making of the global bridges of trade from the vantage point of farmers. How does the market, as traders see it, look from the vantage point of farmers? How does cotton change hands in the fields of growth and exchange? What forms of struggle inform the marketing of cotton? The answers that these chapters offer depict a world of market-making whose every moment of realization is informed by power contests that defy a priori logic of calculation. It is in these relations of power that markets are made in the simultaneous processes of exchange and production of commodities, their translations, research results, and struggles between farmers, children, overseers, graders, traders, pests, and all other agents who want to use the cotton for satisfying their own needs. Cotton as a living organism is a part of this power field, too.

Chapters 5 and 6 also describe the effect of neoliberal reforms in Egypt and Turkey. They show that structural adjustment programs have affected configurations of power in the countryside and paradoxically violated even neoliberal objectives of formalizing the rules of the markets. These reforms manufacture and foster a number of informalities, from illegal trading to increased violence in the countryside. The chapters argue that it is misleading to see these reforms as projects of letting the market work by itself, for they are making the object of their reformation. As they empower traders, these reforms create regimes of exchange/production that may lead to the disappearance of cotton as the most important agricultural market commodity in Turkey and Egypt.

Finally, chapters 5 and 6 ethnographically map a market universe from the viewpoint of Turkish and Egyptian farmers. This universe cannot be analytically located by imposing boundaries that attach categorically separate logics of economic, scientific, social, or political encounter. In the fields of growth and exchange that dot the global sites of cotton markets, almost all forces—such as those of supply, demand, yield, and growing area—are negotiated on unequal platforms.

The market, perceived to be operating as a balancing act of supply and demand, seems to be overflowing with various calculative dynamics of power. The market idea of neoclassical logic is itself a tool that frames exchange relations and their production on the ground. Thus, the market is not the name of the location where exchange takes place, but rather the very tool of engagement used by market participants, almost without exception nonfarmer participants—whether they are economists like Black and Scholes, factory owners like the J. R.'s of the Turkish Söke Plain, merchants on trading platforms like Mr. White, or representatives of the merchants of Alexandria like Khaled.

The market exchange in the countryside takes place in locations where farmers feel very uncomfortable. "Things" happen there, as we will see in chapters 5 and 6. It is a field of power where even the knowledge of what will happen does not help. Years of experience coupled with an expressed use of power meet the low level of experience of indebted farmers in the traders' exchange theaters. Furthermore, farmers enter mercantile sites after spending all of their available time growing cotton, killing insects and cows, hiring or pooling labor in cooperatives, hoeing their fields, or picking their cotton. Farmers do not have the time and energy to produce two things simultaneously: they cannot maintain market platforms and grow cotton at the same time, for both the market exchange and cotton-growing draw on concrete forms of production, performance, and maintenance. Finally, the conclusion will present the theoretical consequences of seeing a world market as I have summarized it here. *Market Threads* ends with an elaboration of the practical consequences of framing the market as a field of power and the policy options that follow from these consequences.