Global Commodity Chains

Genealogy and Review

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Over the past two decades, a voluminous literature on international trade and production networks has accumulated. Such networks were described first as commodity chains, later as global commodity chains, and most recently as global value chains. Although the sheer size of this flourishing literature underscores the appeal of global chain constructs as a way to conceptualize and analyze globalization, the dynamic and rapid proliferation of this research program also poses challenges. The significance of new theoretical formulations and empirical findings must be assessed, as scholars examine the extent to which they contradict, complement, or correct our extant knowledge about the ways in which people, places, and processes are linked to each other in the global economy. This volume, containing new work from an interdisciplinary group of scholars, aims to offer such an assessment of what we know about commodity chains, twenty years after the term was coined by Terence Hopkins and Immanuel Wallerstein.

In this introductory chapter, I describe the three approaches that collectively constitute what we might consider the field of global chain studies: (1) the world-systems tradition of macro- and long-range historical analysis of commodity chains; (2) the global commodity chains (GCCs) framework developed by Gary Gereffi and colleagues as a blend of organizational sociology and comparative development studies; and (3) global value chains (GVCs) analysis, the newest variant, which draws inspiration from its GCC predecessor but also, in some of its formulations, from the quite distinct tradition of
transaction cost economics. Although often used interchangeably to describe the sequence of processes by which goods and services are conceived, produced, and brought to market, each of these chain constructs has its own history, its own theoretical and disciplinary affinities, its own substantive emphases and empirical concerns, and, arguably, its own political valences. In providing the reader with a modest exegesis of the commodity chain, my aim in the first section of this introduction is not to evaluate the relative merits and weaknesses of these constructs but rather to underscore the similarities and differences between them. The second part of the chapter then reviews three areas of debate within the study of global chains. Via brief summaries of the nine chapters that follow this introduction, I explain how the collection engages these debates and extends the frontiers of commodity chain research.

A Genealogy of the Commodity Chain

One way to understand the relationship between the actors and activities involved in creating goods and services in the global economy is to describe them as links in a commodity chain. Hopkins and Wallerstein define such a chain as “a network of labor and production processes whose end result is a finished commodity” (1986: 159). Later, I elaborate on the distinctive meaning of this analytical construct within world-systems theory, and contrast this understanding of the commodity chain with that found in the GCC and GVC frameworks. Through this genealogy of the chain concept, I aim to show the variation that exists among these approaches; however, because I also want to compare and contrast what I am referring to as the composite “global chains” literature with alternative perspectives on international production networks, I begin by reviewing some other chain-like concepts or constructs that aim to describe the organization and geography of production in the global economy.

Other Variations on the Chain Theme

In their discussion of commodity chain research as it pertains to agriculture and food, Jackson, Ward, and Russell (2006) locate two nearly contemporaneous but distinct sources of inspiration for this work. The first is world-systems theory, discussed in greater detail in the next section of this chapter. The second is the “new political economy of food and agriculture,” and particularly the work of William Friedland and colleagues (1981) on technological change and its impact on the organization of work in U.S. farming.1 Friedland’s approach, which he described as “commodity systems analysis” (Friedland 1984)
influenced others studying the organization of agricultural production, and increasingly, the relationship between production and consumption in food chains. Jackson and colleagues point out that though the agro-food literature has been influenced both by the world-systems and commodity systems approaches, “Friedland et al.’s key work made no reference to Wallerstein and vice versa. These are distinctly different traditions in their conceptual drivers, objects of study and modes of analysis” (2006: 131).

A later framework that would also prove influential within agro-food studies—systems of provision—was developed by Ben Fine and Ellen Leopold (1993; Fine 2002). Rather than beginning with production, as is typical of work in the new political economy of agriculture, Fine and Leopold sought to devise a more integrated approach to the relationship between consumption and production that would avoid the “productivist pitfall” typical of commodity analysis (Leslie and Reimer 1999: 406). Specifically, Fine and Leopold argued that one needed to consider the specificity of the consumption-production relationship as it pertained to particular commodities, and showed how commodities are “distinctly structured by the chain or system of provision that unites a particular pattern of production with a particular pattern of consumption” (Fine and Leopold 1993: 4).

A third and final chain-like tradition in agro-food studies is the filière approach, which pre-dates the commodity systems and systems of provisions frameworks, having been developed in the 1960s by researchers in France at the Institut National de la Recherche Agronomique and the Centre de Coopération Internationale en Recherche Agronomique pour le Développement. The application of the filière approach in developing countries “was heavily influenced by the needs of the colonial and post-colonial French state, since state (agricultural) development policy in former French colonies was commodity-centered and required a matching analytical framework” (Raikes, Jensen, and Ponte 2000: 391).

Each of these concepts—commodity systems, systems of provision, and filière—describe production (or production and consumption) in terms of a chain linking together different activities and agents. Perhaps for this reason, they are sometimes conflated with each other, or with what I later suggest is a more delimited commodity chain construct. For example, Leslie and Reimer use commodity chains and systems of provision interchangeably (1999; see also Hughes and Reimer 2004). In her discussion of commodity chain analysis, Jane Collins subsumes the filière tradition and the commodity systems approaches under the overarching rubric of commodity chain analysis, but her
review contains no reference to the founding contributions of Hopkins and Wallerstein and mentions the world-systems tradition of chain research only in passing, when describing Gary Gereffi’s global commodity chain paradigm as “operating within what is nominally a world systems perspective” (2005: 6).

Like their counterparts who study primary commodities, researchers investigating manufacturing industries have also been drawn to the chain metaphor as a way to capture the links connecting firms and other actors to each other across space. However, few references to the world-systems tradition of commodity chain research are found in such studies, and constructs that were developed specifically to analyze production processes in agriculture, such as commodity systems and filière, are also largely absent. Instead, a variety of other concepts have been used to describe the highly internationalized production processes for manufactures such as cars, clothing, and computers (Borrus, Ernst, and Haggard 2000; Ernst 1999; Henderson, Dicken, Hess, Coe, and Wai-chung Yeung 2002).

Among these various approaches, the “Manchester school” of global production networks (GPNs) is closest to the commodity chain tradition. Developed as “a relational and specifically geographic approach to the study of the global space-economy” (Hess and Yeung 2006: 1196–1997), the GPN framework evolved in dialogue with, and as critique of, the GCC framework, and Gary Gereffi’s work in particular (Czaban and Henderson 1998; Dicken, Kelly, Olds, and Yeung 2001; Henderson and others 2002). Specifically, the proponents of the GPN approach argue that research carried out under the GCC banner has tended to ignore the spatial dimension of such chains. In contrast, the GPN approach seeks to reconcile an appreciation of the multiscale dynamics of globalization with close analysis of specific networks in situ, and specifically the extent to which global networks are also local in the sense that they are embedded in different kinds of social or institutional contexts (Hess and Coe 2006; Hess and Yeung 2006). Despite the different emphases of the GPN framework and the efforts of its proponents to distinguish their approach from the GCC framework, most research carried out under the banner of the former consists of detailed and empirically rich case studies, and thus does not differ greatly from analyses of global commodity chains in terms of methodological approach (Bair 2008).

Though antecedents of contemporary work on international production networks in manufacturing are various, I will mention only two here. A 1973 article by Gerry Helleiner, which discusses the role of multinational corporations (MNCs) in the shift to export-oriented industrialization in developing
countries, anticipates the transformations that Feenstra (1998) would describe a quarter century later as “the integration of trade and the disintegration of production.” Although foreign investment in the developing world focused first on resource exploitation and later on serving domestic markets protected by import-substituting industrialization, Helleiner predicted that MNCs would “move increasingly into the internationalization of production and marketing, knitting the less-developed countries into their international activities as suppliers not only of raw materials but also of manufactured products and processes” (31). Helleiner pointed to the implications of this “processing, assembly, and component manufacture” model for extant explanations of the internationalization of corporate activity, as well as for the industrialization and development prospects of host countries. By the end of that decade, the future Helleiner envisioned had, to large degree, materialized. The emergence of export-oriented manufacturing in many developing countries was famously interpreted as a new international division of labor, manifest in the proliferation of export-processing zones throughout the Third World (Fröbel, Heinrichs, and Kreye 1980).

Stephen Hymer’s work on MNCs was a second important predecessor to the contemporary literature on cross-border production networks in global industries. If Helleiner assumed that the expansion of manufacturing for export in the developing world would take the form of foreign direct investment by multinationals in overseas subsidiaries, Hymer anticipated not just the geographical relocation of manufacturing but also its externalization to networks of independent enterprises (Strange and Newton 2006). In a 1972 paper, Hymer describes a cycle that “traces the operational flow of activities organized by the corporation through the phases of science, invention, innovation, production, marketing, distribution, and consumption” (Hymer, quoted in Cohen, Felton, Nkosi, and van Liere 1979: 151). In a passage that is resonant with Gereffi’s description of buyer-driven commodity chains, Hymer hypothesizes that “where product design becomes the dominant element, investment in development and marketing is more important [than production.] The large corporation might then prefer to allow small businesses to own the plant and equipment (along with the associated risks) while it concentrates on intangibles” (Hymer, quoted in Cohen, Felton, Nkosi, and van Liere 1979: 248; compare Gereffi, Humphrey, Kaplinsky, and Sturgeon 2001: 6).

Decades after these pioneering discussions, two more variations on the chain theme emerged from milieu quite different than the literature on MNCs to which Helleiner and Hymer were contributing. The first is supply chain
management (SCM), a term coined in 1982 by Keith Oliver, a vice president in the London office of the international consultancy firm Booz Allen Hamilton. Oliver developed an integrated approach to inventory management that sought to balance the trade-off between his client’s goals and the needs of the client’s customers; his idea was to analyze the “management of a chain of supply as though it were a single entity, not a group of disparate functions” (Laseter and Oliver 2003). Oliver referred to his approach as supply chain management; not only did the name stick, but this project of integrating logistics with materials and information flows mushroomed in the 1990s with new point-of-sale technologies and electronic data interchange (EDI).

The second is the notion of the value chain, which entered the lexicon of strategic management via Michael Porter’s well-known 1985 book, Competitive Advantage. For Porter, value chains are tools for analyzing the relationship between various actors and activities within an organization. Businesses can secure a competitive advantage by successfully managing the linkages between these internal functions in a way that creates value for the firm’s customers. Porter uses the term value system to describe the set of inter-firm linkages through which different enterprises (and their value chains) are connected to each other. These larger interconnected systems of value chains, which extend backward from an individual firm to its suppliers, and forward into its distribution channels, are often international in scope. For this reason, within the strategic management literature they are sometimes referred to as global supply chains, or occasionally global value chains.

The first set of chain concepts discussed earlier—commodity systems, systems of provision, and filière—shares some similarities with commodity chains as understood by world-systems theorists, whereas the various network approaches used to describe global manufacturing arrangements, as well as supply chain management and Porter’s value chains, are closer to the GCC and GVC frameworks. Yet these variants differ from the three camps of commodity or value chain research summarized further on insofar as the latter share common roots—specifically, in a political economy perspective in which the chain construct is used to investigate interconnected, cross-border processes of trade and production. Although the discussion of these three chain approaches later in this chapter points to some of the ways in which the GCC and later the GVC approaches diverged from the original commodity chain formulation offered by Hopkins and Wallerstein, they can nevertheless be regarded as stemming from a single intellectual lineage, in the sense that the GCC framework grew out of (though modified) world-systems theory, and
GVC analysis grew out of (though, again, also modified in important ways) the GCC framework. The extent to which this lineage outweighs salient differences between these camps, and the relationship between this composite global chains literature, so conceived, and other network approaches such as the GPN framework mentioned earlier, is an ongoing question, and one that is addressed, implicitly or explicitly, in several of the chapters that follow.

From Commodity Chains in the World-System to Value Chains in the Global Economy

The term commodity chain dates from a 1977 article by Hopkins and Wallerstein in which the authors sought to differentiate their understanding of capitalism’s territorial scope from the orthodox way of thinking about globalization. Instead of seeing the global economy’s development as a sequential process whereby national markets evolve in the direction of expanded foreign trade geared to an international market, the authors suggest starting with a radically different presumption. Let us conceive of something we shall call, for want of a better conventional term, “commodity chains.” What we mean by such chains is the following: take an ultimate consumable item and trace back the set of inputs that culminated in this item—the prior transformations, the raw materials, the transportation mechanisms, the labor input into each of the material processes, the food inputs into the labor. This linked set of processes we call a commodity chain. If the ultimate consumable were, say, clothing, the chain would include the manufacture of the cloth, the yarn, etc., the cultivation of the cotton, as well as the reproduction of the labor forces involved in these productive activities (128).

Three features characterize the world-systems tradition of chain research. First, commodity chain analysis focuses on how the global division and integration of labor into the world economy has evolved over time: “In terms of the structure of the capitalist world-economy, commodity chains may be thought of as the warp and woof of its system of social production” (Hopkins and Wallerstein 1994: 17). Historical reconstruction of commodity chains suggests that they have been global in scope since the emergence of modern capitalism. Thus, contra a presentist view of globalization, world-systems theory maintains that “transstate, geographically extensive commodity chains are not a recent phenomenon, dating from say the 1970s or even 1945, . . . they have been an integral part of . . . the functioning of the capitalist world-economy since it came into existence in the long sixteenth century” (Wallerstein 2000a: 2).
Second, commodity chain analysis seeks to understand “the unequal distribution of rewards among the various activities that constitute the single overarching division of labor defining and bounding the world economy” (Arrighi and Drangel 1986: 16). The question for researchers is what we can learn from commodity chain analysis about the process of capital accumulation at a particular point in the evolution of the world-system, and what it tells us about the distribution of the total surplus-value created in a particular chain between its various links (or boxes, in the terminology of Hopkins and Wallerstein). Some links in a chain will tend to be located in core (that is, developed) countries of the world-system, and others in the less-developed zones of the semi-periphery and periphery, but the spatial distribution of these links can change over time, as can the configuration of the chain itself, as when the boundaries around boxes are redrawn (for example, activities previously performed in one box are divided into two separate boxes). Boxes that are characterized by a high rate of profit are typically monopolized by a small number of producers and are usually located in core countries, although any highly profitable link is subject to competitive pressures that tend toward its demonopolization over time.

Third, the spatial and social configurations of chains are linked to cyclical shifts in the world economy. During phases of economic contraction (Kondratieff B-phases), the geographical scope of a chain is often reduced, due to increased concentration and a decline in the overall number of producers participating in it, while the degree of vertical integration characterizing a chain tends to increase (that is, more links of the chain are incorporated within the organizational boundaries of the firm) (Hopkins and Wallerstein 1994). The reverse is true of expansionary periods, or Kondratieff A-phases.

The first book-length manuscript devoted to commodity chains appeared in 1994. Commodity Chains and Global Capitalism was edited by Gary Gereffi and Miguel Korzeniewicz and contained a number of papers presented at the sixteenth annual conference of the Political Economy of the World-Systems (PEWS) research group. Most reviews of the commodity chain approach cite this volume as “the beginning of GCC analysis as a relatively coherent paradigm” (Daviron and Ponte 2005), and emphasize the framework’s roots in the world-systems orientation (Dicken and others 2001; Fine 2002; Thompson 2003), the dependency tradition (Henderson and others 2002), radical development theory (Whitley 1996), or structuralist development economics (Cramer 1999). However, as I have argued elsewhere (Bair 2005), there is a disjuncture
between the world-systems tradition of commodity chain research and the GCC framework, and these differences were already evident in the Gereffi and Korzeniewicz volume. Most of the chapters in the book, with the exception of those on the shipbuilding and wheat flour commodity chains during the sixteenth and seventeenth centuries (Özveren 1994; Pelizzon 1994), focus on contemporary manufacturing industries, and in particular on inter-firm networks linking developing country exporters to world markets. In addition, most contributors neglected to investigate the cyclical dynamics of commodity chains that are of great interest to world-systems theorists.

The most widely cited contribution to Commodity Chains and Global Capitalism was a chapter by Gary Gereffi that described a framework for the study of what he called global commodity chains, or GCCs. Gereffi (1994) identified three dimensions of such chains along which they could be analyzed: (1) an input-output structure, which describes the process of transforming raw materials and other inputs into final products; (2) a territoriality, or geographical configuration; and (3) a governance structure, which describes both the process by which particular players in the chain exert control over other participants and how these lead firms (or “chain drivers”) appropriate or distribute the value that is created along the chain. In a later contribution (1995), Gereffi added a fourth dimension: institutional context, which describes the “rules of the game” bearing on the organization and operation of chains.

As Gereffi and his coauthors make clear in their introduction to the volume, part of the appeal of the commodity chain construct is its ability to move across different levels of analysis: “Our GCC framework allows us to pose questions about contemporary development issues that are not easily handled by previous paradigms, and permits us to more adequately forge the macro-micro links between processes that are generally assumed to be discreetly contained within global, national, and local units of analysis” (Gereffi, Korzeniewicz, and Korzeniewicz 1994: 2).

Global commodity chains are structures that connect actors across space—not only to each other, but also to world markets. They can thus be thought of as the infrastructure of international trade, and their analysis reveals cross-border flows and intermediate processes of production and exchange that are concealed by statistics referring only to trade in final products. For this reason, Gereffi’s GCC framework proved particularly appealing to scholars in development studies, who having witnessed the widespread adoption of export-oriented industrialization (EOI) strategies across much of the global South
throughout the 1980s and 1990s were eager to find a paradigm that would help shed light on these policies and their consequences. The shift to EOI among developing countries was auspicious for the reception of Gereffi’s GCC framework among academics and policymakers alike, and although the timing was fortunate, the substantive relevance of the GCC approach for development issues was rooted in the evolution and trajectory of more than two decades of Gereffi’s own work—first, on the pharmaceutical industry in Mexico and the dynamics of dependent development (Gereffi 1983), and later on the comparative trajectories of East Asian and Latin American economies (Gereffi and Wyman 1990). Although his early writing was strongly influenced by dependency theory, Gereffi’s comparative research later highlighted differences in the industrialization strategies being pursued across regions, especially with regard to how these domestic policies and regimes intersected with the organization of global industries.

As an approach linking development trajectories to the dynamics of industrial sectors, the GCC framework provided a way to codify and extend the insights generated by Gereffi’s studies of comparative development. Chief among these was Gereffi’s assertion, contra the world-systems view of commodity chains, that global commodity chains are an emergent organizational form associated with a relatively recent and qualitatively novel process of economic integration: “One of the central contentions of the GCC approach is that the internationalization of production is becoming increasingly integrated in globalized coordination systems that can be characterized as producer-driven and buyer-driven commodity chains” (1996: 429). This distinction between producer-driven and buyer-driven commodity chains (PDCCs and BDCCs) highlighted distinct patterns of coordination and control in global industries. The emergence and proliferation of buyer-driven chains in light manufacturing industries seemed to capture well the experience of many developing countries, which were becoming integrated into global markets as exporters of toys, footwear, apparel, and consumer electronics. In addition to Gereffi’s own early work on apparel (Appelbaum and Gereffi 1994; Gereffi 1994), dissertations written by Gereffi’s students at Duke University contributed to the emergent literature on BDCCs in several industries throughout the 1990s (Cheng 1996; Haji-Salleh 1997; Leung 1997; Pan 1998).

The GCC approach departs from the original world-systems research agenda on commodity chains in two ways. First, its analytical emphasis on the
activities of firms, and especially the chain drivers that play the lead role in constructing and managing international production networks, gives greater weight than a more orthodox world-systems approach would to the role of firms as capitalism’s organizing agents. Second, its interest in analyzing—and later, in more policy-oriented work, harnessing—the dynamics of commodity chains to advance the industrialization and developmental objectives of states marks a further break with the world-systems tradition, which inveighs against the myopia of this “developmentalist illusion” (Arrighi 1990; Wallerstein 1994). Although studies of GCCs frequently focus on the prospects for firms, nations, or regions to upgrade via incorporation into particular commodity chains, world-systems theorists emphasize that for understanding the world-capitalist economy, “[w]hat is central is the fact of unequal exchange operating through a set of mechanisms . . . that continually reproduces the core-periphery division of labor itself—despite massive changes in the areas and processes constituting the core, periphery and semi-periphery” (Arrighi and Drangel 1986).

The GCC framework outlined by Gereffi in his contribution to Commodity Chains and Global Capitalism proved widely influential, and within a decade a wide range of global commodity chains in the manufacturing, agricultural, and (to a lesser extent) service sectors had been studied. Several international institutions embraced the GCC (and more recently, GVC) framework as well. The International Labour Organization sponsored a multiyear project looking at the implications of this kind of analysis for employment; the United Nations Commission for Latin America and the Caribbean has drawn on the GCC approach in research on regional production clusters; and the United Nations Industrial Development Organization funded a series of sectoral analyses assessing the prospects for developing-country firms in various global chains, including those for autos (Humphrey and Memdovic 2003), apparel (Gereffi and Memdovic 2003), and furniture (Kaplinsky, Morris, and Readman 2001).

By the close of the 1990s, and in the context of this burgeoning literature on global chains, some scholars began to reappraise the original GCC approach. First, the very description of these chains as commodity chains was questioned, because the term commodity is generally taken to denote either primary products (for example, agricultural staples) or low-value-added, basic goods (such as plain t-shirts as “commodity” garments). Second, Gereffi’s original distinction between producer-driven and buyer-driven chains was thought to miss important features of chain governance that were revealed
by new studies, suggesting the need for an expanded typology. Finally, some scholars noted that there was relatively little exchange between researchers working within the GCC framework and those who, although working on similar topics, were using different concepts to describe international production networks. This became especially evident when, as Timothy Sturgeon’s chapter in this volume explains in greater detail, a group of researchers, with support from the Rockefeller Foundation, began an interdisciplinary initiative in 2000 to examine different approaches to the study of global production networks. Out of their conversations and collaborative work came the conviction that a common terminology would foster dialogue and promote a sense of intellectual community among scholars studying global industries. With the aim of selecting a term that would be inclusive of various constructs, this group decided to describe their project as global value chain analysis. The GVC rubric was favored over alternative concepts such as commodity chains or supply chains “because it was perceived as being the most inclusive of the full range of possible chain activities and end products” (Gereffi, Humphrey, Kaplinsky, and Sturgeon 2001).

There is no clear consensus regarding the relationship between the GCC framework and GVC analysis, however. For example, scholars at the Danish Institute for International Studies adopted the new vocabulary in a multiyear research project analyzing the experiences of African exporters in global markets. Although the two books that resulted from this research are the first manuscript-length works to refer to GVCs, the authors appear to regard the shift from “commodity chains” to “value chains” as a purely terminological one devoid of substantive theoretical implications (Gibbon and Ponte 2005; Daviron and Ponte 2005). Indeed, Daviron and Ponte refer to the GVC approach as one “that first appeared in the literature under the term ‘global commodity chain’ (GCC) analysis” (2005: 27), suggesting that GVCs and GCCs are more or less interchangeable constructs.

However, a somewhat different perspective is offered by Timothy Sturgeon, whose chapter here both elaborates his view of GVC analysis as a broader intellectual project and situates within this overarching GVC research agenda a specific theory of GVC governance, which he has helped formulate. In Sturgeon’s view, GVC analysis draws on the GCC tradition of chain research, but it is also influenced by transaction cost economics and a broader literature in the economics of organization. A paper coauthored by Sturgeon, Gary Gereffi, and John Humphrey, which appeared in the Review of International Political
Economy in 2005, was a key moment in the development of a GVC approach distinct from Gereffi’s GCC framework. In this paper, the authors identified a typology of five possible governance structures that can be found at the inter-firm boundary linking suppliers to lead firms in global value chains. According to this theory, the type of governance prevailing at the link between two firms is determined by the values (measured as “low” or “high”) in three independent variables: the complexity of transactions, the codifiability of information, and the capabilities of the supply base. These variables are intended to capture characteristics of the industry structure or production process, including the nature of “the knowledge transfer required to sustain a particular transaction, particularly with respect to product and process certifications, the extent to which this information and knowledge can be codified, and therefore, transmitted efficiently and without transaction-specific investment between the parties to the transaction, and the capabilities of actual and potential suppliers in relation to the requirements of the transaction” (Gereffi, Humphrey, and Sturgeon 2005: 85).

Thus far I have offered a genealogy of the commodity chain concept that distinguishes between the world-systems tradition, the GCC framework, and GVC analysis. One might interpret these as three generations of chain constructs, insofar as they roughly succeed each other in a temporal ordering, with the original commodity chain concept dating from the 1980s, the GCC framework being elaborated in the 1990s, and the global value chain variant emerging only in the 2000s. However, a generational schema of this sort is somewhat misleading because these literatures overlap, and work in all three traditions of chain research continues, including some by scholars who have been influenced by, and whose present research references, more than one of these frameworks. For example, though Gary Gereffi has been actively involved in the development of global value chain analysis, and was one of the architects of the GVC governance theory, it is the GCC framework and its conceptualization of governance as “drivenness” that informs his analysis in Chapter 7 of this volume, authored jointly with Gary Hamilton.

In fact, the construct of the buyer-driven commodity chain figures prominently in Hamilton and Gereffi’s discussion of the relationship between global buyers and local producers in Korea and Taiwan. This suggests that the new typology of governance proposed by Gereffi and colleagues (2005) is not intended to replace the GCC framework’s original buyer-driven versus producer-driven distinction. Rather, because these different classificatory
schemes correspond to different conceptualizations of governance (as I discuss in the next section of this chapter), the question of which typology to apply in a particular piece of research may well depend on the specific analytical or theoretical issue that is being addressed. Hamilton and Gereffi use the BDCC construct to explain how networks between global buyers and local suppliers can shape the organization of a national economy. Given their interest in demonstrating the macro-level consequences of these networks, the GCC framework provides a better analytical lens than that of the GVC governance theory, whereas the latter might be preferable if the researcher wanted to focus instead on the dynamics of a particular industry, or to explain the variation that exists within a set of buyer-driven chains.

As the preceding discussion as well as the chapters that follow suggest, the extent to which a clear differentiation between the world-systems, GCC, and GVC versions of commodity chain research can and should be made is open to dispute, and so too is the question of how one might distinguish between these various approaches as they are applied in empirical work. Readers of this volume can make their own judgments about the analytical utility of such a distinction, and likely will arrive at their own assessments.

Three Debates in the Study of Chains

I turn now to a review of key debates within the commodity chain literature that contributions to this volume engage. These deal with central methodological and theoretical questions about what and how we learn from the study of global chains, and include (1) issues of analytical scope and operationalization of the chain construct, (2) chain governance, and (3) the sociological and political implications of chain analysis. The remainder of this chapter is divided into three sections, each of which provides an overview of one of these debates, followed by brief summaries of how the chapters in this collection address and extend them.

Issues of Operationalization, or "Which Is It Anyway—Commodity or Value Chain?"

Of necessity, every contributor to this volume takes a position with regard to the first of these debates by deciding to use either the term commodity chain or value chain. Although some might dismiss as inconsequential the decision to use value or commodity, the genealogy of the commodity chain concept traced in the previous section suggests that the choice for one term versus an-
other is meaningful insofar as it has implications for how chains are studied, starting with the fundamental question of how the very object in question is analytically defined.

The commodity chain of world-systems theory is the most inclusive of extant chain constructs. Like its GCC and GVC counterparts, it includes the sequence of activities through which raw materials or components are transformed into final products, but this tradition of chain research also emphasizes that labor power is a critical input into every commodity chain and thus seeks to identify the various modes of labor control and reproduction that one can find along a chain, or even within a single box (Hopkins and Wallerstein 1994). Depictions of historical commodity chains as they have been reconstructed by world-systems researchers also include the transportation and storage of intermediate and final products as boxes in the chain. In this sense, the commodity chain is more like a web than a chain. World-systems analysts are not only, or perhaps not even primarily, interested in the sequential flow of materials and transformations that produce a final commodity. Instead of this “forward” view, they may want to look outward from any particular box in a chain and analyze the various processes which created the product in that box. In other words, what may be the last link in one chain is itself an input or intermediate link in another. It is the overlapping and intersecting nature of different commodity chains that Hopkins and Wallerstein meant to evoke when referring to them as the warp and woof of the capitalist world-economy.

Moving from this conceptual understanding of commodity chains to their empirical study poses a number of daunting challenges for the researcher. Hopkins and Wallerstein suggest that one possibility for commodity chains research is “to develop a mode of evaluating the entire network of commodity chains at successive points in time, so as to locate shifts in which chains are the major loci of capital accumulation” (1994: 49). However, in reality most studies focus on a single chain, or more accurately, a segment of a single chain or even a single box. This raises a methodological question for chain researchers: how should a chain be defined and made manageable as an object of study? For example, if the buyer-driven and producer-driven constructs are Weberian ideal types, how is a particular buyer-driven or producer-driven chain—say, those for apparel and automobiles, respectively—operationalized in empirical analysis? Or put differently, how does one differentiate between a global commodity chain as a stylized representation of inter-firm networks in a global industry and the many sets of specific linkages that constitute “real world” chains?
One of the benefits that primary commodities offer to chain analysts is manageability. Studying the entire length of a commodity chain is a task more easily accomplished for coffee and cocoa than for cars and computers. Another “comparative advantage of tropical commodity chain analysis” (as described by John Talbot in Chapter 5) is the tendency of these chains to highlight issues of global inequality that may be less obvious in other industry contexts. This is because the ecology of tropical commodities requires them to be grown in the global South, whereas markets for these products are located primarily in the North. Thus tropical commodity chains are almost always truly “global”—not only do these chains cross national borders, they also connect producers to consumers across the boundaries of the world-system zones (Talbot 2004).

But are all commodity chains so extensive in their territorial dimension? Put differently, are all global commodity chains, in fact, global? It was a premise of Gereffi’s original GCC framework that transnational production systems are becoming increasingly integrated and coordinated across space, but the extent to which the territoriality of any specific commodity chain is global is an empirical question. Geographically concentrated chains can be found in global industries for a variety of reasons, including product characteristics and market factors. For example, clothing retailers in the United States might prefer domestic or regional (say, Latin American) suppliers when speed-to-market or quick replenishment pressures are critical. For some products, “shorter” and less dispersed chains are part of the product’s very definition and appeal; this may be the case for fruits and vegetables sold at a local farmer’s market when, for example, the consumer values the increased transparency and freshness that spatial proximity between “farm and fork” is thought to provide. Yet although particular chains—that is, discrete sets of linkages between specific actors—may not be global, the GCC framework leads us to ask how these are nevertheless shaped by the broader organizational field of the global commodity chain to which they belong.

Several critics have faulted the chain construct for its linearity, suggesting that it is incapable of conveying the complex and interactional nature of networks (Henderson and others 2002; Cook and Crang 1996). Some argue that an analytical vocabulary of networks better captures the role of actors than do more structural chain approaches, which Arce and Marsden accuse of verging on a functionalist determinism that “suppresses the significance of contextualized human agency” (1993: 296; compare Collins 2005). Leslie
and Reimer (1999) worry that "horizontal" dimensions receive inadequate attention when analytical priority is given to the flow of materials or processes along the chain. For example, aspects such as place and gender are relevant for each link in the commodity chain, yet may be neglected by chain approaches focusing on the connections between links, as opposed to the common elements bearing on the organization of actors and activities across the chain.

These and other critical discussions of the global chain literature highlight some of the methodological weaknesses or confusions that chain researchers should address, and underscore the need for greater attention to the question of how we operationalize the commodity chain as an analytical construct. Raikes, Jensen, and Ponte point to the need for this kind of clarification in their review of Gereffi’s global commodity chain framework: “Is a GCC just any channel, or set of channels, by which products cross the world, or should the notion itself include the specific power and governance structure seen by Gereffi to define GCCs?” (2000: 400). Similarly, Thompson asks “[w]hat are the ‘limits’ of GCC/value-chain analysis, and what is the ‘beyond’ of its particular analytical formulations? Is there anything that cannot be included as a commodity/value chain that can claim to be called economic production?” (2003: 211).

The chapters in Part I speak to several of the methodological issues at stake in analyzing commodity chains in comparative and historical perspective. These authors reflect on how we define the commodity chain as an object of study, implicitly pointing to the challenge that researchers face in deciding on an operationalization of the commodity chain that is feasible in terms of empirical study and yet still sensitive to the complexity, multidimensionality, and variability of these networks across time and space.

In the only chapter authored by a historian (Chapter 2), Steven Topik’s discussion of the global trade in coffee underscores the importance of approaching commodity chains as concrete social relations between historical actors. In contrast to the GCC approach’s emphasis on the role of lead firms as the organizational drivers of chains, Topik shows how changing patterns of popular consumption in foreign markets, as well as particular characteristics of the locations in which production takes place, shape the geography of international production and trade networks. Within the vast literature on the coffee trade, analyses of the contemporary coffee chain highlight the power of large, multinational roasters and specialty coffee retailers and the collapse of the International Coffee Agreements in explaining the precipitous decline
in the price of green coffee beans (Talbot 2004). Others emphasize that the ability of brands and coffee retailers such as Starbucks to capture the majority of value-added in the coffee chain reflects their control of symbolic or immaterial aspects of production, such as the in-person services or atmosphere provided on-site at the local café (Daviron and Ponte 2005).

These analyses provide valuable insight into the organization of the coffee chain (including the enormous volumes of coffee traded on the futures market), but Topik’s sweeping historical analysis, which begins before coffee became constituted as a commodity, enables a different perspective. Challenging the standard view of coffee-growing countries as victims of powerful U.S. or European corporations, Topik describes Brazil’s importance as a “market maker” for coffee in the late nineteenth century and its later role as a global “price maker,” following the government’s implementation of the valorization plan in 1906. In short, historical analysis is capable of underscoring agency and contingency in commodity chains, and can show how power among actors in chains shifts over time—all of which helps one to avoid the temptation of seeing the organization of contemporary commodity chains as necessary or inevitable, the functionalist determinism that Arce and Marsden, among others (Henderson and others 2002), caution against.

David Smith and Matthew Mahutga provide a similar warning about what Topik refers to as the problem of “tunnel vision” in analyzing commodity chains. In their contribution (Chapter 3), Smith and Mahutga argue that extractive activities, which produce the raw materials used in so many commodity chains, merit far more attention than they have received in the chain literature—an omission they aim to address. Drawing on the “modes of extraction” concept developed by Stephen Bunker (1985; Bunker and Ciccantell 2005), Smith and Mahutga suggest that analytical attention to these forgotten links in the commodity chain foregrounds critical factors, such as the importance of transportation in enabling geographically extensive chains, and the role of the state, given that governments are often intimately involved in administering and supporting the infrastructure required for large-scale extractive activities. An operationalization of the commodity chain that “starts at the beginning” (Smith 2005) is part of the authors’ project to link the analysis of international trade and production networks to a country’s structural position in the world-system, as well as to broader debates about the degree and nature of global inequality. In this sense, Smith and Mahutga’s chapter is the most faithful extension of the world-systems research agenda on commodity
chains among those collected here. However, their quantitative network analysis departs from the historical reconstruction of commodity chains that has characterized this tradition, and thus extends world-systems analysis of commodity chains in a new methodological direction.

Like Smith and Mahutga, Immanuel Wallerstein points in Chapter 4 to the importance of the state in shaping commodity chains, and like Topik, he is interested in the implications of this insight for appreciating the historically contingent and politically constructed nature of chains. Wallerstein elaborates the various ways in which governments shape what the GCC framework refers to as the institutional context within which chains operate, but he emphasizes that the influence of the state over global production networks is not restricted to setting "the rules of the game." The configuration of chains sometimes reflects struggles between the state and producers, as the latter try to avoid or circumvent government-imposed restrictions on their activity that they find onerous. In addition to these internal struggles between states and producers, Wallerstein observes that international trade and production networks are often objects of political and ideological contestation between countries, as was starkly apparent when a unified front of developing countries (the so-called G-20 plus) challenged the legitimacy of the global trade regime during the WTO meeting in Cancun, Mexico, in September 2003.

Wallerstein’s chapter provides a fitting conclusion to the first section of this volume, because he speaks directly to the question of how we should study commodity chains. Rather than offering a specific set of recommendations, Wallerstein reminds us that even the most careful operationalization of the chain concept, and the most rigorous empirical analysis, will yield only a partial perspective on the dynamics of production and exchange in the world capitalist economy that he and Hopkins developed the commodity chain concept to explore: "Studying commodity chains is for the political economist something like . . . looking through the Hubble telescope for the cosmologist. We are measuring indirectly and imperfectly a total phenomenon that we cannot see directly no matter what we do. . . . It requires imagination and audacity along with patience. The only thing we have to fear is looking too narrowly."

**Governance: Beyond the PDCC-BDCC Distinction**

Gereffi’s (1994) differentiation between producer-driven and buyer-driven commodity chains is the most widely cited proposition in the global commodity chains literature. Producer-driven chains are characteristic of more
capital-intensive industries in which powerful manufacturers control and often own several tiers of vertically organized suppliers (for example, motor vehicles); buyer-driven chains refer to industries, apparel being the classic case, in which far-flung subcontracting networks are managed with varying degrees of closeness by retailers, marketers, and other “intermediaries” (Spulber 1996) that generally make few or none of the products that are sold under their label. Ownership is more closely correlated with control of the production process in PDCCs than in BDCCs. In the latter, non-equity ties between lead firms (or “big buyers”) and first-tier suppliers, as well as between suppliers and several tiers of contractors, are more prevalent than either vertical integration or one-shot, arm’s-length market transactions. What is most significant about this dichotomy is the recognition of the role played by commercial capital in BDCCs. These companies, mostly retailers and brand-name marketers, call the shots for the many firms involved in the buyer-driven chains they manage, although they generally have no equity relation to the producers making goods on their behalf.

One of Gereffi’s main interests was to show that even chains with more “market-like” governance structures require coordination, and that these coordinating tasks are assumed by lead firms that determine much of the division of labor along the chain and define the terms on which actors gain access to it (Appelbaum and Gereffi 1994). Thus outcomes for suppliers are strongly affected by the behavior of lead firms, leading researchers to examine the implications of a chain’s governance structure for the upgrading efforts of suppliers and the developmental prospects of the regions in which they are located (Gibbon 2001a; Schrank 2004; Daviron and Ponte 2005).

Although the analytical utility of these Weberian ideal types was confirmed by studies using the producer-driven and buyer-driven constructs as templates for analyzing various industries, the PDCC-BDCC distinction was criticized for being too narrow, overly abstract, or both (Clancy 1998; Fold 2002; Gellert 2003; Henderson and others 2002). Other studies suggested that the buyer-driven and producer-driven categories did not adequately capture the range of governance forms observed in actual chains, leading to a proliferation of variations on the original theme of “drivenness.” Although the PDCC-BDCC distinction had been elaborated with reference to manufacturing industries, Peter Gibbon (2001a) proposed that true “commodity” chains—that is, those along which basic agricultural products such as coffee and sugar are
harvested, processed, and marketed—are international trader-driven chains, with large trading houses often playing the lead firm role. Based on his study of the chocolate chain, Niels Fold (2002) proposed that a bipolar governance structure can emerge when two types of lead firms (in the case of chocolate, cocoa grinders and brand-name chocolate manufacturers) control different segments of the chain. Sean O’Riain (2004) argued that research-intensive industries such as software are best understood as technology-driven chains. Gereffi himself proposed that Internet-based developments such as B2B (business to business) networks were producing new forms of coordination and control described as Internet-driven chains (2001a). Yet another governance structure—the modular network—was proposed by Timothy Sturgeon (2002). The modular network, which is discussed in more detail later in this section, describes relations between brand-name companies in the electronics industry (such as Apple, Compaq, Silicon Graphics) and the contract manufacturers that supply them (for example, Solectron, Flextronics).

Among the four dimensions of the GCC framework outlined by Gereffi, governance structure has received the most empirical and theoretical attention (Gereffi, Humphrey, and Sturgeon 2005; Ponte and Gibbon 2005; Petkova 2006). To understand current debates about governance in the chain literature, and how the chapters in this volume contribute to them, we must first consider how the concept of governance in the GCC and GVC frameworks differs from the view of networks as organizational “hybrids” in transaction cost economics, as well as from the view, prevalent within much of economic sociology, that relational networks are a distinct, trust-based governance structure.

Sociological research on economic networks in the 1980s was largely a response to, and more specifically a criticism of, transaction cost economics. The latter field developed as part of the new institutional economics in the 1970s, when economists, armed with the much earlier work of Ronald Coase (1937), began to look inside the “black box” of the firm. If Coase argued that the problem of the firm—that is, why the economy features large organizations that internalize transactions that could occur in the market—is to be explained by the fact that transacting on the market implies costs, Oliver Williamson set out to formalize this observation, asking under what circumstances do the costs of transacting on the market make the internalization of those exchanges within a firm the more efficient solution? Williamson’s answer hinged largely on asset specificity: transactions were more likely to
be conducted within the organizational boundaries of the firm when they required particular, dedicated investments. In Williamson’s view, investments of this kind increase the mutual dependence between the actors in an exchange (for example, between buyer and supplier). The mutual dependence implied by high levels of asset specificity create the conditions for opportunistic behavior on the part of one or both parties to the transaction, which, in turn, creates costs, such as the building-in of safeguards to prevent possible malfeasance (Williamson 1975).

Although Williamson’s theory initially focused on elaborating the circumstances under which hierarchy (that is, firms) may represent an efficient alternative to markets, he later acknowledged that intermediate forms of organization that mix elements of market and hierarchy are also possible. In an analysis of the way in which different organizational forms depend on and are supported by distinct traditions of contract law, Williamson identifies a “hybrid” organizational form between market and hierarchy, which describes various kinds of long-term contracting arrangements or other situations in which there are repeated exchanges between autonomous parties that share some degree of mutual dependence (Williamson 1991).

Sociologists challenged Williamson and the new institutional economists on three grounds. First, they argued that the hybrid form Williamson described was not an intermediate organizational form between the poles of market and hierarchy but rather a distinct network governance structure that was, in Powell’s classic formulation, “neither market nor hierarchy” (1990). They further rejected Williamson’s assumption that what he called intermediate forms of organization were relatively infrequent, arguing that because “the network form of organization has a number of distinct efficiency advantages not possessed by pure markets or pure hierarchies,” it is empirically more common than transaction cost economics would predict (Podolny and Page 1998: 59). Finally, the very tenability of Williamson’s distinction between different organizational forms was questioned, because there are “strong elements of markets within hierarchies” and vice versa (Perrow 1986).

In a highly influential and widely cited article published in 1985, Mark Granovetter argued that transaction cost economics operates with an “under-socialized” conception of human action. His claim is that standard economic accounts obscure the fact that interpersonal relations between economic actors, and the obligations and expectations that derive from them, can constrain the malfeasance and opportunistic behavior at the core of Williamson’s
explanation of the firm (Granovetter 1985). However, if trust-producing social relations can “solve” the malfeasance problem, they do not necessarily do so, leading Granovetter to eschew a predictive model specifying when interpersonal ties generate particular outcomes in favor of grounded analyses examining how concrete social relations affecting economic activity emerge and evolve in specific contexts.

The research agenda proceeding from Granovetter’s intervention has since been pursued by many authors seeking to demonstrate how socio-structural contexts shape economic activity (see also Hamilton and Gereffi, Chapter 7 in this volume). Many of these contributions focus on a particular organizational form—inter-firm networks—and a particular manifestation of the social-interpersonal relations, between, for example, firms and venture capitalists (Powell, Koput, and Smith-Doerr 1996) or between manufacturers and their suppliers (Uzzi 1997). In fact, a focus on social networks as dyadic ties between individuals or firms is a hallmark of the new economic sociology (Granovetter 1992; Swedberg 1997; Grabher 2006). Thus, although one could read Granovetter as suggesting that all economic activity and every form of economic organization is embedded in a social context—in which case, embeddedness is a process that bears on hierarchies and markets as much as on hybrid forms—sociological work proceeding from Granovetter’s challenge to economics has focused primarily on the inter-firm network as a uniquely “social” organizational form (Bair, 2008).

Understood in this sense, networks are unlike either markets or hierarchies because they generate mutual expectations and relations of trust, which arise from repeated exchanges that become “overlaid with social content” (Granovetter 1985: 490). It is because of their “distinct ethic or value-orientation” that networks are “not reducible to a hybridization of market and hierarchical forms, which, in contrast are premised on a more adversarial posture” (Podolny and Page 1998: 61). The benefits of networks relative to other organizational forms derive in large measure from the kind of interactive and collaborative learning that trust is presumed to enable. Brian Uzzi’s discussion of networks in the New York City garment district is typical in this respect:

Unlike governance structures in atomistic markets, which are manifested in intense calculativeness, monitoring devices, and impersonal contractual ties, trust is a governance structure that resides in the social relationships between and among individuals and cognitively is based on heuristic rather than calculative
processing. In this sense, trust is fundamentally a social process, since these psychological mechanisms and expectations are emergent features of a social structure that creates and reproduces them through time. This component of the exchange relationship is important because it enriches the firm’s opportunities, access to resources, and flexibility in ways that are difficult to emulate using arm’s-length ties (1997: 45).

Sociological analyses of the network form often highlight, as Uzzi does, the functional advantages that networks provide. But what if a different governance structure is capable of generating similar benefits? This is the question both posed and answered by Timothy Sturgeon’s work on contract manufacturing in electronics. Sturgeon hypothesizes that value chain modularity represents a form of governance that is not only neither market nor hierarchy but, equally important for the purposes of this discussion, also not a network form exhibiting the “open-ended, relational” features that Powell argued “greatly enhance the ability to transmit and learn new knowledge and skills” (1990: 304).

As Sturgeon explains (2002: 480), “trust, reputation and long-term relationships are not the only way to buoy external economies.” For example, the development of industrywide standards and the codification of knowledge in the electronics industry enable lead firms and highly competent suppliers to exchange rich information (such as detailed specifications) about transactions without need of deeply relational ties. “Turn-key” suppliers provide their clients with “a full-range of services without a great deal of assistance from, or dependence on lead firms” (2002: 455). In modular networks asset specificity remains relatively low because there is “a highly formalized link at the inter-firm boundary, even as the flow of information across the link has remained extremely high” (468). The linkage between lead firms and these key component suppliers, which often work for multiple clients, enables external economies of scale that cannot be realized in the trust-based, relational networks described by Granovetter, Uzzi, and Powell. Comparatively, modular networks are characterized by lower degrees of mutual dependence and a greater reliance on codified instead of tacit knowledge. In a sense, Sturgeon is arguing that standards and codification mimic “trust”—they produce an outcome that is similar to what may be observed in long-term, relational networks, but via a different mechanism.

Sturgeon’s concept of value chain modularity implicitly underscores the extent to which sociologists posit the relational features of networks as constitutive of, or synonymous with, networks as an organizational form. This is not surprising, because it is precisely these attributes of network relations
(the degree to which they consist of interpersonal communication, generate or express trust, and so on) that point most clearly to the independent effects of social structure on economic action, and are therefore most auspicious for developing a sociological alternative to transaction cost reasoning. But if the project of economic sociology is largely to dispute transaction cost economics, Sturgeon’s work and the GVC governance theory elaborated by Gereffi, Humphrey, and Sturgeon (2005) are in dialogue with it, as is made clear by the weight that these authors give to transaction costs as a factor shaping the coordination and configuration of value chains in global industries.

Pursuing the path opened by Sturgeon’s identification of the modular network, Gereffi, Humphrey, and Sturgeon (2005) develop a typology of the various forms that inter-firm relationships can take in GVCs, effectively elaborating a continuum of governance structures between the poles of hierarchy and market. In addition to modular networks, this continuum includes relational networks, in which interaction between firms is frequent and interpersonal communication important, and captive networks, which refer to relationships that are more asymmetrical, as lead firms that have invested in developing the skills of their suppliers seek to lock them in to the relationship, thus making them “captive.” Thus, like institutional economics and economic sociology, the theory of GVC governance asks why we sometimes find networks between firms instead of markets or hierarchies, but it operates with a more diversified understanding of the network forms that may exist at the inter-firm boundary, and thus also seeks to explain why one kind of network is found instead of another.

As was also the case with the earlier dichotomy between producer-driven and buyer-driven chains, the utility of the fivefold typology outlined in the GVC governance theory is already being questioned by scholars asking how well these modes of inter-firm coordination capture the overall dynamics of various chains (Gibbon and Ponte 2005; Bair 2005; Palpacuer 2008). Within the GCC framework, the BDCC-PDCC distinction aims to describe the composite power structure of a chain but offers no predictions about the way in which particular activities or the relationship between specific links are coordinated; the opposite would seem to be true of the GVC governance theory. As Sturgeon acknowledges in his chapter here, the GVC governance framework is best suited for analyzing a particular link in the chain—that is, the transaction between lead firms and first-tier suppliers7—whereas more work is needed to understand to what extent and how the mode of coordination prevailing at this link affects inter-firm dynamics farther down the chain.
This brings us to the first of several questions regarding chain governance that are addressed in this book: *Are chains characterized by a single governance structure, or are multiple forms of governance possible? If the latter is the case, how do we understand and theorize the relationship between them?* This issue is raised by John Talbot’s analysis of tropical commodity chains (Chapter 5). Talbot explains that the commodity chain for coffee forks into two branches after the growing, harvesting, and initial processing of the beans—one branch results in roasted and ground (R&G) coffee, whereas instant coffee is the final product of the other segment. Because these branches are different from each other, but both part of the larger commodity chain for coffee, Talbot follows Sturgeon (2001) in suggesting that they be referred to as threads. However, both industrial R&G and instant coffee differ from fair trade and specialty coffees, and Talbot proposes the term *strand* to denote the distinction between these “upscale” coffees and their industrial counterparts. Unlike the fork after the green coffee stage, which leads to two distinct forms of coffee, the production process for specialty or fair trade coffee may not differ greatly in terms of activities and inputs from that for industrial coffee. Yet even if the processing of these beans is similar, this occurs in the context of distinct governance structures and institutional contexts, meriting the recognition of specialty and industrial coffee as distinct strands that together constitute the coffee commodity chain.

As Talbot’s findings seem consistent with earlier work on the bipolar governance structure of the cocoa chain (Fold 2002), one hypothesis is that multiple governance forms more commonly characterize agricultural or other primary commodity chains, which often feature one “local” segment or set of links for the harvesting and initial processing of the product and another segment devoted to transportation, further processing, and eventual marketing; these later links in the chain tend to be located closer to the consumer. Is it also possible to identify somewhat analogous forks or splits in manufacturing commodity chains, and if so, do these give rise to or reflect different governance structures?

A second question regarding governance is, *How is governance best understood—as “driveness” or as “coordination”?* In the GCC framework, governance describes the power relations between actors that shape the flow of tasks and the distribution of costs and profits along the chain. Within any two chains of the same type the specific coordination of activities might be handled differently. For example, in the language of Gereffi, Humphrey, and Sturgeon’s
GVC governance theory, the retailers and branded marketers that are the lead firms in the apparel chain opt to establish more relational networks with their suppliers, whereas other inter-firm relationships between buyers and suppliers are better described as captive networks. Yet rather than explain this diversity, GCC analyses of the apparel chain have emphasized the extent to which the overall dynamics of this industry conform to the buyer-driven governance structure—that is, the greater relative power that virtually all lead firms have vis-à-vis manufacturers to decide how, where, and by whom products are made, regardless of the particular mode of coordination governing specific relationships.

In his contribution (Chapter 6), Timothy Sturgeon clarifies the relationship between the earlier PDCC-BDCC distinction and the new typology of governance structures laid out in the GVC theory of governance. Although Gereffi’s buyer-driven category gestured toward the importance of external networks in the coordination of global production processes, it did not differentiate between different network forms, and so failed to capture the diversity of inter-firm relationships that exist. The GCC framework was also unable to model how the possibilities for coordination between links in the chain are affected by dynamic processes of technological change and learning at the firm and industry level. The GVC governance theory was developed, in part, to compensate for these limitations of the GCC approach. In formulating their theory of GVC governance, Gereffi, Humphrey, and Sturgeon drew on many rich empirical analyses of specific global industries. Their intent was to build on the inductive, case study method typical of the GCC tradition, while developing a deductive approach that would allow for the formulation and testing of hypotheses.

Sturgeon’s chapter aims to clarify the relationship between this discrete theory of GVC governance on the one hand and the broader research agenda of GVC analysis on the other. He offers a clear assessment of the GVC governance framework’s strengths as well as its limitations, and acknowledges that governance is conceived in this theory as the coordination between two links in a chain—a definition that is analytically narrower and theoretically distinct from the conceptualization of governance as “drivenness” on offer in the GCC framework, which characterizes governance structure in terms of the composite power relations characterizing ideal-typical chains (also Gibbon, Bair, and Ponte 2008).

The third and final question about chain governance that is addressed in this volume is, How do governance structures change over time? Because
global chains are dynamic, chain analysis is necessarily historical. Although the GVC and GCC approaches depart from the sweeping, long-range studies characteristic of the world-systems tradition, these frameworks also acknowledge the importance of understanding how changing forms of governance affect the organization of global industries over time. In fact, Gary Hamilton and Gary Gereffi argue (Chapter 7) that not only have buyer-driven commodity chains reconfigured the geography of global manufacturing, this governance structure has also played an unappreciated role in the much-debated East Asian miracle.

Hamilton and Gereffi explain that in the decades after World War II, U.S. retailers became “global market makers”; their overseas sourcing activities created a market of international suppliers for goods such as footwear, apparel, and electronics. These buyer-driven commodity chains critically enabled the rapid economic growth characterizing the Korean and Taiwanese economies from the 1960s through the 1980s, but this causal factor has been omitted from the prevailing statist or institutional accounts of East Asian development. Hamilton and Gereffi assert that the economic organization of Korea and Taiwan reflects a process of iterative matching between global buyers and local suppliers, which, over time, gave rise to distinct patterns of sectoral specialization and an eventual divergence between these economies. By linking the emergence of buyer-driven commodity chains and the rise of demand-responsive economies in East Asia, Hamilton and Gereffi not only provide a new interpretation of that region’s successful industrialization but also more generally underscore the need for economic sociologists to take globalization—as a historical process and an ongoing set of organizational dynamics—more seriously than has been the case to date.

Workers and Activists in Global Chains

The final section of this volume engages two related debates about the social and political implications and possibilities of chain research. First, what can we learn from commodity chain analysis about how global industries shape outcomes for developing-country firms and workers? Second, in what ways can commodity chain analysis inform forms of activism designed to promote ethical production, mitigate globalization’s social and environmental costs, or both?

Many contributions to the GCC and GVC literatures have been made by scholars working in development studies. This is not surprising, because the advent of the commodity chain approach coincided with a period of searching
within the development field for new paradigms capable of illuminating the relationship between national development and a changing global economy. By the 1980s, the apparent failure of import-substitution industrialization regimes and the massive Third World debt crisis were widely interpreted as evidence that existing development strategies were misguided or unviable. Export-oriented industrialization (EOI) strategies were a key feature of the new conventional wisdom, famously summarized by John Williamson as the “Washington Consensus.” More or less rapidly, countries across the developing world embraced the turn toward EOI, often as part of broader reform packages that included trade and financial market liberalization and privatization of state-owned enterprises. The international financial institutions emerged from the debt crisis with an expanded and changed focus vis-à-vis developing countries (Krueger 1997), leading to much debate, considerable criticism, and eventually talk of a post–Washington Consensus, with an expanded agenda that includes issues such as poverty reduction and institution building.

The orthodox version of EOI maintains that economies should export goods in which they have a comparative advantage, and open their domestic economies to imports in order to help secure access to markets abroad. But as a way of examining how export-led policies become applied in practice, GCC research shows that participation in global markets is not restricted to trade in final goods. Instead, countries become linked to the global economy in a variety of ways via participation in commodity chains. Unlike conventional trade theory, which assumes that trade patterns reflect comparative advantage, and further that comparative advantage in turn reflects differences in factor endowments across countries, the global commodity chain approach examines the relationship between trade and production as a set of activities that is organized by particular economic actors. Analyses of GCCs often focus on the role of lead firms as particularly important actors in a chain, and potential agents of upgrading and development (Gereffi 1999, 2001a).

This opens up a way of looking at trade and production networks as opportunity structures for organizational learning on the part of developing countries. Not only can local firms access international markets via such chains, but the implication is that firms can actively seek to change the way that they are linked to global chains in order to increase the benefits they derive from participating in them—a process of repositioning that is called upgrading. Early discussions of upgrading within the GCC framework focused largely on the export roles that countries or regions perform in the global economy.
Drawing on comparative research analyzing development trajectories in East Asia and Latin America (Gereffi and Wyman 1990), Gereffi argued that firms in the former had parlayed basic assembly subcontracting activities into a wider repertoire of export roles, giving East Asian exporters a more secure and more profitable niche in global markets than the one enjoyed by their counterparts in Latin America (Gereffi 1994, 1999). Although initially the upgrading concept was used to analyze the trajectories of national or regional economies, it was increasingly used to describe the position and capabilities of (developing-country) firms in particular global value chains.

Analyses of upgrading have figured prominently in both the GCC and GVC variants of the chain literature (Humphrey and Schmitz 2001; Kaplinsky 2000a), and this accumulated body of research has engendered several critical appraisals of upgrading, both as an empirical phenomenon and as an analytical concept (Bair 2005; Rammohan and Sundaresan 2003). There is vigorous debate and substantial disagreement among academic researchers and policymakers alike about the extent to which participation in GCCs can promote positive development outcomes. In part, this lack of consensus reflects a fundamental unit of analysis problem plaguing research on global chains: At what level do commodity chains have an impact on development processes? At the level of the firm or the cluster, for example, or at the level of the local, regional, or national economy? And if participation in such chains can facilitate development, who benefits from these outcomes? In what ways, if any, do workers gain from upgrading processes that benefit owners and managers?

In their contribution to this debate, Kate Raworth and Thalia Kidder (Chapter 8) underscore the connection between the how and who questions, arguing that particular strategies to increase the competitiveness of suppliers in global chains may look like upgrading from the vantage point of the firm but in fact constitute a form of downgrading for the workers involved. Raworth and Kidder draw on research conducted by Oxfam and partners to analyze the value chains for apparel and fresh produce and find strong evidence that the adoption of a “lean production” philosophy by lead firms in both chains has strong (and strongly negative) effects on workers in developing and developed countries alike. As implemented in these value chains, lean production is transformed from a “high road” to competitiveness to a set of practices that entail squeezing employees at the bottom of the chain in order to lower costs and increase flexibility.

Raworth and Kidder’s analysis also speaks to the difference between defining governance as coordination (as in the GVC governance theory) and
understanding governance as drivenness (as in the GCC framework). Whereas Gereffi, Humphrey, and Sturgeon (2005) describe the governance structures of the apparel and fresh produce chains as a mix of relational and modular networks (chains that they contend are characterized by relatively low power asymmetries between actors), Raworth and Kidder show that these networks are compatible with significantly asymmetrical relations between buyers and suppliers. They find that the apparel and fresh produce chains alike are highly driven by retailers or importers, who put intense and growing pressure on their suppliers to reduce costs, increase services, or both. When managers lack the will, resources, or knowledge necessary to find other routes to increased competitiveness, these demands are offloaded onto employees, and take the form of deteriorating working conditions and more precarious employment.

Shifting from a focus on workers to a focus on activists and consumers, the final chapters in this volume ask how commodity chain analysis can enrich our understanding of the social and political implications (and possibilities) of globalization. In volume 1 of Capital, Marx introduces the notion of commodity fetishism to describe the way in which the commodity circuit transmogrifies relations between social actors such that they assume the “fantastic form of a relation between things.” Critical scholars have enlisted the commodity chain as a way to interrogate this “fetishism which attaches itself to the products of labour, so soon as they are produced as commodities” ([1867] 1992: 77). The most influential formulation along these lines was that of David Harvey, who reported asking students where their last meal came from as a way of conveying the meaning of commodity fetishism. His description of the exercise resonates with the concept of the commodity chain as elaborated by Hopkins and Wallerstein:

Tracing back all the items used in the production of that meal reveals a relation of dependence upon a whole world of social labor conducted in many different places under very different social relations and conditions of production. That dependency expands even further when we consider the materials and goods used in the production of the goods we directly consume. Yet we can in practice consume our meal without the slightest knowledge of the intricate geography of production and the myriad social relationships embedded in the system that puts it upon our table (Harvey 1990: 422).

Harvey goes on to explain how the diner can consciously engage the concept of the commodity chain to learn about the conditions under which his or her food was produced. True, the “grapes that sit on the supermarket shelf are mute;
we cannot see the fingerprints of exploitation upon them or tell immediately
what part of the world they are from,” but further inquiry makes it possible
to “lift the veil on this geographical and social ignorance and make ourselves
aware of these issues. . . . [I]n so doing we have to . . . go behind and beyond
what the market itself reveals in order to understand how society is working”
(423). What Harvey points to here is the use of the commodity chain as a tool
of critical inquiry—a way to “penetrate the veil of fetishisms with which we are
necessarily surrounded by virtue of the system of commodity production and
exchange,” laying bare the social (and geographical) relations characterizing
this system. Because the spaces of production and the spaces of consumption
are distinct, analysis of the relationship between them is necessary if we are to
avoid the danger of not looking beyond the latter, the fetishism constituted by
taking “the realm of individual experience . . . as all there is” (423).

If we accept commodity chain analysis as a mode of critical inquiry, it
is perhaps not a great leap to imagine how it might also constitute a form of
politics—not only a method for unveiling the prevailing social relations of
production but also a means for resisting the exploitation and alienation that
these entail. Indeed, several commentators have noted the “political ‘edge’
[the commodity chain] appears to offer in the critical analysis of contempo-
rary production systems” (Jackson, Ward, and Russell 2006: 132). Leslie and
Reimer observe, for example, that “commodity chain analyses provide a space
for political action by reconnecting producers and consumers” (1999: 402; also
McRobbie 1997).

In fact, many activist organizations have made use of the commodity
chain approach in precisely this way, using it to map connections between
First World consumers and workers in Mexico or China or southern Cali-
ifornia who sew the t-shirts and grow the produce they will purchase. A de-
sire to ensure that production processes are carried out in a particular way
(for example, avoiding child labor, insuring worker safety), concerns about
the health or environmental consequences of these activities (such as promot-
ing organic farming methods, preserving local biodiversity), or an interest in
establishing a particular distributional outcome (for example, that growers
of “fair trade” coffee secure a minimum price for their beans) orient various
commodity chain analyses conducted by NGOs and other consumer groups.

As a form of politics, these strategies are rife with contradictions. Chief
among these is that ethical consumption is a form of politics that uses the
dynamic of market competition in the realm of capitalist circulation to resist
the social and ecological degradation that occurs in the realm of capitalist
production. The logic for initiatives that are “in the market while not quite of it” (Taylor 2005) is that consumers will vote with their dollars to support producers who bring goods to market while ensuring that certain standards (such as sweat-free, bird-friendly) are met. In spite of the practical difficulties that these initiatives encounter (Who pays for developing-country firms to be certified and monitored? How can sufficient market demand for ethical products be created?), labeling and other forms of alternative trade help to produce better-informed consumers and, more controversially, positively affect the workers and communities that are the intended beneficiaries.

But to work, alternative trade initiatives depend on the continued existence of conventional markets. Fair trade coffee, to take one example, is only meaningful when it is contrasted with the industrial coffee that accounts for 99 percent of the global market. Because these initiatives are necessarily limited in scope and impact, there is a danger of fetishizing the de-fetishizing move they ostensibly represent. This is the risk that Julie Guthman invites us to consider when she attempts to “unveil the unveiling” of commodity chain analysis as it applies to voluntary, ethical food labels (Chapter 9). Guthman explains how certification and labeling schemes, though often in pursuit of politically progressive or socially desirable ends, constitute barriers to entry for producers. Labels that are intended to serve a redistributive function (for example, fair trade) are only effective when they generate rents for producers; Guthman’s point is that as a form of “created scarcity,” such rents cannot be universally, or perhaps even widely, available. Thus these schemes are necessarily exclusionary—an insight of critical importance for understanding and evaluating protective labels as a form of politics.

As a mode of critical or strategic analysis, the commodity chain construct is most frequently used in the way endorsed by Harvey and problematized by Guthman—that is, to reveal links between producers and consumers that would otherwise be concealed by the commodity form. The goal is often to create an implicit alliance between workers (typically though not exclusively in the global South) and consumers (usually in the global North) vis-à-vis employers, in pursuit of shared goals and objectives, such as better working conditions. But if commodity chain analysis can be applied strategically by activists in designing consumer campaigns, it can also help make sense of why some efforts along these lines prove more efficacious than others.

This is the task that William Munro and Rachel Schurman take up in the final chapter of this volume (Chapter 10), which examines why the movement against genetically modified organisms (GMOs) was more successful in
Europe than in North America. They show that differences in the structure of the food commodity chain are important in explaining these divergent outcomes. The pro-GMO faction in the United States, consisting of an alliance between the agro-technology companies and the farmers who use their products, presented a united front that was difficult for anti-GMO activists to penetrate, whereas the configuration of the chain in the United Kingdom, and the organization of the retail link specifically, created a more propitious environment for strengthening consumer opposition to the importation of what was largely regarded as a “foreign” technology. Munro and Schurman’s discussion points to the utility of chain analysis for understanding processes of interest formation and identity construction among various constituencies and stakeholders in the chain. Consumer struggles for social or ecological objectives are not just shaped by the production networks they target; they are also simultaneously and necessarily struggles to shape the organization and the operation of global chains.

In this introduction, I charted the development of the commodity chain concept over the past several decades and reviewed several key debates within this literature. In the chapters that follow, the authors advance the frontiers of the field I have reviewed here in multiple ways. Some examine methodological and theoretical issues regarding the conceptualization and study of global commodity chains, while others explore the extension of this approach to novel forms of analysis and even activism, including chain-inspired politics. In doing so, these authors draw on the world-systems, GCC, and GVC traditions to a greater or lesser extent, and in ways that reflect the different disciplinary formations, theoretical commitments, and substantive interests they bring to the study of global chains. It is my hope that this collection provides ample material to help researchers understand what is at stake in these various approaches in terms of the kind of questions they open up, as well as the kind that they might foreclose.