

Final version of an All-Academy Symposium Description on

The Dynamics of Industry Architecture:

New Questions to ask in the Intersections of Disciplinary Research

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Abstract

In this symposium, we hope to stimulate interest in taking a broader view of “industries” or “organizational populations” than has characterized most research thus far. While these concepts have been the basis of much fruitful research, they tend to distort the view of activity fields involving a multiplicity of heterogeneous actor types. The concept of “industry architecture” offers a broadening of the field of view beyond the conventional economic idea of an industry, but retains a basic focus on the social arrangements that support the provision of some particular final product or service, or class of such. The *dynamics* of industry architectures embraces the process of evolutionary change as well. This concept directs attention to the evolving patterns in which labor is divided between different types of industry participants, and the associated set of “rules and roles” that emerge. There has recently been a resurgence of research effort, from various disciplinary perspectives, that throws new light on these structures and their dynamics. Through this symposium, we will draw on this research to focus on the evolution of sectors, and on the changing “rules and roles” within them. Research on these topics will help us understand the processes of change in industries and organizational fields, how new competitors emerge, why ‘unwritten rules’ are often updated, and how new “roles” in sectors appear and develop.

Keywords: Industry architecture, rules and roles, institutional environment, value chain dynamics, boundaries

Content and intended contribution of the proposed symposium

With this proposed All-Academy Symposium, we hope to stimulate interest in a set of questions that seem ripe for investigation now but have received relatively limited attention in the past. Such neglect does not occur by accident; it is commonly the product of restrictive conceptual frameworks and of a scholarly division of labor that naturally tends to follow disciplinary lines. In this case, we are specifically concerned with the concept of an “industry” and with approaches to industry analysis that are dominated by an economic perspective or one sort or another.

The concept of an “industry” is often taken to be something given – set by technology or history. For some research purposes, it is in fact “given” by the industrial classification schemes conventionally used in government statistical offices. For others, it is “given” by the nature of the data on organizational populations that are taken to represent species inhabiting or constituting a sector. In a dispassionate view of the real situation, however, it is easy to see that in fact a variety of human wants are being met by a variety of technologies, guided and coordinated by a variety of markets and a diverse assortment of non-market institutions. Further, these diverse means of want-satisfaction all have their value chains, which interweave and evolve significantly over time. The validity of this characterization is particularly clear when we consider broad categories of wants such as food, clothing, housing, entertainment, transportation and communications.

The concept of “industry architecture” (Jacobides, Knudsen & Augier, 2006) offers a broadening of the field of view beyond the conventional economic idea of an “industry,” but stops well short of an attempt to swallow the full complexity of the situation in a single gulp. It retains a basic focus on the social arrangements that support the provision of some particular final product or service, or class of such. But it embraces the entire structure of the supporting value chain, and the full range of institutions involved. The *dynamics* of industry architectures embraces the process of evolutionary change as well. The concept directs attention to the stable but evolving relationships along the value chain, i.e. the patterns in which labor is divided in a sector between different types of industry participants, and the associated set of “rules and roles” that emerge. There has recently been a resurgence of research effort -- published, unpublished, or in gestation – that throws new light on these structures and their dynamics.

The analysis of the dynamics of industry architectures provides the opportunity to ask some new questions. Indeed, it might help redress some of the imbalances in the way knowledge has evolved in the field. Investigations of the division of labor in the economy, in, e.g., New Institutional Economics, have focused on examining the micro-analytcs of the “make-vs.-buy” decision faced by individual producers. This micro-analytic emphasis has led to the relative neglect of the evolutionary dynamics of overall vertical structure in a sector, which can involve more or less concurrent shifts by many firms or major changes in the roster of participants in different parts of the value chain. It is clear from the way that fairly similar tasks are organized in different countries that there are many different ways to “chop up” the production process, and define roles and interactions. In the symposium, we hope to underscore both the intrinsic interest in these questions and the fact that there is insight to be obtained from different disciplinary perspectives..

In economics, a good deal of understanding has accumulated about the processes of industry evolution or the “product life cycle,” and this basic dynamic framework can be extended by a broader consideration of dynamics of firm and industry boundaries. Economic and organizational sociology has considered “rules” or “roles” and their evolution, though it has done so primarily at the level of the organizational population (Dacin, Goodstein, and Scott, 2002) or amongst a set of professions (Abbott, 1988) rather at the level of a sector as it evolves (cf. Granovetter and McGuire, 1998). There is certainly a place also for political and legal analysis in this picture, since participants often turn to legislatures, regulatory bodies and courts in their quest for authoritative support for the role adjustments they seek.

More important yet, the existing fault-lines of different disciplines have been maintained by the lack of empirical focus on the structural dynamics of sectors as they evolve (Jacobides and Winter, 2005). That is, by taking a sector as a given, attention has not been paid to the dynamics that shape the division of labour, or to the socially embedded and institutionally ratified rules that affect both “who does what” and “who takes what”. Through this symposium, we intend to focus on the evolution of sectors, and of the changes in “rules and roles” within them, as an important, yet neglected area of analysis. Our focus on these “new questions” we can ask of sectors, and of the resulting implications for empirical as well as theoretical research could help consolidate current interest and push the boundaries of our knowledge.

In practical terms, we feel that this is a timely exercise. Firm and industry boundaries are being re-shaped, helped by technology and de-regulation. Changes transcend national boundaries, as the recent growth of global outsourcing, supply-chain collaboration and offshoring has shown. There is much discussion of all this in the popular media, but academic research has done little to provide a convincing interpretation backed by robust evidence. We thus feel that research on these topics will help us understand how industries change, how new competitors emerge, why ‘unwritten rules’ are often updated, and how new “roles” in sectors appear and develop.

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Format, participants and symposium logistics

Given this ambitious goal, we intend to take two concrete empirical settings, recently studied by relatively younger authors, and use them as a canvas to explicate how research on industry architectures might help us uncover interesting facets that underlie industry evolution, as well as advance theory in the field. We will then provide the opportunity to more experienced scholars to provide their views on what we can learn through this approach, before opening the symposium up to a discussion between the participants and the panel. So, while both authors will present papers (in process), these papers will be used to illustrate how we can understand specific contexts and to show how the study of industry architectures and of the changing rules and roles can help move research forward.

More concretely, we envisage the session opening by remarks from Michael Jacobides, laying out the research programme on industry architectures, and showing how we can integrate (and also qualify) existing research from institutional economics, economic and organizational sociology, and strategic management by taking new slices of the empirical reality as our focal point. Then, Fabrizio Ferraro will present his paper on the evolution of the US movie industry, focusing on how Lew Wasserman (CEO of Music Corporation of America) helped change the rules and roles in the sector. Next, Brandon Lee will present his findings on the changing dynamics in the organic food sector in the U.S. and show how this emerging sector crystallized and solidified its practices, rules and roles (abstracts attached below). Then commentaries from four prominent scholars in the field (two with a greater sociological bent, two focusing on industry evolution) will consider how this type of research can help us better understand the world, and identify the promises and challenges of this type of research. Then, comments by Woody Powell, Sid Winter, and Huggy Rao (in this order) will aim to take the conceptual issues raised, and consider how they help us better understand the two specific settings introduced. They will also consider how this analysis could *put in perspective* (and possibly qualify or even call for a revision to) the existing modes of analysis in economic sociology, institutional / evolutionary economics and strategy. Finally, Anita McGahan will provide some comments on how this approach could help us both drive new theory and understand how value can change in sectors whose architecture is changing – like energy or health-care.

This will sum up the “presentation” part of the symposium (just over half of the allotted time) and will open up the discussion between the participants, as well as the participants in the audience. In that respect, we should note that to liven up the debate and energize the discussion, we also anticipate that before the beginning of the session we will take a vote from the audience on two or three intentionally sharp and provocative resolutions. These could be that “this room believes that the industry as a level of analysis has outlived its usefulness”; or that “this room believes that the analysis of social dynamics and networks without a study of incentives is foolhardy”; and that “the analysis of ‘rules and roles’ operating in a sector can help shed new light to social and strategic phenomena’. After the “presentation and discussion / comments” part of the presentation, described above, we will allow each participant of the panel will ask one question to another participant, who will respond. After this first set of discussions, we will take, *again* the same vote on the core propositions of the symposium, to see if the sentiment has swayed either way. (This will also help ensure we engage the audience and make them take a stand.) Following the tallying up, the participants will give their one-line reaction to the result of the vote, and we will open this up to discussion with the audience. We will also have solicited questions in advance, to ensure that there is enough discussion, debate and intellectual excitement in the room!

Given the planned format, we would like to make a request to be allotted one of the longer sessions (in another all-academy session we had organized two years ago, we were given 110 minutes, which would be ideal; and we would ask for 100 minutes if this is not possible.) This would enable us to ensure that the substantial interactive component anticipated gets its due attention and airtime. We would like to offer our thanks in advance for the consideration of this request.¹

¹ In terms of logistics, please also note that Huggy Rao’s participation can only be confirmed if the session happens on a Monday, due to scheduling constraints; else he will not be able to confirm his being part of this symposium.

Presentation Abstracts

Fabrizio Ferraro and Kerem Gurses

Building Architectural Advantage in the US Motion Picture Industry:

Lew Wasserman and the Music Corporation of America.

In addressing the critical question of industry evolution, two research traditions, industrial organization and evolutionary economics (Porter, 1980; Nelson and Winter, 1982; Teece, 1986; McGahan, 2004), on the one hand, and economic and institutional sociology on the other (Thornton and Ocasio, 1999; Haveman and Rao, 1997; Lounsbury, 2007), have contributed much to our understanding of antecedents and consequences of structural changes in industries. Nevertheless, both traditions abstracted from the analysis of the endogenous appearance of a stable set of "rules and roles" (as recently proposed by Jacobides, Knudsen & Augier, 2006) that shape the patterns of the division of labor and the nature of the "field". So, in the spirit of trying to break new ground, this paper looks at the rich dynamics of one industry in order to bring up a new set of questions and an emphasis on the emergence of "architectural advantage." In so doing, we can help extend, qualify and bridge these two traditions and develop novel insights for future research on industry dynamics.

The concept of "industry architecture" (Jacobides et al, 2006) provides a useful conceptual tool to explore the role of technical and institutional forces in shaping the division of labor in the industry, and the related distribution of value. Furthermore it suggests that firms can influence changes in this architecture but the process through which they can do so, or in other words, the emergence of "architectural advantage," is a fertile ground for empirical and theoretical work, given that much of existing research has focused on the consequences of exogenous shocks (for instance, technical innovation or regulatory change) rather than the endogenous process that lead some firms to develop a structural advantage by shaping industry forces in their favor. To understand this process we need to understand how can one firm shape the evolution of the industry architecture in its favour or, in other words, how can one achieve architectural advantage?

To address this question, we studied a historical case study on the role of Lew Wasserman and the Music Corporation of America in the evolution of the Motion Picture industry in the United States. The American movie industry is a good case for studying industry transformation because this industry has experienced a number of

reorganizations, triggered by technological and regulatory changes and is therefore characterized by important shifts in the industry's roles and rules. Furthermore, the life of Wasserman and his impact on the industry has been the topic of rich and comprehensive biographies, which we used as data sources (McDougal, 1998; Bruck, 2003; 2004) together with a large number of other historical materials on the industry.

In this paper we focused on two major disruptive events: the 1948 Paramount Decree which forced vertically integrated movie studios to divest their theaters, and the explosion of television as a novel form of entertainment in the 1950s and its diffusion as a channel for the exhibition of movies alternative to the movie theater. In both of these cases, one company, Music Corporation of America, led by a very entrepreneurial CEO, Lew Wasserman, managed to improve substantially its standing in the industry by occupying and consolidating a position of advantage in the industry or, in other terms, an architectural advantage. We show how in both of these cases this was the result of the interaction of the CEO's personal network position, the resources and capabilities the company had developed, and the constraints created by the regulatory framework. In both cases, Lew Wasserman managed to exploit these changes through the introduction of innovative business practices: profit sharing contracts for talents in the first case and "packaging" for television in the second.

A short history of the movie industry (1915-1848).

During the period from about 1915 to 1930 the industry was dominated by a small number of vertically integrated firms that provided production, distribution and exhibition: the Hollywood Studio System. The production and distribution of firms also became increasingly concentrated (Negro & Sorenson, 2006). The major studios at that time were 20th Century Fox, Metro-Goldwyn-Meyer, Paramount, RKO, and Warner Bros and controlled nearly 90 % of the market. The minors (Universal, Columbia, United Artists) owned no theater chains. While many of the major stars had their own production companies, before the rise of the studio system, by the 1930s most stars were salaried employees of the studios, usually with a seven-year contract that gave talents very little room to negotiate. In 1948, after an eight-year antitrust investigation, the Justice Department forced the separation of exhibition from production and distribution. The court ordered the five majors to spin off their theater holdings, and it ordered the spun off circuits to divest one-quarter to one-half of their theatres. As the studios couldn't control the production and exhibition at the same time, they reduced

their output and they dramatically cut back on the number of stars. The major studios decreased their production of feature films by more than 50 percent and concentrated more on distribution and film financing.

The Rise of Lew Wasserman and MCA

In 1936, at the age of 23, Lew Wasserman joined the Chicago-based talent agency Music Corporation of America (MCA) which was the most successful band booking agency at that time. In 1939 Jules Stein, the Head of MCA, called Wasserman in Los Angeles to help develop MCA in Hollywood. From 1940 on, with Stein's authorization, Wasserman started buying up star's contracts from other agencies, and buying agencies themselves. In only a few years, Stein and Wasserman bought the contracts of top stars such as Bette Davis, Errol Flynn, Joan Crawford, and many others. MCA also bought a large number of agencies and quickly became the largest agency in the world, even though in the seven-year contract era, the agency business was not very profitable, given the power that studios had over the talents.

As the big studio power over the talents began to decline in the aftermath of the Paramount decree, Wasserman took advantage of their financial difficulties by introducing a novel compensation practice that in the long term would strengthen its hold on its main asset: the creative talents. In 1950 Universal was in financial difficulty and could not afford Jimmy Stewart's normal salary of \$250,000 for the movie *Winchester 73*. Wasserman negotiated a deal according to which Stewart got no fixed salary but did get 50 percent of the net profits over the life of the film. Stewart's earnings in the next few years made him the best compensated star in Hollywood. This was not the first time studios had accepted profit-sharing contracts, but this practice started to flourish with MCA. At the same time, the regulatory framework (specifically the Screen Actors Guild (SAG) rules) prohibited the Studios from entering the now lucrative talent agency industry.

In this first example of emergence of architectural advantage, we can observe how one actor (Lew Wasserman's MCA) took advantage of a disruptive change brought about by regulation (Paramount Decree) to leverage the resources he had cumulated in previous years (contracts with actors, writers and directors). The new rule he introduced and promoted (profit sharing contracts) locked-in the resources and strengthened the position of MCA in relation to the Studios.

Enter Television

By 1950, television sets had come in 25 percent of homes, and this penetration doubled to 50 percent by 1952. During the same period, cinema attendance decreased considerably from 1949 to 1953 and then stabilized at about 40 to 50 million admissions per week. Television was in the view of the Studios the main cause for this fall. Large movie studios had initially tried to start building their own TV networks but the Federal Communications Commission (FCC) had blocked their efforts. Warner Bros' frustration with Television was shared in the industry, and led to a famous antagonism towards the medium, and a stubborn rejection to provide them content. Hence, in the late forties, most of the programs for TV were produced for live broadcast by New York-based advertising agencies. When networks decided to keep the advertisers away from producing for TV, and produce their own programs, this decision created a vacuum in the TV production business. The large studios didn't perceive this opportunity; they rather saw TV as an enemy.

For a few years, Wasserman's MCA had been "packaging" the script, director, stars and producer for several RKO pictures. Wasserman had learned this practice from the founder of MCA, Jules Stein, who booked different bands for his clients, and started adapting it to movie industry. With the help of his friend Ronald Reagan (one of his early clients at MCA), Wasserman obtained a waiver from the SAG that would permit talent agencies to produce for TV and launched MCA into the TV production process through a newly formed subsidiary, Revue Productions. In 1959, MCA owned about sixteen hundred and fifty shows outright; as a co-producer, it also owned, on average, a fifty percent interest in about five hundred and twenty five additional programs. MCA was producing or co-producing more television series than any other firm; and it got a cut from about forty-five percent of all network evening shows.

Once again, Lew Wasserman took advantage of the opportunity created by the need for filmed entertainment the TV networks had, leveraged his personal network to facilitate regulatory changes, and exploited an innovative business practice, a new rule of the game, to leverage MCA's key assets, its talents. "Packaging," helped MCA consolidate its architectural advantage in the industry.

In less than twenty years, Lew Wasserman and MCA had greatly improved their position in an industry they had entered without much in terms of resource advantages. Their architectural advantage was built by exploiting two structural shifts of regulatory

and technological nature in a way that helped them leverage their assets and capabilities (contracts and relationships with talents). The new industry rules he helped diffuse (profit sharing and packaging) changed the way the industry operated, its architecture, and in the meanwhile consolidated the grip of his company over it.

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Brandon Lee:
***Institutional effects of regulation and standardization
on the evolution of the U.S. organic food value chain***

Important knowledge has accumulated regarding the dynamics of organizational populations over the past several decades. Focus on a single organizational form or population has led to significant understanding of how organizational attributes, relational features, and population characteristics influence a myriad of organization and population-level outcomes (Dacin et al., 2002). Yet this focus on a single organizational form has limited theoretical development and empirical exploration of more encompassing concepts such as organizational field. While substantial effort has been made in recent years to broaden the scope of inquiry beyond a single population (Powell et al., 2005; Scott et al., 2000; Aldrich and Ruef, 2006; Freeman and Audia, 2006), notably absent from these studies is an explicit focus on the upstream and downstream organizations that constitute a value chain—the value adding activities that are necessary for the production of a good or service (Porter, 1985; Jacobides, 2005). As such, greater empirical attention to changes in the relations among these organizations and shifts in their boundaries is needed to enrich extant conceptions of organizational field dynamics (Dacin, Goodstein and Scott, 2002).

Work in strategy has begun to emphasize the importance of examining the totality of a value chain, demonstrating how value chain dynamics enable and constrain firm-level “make or buy” decisions, shape industry structure, and create new market opportunities along the value chain (Jacobides, 2005; Jacobides and Winter, 2005). More recent theoretical work has advocated the construct of “industry architectures” as a means to focus attention on the actors, their relations to one another, and the rules that govern them within an economic system (Jacobides et al.2006). Like institutions, these architectures can result from either intended, rational planning processes or from organic, emergent processes and can exhibit both anticipated and unanticipated consequences.

Fruitful dialogue and theoretical advancement is to be had by connecting these promising domains of research in organization theory and strategy. Work in strategy that explicitly focuses on value chain dynamics can be complemented by organizational sociologists’ emphases on the impacts of cognitive, normative, and regulative

institutions on organizational structures and change processes. In this paper, I empirically advance this synthesis by assessing the degree to which intra-industry standards and extra-industry state regulation influence the division of labor in new industry sectors/niches. Standards wield classificatory power by solidifying product definitions and by allocating material and social resources to people and organizations. Standardization also leads to efficiencies through technological harmonization (Sanchez and Mahoney, 1996), the elimination of “lemons” in markets (Akerlof, 1970), and in general, commensurability (Espeland and Stevens, 1998) that facilitates transactions. Similarly, the state, with its regulatory apparatus, provides significant coercive power in establishing and maintaining durable industry boundaries and boundaries within industries (e.g., Dobbin and Dowd, 1997). As such, standards and state regulation have tremendous impact on the scope and trajectory of an industry sector, leading to the creation of winners and losers contingent upon whom within the value chain these institutions endorse.

The context for this study is the United States organic food industry. Once considered a “primitive, backward, nonproductive, unscientific technology suitable only for the nostalgic and disaffected back-to-the-landers of the 1970s” (Youngberg 1980: 298), organic agriculture has grown into a 26 billion dollar industry, making it the fastest growing sector in both U.S. and global agricultural markets. Although organic production accounts for less than .2 percent of U.S. agricultural output, it has posted a 21 percent yearly growth rate since 1997. Retail sales also suggest a significant shift in the organic food sector. In 1991, less than 10% of all organic sales occurred in conventional grocery stores. By 2000, that number increased to 49%.

Despite such robust growth, organic agriculture was marginalized for much of its history. In the early years, market mechanisms and institutional structures failed to provide organic farmers with the stability and support necessary to grow beyond local and specialized niche markets. Because organic agricultural production uses no chemical fertilizer or pesticides, organic production was seen by the majority of the American farming establishment as unscientific and inefficient. Being excluded from existing channels of access, movement insiders mobilized resources to create and advocate a viable set of standards and state laws that differentiated organic techniques and products from those of mainstream agriculture. Consequently, organic farmers, through the development of standards, certification, and successful lobbying for state

regulation, sowed the seeds for a market that has quietly grown up in the shadow of conventional agribusiness and now dominates the sector in terms of growth.

To more clearly understand the growth and evolution of this industry niche, I quantitatively examine how evolving, quasi-institutionalized amalgamations of intra-industry standards and organic food laws at the state level influence firms' configuration of functional tasks.² Examining the growth of a nascent market, I am able to consider the changing salience and efficacy of normative and regulative institutions as they interface with one another, providing new insight into how the “rules” of a new industry unfold across time and space. I also shed light on the question of “roles” within a value chain by considering how these sets of institutional arrangements influence the degree and rate at which distinct positions in the organic food value chain are populated. I explore questions such as: Does the existence of standards and firm level certification to those standards increase the possibility for specialization and vertical disintegration? Do state laws influence functional task choice and market entry and exit along the value chain?

To answer these questions, I draw on a dataset composed of information on organic producers, wholesalers, suppliers, retailers, processors and support groups in the U.S. from 1986-2000. I also use a dataset containing information on all organic certifiers and state organic food laws passed during the period under review.

This study highlights the importance of an explicit focus on industry value chains while simultaneously attending to important institutional influences such as standardization and state laws on firm level functional task choices. Careful examination of how firm boundaries around functional tasks shift over time advances organization theory by moving beyond conceptions of organizational forms as static and durable—a view that is pervasive in institutional theory and population ecology. Given that population ecology (and much of institutional theory) is biased toward downward causation (populations and institutions impact organizational routines), focusing on functional tasks while attending to broader institutional processes provides a more balanced understanding of how industry/value chain structure changes over time.

² I define functional tasks as the recognized tasks necessary for the production of the good or service.

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