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What is This?
Waltzing, Relational Work, and the Construction (or Not) of Collaboration in Manufacturing Industries*

Josh Whitford

Abstract
The article uses a case study of relationships in American manufacturing industries to demonstrate the utility of documenting the “relational work” that managers do as they negotiate circumstances where either roles or norms are ambiguous. It shows that the explicit identification of the role that relational work plays in those relationships story militates for—and extends, improves upon, and arguably completes—a particular understanding of what economic sociologists should mean when they talk about the “embedding” of the economic in social relations. The article hence shows the utility of jointly using otherwise disparate perspectives in the analysis of interorganizational relationships, and thus contributes to the development of a more unified paradigm in economic sociology.

Keywords
economic sociology, relational work, embeddedness, manufacturing, organizations

*This is one of seven articles in the June 2012 special issue of Politics & Society on the topic of “Relational Work in Market Economies.” The papers were initially presented at a miniconference held at the University of California, Davis in 2010. The theme that organizes the issue is explained at length in the first article, “Relational Work in Market Economies: Introduction.”
In the call for papers for the workshop that led to this special issue of *Politics & Society*, Fred Block asked whether “the concept of embeddedness, regardless of how it is defined” had outlived its usefulness, and he thus proposed an alternative. Drawing especially on the ideas of Tilly and Zelizer, Block suggested that the concept of “relational work” might offer a better “jumping-off point” for economic sociology since “human relationships—from the most intimate to the most impersonal—are never sustained automatically even where roles and norms have been clearly enforced by powerful institutions.”1 This, he argued, implies that economic sociologists might fruitfully direct their attention toward “those circumstances where either roles or norms are ambiguous,” and that they might understand those situations best by looking at the ways in which actors “mutually [define] the nature of the relationship, [establish] basic ground rules,...[determine] what will and will not be exchanged,” and “do reparative work when or the other party perceives that the expectations were not met.” Making the analysis of such relational work the core economic sociology, he concluded, can help the subfield to better understand commonalities among—as well as the causes and consequences of—a wider variety of economic transactions than has been achieved in the many analyses of the social embedding of economic activity.

The ideas in that call naturally resonate across all the papers in this issue, and become especially clear in Viviana Zelizer’s explanation of just how she “became a relational sociologist.”2 In that explanation, Zelizer defines relational work, clarifies the role that concept has played in her own research, and outlines some next steps that economic sociologists interested in the concept might usefully take. Like Block, she also frames those next steps around the claim that relational work might represent an *alternative* to the longtime dominance of the embeddedness paradigm in economic sociology. Though careful to recognize that embeddedness “has had its day” and to write that purveyors of the paradigm have “profoundly transform[ed] our understandings of economic activity,” Zelizer ultimately endorses Krippner’s “sustained, trenchant critique” of the embeddedness literature and lauds its attack on the tendency of authors in that tradition to perpetuate an “illusion of an asocial market sphere” by dividing the “world of relations into embedded and arms-length ties.”3 Economic sociology, Zelizer writes, must therefore become more fully relational and must supersede the “residual economism” common to so much work in the embeddedness tradition.

In my own contribution to this issue, I use an analysis of interviews conducted with dozens of managers at large and small U.S. manufacturing firms to examine whether and to what degree incorporating explicit attention to actors’ relational work into the analysis helps to understand how, when, and to what effect organizations collaborate in the design and making of the products they sell. The case is well suited for the question at hand. On the one side, analyses of interorganizational relationships have long been at the center of studies of the embeddedness of economic action: Granovetter’s initial article launching the modern embeddedness agenda took as its primary “concrete application” a discussion of the ways in which “dyadic relations” are “embedded in broader systems of social relations”; and Uzzi’s subsequent work on the “sources and consequences of embeddedness for the economic performance of organizations”
was built around an analysis of the overlay of business and social relations between manufacturers and contractors in the New York garment industry. On the other side, meanwhile, those who hold that relational work might serve as an alternative “jumping-off point” for economic sociology recognize that the concept has been applied more often in studies of topics largely ignored by the dominant literature on embeddedness (i.e., care economies, households and families, and micro interactions between actors in work groups); but, as Zelizer explicitly notes, the “relational work agenda” is meant to apply topics to which the concept of embeddedness is more often applied, including especially “economic activity at the macro level, including relational work by organizations.”

My case material thus puts me in a position to compare the relative merits of perspectives that emphasize relational work and perspectives that highlight embeddedness. And the evidence I adduce and analyze does suggest that there are theoretical and practical payoffs to identifying the relational work done by the players in my story. However, I argue that it does not support the claim that a “relational work agenda” represents an alternative to the subfield’s longstanding emphasis on embeddedness, but rather militates for—and extends, improves upon, and arguably completes—a particular understanding of what economic sociologists should mean when they talk about the “embedding” of the economic in social relations. More specifically, my findings show that Krippner, Zelizer, Block, and others are quite right to object to a blunt division of the “world of relations into embedded and arms-length ties.” They show also that partisans of that position are justified in their call for greater emphasis on the ways that define—and do not simply accept—the meaning and implications of their varied ties when roles and/or norms are ambiguous. But, I argue, those findings are at the same time quite consistent with recent efforts by Mark Granovetter to develop an agenda for economic sociology that potentially separates an embeddedness baby from some overly economistic bathwater. I therefore endeavor in the article to dovetail an understanding of an “embeddedness agenda”—one outlined in more recent work by Granovetter—with the relational work agenda for economic sociology as laid out by Block and Zelizer. And, in conclusion, I argue that this combined agenda not only helps to understand patterns of interorganizational relations better than we can using either singly, but also guides future research better than does either alone.

Background and Theory

I have been studying the changing organization of metal manufacturing industries in the American Upper Midwest since the late 1990s. This means, in part, studying producers of cars, tractors, machine tools, construction equipment, and such; but only in part, because the making of such complex goods has been complicated considerably across the last quarter century. As has by now been widely documented—and as inhabitants of America’s industrial heartland well know—the once-giant producers who control the brands and their important associated technologies no longer really make the products they sell. Instead, they increasingly coordinate their making across
an array of organizations and nations: companies that produced and designed some two-thirds (at least) of value of the things they made just a quarter century ago now typically only add something like 20 percent of the value of their products, and rely on external firms—suppliers, in the United States and abroad—for the rest. The result, as Walter Powell has observed, is that we stand today in a world in which “the boundaries of many firms have become so porous that to focus on boundaries means only to see trees in a forest of interorganizational relations.” And in my own research, I have hence been careful to interview managers at “Original Equipment Manufacturers” (OEMs)—the industry term for the (generally) large manufacturers that sell goods on the final market (e.g., John Deere, Caterpillar, Ford)—and also to speak with managers at the supplier firms now responsible for much of the actual production and even for an increasing proportion of the design.

When I first began conducting those interviews, I was a graduate student well steeped in the canon of economic sociology at the time. I had my arsenal of concepts: I knew from Mark Granovetter that neither an under- nor an over-socialized account of economic action would do; I knew from Walter Powell that “network” forms of transactional governance could operate by their own distinct logic and were thus “neither market nor hierarchy” nor were they “mongrel hybrids” of the two; and I knew from Brian Uzzi that “embeddedness” in organization networks could generate a “logic of exchange which differs from the logic of markets.” I also knew that the industries I was studying had been dramatically transformed by outsourcing and that big changes were afoot. I knew that I should expect to find many and varied efforts by firms to build the sorts of collaborative “embedded” relationships that I had been taught to identify: Charles Sabel, for example, was declaring that “the organization of production in the U.S. [had] become. . .substantially more collaborative or team-like: in a word, more ‘Japanese,’ and . . . [less] ‘American’”; and Paul DiMaggio was writing that “most knowledgeable observers [at the time] believe[d] that firms [were] engaging in more long-term collaborations—especially close information-sharing relationships with suppliers and collaborations around product development—[then] than during most of the twentieth century.” At the same time, I knew also that there would be hiccups, and that many of these efforts would fail and that market modes of exchange might still dominate most relations: the “Varieties of Capitalism” literature and authors such as Bennett Harrison had made clear that the United States lacked the sorts of institutional and associational supports for collaborative manufacturing that, for example, had led Germany, Japan, and central Italy to dominate a series of sophisticated manufacturing industries.

What I found—and have continued to find in subsequent research—was curious, at least from the point of view of extant theory. Following Uzzi, it had been (and is) conventional in studies of organizational networks to draw a sharp distinction between “embedded” and “arms-length” relations between firms, and to define each in terms of its “logic of exchange”: an “arms-length” logic is one marked by an orientation toward the market with its short time horizons and, as a consequence, by fears of, and safeguards against, opportunism; a logic of embeddedness, by contrast, is marked by a
mutually reinforcing trinity of trust, fine-grained information transfer, and joint problem-solving that, in turn, allow actors to invest for the long term. The managers I interviewed did draw a distinction between alternative logics of action, generally calling the former “arms-length” or something of the sort, while they tended to call the latter a “partnership.” But—and here is the part that did not fit with extant theory—they also spoke of a world in which they were not able to draw a similarly sharp distinction between particular ties. That is, they could not uniquely identify which logic was in play across particular relationships. They explained that the decentralization of production had driven them to look for new ways to collaborate in relationships that had long been marked by distrust; but they also made clear that those very same efforts were somehow often marked by ruthless and even deceptive hard zero-sum bargaining backed by the careful maintenance of exit options that did, in fact, damage trust but that somehow did not destroy transacting partners’ willingness to try again or to collaborate in other areas of their relationships.

I was not alone in my identification of the phenomenon. Others studying U.S. manufacturing at the time were similarly struck by its novelty vis-à-vis extant theory. Gary Herrigel has described this intermingling of seemingly contradictory behaviors in particular OEM-supplier relationships as a sort of “sustained contingent collaboration” in which the parties vary and negotiate their roles in the face of “contradictory pressures for collaboration and search.” John Paul MacDuffie and Susan Helper found “collaboration without trust” in the automotive industry, writing that they were seeing some collaboration between engineers at the “task-level” even where “OEMs subject suppliers to severe versions of ‘exit’” rather than “voice” in the policies that govern the transaction (i.e., “the process of awarding work to the supplier, ... the negotiations over price, the responsibility for investments in tooling and other capabilities” and so on). And I published a book, The New Old Economy in which I argued that “systematic” contradictions in relationships between OEMs and suppliers could be exploited by regional policy makers to foment more collaborative relationships between manufacturers and their suppliers in ways that, hopefully, would root those firms in their territories and give them more reason to invest in their workers and in new productive and innovative capacities.

I return to those findings here, not to rehash what is already available in print, but to return to some of the underlying data—subsequently supplemented with further interviews—in order to speak to the relative merits of perspectives that emphasize relational work and perspectives that highlight embeddedness in the examination of interorganizational relationships. After all, Herrigel’s, MacDuffie and Helper’s, and my finding that the range of relevant relational types runs beyond embedded and arms-length to include mixed forms do quite evidently support the critique—made by Krippner and others—that the two-mode distinction so common in writings on embeddedness can obscure important variation; and they also challenge the presumption that presumption that trust, fine-grained information transfer, and joint problem-solving are mutually reinforcing enough to ensure that we uniquely classify ties in terms of the logics that manifest across those ties. But, at the same time, the findings (1) that
interviewees were quite clearly familiar with and drew upon logics essentially cognate to those described by Uzzi and others; and (2) that the sharp distinctions they drew between those logics (if not the ties across which they were only sometimes manifest) suggests that there is something to the distinction they draw.

Most importantly for purposes here, I return to those findings to provide the grist for my claims (1) that there is an embeddedness baby well worth saving; and (2) that a little relational work can help to save that baby. My defense of these claims begins with the full acceptance of a point made most forcefully in the writings of Block and Krippner, who have argued that all market and economic behavior is embedded in social relations and that “arms-length” relations are therefore no more (and no less) “social” than are the relations that Uzzi and others have referred to as “embedded.”17 However, I see those writings less as a refutation of the “embeddedness agenda” that took form in the wake of Granovetter’s seminal article than as an essential correction of that agenda.18 And I hence stand in agreement with Granovetter, who, in response to Block and Krippner, concurred that economic sociologists should understand all market activity to be “embedded in something,” but who argued that it was also incumbent on the subfield “to talk a lot more systematically than we have about what that something is in situations where market relations actually are more or less impersonal.”19

Granovetter, in his most recent writings, has begun to undertake precisely that task. For my own understanding of the contemporary “embeddedness agenda,” I thus rely on his return to the themes that primarily motivated his 1985 article. In his forthcoming book manuscript, he has again been asking how we might “find a position that balances the need to accommodate strategic action” without overestimating “the coherence of institutions.” He proposes that the analyst identify “the alternative frames or ‘logics’ . . . that actors are likely to choose in organizing economic activity;” that she “determine the extent to which [those logics] are separate and autonomous from one another or overlap;” and that she “theorize the process by which actors assemble solutions for the economic problems they face from the available materials” by identifying what it is “in the social and economic environment [that] keys actors into the frames or logics that they use.”20

This analytic strategy, I argue, does away with what I referred to above as the “economistic bathwater” around an embeddedness baby in two interrelated ways. First, it “entails a view of human action consistent with pragmatist philosophy, which is skeptical of simple means-ends frameworks of the kind that rational choice and game theory favors.”21 Second, it is consistent with Block and Krippner’s depictions of an “always embedded” economy since “market” or arms-length logics of action are not portrayed as some baseline from which those pragmatic actors sometimes deviate, but are rather just one of many possible logics that, depending on institutions and context, may be used in part or in full by actors seeking to assemble solutions to their problems.22 And yet, even with our embeddedness baby and without our economistic bathwater, a problem remains. There is a risk, as Granovetter recognizes, that the descriptive accuracy of an approach that potentially allows nearly any regularity to be
described as a logic—and that further expects its actors to intermingle or recombine those logics as conditions warrant—can easily “[slide] down the slippery slope into historicism.”

Enter relational work. Attention to that concept, especially as it has been theorized by Zelizer, is certainly consistent with an analytic strategy that (1) directs scholarly attention toward “those circumstances where either roles or norms are ambiguous”; (2) depicts actions as concatenated into meaningful “logics” that actors use to organize their own behaviors and to interpret the behavior of others; and (3) that relies on a pragmatic model of action in which the solutions to problems chosen may not follow those logics exactly, but may recombine or reject them in creative and surprising ways. However, it also adds something important to that analytic strategy. Zelizer’s approach begins with observation that economic activity consists, in part, of (1) transactions; (2) media for those transactions that allow actors to represent rights to goods and services, and (3) social ties across which those transactions take place. But she notes also that it requires that there be “shared meanings that people attach to their economic relations, transactions, and media.” And she cautions that those meanings are neither fixed nor given but that they are instead determined by relational work, which, she argues, consists in the negotiation of “relational packages” matching ties, transactions, and media in ways that define in turn what will and will not be exchanged.

Recognizing that the two approaches dovetail and can thus usefully be combined, I submit, is a better “jumping-off point” for economic sociology going forward than is an approach that sees them as alternatives or, worse, that grants “paradigmatic privilege” to either. Granovetter’s proposed analytic strategy brings with it the notion of the “logic,” which both squares with my interviewees’ understanding of their actions vis-à-vis each other as having some coherence (i.e., the presence of behavior X tends to entail also the presence of behavior Y), and, at the same time, enables me (and future analysts of interorganizational relationships) to put my (and their) work into dialogue with a vast array of completed studies that have drawn on that same concept. Similarly, recognizing that actors may intermingle or recombine logics as circumstances warrant squares with the finding that interviewees were not able to uniquely identify which logic was in play across particular relationships, and, at the same time, enables me (and future analysts of interorganizational relationships) to put my (and their) work into dialogue with an emergent institutional literature on bricolage and recombination. The incorporation of attention to relational work into the analysis, meantime, forces the analyst to identify the ways in which actors combine social ties, transactions, and media into relational packages, as well as the ways they attach and contest the meanings that can be attached to those “relational packages.” In short, it requires the analyst to document the processes by which logics are—or are not—intermingled and recombined; it therefore allows for comparisons of those processes across contexts in ways systematic enough to allow for the development of theory, and that thus also guard against the risk of a “[slide] down the slippery slope into historicism.”
The Possibilities of Collaborative Decommodification

Let me turn now to my case material. I have said that relationships matter more than ever in the manufacturing economy. But what determines what sorts of relationships companies keep? And to what effect do they keep those relationships? A common fallacy in studies of manufacturing industries is the presumption that the \textit{ex ante} characteristics of the object to be traded let companies know both what sorts of relationships they should pursue with their trading partners, and, over time, predict the effects that those relationships will have on company’s competitive prospects.

Jeffrey Dyer lays out the standard guidelines especially clearly.

The guiding principle with regard to arm’s length relationships versus partnerships is to use [the former] when inputs are low value; commodities or standardized (open architecture) products; stand-alone, or modular with no or few interaction effects with other inputs; and characterized by a low degree of supplier-buyer independence. In contrast, partnerships are preferable with outside suppliers that produce inputs that are high value; non-standard inputs or (closed architecture) inputs with the potential to differentiate the final product; and characterized by a high degree of supplier interdependence and which have multiple interaction effects with other inputs.\textsuperscript{31}

I call this a fallacy, not because those guidelines are exactly \textit{wrong}, but because they obscure the direction of causality. It is certainly true that OEMs “segment” their suppliers, and that they try to establish more collaborative relations with companies that produce the higher-value and less standard components. It is likewise true that they tend to buy components they classify as commodities from whomever sells them cheapest. But the thinking flows from product to relation. It ignores that what is and is not standard—that is, what is and is not a “commodity”—is often less given than it is negotiated, and that those negotiations take place in contexts in which actors’ understandings of the likely outcomes of different paths are highly uncertain.

This is not a simple claim, but it is an important one. It is a consequence of two emergent patterns in the organization of production. The first, as I have already noted, has been widely recognized and is uncontroversial: the firms that once dominated so many industries through vertical integration have outsourced large portions of production to armies of supplier firms in response to ever shorter product cycles, to the breakdown of national markets, and to evident flexibility of “Japanese” methods of production (i.e., Kanban systems, JIT production). The second pattern is somewhat more contested in its interpretation, though there seems to be an emergent consensus. Some observers had argued that the breakdown of vertical integration and ensuing tendency of firms to “buy” rather than to “make” components were largely a consequence of more “modular” designs (i.e., personal computers) in which the standardization of interfaces (i.e., USB) had made it possible to write fairly complete contracts and thus to mitigate much of the “hold-up” risk that had in a previous era led Williamson
and others to expect vertical integration to dominate complex manufacturing industries. Others have since countered, however, that only a small proportion of the increase in the trade of intermediate components between firms can be explained by a diffusion of more “modular” product architectures; and they have shown that many products are still characterized by what Herrigel refers to as the “persistence of integrated design” in which interactions between components are both inevitable and unpredictable.

For my purposes, the key implications of these patterns follow not just from the fact that they generate interdependencies between OEMs and their suppliers but also from the fact that the interdependencies they generate vary tremendously in both degree and character. If we take the making of a car, for example, we have at one extreme things like standard hardware, or even rock salt to melt snow in the parking lot in winter, where it is hard to imagine that collaboration would make much difference. Then we have, at the other extreme, something like the safety system in a car, where the interdependencies run across multiple organizations and necessitate complex coordination both within and across those organizations; safety systems are typically made up of an electronic control system, the airbag modules, seatbelts, and the steering wheel, all of which would typically be purchased from suppliers, and which must ultimately be integrated into another complex system—the car—across interfaces with the frame, the dashboard, the seats, and the cockpit. But then, besides those extremes where collaboration is easily avoided, or is unavoidable, we have a very fat and very heterogeneous middle in which decisions about whether or not to collaborate are far more complicated.

In this fat middle, we find many of the things that were done internally by OEMs prior to the wave of downsizing and outsourcing that so transformed U.S. industry in the 1980s and 1990s. It is now dominated by “component manufacturers,” the generally small- and mid-sized firms selling, on average, 90 percent of their products to other firms (usually large customers), which form the core of intermediate good production in metal manufacturing industries today. Firms are often “process specialists,” such as metal stampers, machine shops, injection molders, and such. Their products, if we look at our safety system, would include, for example, an array of subcomponents—wire harnesses, machines parts, fabrics for cockpit, and so on—made both in coordination with the automotive assembler and with a larger first-tier “system” supplier. Or if we look at another important durable good—tractors, for example—we would find OEMs buying many machined and stamped parts that they would have made thirty years ago, as well as an assortment of electronic and plastic components that were not even part of the tractors of yesteryear, which they must buy because they are not experts at making them.

In this middle, there are many ways companies can come up with innovations, but those innovations tend to be incremental, and are the kinds of things that occur simply by allowing the minds of many more people—in many more contexts, with far more diverse knowledge and skills—to apply themselves to the improvement of products manufactured across many more roofs. They simply may amount, for example, to
ways to get equal or similar performance at lower cost by, say, making small design modifications that ease manufacturability, using cheaper materials, loosening tolerances, and so on. But—and this is what makes things complicated—coming up with innovations is only part of the problem. Incorporating those innovations into products—or even deciding whether it makes sense to incorporate those innovations—requires communication across multiple parties and, often, coordination between actors at multiple points in a particular production network.

Examples of the sort of incremental innovations that occur in this fat middle—and of the fact that they necessitate complex coordination across firms—abound. A supplier of condensers for air conditioners (which are considered standard parts) found a way to make that condenser a bit smaller; this created more space in the front of the car, freeing the dashboard supplier to add other gadgets or to create more room in the cockpit (which, however, has implications for, say, the supplier of airbag modules; and so on). Another example: a supplier of mufflers for lawn equipment told of explaining to their customer that they could deal with a “safety issue, a heat issue” not in the usual way—by “insulating and shrouding” the muffler—but that they could instead install a heat shield; doing so made one part more expensive but led to savings elsewhere. Or yet another: a supplier of sheet metal offered suggestions to his customer about “parts that were heavier than needed to be, welds that could’ve been eliminated, parts that could’ve been eliminated, etc.”; the customer, he said, then has to ask, “Can we live with this? Will this be strong enough?” and so on, and, if it is, it is “a way to cut their costs, and at the same time we [the supplier] don’t lose any value added.”

The significance of incremental collaborative innovations, from the point of view of suppliers, was made clear by an interviewee at a supplier of small plastic molded parts to the automotive industry. He explained that the way particular parts are treated and understood by OEMs is not given, but is instead negotiated. His company could not survive, he said, unless they could prevent their products from becoming commodities, by which he meant something that the customer perceived as available from a vast array of competitors and that could thus be purchased by way of auction. That eight-letter word, he alleged, was for him a “four-letter word.” And, to ensure that his firm’s products were not damnable with the awful appellation, they were careful to maintain the “the engineering and process know-how” they needed to be constantly coming up with ideas they could pitch to customers. But, he explained, even that was not enough by itself; they also had to communicate and negotiate with customers, who, in turn, had to be willing to consider changes on their end: “We might say, if we change the resin from Brand X to Brand Z, we might be able to give you 5 cents off. But then I have to go, I have to requalify everything, it takes an engineering change . . . it could be forget it, or it could be: hey, that’s a good idea, let’s run the gauntlet.”

The Limits of Collaborative Decommodification

“Decommodifying” innovations are small but cumulatively big things that often require explicit coordination across organizational boundaries. The OEMs at the helm
of the vertical production networks that dominate manufacturing today are in markets with short enough product cycles that they generally need some flow of those incremental innovations, lest they be overtaken by competitors. But how much flow? In which components? And with which suppliers? OEMs certainly do not need those innovations in every component at all times. At any given moment, they can treat nearly anything as a commodity by putting out a request for quotation (RFQ) with well-defined specifications with the expectations that the low-bid suppliers will just "build-to-blueprint"; and, since the specifications on that component have been fixed, they can aim instead for incremental innovation around parts treated as unchanging "black boxes." However, even if "commodifying" components can lead to short-term cost savings, it constrains long-term improvements (including cost-reducing improvements) to products, and those OEMs therefore cannot treat every component as a commodity at all times. They are hence constantly asking themselves which components they should allow to change, and which they can leave be.

If the questions OEMs are asking themselves are straightforward enough, answering those questions is, however, not so straightforward. The issue, I was told, is that they cannot be answered in purely technical terms. Whether or not a particular component is worth decommodifying depends not just on its placement in the product and the value that innovation might add; it depends also on some combination of the ability and the willingness of the suppliers making the component to develop the requisite incremental innovations. And neither can be taken for granted in the U.S. context. Many U.S. component suppliers had, until recently, served essentially as capacity buffers for their larger customers—which meant that they were put into direct cost competition on the same parts with competitors. They had thus maintained quite minimal design competencies—lest the ensuing overhead costs impede their ability to compete on price. They can (and often do) make new investments in the sorts of design capacities required for this new role, but they are logically wary of doing so unless reasonably assured that those investments will not go to naught. And, as the companies I interviewed made clear, they could little look to history to know either the competence or the trustworthiness of their interlocutors.

OEMs that had historically avoided complex coordination with suppliers were only just beginning to collaborate in complex ways with suppliers. Many of the suppliers were only just developing competencies they hoped to use to cement their place in a rapidly changing relational space. In short, both parties had been driven into a new world and were left with little choice but to look at actions; from those actions they had to try to discern not so much whether or not—but rather when and with whom—to invest in the joint decommodification of components that might be left standard and simply bought from the low bidder. They were hence regularly in situations in which stakes were often high, but in which roles and norms around exchange were relatively ambiguous; or, to put it in the terms of the questions motivating this article, they were regularly in situations in which theorists of embeddedness would predict that they would make recourse to institutional logics, and—if Zelizer and Block are right—we should also expect to see considerable relational work.
I have made it clear in previous sections that I think that my interviewees’ descriptions of their strategic actions in these situations suggest both that they make recourse to institutional “logics” to coordinate their actions, and that they rely upon relational work to recombine, interpret, and classify particular “relational packages” as indicative of one logic or the other. My challenges in the remainder of the article are thus (1) to show why I think that; (2) to defend my claims that the “embeddedness” and “relational work” perspectives are complements rather than alternatives; and, (3) to show that the perspectives in combination shed some useful light on patterns of interorganizational relationships in U.S. manufacturing industries.

It is in the service of these tasks that I finally invoke the curious (for an article on industrial sourcing) metaphor with which I have titled the article. Faced with this need to interact as well as to decide how to interact, I argue, it is as though manufacturing firms have found themselves trying to decide whether or not to waltz and with whom to waltz, on a dance floor in which the only way to figure out if it is worth waltzing was, in fact, to waltz a bit. What do I mean by this? Why dance? And why specifically the waltz? When one uses metaphors in a social scientific argument, there is always a danger that one may add more confusion than he subtracts, and that danger is multiplied in this case, as I am far from an expert on dance. But ever since the metaphor was suggested to me—in a memo written by Gary Herrigel—I have found the idea that collaborative innovation relies on a sort of “waltz” to be helpful in my own understandings of the complex interorganizational dynamics that I (and Herrigel) have been observing, and I thus try to render the idea here in the hopes that it clarifies for the reader as well.

The waltz, as I understand it—and, more importantly, as I intend it in what follows—is a dance in which the moves available to dancers are, in any given step, relatively structured, even as there is considerable room for creativity and even small-scale innovation in their performance. Over time, there have been iterations in the dance itself (the steps available) so that it is by now performed in a vast array of styles (which correspond here to what I am calling “logics”). It moreover requires a partner and generates an outcome—the quality of the dance—that is not independent of the ability and commitment of one’s partner. Conceived broadly, the metaphor also recognizes that partners may try to find someone else with whom to dance once the music stops, might even have a wandering eye while the music plays; and the metaphor leaves space for the idea that parties might leave the dance hall altogether if bothered enough by the actions of a partner.

Applied to the case, the claim is thus that manufacturers today jointly innovate by way of a dialogic process in which there is lead and follow and in which the range of permissible moves is both circumscribed and meaningful, but in which there is nonetheless room for creativity and signaling between partners as to what they might jointly do next. Actors know that the process does not always go well; and yet, they recognize also that the only way to know if it is worth engaging in the process is to give it a whirl (that is, the only way to really know if it will, in fact, be enjoyable to dance with someone who seems potentially attractive is in fact to dance with that someone; and
things can improve or degenerate not just with time but also with the relative alternative partners).

To put it another way: to make strategic sense of their growing yet variegated and very negotiated interdependence, American OEMs and their suppliers have developed a series of practices, a means of signaling to each other that they are in fact trying jointly to “decommodify” things that might also very plausibly be seen as unchanging commodities that—from the OEMs’ point of view—can be bought anywhere; or that, from the supplier’s point of view, are not worth investing resources in their improvement. And it is only by actually engaging in these practices that they can discern—or better put, decide—if it was in fact a good idea to engage in those practices.

Waltzing (Though Not Always Well)

The moves in the waltz are so myriad it is impossible to fully list them here—though I hope to have given a flavor with the aforementioned examples of incremental innovations and of efforts by suppliers to decommodify their production. In this section, my goal is to show why the sorts of joint practices that structure interactions between OEMs and suppliers do more than just signal perceived opportunities for joint innovation. I want to argue also that moments arise when the contracting parties are feeling each other out in an effort to determine just what sort of relationship they will have going forward, that their meaning is often equivocal, and that they must therefore be interpreted by the parties in light of the some broader context.

Take, for instance, a demand by an OEM for suppliers to lower their prices. This would, on the face of things, seem clearly to signal that a partner has no intention of dancing and intends to maintain an arms-length relationship. But what if the demand was made only after a study of the part that suggests that there might be innovative ways to bring down costs—and thus prices—by working together. Then the question is whether or not those demands are made in a context in which suppliers perceive that their suggestions for design changes will be taken seriously. When this is done, it is presumed that suppliers can reduce the overall bill by way of “suggestions” for ways to modify the component in question (or the terms of its delivery, or . . .). Sometimes demands for cost reduction come with offers of concrete assistance, with OEM engineers dispatched to help ensure that demands for cost reduction can be achieved by improving productivity and do not damage supplier margins and thus ability to invest. Or OEMs may invite suppliers to “tear downs” of the product or to brainstorming sessions that reveal the inner workings of products even as this means taking risks, because those suppliers often also serve those same OEMs’ competitors and might thus learn things they pass on to those competitors. OEMs might also bring suppliers of even the most mundane components into the design process very early when it is easier to redesign parts. Or they may limit the number of suppliers in a particular commodity area, allowing the possibility of competition but also encouraging suppliers to specialize in different product market segments so that those suppliers can invest with some certainty of future business.
I focus on demands made by OEM actors, because in this waltz of mutual adjustment, OEMs generally have the lead, suppliers the follow. By this, I mean that suppliers must respond with signals of their own, which must themselves be interpreted. Beyond just continuously investing in technologies and engineering resources and taking part in co-design with OEM customers, suppliers are expected to be actively looking for ways in which they can improve OEM design or processes without sacrificing quality—which obviously requires not just having resources, but also directing them. In addition, suppliers are expected to provide ideas for ways that they and their customers can jointly use to lower costs, as well as committing more generally to the relational decommodification of the mundane. However, there are also kinds of issues around the release of information that can be used in bargaining to drive down prices. Suppliers are often asked, for example, to reveal step-by-step cost breakdowns of the parts they are making for their customers, so that those customers can benchmark those costs against an internal database. This allows the OEMs to let those suppliers know if they are out of line (which can help to direct future investment), but there is an understanding that it serves as a benchmark and will not be used to drive hard bargains. Similarly, when suppliers are working for OEMs with seasonal fluctuations in their businesses, suppliers may be asked to reserve capacity or to hold inventory in order to meet the demands of today’s “just-in-time/build-to-demand” strategies, but their customers are expected to provide accurate forecasts and compensate them if those forecasts are wildly out of line.

The list of steps could go on. They are myriad and varied. More examples, however, would simply underscore that the waltz consists of practices that generate plenty of joint problem-solving, the exchange of fine-grained information, and trust between the parties—and that therefore reflect a logic that, when functioning well, might easily be framed as Helper et al.’s “learning by monitoring” or as Uzzi’s “logic of embeddedness.” Yet we are also talking about practices that are ambiguous, specific, and contextual enough that they do not by themselves bespeak a logic. They must be interpreted in the context of real relationships—not least because everyone knows that everyone involved is under pressure and may have some real incentives to refuse to waltz. It must not be forgotten—and suppliers don’t forget—that OEMs are sometimes better served, even in the long term, by using their greater leverage to drive hard bargains enforced by exit, at least for particular components. Similarly, although there is often a presumption that suppliers are the weaker party, to be weaker is not be powerless or without agency. Suppliers must and do choose where to allocate resources and may elect to minimize the energy and investment directed toward the decommodification of the components for OEMs they deem unwilling or unable to waltz sufficiently well.

Taken singularly, many of the moves in the main alternative to the waltz—an “arms-length” logic—overlap with actions that can, in some contexts, bespeak collaboration. Decisions by OEMs to extract themselves from the waltz, after all, are not generally followed by Hobbesian manifestations of raw power, but rather by a different logic—a different dance, if the reader will—with its own patterns, norms, actions, and anticipated reactions. For example, hard bargaining, or even the occasional use of
market power, is understood to be part of the game by suppliers, so long as it is relatively predictable, for example; but how much is more than “occasional” is a matter of interpretation. In the terms of the metaphor, the real issue is thus the ubiquity of what I will call “missteps,” by which I mean actions that suggest that perhaps another logic of action is in play but that are by themselves inconclusive. These missteps are seemingly small things in which the parties expose themselves to risks, signal the intent to collaborate, but in which they do so often in expressly limited ways.

For example, OEMs may, in fact, misuse supplier cost data—given up for benchmarking purposes, or obtained in joint development projects—to drive harder bargains; or suggestions for design improvements find their way to suppliers’ competitors; or OEMs may systematically err on the high side—not wildly, but a bit—in their estimates of future orders, leaving suppliers to reserve capacity, raising costs, but never using that capacity. In response to such moves, suppliers may not just refuse to give up cost data but intentionally give errant data in ways that render OEM benchmarking databases virtually useless; or suppliers may limit investments in design competencies for fear that ideas they provide will be shopped to lower-overhead competitors; or suppliers may respond to systematically errant inventory forecasting by simply mentally discounting those forecasts, not maintaining requisite capacity, and putting those customers at risk of losing market share should those targets in fact be hit.

Small deviations from the waltz—missteps—may simply be mistakes. One supplier, for example, spoke of a period when a particular customer was “really pushing [them] to give the cost breakdowns, one of the [OEM] engineers—I am sure it was inadvertently—they gave us a complete cost breakdown from one of our competitors.” Still, this made him wary: “If it is that easy to get this stuff, who is to say that our breakdown won’t show up in a competitor’s hands?” But they may also be the result of strategic contestation internal to one of the parties that is opaque to the other, which is, again, unpredictable. It was common to hear sentiments, for example, like that of a supplier who said it was like “two different camps within [his customer],” with “the people saying suppliers are precious; nothing is cheap if you don’t get it or it is all junk . . . and . . . the people who would kill their moms for a nickel.” This, he said, had left him wondering who “is going to win out.” In short—and transitioning from the metaphor back to a terminology more familiar to economic sociology—missteps represent occasions in which “roles or norms are ambiguous” because it is not clear which logic is in play. And, as Zelizer and Block predict, in such occasions, we do, in fact, see actors forced by circumstance to assess the various elements of their “relational packages”—their ties, their transactional history, and the media involved—and to decide whether “to do reparative [relational] work [given that] one or the other party [has] perceive[d] that the expectations were not met.”36

The manager who spoke of “camps,” for instance, went on to describe his company’s ties to that OEM. He said that the “supplier development people” at the OEM were “out there preaching relationships,” telling his company that they “[have] excellent quality, delivery, if the price is a little high, [they] will give us the resources to get
that down." He added that they were frustrated with those in their own company who were brandishing "the club saying 'lower your price or else.'" He explained that while his company was hedging to some degree against the risk that the "collaborationist" faction in his customer might lose out, they were also doing what they safely could to make sure that did not happen. Notably referencing (in Zelizer's terms) media that served to mark their efforts to define the relationship as a partnership in spite of the occasional misstep, he gave an example of a project done with the supplier development (SD) personnel, which had been a good project, but that had "presented better than it really was" in "measured cost savings," the key currency in collaborative projects. He said they had also collaborated on subsequent projects that did not go as well, but they had still "kept track of everything that we did and . . . gave them every bit of it"—even if "there wasn’t much payback.” He made it clear, in short, that he was openly marking the relationship as one fundamentally driven by a logic of partnership, though aware of missteps, and was hence doing so in a "reparative" sense: he hoped that doing so might strengthen the position of that collaborationist faction in internal disputes at the OEM, in turn making future "missteps" less likely.

Importantly, this outcome—reparative relational work in the hopes of dancing some more—was hardly his only option. This was made clear by the manager in question in the interview, who said he was willing to employ an alternative—and more arms-length—logic if things worsened. (“I think customers oftentimes just get in the way, and I think that the biggest issue is calculating the savings . . . too much of it always has to be theoretical.”) And it is also demonstrated by the fact that other suppliers reacted very differently to missteps from that same OEM. One, for instance, said that a partnering customer should "want [its] partner to remain financially healthy and be able to stimulate their workforce with raises, benefits, whatever—as much as possible"; but, he continued, he felt that the OEM in question had begun to pressure too much and had led him to engage in a few intentional missteps, being careful with information to "get a little leverage to keep the market here,” but to collaborate nonetheless with other areas of the company.

He explained that he, like the supplier discussed above, had worked with OEM supplier development personnel on a project, but when there were changes in OEM procedures that made it hard to trace ensuing cost reductions directly to the project, he took advantage of the legitimated media in the standard relational package—the measured cost reduction due to the intervention—to drive a hard bargain by refusing to count cost reductions that resulted from related process improvements on parts for other customers. The result, he said, left supplier development without cost reductions and “they were not happy with that.” He recognized that his company was taking the risk that future dealings would be governed by an arms-length logic, thus making it harder for his company to decommodify its parts; but, he said, he felt that the SD engineers in question came from a plant at the customer who already felt like his company “can’t do anything right.” He was thus just cutting his losses across a part of his tie to that customer, because there were other groups at the customer that his company “can’t do anything wrong for.” He did not know how things would turn out, but he hoped
“that somebody would go to bat for our company at some point . . . when somebody decides to pull work out and [would] say, ‘Well, I never had these problems with [his company].’”

**Conclusion: Where to Go from Here?**

In this article, I have responded to Fred Block’s call for economic sociologists to examine whether “the concept of embeddedness” had outlived its usefulness and to ask whether the concept of “relational work” associated with the ideas of Tilly and Zelizer might serve as a superior and alternative “jumping-off point” for the sub-field. Drawing on interviews conducted at large firms and their suppliers in U.S. metal manufacturing industries, I have argued that the conceptual apparatus developed by Zelizer in her studies of relational work can fruitfully be used to examine those changing patterns of interorganizational relations that have long garnered so much interest in the economic sociology literature. But, in contrast to Block and Zelizer, I have suggested that it is a mistake to treat the “embeddedness” and “relational work” agendas as *alternatives*, and have sought to show that the two perspectives are not just consistent with each other, but are in fact complementary.

I have made my argument by revisiting a finding initially presented in *The New Old Economy* (though supplemented by subsequent interviews) as well as a puzzle laid out in that book: Why is it that firms in relationships marked by frequent mistrust and opportunism nonetheless persist in efforts to collaborate rather than going their separate ways? I have recognized—with critics of embeddedness—that this finding does not square with a widely held tenet in that literature: following Uzzi, it is common to expect trust, fine-grained information transfer, and joint problem-solving arrangements to be mutually reinforcing enough to leave most interorganizational relationships to be dominated *either* by “logic of embeddedness” *or* by the “logic of the market.” But I have also questioned whether this tenet, though endemic to much actual scholarship on embeddedness, is *intrinsic* to an “embeddedness agenda.” That agenda, to my read, is better and more coherently organized around the issue that actually drove Granovetter’s seminal 1985 article, and to which he returns in more recent work where he again asks how economic sociology might “find a position that balances the need to accommodate strategic action” without overestimating “the coherence of institutions.” And in my effort to dovetail an embeddedness agenda with Zelizer’s emphasis on the salience of relational work, I have hence combined (1) Granovetter’s more recent call for attention to the ways in which actors embedding in a social and institutional surround provide them with “logics” that may be assembled into solutions to economic problems with (2) the claim that an incorporation of explicit attention to relational work into the analysis helps to understand more concretely how those logics are intermingled and recombined.

Using the metaphor of the waltz, I explained that actors in U.S. manufacturing industries do in fact frame their actions in terms of “logics” and that they do develop a shared sense of what those logics entail from their embedding in an institutional
surround. However, I noted also that more than one step is available, and that not everyone dances so well. That is, I showed that actors recognize multiple logics to be potentially in play in any given relationship, not least because those actors often have multiple interlocutors at the firms with which they trade. I argued that we therefore need a conceptual toolkit to attune us to the ways in which actors intermingle those logics in real relationships. I hence turned to Zelizer’s theorization of relational work to show that the ways actors negotiate “relational packages” and do—or do not do—“reparative work” affects the mix of logics in play and, as a consequence, the quality of the relations in question going forward. I closed the case analysis with a comparison, for example, of two suppliers embedded in a similar institutional surround, but who did their relational work very differently, and whose relationships with their customers thus took different tacks.

The question that remains, of course, is where to go from here. What, besides greater descriptive accuracy, is gained by applying this “combined agenda” to the analysis of interorganizational relationships? Most obviously, there is considerable space to deepen the analysis I have conducted here, with, for example, longitudinal studies of particular relationships. One can also broaden. I have noted that others have similarly identified the intermingling of arms-length and collaborative logics of action in U.S. manufacturing, and have documented the relational work that thus ensues. But what of other places and other moments of ambiguity between other logics? Sebastiano Brusco has shown, for example, that in industrial districts in some regions (Emilia-Romagna) in Italy, suppliers in “partnership” relations have historically not just allowed but are expected to maintain a wide portfolio of customers (in order to ensure their stability in a downturn) and have considered it a breach of trust for a particular customer to ask an outsized proportion of their capacity; meanwhile in another region (the Veneto), suppliers in collaborative relations have been expected to be extremely flexible but also quite dependent on one customer who, in turn, is was expected to shelter them in a downturn. At the same time, the pressures of globalization have made it hard for suppliers to maintain a portfolio of customers, and for customers to protect suppliers. My findings from the United States suggest that we might learn how those logics—and thus the relations that essentially define industrial districts—are changing by looking at the relational work that actors in those districts are doing to intermingle and recombine logics in the face of new pressures.

Deepening longitudinally or broadening through comparison to other realities though are hardly the only ways that the incorporation of attention to relational work into the analysis might serve analysts of interorganizational relations. Many economic sociologists, myself included, are especially interested in variation in the economy because we believe that some variants are normatively desirable. In the study of my bailiwick—manufacturing—for example, there is reason to believe that more collaborative relationships between OEMs and suppliers would not just generate innovation, and hence potentially growth, but it would also arguably be associated with investments by manufacturing companies in their workers, and hence, hopefully, better wages and greater job security. I have argued that there is contingency in the trajectory of interorganizational relations in the wake of “missteps” and suggested that the ways actors
conduct their relational work can affect those trajectories. I do not mean that some actors are “better” or “worse” at relational work: to make that claim would be to make the same error as those who see some relations as more or less “embedded” than others. But in showing that differences in the conduct of relational work affect relational outcomes, I am effectively raising another question with potentially important normative consequences: How might one affect the ways in which actors do their relational work?

I, like Block, Zelizer, and others writing on relational work, have focused on the work done by actors directly involved in dyadic relationships, and have seen their embedding in the institutional surround as the source of resources (i.e., logics and shared meanings) they use to do that work. But in the real world, third parties—including state actors—mediate and broker many relationships and may find themselves doing “reparative work” or otherwise trying to affect negotiations between actors in situations where roles or norms are ambiguous. And this, I submit, opens up an important additional area of research to which theorists of relational work might have much to contribute. If we look again at the case of U.S. manufacturing, for example, we see an array of public and private actors—ranging from trade associations, to state technical colleges, to the Federal Manufacturing Extension Partnership, to private consultancies—that serve, in network terms, as “brokers” between OEMs and their suppliers. Andrew Schrank and I have shown that such third parties can affect the quality of relationships between actors in production networks. And we have argued that third parties therefore serve to mitigate “network failures” that “arise where the social and political requisites of productive decentralization fail to obtain.” In that research, we focus on the importance of institutions that generate competencies and institutions that enhance trust in their mitigation—because those institutions affect the logics available to actors. But there are questions left to answer. How do those third parties—the brokers on the ground—do their relational work? And to what effect do they do that work? What, in short, is the role of interested third parties in a relational work paradigm?

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9. In recent years I have also been studying outsourcing in metal manufacturing industries in central and northern Italy and have observed some similar dynamics. See for example, Josh Whitford and Francesco Zirpoli, “The (Vertical) Network Firm as a Political Coalition: The Reorganization of Fiat Auto” (Unpublished manuscript, 2011). To keep the story as straightforward as I can, however, here I am just drawing on my past work in the United States, thus drawing especially on interviews done for the book but also on more recent work done as part of the “Global Components Project.”


18. Granovetter, “Economic Action and Social Structure.”


20. Mark Granovetter, Society and Economy: The Social Construction of Economic Institutions (Cambridge, MA: Harvard University Press, forthcoming); see Chapter 4: “Norms, Values, Moral Economy, Culture, Schemata and Institutional Logics.” I am grateful to Mark Granovetter for providing me with a draft copy of the chapter.


29. Granovetter, *Society and Economy*.

30. The next three sections are based largely on the analysis of interviews I have conducted with manufacturing firms in the American Upper Midwest. Descriptions of the procedures I followed—and continue to follow in subsequent interviews—can be found in Josh Whitford, *The New Old Economy: Networks, Institutions, and the Organizational Transformation of American Manufacturing* and in Whitford and Zirpoli, “The (Vertical) Network Firm as a Political Coalition: The Reorganization of Fiat Auto.”


33. Herrigel, “Emerging Strategies and Forms of Governance in the Components Industry in High Wage Regions”; Charles Sabel and Jonathan Zeitlin, “Neither Modularity nor


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