# THE NETWORK FIRM AS A POLITICAL COALITION: THE REORGANIZATION, FALL AND RISE OF FIAT AUTO

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**ABSTRACT**
The article uses a qualitative case study of fifteen years in the production network that revolves about Fiat Auto to develop a model of the "network firm" as a political coalition. The article reconstructs James March's classic Carnegie model of the firm in light of the fact that we live today in a world of "blurred-but-existent" organizational boundaries. Using concepts drawn from the literatures on organizational networks, social movements, and organizational politics, it demonstrates that strategic decision making at Fiat and at key suppliers shaped and were shaped by an interplay of frames and relational embedding within and across organizational boundaries. It therefore builds theory by showing how coalitional politics shape and are shaped by the shifting boundaries of the firm, and by showing how those coalitional politics affect the evolution of the production networks prevail across many contemporary industries

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## INTRODUCTION

More than a quarter century ago, Jeffery Pfeffer and Gerald Salancik (1978: 1) began *The External Control of Organizations* with the claim that one cannot adequately understand the behavior of organizations without examining the "context of that behavior – that is, the ecology of the organization." Their central thesis, they argued, would force scholars of organization to forgo their insistent focus on the internal dynamics of the giant vertically integrated corporations that had dominated the post-war growth model, and would guide them instead towards investigations of interactions between power, politics, and the embedding of organizations "in networks of interdependencies and social relationships" (Pfeffer and Salancik 2003: xii). That thesis is today part of the received wisdom for most organizational scholars. This is due surely in part to the power of Pfeffer and Salancik's analysis, but it is due also to a series of subsequent changes in the organizational world itself. The decision making processes of the highly-integrated corporate behemoths that had dominated the post-war growth model had tended *in fact* to be highly structured and relatively inward-looking (see e.g. Chandler 1977), thus justifying their prior centrality in organizational analyses. Beginning sometime in the 1970s, however, the boundaries of many of those organizational behemoths began to blur as outsourcing, alliances, strategic partnerships and such spread to such a degree that scholars today often "to regard the interorganizational network [rather than the firm] as the basic unit of analysis" (Powell, 2001 #486: 59 see also Jones, Hesterly and Borgatti 1997; Podolny and Page 1998; Helper, MacDuffie and Sabel 2000; Smith-Doerr and Powell 2005).

This recognition that organizational boundaries were blurring initially generated considerable theoretical cross-fertilization between the literature on organizational politics – in which Pfeffer and Salancik placed themselves – and the literature on organizational networks. The network imagery implicit in theories of resource dependence, for example, was quickly operationalized and extended in analyses of corporate mergers (Burt 1980) and of interlocking corporate directorates (Burt, Christman and Kilburn 1980; Mizruchi and Stearns 1988). As those two literatures have since developed, however, they have gone in different directions and that cross-fertilization has all but disappeared (Mizruchi 2007). Scholars of organizational politics have gone on to examine the ways in which power dynamics and resource dependencies are mediated by "conceptions of control," framing and other cognitive factors (see e.g. Zald and Berger 1978; Fligstein 1990; Davis et al. 2005; Kaplan 2008). Yet they have done so in analyses that presume rather than investigate the salience and character of organizational boundaries. They have hence neither drawn on nor contributed to the more recent literature on inter-organizational networks. This latter literature, meantime, has done much to show that the boundaries of the "nodes" in the sorts of structural networks used to operationalize resource dependence theory have blurred radically, but has not for its own part explored the ways in which that blurring might affect and

be affected by inter- and intra-organizational politics (Hagedoorn 1993; Stark 1996; Owen-Smith and Powell 2004; Mizruchi 2007).

In this article, we aim to re-ignite this once-fruitful dialogue using a longitudinal case study of key transitions in the production network that revolves about Fiat Auto. More specifically, we use 115 interviews conducted between 1998 and 2010 at both Fiat and suppliers to Fiat, as well as an investigation of primary and secondary documents, to analyze a series of important transitions in the evolution of that production network. Those transitions include: a decision by the Italian automaker to outsource radically; a brief and failed alliance with General Motors; a deep crisis that nearly drove the company into bankruptcy in 2004; subsequent insourcing; and a turnaround dramatic enough that Fiat could be cast as Chrysler's savior in 2009. In our analysis we begin with an accepted and well-traveled model in organizational politics – James March's (1962) classic Carnegie model of the "*business* firm as a political coalition" – but then reconstruct that model in light of theories of relational embeddedness drawn from the networks literature (Granovetter 1985; Krippner and Alvarez 2007), and of theories of framing drawn from a recent revival in studies of organizational politics of ideas drawn from studies of social movements (Zald and Berger 1978; Davis and Thompson 1994; Davis et al. 2005; Kaplan 2008).[1] The result is a meso-level model of the *network* firm as a political coalition. That model can explain in the specific how strategic decision making at both Fiat and at key suppliers shaped and was shaped by a dynamic interplay of relations, actions and reactions that ran not just within but also across organizational boundaries. And it can explain in the general (1) how coalitional politics shape and are shaped by the shifting boundaries of the firm; and (2) how those coalitional politics in turn affect the evolution of the production networks that currently prevail across many contemporary industries.

## THEORY

We take March's 1962 depiction of the business firm as a political coalition as our theoretical starting point because its main tenets – those of the "Carnegie school" – have long defined what it means to understand an organization in political terms (see also Cyert and March 1963; Gavetti, Levinthal and Ocasio 2007). March's core model is very straightforward: it holds that composition of the firm is negotiated and its goals bargained amid demands made on executives by participants to various coalitions that have their own ideas and interests, and whose cooperation or concession affects the firm's strategic direction and competitive position (March

[1] Our use of social movement concepts to analyze organizational phenomena is notably intended as contribution to a line of research first outlined by Zald and Berger in the pages of the AJS in 1978 (the same year that Pfeffer and Salancik published *External Control*), that was subsequently ignored (for the most part; see Davis and Zald 2005), but that has recently been rehabilitated amid a growing sense that "the imagery of the centralized, rational bureaucracy is increasingly unable to capture the empirical world confronted by organizational analysts" (Clemens 2005).

1962: 674). Its applications and invocations are many, and are strewn across the sociological literature. Its imagery is found especially in streams of literature that trace their lineage to Pettigrew (1977), to Pfeffer and Salancik (1978) and to the many since who have documented the role of power and instrumental action in the pursuit of organizational resources (see Pfeffer and Salancik 2003). That imagery is also common in work showing that "cognitive frames" affect how managers interpret what is and is not in their interest (Levina and Orlikowski 2009; Kaplan 2008; Beunza and Garud 2007; Barr 1998; Ocasio 1997; Krackhardt 1990; Daft and Weick 1984). With our case analysis, we aim to contribute to these theoretical traditions. And, in our interpretation of that case, we hence stand between alternative streams of theory that depict organizational leaders (or at least leadership teams) as the relatively unfettered architects of corporate strategy (see e.g Nadler and Tushman 1990; Tushman and O'Reilly 2005); or that root their explanations of organizational phenomena primarily in the pushes and pulls of institutional path dependencies and other field-level forces (Garcia-Pont and Nohria 2002; Delmas and Toffel 2008; Lieberman and Asaba 2006).

Our reconstruction of March's 1962 treatment begins with the observation that scholarship in this tradition – including not just March's analysis but also subsequent work by Burt, Mizruchi, and others – has relied on an analytic strategy that has in recent years gotten problematic. March's political turn had followed naturally from his observation that organizations as understood by the Carnegie school are essentially "conflict systems" in which bargaining is required because "the most preferred states of all elementary units cannot be simultaneously realized" (March 1962: 663). He conceded that the sorts of "elementary units" likely to be of theoretical interest include not just individuals but also work groups, departments, and similar entities that are themselves conflict systems with preferences and interests that are more bargained than given. He had therefore proposed that political analyses of organization define their elementary units – the subsystems – in ways that ensure either (1) that the demands they place on the system be independent of the decisions of the larger system, or (2) that "variation in system behavior due to conflict within the subsystem [be] trivial because of scale differences between the conflict within the subsystem on the one hand and conflict among subsystems on the other" (March 1962: 664). This strategy is unproblematic in the analysis of organizational fields dominated by bureaucratic multidivisional firms, in which the units of interest are for the most part hierarchically organized (Chandler 1977). But it is for this reason of decreasing utility today, given the widespread diffusion of collaborative, or "network" modes of transactional governance in organizational fields once dominated by market or hierarchy (Jones, Hesterly and Borgatti 1997; Podolny and Page 1998; Powell 2001).

The problem is rooted in a blurring of boundaries between organizations (and organizational subunits) that has been documented in everything from biotechnology, to electronics, to mechanical industries, to software, to financial service, and, of course, to automaking.[2] This blurring has naturally led organizational scholars to explore what Jacobides and Billinger (2006)

[2] For studies of the biotechnology industry see e.g. Powell (1996); for the electronics industry see e.g. Sturgeon (2002); for mechanical industries see e.g. Herrigel (2004); for the software industries see e.g. Lerner and Tirole (2002); for financial services, see e.g. Jacobides (2004). Studies of the auto industry are cited throughout the article, but see especially Womack, Jones and Roos (1991). For a cross-sectoral overview see especially DiMaggio (2001).

refer to as the growing "permeability" of the "vertical architecture" of the modern firm, and to recognize that that organizational boundaries today are somehow simultaneously *blurred-but-existent*. With this neologism (which is our own), we mean to capture two essential and interrelated findings in recent studies attentive to the spread of network modes of transactional governance scholarship (Bidwell 2010; Parmigiani and Mitchell 2009; Azoulay, Repenning and Zuckerman 2010; Whitford 2005; DiMaggio 2001). We mean first that the ability of particular actors (or groups of actors) in particular organizations to achieve their goals depends increasingly in the wake of vertical disintegration on those actors' ability to elicit cooperation from actors (or groups of actors) in other organizations; but, we mean also that those newfound interdependencies have neither fully aligned routines and actor identities across formal organizational units, nor have they obviated the incentives created by internal labor markets at actors' places of formal employment (see also Kogut and Zander 1996; Kogut 2000).

Studies of the blurring-but-existence of organizational boundaries have to date primarily explored the ways in which internal organization of potential collaborators affects their ability to build alliances with others and to reach across organizational boundaries (see e.g. Helper, MacDuffie and Sabel 2000; Kristensen and Zeitlin 2004; Lorenzoni and Lipparini 1999; Bidwell 2010; Azoulay, Repenning and Zuckerman 2010). To our knowledge, however, there have been no studies of effects that run in the other direction, that is, of the implications that patterns of external relations have for the internal organization of potential collaborators. In our own case analysis, we hence fill this gap, and, in so doing, bridge and extend important lines of inquiry in the literatures on organizational networks and on organizational politics. We begin with those elements of March's model that have since become standards across a broader literature: we understand coalitions as temporary alliances of some subset of the potentially involved parties; we expect parties to enroll in coalitions that serve their interests; and we expect bargaining within and among those coalitions to enable and constrain the executive. We accept, however, that we will not generally be able to identify elementary coalitional units in ways that ensure that the demands they place on the system be independent of the decisions of the larger system. We therefore propose an alternative that draws in two additional concepts – one each from the two literatures we are seeking here to bridge. In the specific, we reconstruct March's core model of the business firm as a political coalition in light of the blurring of organizational boundaries by showing how patterns of coalitional enrollment and mobilization shape and are shaped by interactions between parties' *relational embedding* and the *cognitive frames* that those parties use to understand, explain and justify their actions.

Our incorporation of the latter concept into March's model is notably intended as a return of sorts to ideas put forth in the *AJS* in 1978 by Zald and Berger (1978: 823), who first used a "resource-mobilization approach ... to examine the range of social movement phenomena in organizations." It is a return, as Davis and Zald (2005: 335) note in more recent writing, because few took up that argument at the time. But, as Davis and Zald also note, we are not alone: others have similarly recognized that the current "era of rapid social change" has left organizations today "increasingly [to] resemble episodic movements rather than ongoing bounded actors

(Fligstein 1990; Fligstein 2001; Davis and Thompson 1994; Davis et al. 2005; Kaplan 2008).[3] To ensure that our work fits in dialogue with other studies in this vein, we hence draw our understanding of *cognitive frames* from this recent stream of studies and define them as those "metaphors, symbols, and cognitive cues" that actors use to "cast issues in particular light and [to] suggest possible ways to respond to those issues" (Campbell 2005: 48-49; see also Benford and Snow 2000). We also similarly distinguish between frames' "diagnostic" and "prognostic" components, where we understand the former to identify problems and assign blame, and the latter to direct attention towards possible solutions (Benford and Snow 2000; Kaplan 2008).

Our incorporation of *relational embedding* into our analysis in an effort to move beyond work by Kaplan (2008: 732) that, to our read, represents the most complete effort to date to use concepts from the social movements literature in a case analysis that "[marries] political and cognitive stories about how strategic choices get made." This means that we follow Kaplan in part: we focus our narrative on moments in which there is enough uncertainty that actors might plausibly use frames to "make sense of ambiguous signals from the environment" (Kaplan 2008: 732; see also Fligstein 1990; Beckert 1996); and we focus in those moments on the effects of "framing contests" that turn not just on the extant distribution of power but also on the ways in which the frames available in relevant actors' "frame repertoires" affect patterns of alliance and thus of coalitional struggle (Kaplan 2008: 738). But because we are concerned with the possibility that relevant actors might range across the production network, we hence turn also to a literature in economic sociology that has shown how relational embedding[4] – those patterns of social and business ties that have been shown give actors insights into the motives, trustworthiness, and capabilities of others – affords some opportunities, precludes others, and generally influences the likelihood that particular frames will in fact resonate in particular situations (Campbell 2005: 65).

[3] Zald and Berger (1978) give primary attention to "the occurrence of social movements in corporate hierarchical forms" even though they recognize that the approach is in principle "applicable also to social movement phenomena in federated ... associations." Their 2005 effort to "[bring] together two fields of inquiry, the study of social movements and the study of organizations," by contrast, is explicitly justified with attention to changes in the structure of production (Davis and Zald 2005: 335). This shift in focus is notably consistent with our claim that the anointment of Pfeffer and Salancik's central thesis as conventional wisdom has been driven at least in part by a recognition among scholars of organization that the world itself has changed considerably.

[4] Our understanding of "relational embedding" is heavily informed by Krippner's rejection of the idea that an "arms-length-tie" might somehow be "disembedded" (Krippner 2001; Krippner and Alvarez 2007; see also Krippner et al. 2004 for a concurrence from Granovetter). Our analysis relies on the claim that differences in the ways in which actors are embedded into a broader social network may affect those actors' knowledge of the likely behaviors of others and therefore their interests especially when the outcomes of action are highly interdependent and therefore uncertain – as they often are when organizational boundaries are blurred.

## DATA, METHOD, ARGUMENT

We have been studying Fiat Auto and its suppliers since 1998 and have to date conducted 42 semi-structured interviews with 34 different persons employed by Fiat Auto, and 73 interviews at 41 different first and second tier suppliers. The interviews were conducted in three waves: 21 were conducted between 1998 and 1999; 20 were conducted between 2001 and 2003; and 74 were conducted between 2006 and 2010.[5] Interviewees were selected primarily according to their links to the product development process or to the management of relationships that cut across organizational boundaries. They were identified and contacted in a variety of ways, ranging from cold calls to snowballing and were generally conducted in Italian (with translation here by the authors). When respondents were amenable, which they were in the vast majority of cases, interviews were taped and transcribed. A full list of interviews including date, length of interview, and organizational role of the interviewee (with identities masked) is available in an appendix [which we expect would be available only online]. At Fiat, those interviews were conducted both with senior managers (e.g. the Chief Technology Office; VP of purchasing) and with more operational personnel (e.g. managers in charge of vehicle lines). At suppliers, we have sought out those responsible for the commercial relationship with customers and those in charge of component or system development.

In addition to more formal interviews, we have had many conversations with "privileged observers," including industry experts, consultants, and representative of the Italian unions and employers' associations, and have progressively collected more than 2000 pages of documents from Fiat and suppliers, including presentations of broad company strategies, descriptions of engineering solutions, documents describing norms and procedures in product development and supplier relations, contracts with external sources of innovation, outlines of supplier classifications, and the like. These conversations and documents have been used to formulate questions in interviews (it was not uncommon for interviews to include explicit discussion of internal company presentations or other materials), to verify claims, and more broadly to reconstruct the outcomes of framing contests as they have manifested in formal organizational strategy and structure (e.g. changes in supplier classifications or purchasing strategy, additions or subtractions of divisions, changes in who reports to whom, and so on).

In analyzing and presenting the data, we triangulate interviewees' responses with each other, with company documents and with subsequent developments. Furthermore, because we have been studying the production network for many years, we can compare interviewees' retrospective descriptions of events to documents produced, or to interviews conducted, around the time those events occurred. In a few cases, we interviewed the same people at different times, and in many cases we interviewed people in structurally similar positions in each of our three rounds of interviews (the details and structural position of interviewees can be found in the online appendix). Given the sometimes sensitive nature of material discussed in these interviews, we must be careful to protect the identities of informants. Often in organizational research, this is

[5] The authors were first studying Fiat independently but have been working jointly since 2006. All interview materials have been fully shared. See the appendix for details.

done by giving pseudonyms to companies. We do this for suppliers, but because there are so few automakers in the world, to do the same with Fiat would be futile. Fortunately, we have enough interviews and enough points of view that we can mask the identities of individual respondents where necessary by describing persons quoted only in very general terms (i.e. "a high-level manager in X department"; "an engineer working on Y project"; etc.).[6]

It is impossible to describe every major turning point in the evolution of Fiat's production network. Our narrative strategy is thus guided by two main criteria. First and most obviously, we focus on moments in the broader evolution of the network in which there is interdependence between actors and uncertainty and as to the outcomes of action, and which thus meet the scope conditions for the "framing contests" model on which we aim to build (Kaplan 2008). Second, and as importantly, we highlight events potentially explained by the main alternative theoretical perspectives so that our preferred political-network approach might be directly compared to – and shown superior to – those alternative perspectives. More specifically, we have organized the case narrative so that we can respond in the concluding section to the two most prominent alternative explanations for the phenomena we describe. Those are: (1) an approach that focuses on field-level forces and that thus expects the trajectory of the network around the Italian automaker generally to be explained by the company's position in its organizational field (Garcia-Pont and Nohria 2002; Delmas and Toffel 2008); and (2) a more agency-centered managerial literature that holds that "the intensity of global competition" has put "a premium on executive leadership and the management of system-wide organization change" (Nadler and Tushman 1990: 77; Tushman and O'Reilly 2005), and that therefore expects substantial changes in corporate strategy to be driven by decisions taken largely internal to the executive suite.

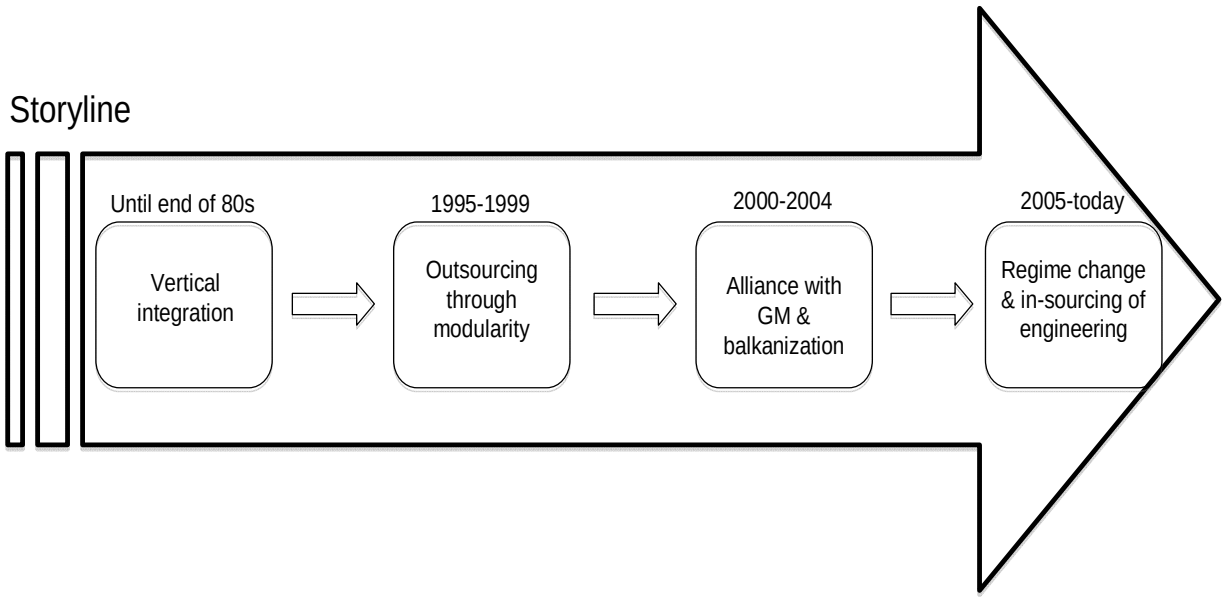
The case narrative is organized into four main sections. An initial "stage-setting" section recognizes – with those who focus on field-level forces – that Fiat in the 1990s seemed broadly to go with the herd, radically outsourcing and embracing a "modularity" strategy that had broad currency in the managerial literature at the time. We also make clear in that section that the scope conditions for our approach hold, which we do by showing that the production network that emerged in those years was in fact characterized by "blurred-but-existent" organizational boundaries. The stage set, we then recount the evolution of the production network that revolves about Fiat Auto across three extended moments. In the first, which runs from the late 1990s to 1990, we show that the strategic consensus that had enabled radical outsourcing to occur was subsequently splintered by an *intra*-organizational framing contest that went *inter*-, as factional struggles that might once have played out internal to Fiat turn in the wake of that outsourcing on processes of mobilization that run also across organizational boundaries. Our second moment, which begins in 2000, follows from the outcome of the framing contest narrated in our first moment. It is marked by Fiat's alliance with GM and some cognate restructuring. We again recognize that these events are by themselves broadly consistent with field-level explanation of

[6] When interviewees speak with hindsight, they often assign blame and many have said things that are quite revealing about coalitional politics across the production network, but that they are willing to have repeated only so long as they cannot be individually linked to those statements. While many interviewees did speak on the record, the best way we know to protect those who spoke only "on background" is to make it impossible to connect certain statements with *particular* interviewees.

the company's trajectory predictions – since other automakers (i.e. Daimler-Chrysler, Renault-Nissan) had similarly sought alliances in those years in response to global pressures. However, we also show in that second moment that the production network balkanize in those years into a series of weakly overlapping *cross-firm coalitions*, the existence of which eventually undermine the strategy upon which the alliance had been premised, and which create the conditions for a third moment that fits poorly with theories that focus on field-level forces.

In that third moment, we discuss a *regime change* that occurred in response to a crisis that nearly bankrupted Fiat in the 2004. The company, in the wake of that crisis, not only undertook a creative insourcing strategy and made considerable efforts to reform relations with key suppliers, but did so in ways unexpected enough and radical enough that they are often seen grist for those who would highlight the importance of executive leadership in "the management of system-wide organization change" (Nadler and Tushman 1990: 77). Indeed, credit for Fiat's stunning turnaround is often ascribed in the business press to the acumen of Sergio Marchionne, a dynamic CEO who came to the position in 2004. In our own account of the automaker's turnaround, we do not dispute the quality and importance of Mr. Marchionne's leadership, but we do show that core elements of the company's new strategy, as well as the receptiveness of key suppliers to that strategy, had in fact already taken form prior to his arrival. We thus shift the focus from leadership to followership by showing how the turnaround began in the balkanized periphery of a production network that had – in the subordinate cross-firm coalitions identified in our second moment – nurtured an alternative frame and had sustained some essential ties.

**FIGURE 1**



## SETTING THE STAGE: RADICAL OUTSOURCING AND THE TRANSITION FROM HIERARCH TO HELMSMAN

Until the middle of the 1980s Fiat Auto, was the sort of company March surely had in mind when he wrote of the *business* firm as a political coalition. The iconic Italian automaker was a massive, imperious company controlled by Italy's iconic Agnelli family, and was long in such rule of its home market that it had little need to negotiate with external players. As late as 1987, the Turinese company controlled 52% of the Italian market; made 86% and sold 48% of its production in that market; designed some 70% of value internally; made 48% either directly or through subsidiaries; and dominated a vast, very dependent, and largely Italian supply base.[7] By 1997, when we pick up the story, the picture was strikingly different. Seventy percent of the value of both production and design had been devolved to suppliers (design outsourcing soon even reached 85% for some models). The company, meantime, had gotten more global even as it lost its stranglehold on the Italian market: 42% of the company's vehicles were produced, and 63% sold, outside Italy. Domestic market share was down to 43%. And, most importantly for our purposes, there was by the mid 1990s widespread recognition inside and outside the company that Fiat had been transformed not just quantitatively but qualitatively. The times, we were told, had changed, and the automaker had changed with them.

Retrospective remarks in interviews underscore that Fiat's strategy was heavily influenced on the one side by the pressures of increased foreign competition and rapid changes in technology, and on the other by a field-level discursive shift that circumscribed the frames plausibly available to actors trying to meet those challenges (not just at Fiat but across the industry). Fiat's director of Global Purchasing, for example, used the passive voice when he told us in 1998 that "the pressure had been on OEMs [earlier in the 1990s] to become global manufacturers, to improve the quality of their products and, above all, to reduce production costs." These "trends," he told us, had "called for a new supply strategy" and had led Fiat to consolidate just a few areas of component production in two large companies that they controlled, and to sell off the rest. He was echoed by a high-level manager who told us that Fiat had come into the 1990s designing all vehicles and most components internally which – he emphasized – "was no longer viable given the proliferation of new product development projects and the [competitive] need to increase the [new product development] process performance."

As noted at the close of the previous section, the fruits of this restructuring set the starting conditions for our theoretical narrative. Fiat, as those focused on field-level forces would predict, responded in ways isomorphic to other automakers at a time when the evident success of Japanese manufacturing techniques had been codified in Womack, Jones and Roos' (1991) *The Machine that Changed the World* and in subsequent studies. As a result, the company came to the late 1990s in the deep embrace of a strategy – or rather a family of strategies – that led the Italian automaker to follow the industry by relinquishing ownership and control of a vast number

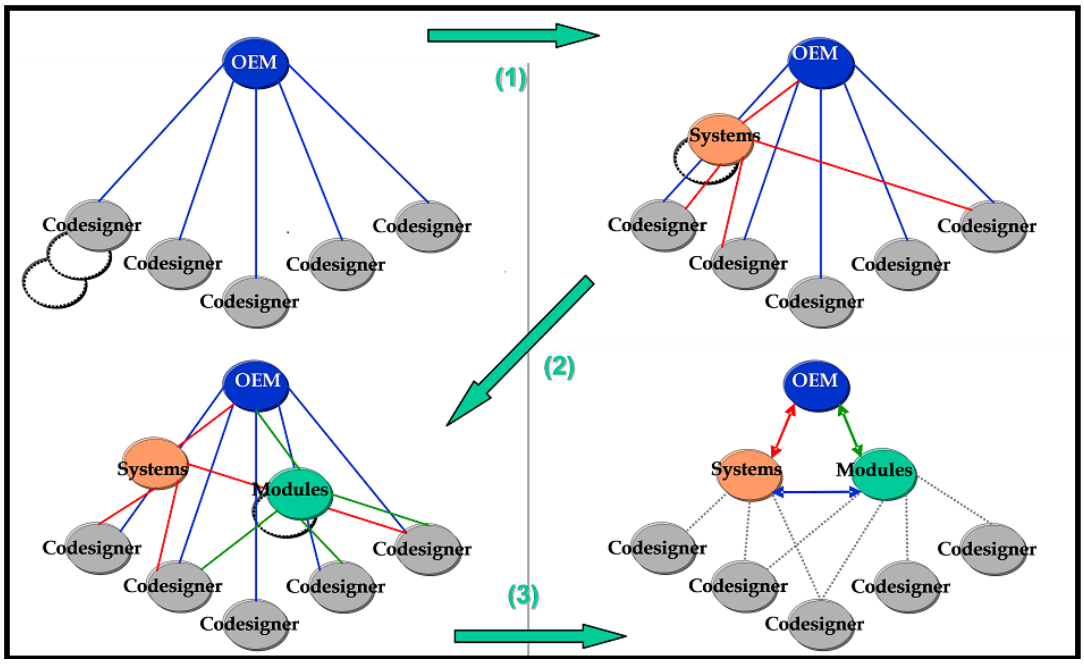
[7] Percentages in this paragraph have been obtained from the automaker. For reading on the characteristics of Fiat and its relationship to the territory in the years preceding our study see especially Enrietti (1987; 1995) and Locke (1995).

of processes, and thus by positioning itself less as a hierarch than as the "helmsman" (Aoki 1971: 406) of a vertical production network. The Italian automaker also made a very heavy strategic bet – a heavier bet than did its competitors – on the possibilities thought to inhere in a *modular* product architecture. This family of strategies was premised on the idea that an automaker and its suppliers could – and should – establish design rules that would minimize interdependencies between systems and allow the automaker to concentrate its resources on "system integration." The expectation – across the industry – was that modularity would simultaneously enable: (1) "rapid innovation at the level of modules, each proceeding independently and at its own pace"; and (2) "reduced costs, from standardization of interfaces that minimize coordination costs during product development" (MacDuffie 2008: 9; see also Baldwin and Clark 2000; Ro, Liker and Fixson 2007; Zirpoli and Becker 2011).

The company's vision for the new decade is outlined in Figure 1 (a slide from a Fiat presentation). The putative goal, as a Fiat manager explained, was to "reduce [Fiat's] assets and overall development costs and, at the same time, [allow Fiat] to leverage external sources of innovation." The automaker sought to do this devolving component design to component specialists, and by asking system and module suppliers (e.g.. makers of brake systems, air conditioning systems) both to manage those suppliers and to coordinate their own actions both with each other and with Fiat. Speaking retrospectively in 2006,a Fiat Manager explained the thinking:

> The idea of systems integrator that we applied was coupled with the idea of modularity …. We thought we could be substantially detached from certain component and systems technologies and focus primarily on "architectural" know-how. For this reason we delegated to suppliers the complete development of certain technologies, those that we did not consider as core.

**FIGURE 2**



## FIRST MOMENT: THE INTRA- GOES INTER-

Fiat's turn towards a modular outsourcing strategy was initially framed in terms that clearly sought to align the interests of actors across an array of functional areas. Financiers stood to gain from a strategy that reduce capital needs by pushing risks onto suppliers, while the marketing division was expected enjoy the ease with which they could target niches by mixing-and-matching combinations of modules (that is, they could take advantage of what MacDuffie 2008: 10 refers to as the "option value" of modularity). Engineers tasked with designing cars, who were smarting some due to the reduced headcounts that were part and parcel of the company's efforts to reduce development costs, would also get some relief; they would be able to direct their energies away from direct component design and towards higher order "architectural" and system-integrative tasks. The purchasing division, for its part, was given new powers to manage the tradeoffs inherent in a historic supply base that was flexible and cost effective, but that been reliant on Fiat for so long that it lacked independent research and design competencies (see also Enrietti 1987; Enrietti 1995). Fiat, it was decided, would remake the supply base itself by encouraging foreign suppliers to enter the Italian market, but would also help a core group of historic suppliers to develop more sophisticated design and development capabilities by providing them with subsidized training and by helping them to expand operations into more markets so that they might learn from competitors (Enrietti 1995; Whitford and Enrietti 2005). Then, to take advantage of this dual supply base and its willingness in many cases to economize on costs, the automaker proposed to temper (or "hybridize," in the words of an interviewee) its use of the purchasing principles borrowed from Japanese producers by maintaining multiple potential suppliers for each component and pitting them against each other in "controlled" (rather than open) competition (Zirpoli and Caputo 2002).

These efforts to align support internal to Fiat for the company's strategic shift were initially quite effective, at least on their own terms. Fiat reduced its asset base, enticed numerous foreign components and systems suppliers entering the Italian market, benefitted from organizational and technological growth among historic Italian suppliers (as those suppliers learned from other automakers), and sold enough cars to generate the profits the company's financiers required. And yet, even in the wake of those early successes, widespread support in the company for the modular outsourcing strategy and for the "hybrid" approach to purchasing soon waned. It was undone, we were told, by contestation rooted in differences in actors' frames that had not mattered when the problem had been simply to decentralize significant portions of production and design, but that began to matter when came time to decide just how the subsequent division of labor would best be managed. The dispute was rooted in a difference of diagnostic frame that – though not apparently large – had subsequent implications for those actors' prognostic frames, and thus also for the ways in which they pursued objectives initially internally but, given the importance of suppliers, also across organizational boundaries.

One coalition mobilized around a frame that gave particular diagnostic weight to the risks entailed by "modularity traps" (Chesbrough and Kusunoki 2001) – the risk that the standardization of interfaces and componentry entailed by a modularity strategy will leave a

company ill-positioned to incorporate novel but more "integral" technologies into its products.[8] The prognostic implications fell particularly to a relatively small group in the technical division – around 120 persons – called the "Components Development Platform" (CDP). The CDP was charged with mitigating those traps by developing a set of underlying engineering *concepts* (a class of solutions to engineering problems) flexible enough to satisfy multiple scenarios. The division did not have the personnel to develop most of those concepts in-house and could not generally find the competencies they needed elsewhere in the technical division given the automaker's broader downsizing. They thus generally sought to coordinate panel of suppliers to develop systems they hoped might satisfy multiple scenarios. The prognostication – which followed from a diagnostic frame that saw modularity traps as the company's biggest risk – was that these concepts would allow product development teams to more quickly develop components and that an underlying conceptual regularity would help those teams to standardize across models. It also held that suppliers would bebe swayed to collaborate in the development of those components by the hopes of gaining a first mover advantage in future bidding for the production of those components.

The other main coalition was led by the purchasing division, and was mobilized around a frame that did not deny the risk of modularity traps, but that gave far greater diagnostic weight to the risk of "hold-up" by suppliers.[9] Fiat, as we were told by the company's director of global sourcing, had been forced to stimulate the "entry into the Italian market of foreign suppliers to compensate the weakness of the Italians despite the greater flexibility of this latter group." This brought advantages: the "foreign suppliers," he said, "had a vast portfolio of customers [relative to Italian suppliers], could take advantage of many sources of knowledge" and, generally had "developed more advanced R&D structures due to the demanding technology level required by their local [usually German] customers." However, reductions in Fiat's technical divisions left the company poorly positioned to assess tradeoffs between different combinations of cost and performance. Trust can mitigate holdup risk in such cases (as has been shown in the literature on Japanese supply relations), but Fiat personnel often did not have longstanding relationships deep into the global suppliers' headquarters and engineering centers. And this faction, as its prognosis, thus began to require as a condition of contract that Fiat's first-tier and system suppliers work with second-tier suppliers selected by the automaker.

This practice was not *per se* unique to Fiat. But its use by Fiat's purchasing department was marked by the way in which Fiat personnel and personnel at many of those suppliers had been embedded in the relatively closed relational structure of the Piedmont region and especially of greater Turin. That use was dubbed colorfully if derisively by a supplier we interviewed as a sort of industrial "eugenics." Fiat, he said, eschewed a process of "natural selection" where the automaker would simply "leave everyone to do their job until [they] [lost] faith in him and then go find someone else." Instead, to assuage a fear of collusion by first tier global suppliers, the

[8] See Chesbrough and Kusonoki (2001) for a more general discussion of the "traps" that the standardization of interfaces can entail, and Christensen (1997) for a discussion of modularity and the risk of "disruptive innovation."

[9] See Nishiguchi (1994), Helper and Sako(1998) and MacDuffie and Helper (2006) for prominent general discussions of trust and the risk and mitigation of "hold-up" by suppliers in the automotive industry.

purchasing department used its power to direct business – and the internal rhetorical cover of an officially "hybrid" purchasing strategy – to ensure the continued and "artificial" presence in the supply base of allied suppliers that might otherwise have found it difficult to remain in the market (hence "eugenics"). Those suppliers, who were trusted, dependent and beholden to their patron, could then be used as a window into the otherwise opaque cost structures and strategies of system and module suppliers to which the company was otherwise linked only by relatively thin ties.

A "eugenic" use of patterns of relational embedding, as well as a more general emphasis on cost control, did restrain the cost of components and systems (at least in the short-to-medium term). And, since that result matched the prognosis s of those who framed modularity primarily as a means to switch suppliers and technologies more easily, it both enhanced the power of a purchasing department dominated by this faction and made them a natural ally of a marketing department eager to introduce new functionalities (since they expected modularity to ease system integration and competitive bidding to ensure good pricing). At the same time, it disfavored the CDP and others whose diagnostic frame emphasized instead the dangers of modularity traps. This latter faction, already suffering from reduced headcounts and an ensuing loss of status and power, had also been trying to mobilize allies at suppliers in support of their objectives. However, their efforts to develop ties to the technical centers of global suppliers, many of which were located elsewhere in Europe, were often thwarted by a marketing department – allied with purchasing – that drove the company toward technological solutions inconsistent with the engineering concepts that the CDP had been developing. The situation, as an engineer in that organizational subunit explained, was untenable:

> We were never sure that the platforms [would] then use our engineering solutions. Sometimes we go on for years and the engineering solutions we find never find a space in vehicle developments. It is not a matter of what engineering solution better suits the new product, it is a matter of who has the right to decide on that. … The power equilibrium was in favor of the purchasing department whose task was to lower the price of supply while improving the quality standards of the component purchased.

The relative subordination of the CDP and its allies internal to Fiat was not lost on suppliers. Many interviewees told us explicitly in those years (and retrospectively about those years) that they were wary when Fiat's engineering and technical divisions asked them for help designing the systems and modules that, at least in principle, were at the core of Fiat's longer term product development strategy. An interviewee at one of the world's leading component suppliers, for example, referenced Fiat's "eugenic" approach when he said it was frustrating to deal with "these fellows in purchasing who want to outsource, but they don't want to do it component by component, but rather little piece by little piece. They say: 'I'll buy it for you, you put it in, and you are responsible'." Fiat's approach, he explained, gave companies like his the worst of all worlds: "if I have to take responsibility for the whole group [of components], clearly I have to know the product, I have to invest, develop know-how, and this raises my costs" which only makes sense when there are efficiencies to be got elsewhere – including especially through the direct management of sub-supply relations. Yet because that direct management of sub-suppliers was exactly what a eugenic approach denied them, his company had "never entirely believed in" Fiat's rhetoric of modularity and full system supply." Though sympathetic to the frame promulgated by the CDP, his company – and many others we interviewed – were cautious in

their dealings with not just with that unit but with Fiat's technical direction more generally. They maintained continuous relationships with Fiat engineers, but concentrated on the supply of components and invested only minimal design resources in the development of the more architectural and systemic projects that Fiat would – as we make clear in our second moment – be needing.

## SECOND MOMENT: BALKANIZATION

Our second moment begins as the cracks that would become a crisis were just beginning to appear. Fiat's costs had come down through the 1990s, but so had sales of the three main brands (Fiat, Alfa Romeo, Lancia). Between 1997 and 2000 the company's share of the Italian market fell from 43 to 35% while market share in Western Europe more generally declined from 12.7 to 9.5%. The company's debt, meantime, was growing ominously, and the financial community was demanding action from company leadership. With the ascendant faction mobilized around a "modularity" frame, that leadership's naturally responded with a strategy that highlighted the possibilities of controlling costs by standardizing interfaces to increase scale. The Fiat Group's 1999 annual report (released June 2000), for example, is revealing. It highlights "efforts made in the area of product innovation and the aggressive implementation of cost containment measures" – which, given the degree and mode of externalization at the time, amounted to the public claim that the company had successfully leveraged external sources of innovation without breaking the bank (Fiat Group 2000: 5). The report also makes much of an event that had just been consummated that spoke volumes about the coming prognostic frame: Fiat and GM, in March of 2000, had tied themselves together in a strategic alliance. That alliance, though backed by an exchange of stock and by a "put" option for Fiat, was at its heart an industrial agreement that was to generate "synergies" that would "amount to two billion Euros by 2005, half of which [would] benefit Fiat Auto directly" (Fiat Group 2000: 9). These synergies were to come from 50/50 joint ventures in purchasing and in powertrain design and manufacturing (which covered between them some 80% of total vehicle manufacturing costs) and from the development of commonalities in product architectures that would allow for economies on componentry and thus for costs to be "spread over more than 5.5 million cars, more than twice Fiat's current volume" (Fiat Group 2000: 9).

The alliance hence underscored in no uncertain terms the degree to which Fiat as network helmsman diagnosed (framed) the crisis as of costs, and it hence ought not to surprise that there were additional changes to the company's organizational structure – both internal and external – that occurred alongside the alliance, and that were consistent with a modularity frame. These changes included the movement of the now-shared purchasing division to Germany – though most staff remained where they had been – and the hiring of a specialized automotive industry consulting company to analyze each company's component lists and, acting in the name of the JV (with business cards to match), to rebid components so that the they might use their greater market power to drive down prices. The consultant was brought in to eliminate the possibility that lower level buyers might play personal favorites, thus intentionally reconfiguring the relational embedding of the company by severing precisely those ties that had been at the base of the division's "eugenic" approach to subsupply management. They were deemed superfluous by

a purchasing leadership that, guided by their understanding of modularity, held that enhanced volumes would finally command the attention (and prices) they wanted from global supplier, that the stronger of incumbent Fiat suppliers would be amenable to the deal under the expectation that they could garner a foothold with GM and thus ultimately increase their own sales, and that was willing to sacrifice the weaker of the incumbents.

The reorganization of the technical divisions in those years similarly highlighted the salience of scale and component standardization in the company's strategic vision. The design and manufacturing of powertrains (engine and transmission) was placed in a Fiat-GM Joint Venture (headquartered in Turin).[10] The CDP, seen as ineffective since so many of its engineering solutions had gone unused, was disbanded and its personnel dispersed across the company (in what amounted to a full renunciation of a prognostic frame premised on the development of transversal conceptual engineering solutions in collaboration with supplier). The division's functions – to the extent they were replaced – were folded into an empowered and centralized technical function that, as a 2002 internal presentation made clear, was the centerpiece of a structure "born to leverage economies of scale in engineering and design." That division was hence to be a "technology content provider" to product development platforms that, for their part, were expected to buy relatively standardized technologies off-the-shelf ("black boxes," in the parlance of the industry) to be mixed and matched across platforms and models. The platforms were then reconstituted as a series of project teams. Those teams, however, were staffed primarily by engineers who drew their paychecks from supplier firms. Their stable staff consisted of just a manager responsible for the entire platform, and, under them, vehicle line managers responsible for each model derived from the platform, and assistants to those managers. The vehicle line managers were then given responsibilities that paralleled those of Toyota's famed and highly successful reliance on "heavyweight" product managers (Wheelwright and Clark 1992). That is, they were given very strong formal decision rights regarding performance tradeoffs as well as support from "competence centers" in the centralized technical division, but were expected to work within the constraints of a broader product architecture – established in an earlier ("pre-development") phase – and with suppliers that had been blessed by the purchasing division..

It is unknowable if this strategy could have been effective under some conditions. What is knowable is that was not effective at Fiat, and that the strategy failed on its own terms. Fiat's heavyweight product managers told us that the right to make decisions matters little without the information and know-how needed to make those decisions well. Interviews with personnel in and around the platform teams show not just that projects in those years came in badly over-budget and off-schedule, but that Fiat failed to standardize componentry well enough to get the volumes so central to the "synergies" promised in the Fiat-GM alliance. The issue, it seems, is that the company's product architecture was not modular enough to mitigate interactions between systems, while the strategy presumed that it was. That presumption– a manager explained – had led Fiat to bleed technical personnel and thus to lose "the ability manage

[10] GM's interest in the joint venture was driven largely by the American automaker's need for technology in the one area in which Fiat had maintained – and continues to maintain – technological leadership: small fuel efficient engines, including especially diesel engines (Enrietti and Barichello 2006).

performance tradeoffs," "to set performance targets to suppliers, and to monitor [suppliers] work." The dominant faction, moreover, also did not have the relational embedding (and hence trust) to effectively and efficiently develop system level solutions, or even to recognize that many suppliers had not in the first moment been sufficiently mobilized to follow Fiat and to invest to the necessary degree in the modular solutions the company desired.

The outcome – from a technological point of view – was summed up by the company's chief technology officer in 2006: "each platform had [in those years] tended to develop its 'own' cars with very few concerns about component and platform sharing."[11] The reasons for that lack of concern were detailed by one of Fiat's ostensibly "heavyweight" product managers who said that the job had just been too hard. It had demanded a "'magician'. Everything was under the control of the manager responsible for the vehicle. It was just impossible to cope with all the aspects of product development, from technical to economic issues." That manager, like many others similarly positioned, told us that he had in response all but necessarily turned outward. He had been dissatisfied by the modularity frame but had been in no position to contest it directly. He, others like him, and the supplier engineers that staffed their teams felt that their problems were rooted in a combination of Fiat's reduced know-how and in failings in a product architecture that was not as modular as the product development processes would have required. The prognosis that followed from this diagnosis created the conditions for a form of "firefighting" – pragmatic alliances of shared interest in which platform teams and suppliers turned towards each other simply to get their projects out the door, and turned away from a centralized engineering division that, in the words of another Fiat manager, seemed like "just another engineering supplier [that] happened by chance to be part of the same firm."

Key supplier engineers, meantime, were growing ever warier of Fiat's center, not least because the purchasing division had in the wake of the alliance with GM become more powerful and more ruthless. A sales engineer at one of the few important global suppliers with a longstanding presence in Turin said for example that the practices of the purchasing JV had "created not a few problems in Fiat's supply base, not just because they lost business to GM suppliers, but because [GM's] attitude towards suppliers was one of absolute arrogance, absolute dishumanity, lack of respect on all levels." He, like many other interviewees, said that his day-to-day relations with product development platform teams were much better and that his company's cooperation in the resolution of pressing engineering problems had given them some control of future business on those models. And yet, though his company and other such suppliers did retain an interest in helping Fiat to standardize components – since profits for suppliers in the auto industry are generally got more on the sale of parts than on development – that interest did not generally translate into an ability to help the automaker to standardize componentry, because those suppliers' strong ties to the automaker were not with the decisionmaking center, but rather with a balkanized collection of platform teams that were themselves weakly connected to that center.

[11] An example: by 2005 the company had 8 different component families in its HVAC module across 19 different product architectures. The HVAC module consists of the heating, ventilation and air conditioning systems To give a sense of scale, in 2010 there were just 8 component families in the HVAC module [Sources: 2006 Fiat presentation; 2010 Fiat presentation].

The effects – over time – on Fiat's profitability were profound. To quote again Fiat's current Chief Technology Officer:

> When I arrived [in 2005, after four years of enormous losses], I reverse engineered many Fiat cars belonging to the same and different segments. Nobody would have said, just by looking at the components and how they were engineered, that the two cars were produced by the same firm. Due to confidentiality reasons, I cannot tell you the exact figures, but we can make lot of money just by bringing components commonality to a decent level [that is, by somehow doing what the alliance with GM was supposed to do but had not].

## THIRD MOMENT: REGIME CHANGE

By 2002, with sales still falling and the company's debt still growing, Fiat's stock was in a free fall. It was also clear that the alliance with GM would not deliver nearly the returns promised, and that GM had no intention of acquiring the distressed Italian automaker. The company's financiers were pressuring management to sell of assets amid fears Fiat would not survive as a going concern. The business press was likewise skeptical, with *The Economist*, for example, writing in 2003 that "even Italians" were spurning Fiat's cars and that "the firm's third rescue plan in two years [was] unlikely to be enough" to "avoid going bust." And yet, as the Obama administration's decision to tap the Italian company as Chrysler's last best hope in 2009 make clear, the automaker did not in fact go bust. Instead, Fiat managed somehow to quickly release a series of quite successful new models and, as a result, recovered so stunningly, that *The Economist* was by 2008 writing that the Italian automaker's "remarkable industrial and financial turnaround … is likely to be pored over in business schools for years."[12]

In this space, we can say only a little about Fiat's crisis and turnaround – which is, of course, complex and multiply caused. In keeping with the theory-building goal of the article, we hence focus on one (important) aspect of that turnaround: we show how the cash- and competencies-strapped Fiat could so quickly release an array of well-designed cars without breaking the bank. To do that, we show how politics, frames and relations internal and external to the automaker enabled the formation of a new ruling coalition built less *on* than *with* the pieces of a production network that just a few years previous had been on the verge of collapse. We reserve discussion of changes in the executive suite – which also occurred – for the final section. In this section, we focus instead on our own story, and thus on how actors in the engineering division mobilized key systems suppliers and co-opted a purchasing division left rudderless in the wake of the full and final collapse of Fiat's joint-ventures with GM in 2005. We argue: (1) that they did with a frame that blamed the company's modular outsourcing strategy for the crisis; (2) that they used that diagnosis to promulgate an alternative prognostic frame premised on a combination of some

[12] See *The Economist* (June 26, 2003), "Can it be Saved"; and *The Economist* (April 24, 2008), "Rebirth of a Carmaker."

insourcing of engineering and some rebuilding of collaborative relations with suppliers; and (3) that they were only able to mobilize suppliers to their position precisely because relations had been kept alive in our previous moment due to the relative balkanization of the production network and to the ensuing existence of a subordinate cross-firm coalition.

The alternative frame that became dominant first took form across relationships in the relative periphery of the production network. We were told, for example, about a series of events that took place between Fiat and a (pseudonymous) supplier, TIER1, that had in the late 1990s agreed to take responsibility for the full design of the "occupant safety system" (OSS). TIER1 engineers told us that the system was difficult to modularize because it required knowledge of multiple components that they did not make, as well as relations to other suppliers and that there were thus numerous unforeseen interactions between systems. This, they said, had first forced them to regularly engage their counterparts at Fiat to find workarounds but had eventually led them to take advantage of a meeting held with Fiat engineers after a "successful frontal crash test of a key vehicle" to reveal that they did not entirely understand why the system had worked (nor, for that matter, did Fiat's engineers since they had not been responsible for the system). The decision to do this after a *successful* crash test is notable, both because TIER1 engineers could have used the successful result to hide their ignorance and because it was a result that might easily have been interpreted under a modularity frame to mean that the product architecture was sufficiently modular and that Fiat therefore did not really need this knowledge. TIER1 engineers, in admitting their ignorance, were taking the risk that they might not be offered subsequent work. However, they knew from their thick ties into Fiat (relational embedding) that there was growing dissatisfaction among Fiat engineers with Fiat's modularity frame. And their gamble proved successful: Fiat engineers chose to – and were able to – use that test to mobilize support internal to Fiat for a strategic shift in which Fiat took back overall responsibility for the system's design (leaving TIER1 to develop parts and components, as was the desire of local TIER1 engineers) amid fears that they would otherwise be leaving its car safety ratings to "serendipity."

Such tales of the need for mobilization across boundaries were common in interviews. They ranged from complaints about costly delays as engineers searched for workarounds due to coordination failures, to remarks about the difficulties of amortizing the development costs of HVAC systems given the lack of standardization across models, and beyond. In and of themselves, those tales were rarely very significant. But they make clear that the events they reference did cumulate, that they did so at a time of increasing pressures from Fiat's bondholders. Something had to be done, and they hence served as grist for those mobilizing around an *engineering* – as opposed to *modularity* – diagnostic frame. This alternative frame, as we were told by a high-level manager in the technical division in 2007, was rooted in a sense in that division that it was not really possible – as the modularity frame had it – to "integrate components performances you know very little about.... If you have never designed a component or a system it will be very difficult to understand the subtle interactions with the rest of the vehicle." The most obvious diagnosis, he also said, had seemed clear: "We [Fiat] should have reversed our strategy by integrating back competences that we had lost. We had two problems, however, *no money and no time*." And hence, as was made clear across a series of interviews conducted in the wake of the recovery, he and other proponents of an alternative engineering frame were instead forced to find ways to quickly and creatively mobilize an array of actors and others resources from diverse sources.

The harsh tactics employed by the Fiat-GM purchasing JV had cost the company considerable good will at suppliers and even left some on the brink of bankruptcy, but there were others in the company who had maintained strong collaborative relationships with a series of technically advanced suppliers (e.g TIER1). Especially important among these others were a group associated with (the here pseudonymous) Project X, which had begun in 2001. That project, as we were told by the mid-level executive in charge – a Vehicle Line Executive – was "the milestone for a new Fiat deal." The project team, she said, had designed internally many parts that had not been designed at Fiat in some years, and had done so explicitly to learn-by-doing about interactions between systems. The components they designed notably included the dashboard, a component that fundamentally affects consumers perceptions of vehicle quality, that interacts with other very important systems (i.e. safety, HVAC), and that relies on a technology – injection molding – in which Fiat had "over the years lost so many specialists." Speaking retrospectively in 2006, the leader of the project team said that undertaking the design of such key components with so little experience, and on such an important project, had been "honestly, a big risk." She had worried that Fiat had perhaps been "a little bit crazy" and said that the team "knew that if [they] failed [they] would have gone home." But, she said, history had proved the team right. Project X concluded in 2005 and was a grand success and a top selling model.

Project X did more than just give birth to a car. It also gave form to the frame favored by an incipient faction centered in the technical division, strengthened the position of that faction in the company, emboldened them to go further in future projects and, eventually and as a result, led to gradual but radical redefinition of the division of labor between Fiat's engineering divisions, the platform teams, and suppliers. Fiat, like other automakers, had long focused its design resources on just a few core component groups or systems – those deemed especially strategic (which, in years just previous, were ever fewer). Yet as noted already, they had lost competencies and did not have the capital to expand that core to any significant degree. The prognostic frame developed around Project X, however, seeded a solution. A put option with GM that had been obtained in the 2000 alliance was, after some brinksmanship, renounced in 2005 in exchange for 1.55 billion Euros. This provided enough cash to buy time with Fiat's nervous financiers so the company could release some models, including those based on project X and its successors. It also freed the purchasing division from its poorly-performing joint-venture, so that it could be co-opted by the rising faction. This was done at the top with the installation of a manager who had initially made his career on the engineering side of the company, and in the ranks by scrapping the "very rigid" procedures that had under GM denied middle and lower level staff "creativity" in the performance of their tasks (we are here using descriptors offered us in 2008 by a mid-level interviewee in that department).

The central engineering function, meantime, was restructured in keeping with the lessons of Project X. This was done first by creating an organizational unit directed towards the integration of systems much earlier in the product development cycle; and it was done second by systematically reconstructing the company's product development processes with the goal of re-acquiring – on the cheap – some of the component-specific know-how that had gone lost. The engineering frame demanded that the automaker represent itself not just as an *integrator*, but rather as a *creator*, of technologies. But, because the capital-constrained company could not hire many new personnel, they could not simply expand out from their one remaining area of deep technical expertise (engine technologies) to related technologies in a classic insourcing strategy.

Instead, the technical division began to take part – generally in co-design with suppliers – in virtually all major aspects of the design of certain models in order to learn (by doing) and, more importantly, to map patterns of interaction between different systems and components. Then, aiming to leverage those heavy investments in design, the company would as needed task engineering suppliers (i.e. Magna Steyr, Pininfarina) with the development of a series of "derivative" models under the assumption that Fiat's conceptual template would be sufficient to guide those engineering suppliers in that very complex task. This was a risk, since those engineering suppliers had historically only developed niche models – rather than the mass models that Fiat required.

This frame and the ensuing strategy could not succeed – as its proponents openly acknowledged – without support from two additional quarters that underscore the continued salience – and contingency – of relational embedding and efforts to mobilize, not just between Fiat and suppliers, but also within Fiat. It required that the technical division's efforts to co-opt personnel in the purchasing division be effective; and it required that the frame resonate with key suppliers. In both cases, our interviews suggest that support from those quarters has mostly been forthcoming, and the preponderance of evidence suggests that the strategy has been effective, both in helping Fiat to acquire needed competencies and in the rapid development of far more models than the company would otherwise have been able to produce. A mid-level interviewee in the purchasing division gave evidence of his adherence to the new frame in 2008, for instance, when he remarked on the "absurdity that [they had] had suppliers that were supposed to do co-design but [Fiat] didn't know what to ask for and what to verify," and when he made much of the fact that Fiat was assigning multi-year contracts "even on new models." Component suppliers similarly told us they were on board, with one saying for example that "the facts" of Fiat's actions "were consistent" with the renewed "global partnership" rhetoric of Fiat Purchasing.

At the same time, however, these successes, combined with an overarching adherence to the new frame, do not mean that there is unanimity – and our interviews did uncover enough dissent to suggest that counter mobilization by some (as yet) indeterminate faction could occur going forward. In particular, we were made aware of some new risks inherent in the company's reliance on engineering suppliers to carry out the design of "derivative" models. Fiat has found it easier to transfer a map of interdependencies to engineering suppliers than to transfer its structural position in the web of social and commercial relations. This is potentially a problem, as those workarounds remain necessary when, for whatever reason, that map proves inadequate (as it sometimes does). The words of a supplier in an interview in 2006, for example, simultaneously bespoke the dependence of Fiat's engineering frame on supplier collaboration, and the potential for new framing contests across organizational boundaries going forward:

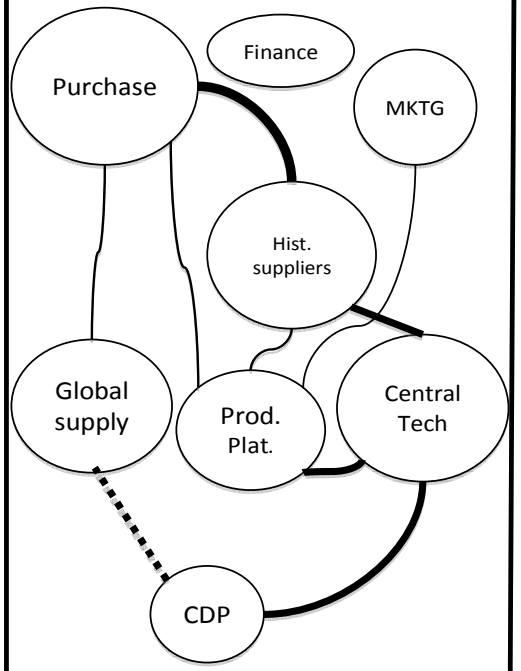
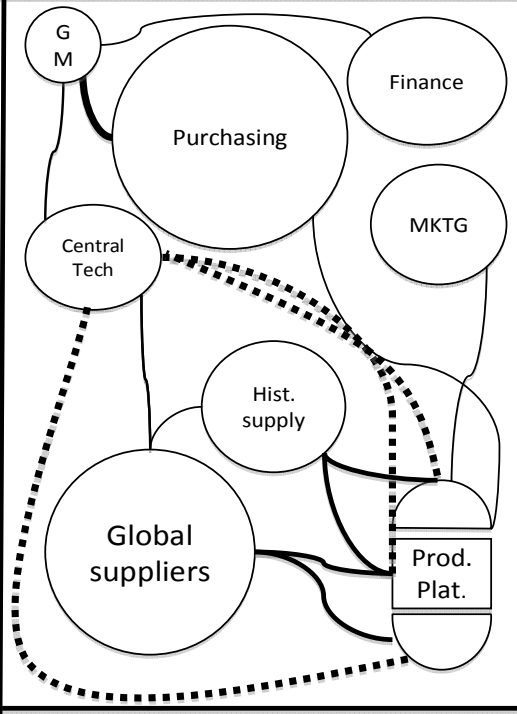
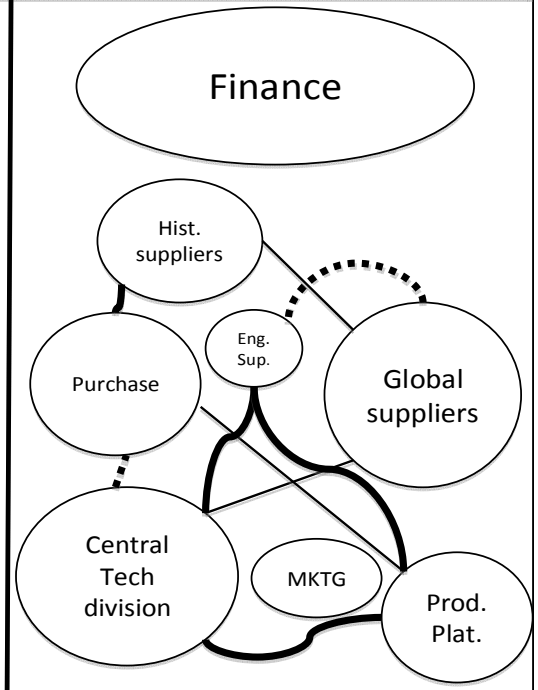
> We had a meeting. Fiat's director of purchasing was there, we were there, other Fiat guys, and the director of the project from Z [an engineering supplier]. We complained that we had not received [certain necessary studies] for [a key component]. Z replied that it hadn't been in their contract… This means that Z's engineers had gotten the contract, drew lines around just what they had to do – because we did have to decide who would do what – [and did just that and nothing else.]. This meant that five [very important] people wasted a bunch of time. I said, "look, Z doesn't want to do these studies? Perfect. Let's not make the car. I'm not doing the studies, because those studies are not something

a component supplier can do alone – so do what you will." This is emblematic of what happens when add a third player.

## DISCUSSION AND CONCLUSION

We have now taken the reader on a whirlwind tour of fifteen years in the vertical production network that revolves about Fiat Auto, and have done so in a narrative with enough moving parts and enough players that a thumbnail summary is in order. We offer that summary in Figure 2. The figure arrays our three moments from left to right. At the north and south pole, we summarize the main competing frames. In the bottom row, we summarize the outcomes. And in the central panels, we place the many corporate players in our story, excepting the most minor, and trace ties between them. The size of bubbles represents the approximate power of each player. Their placement on a north/south axis represents the degree to which actors in the group in question, in our estimation, tended to adhere to one frame or the other (centrality marks relatively neutrality, with the caveat that in the third moment there is not enough space below the halfway line for all players excepting finance). Lines between drawn between groups represent ties that could be used to mobilize support in coalitional struggle, and include ties mentioned but not discussed in detail in the text (due to space constraints) in order to give the fullest picture possible of the overarching story. Thinner lines are weak ties while thicker lines are strong ties. Since virtually all parties had at least some contact, the absence of a line represents very weak ties. The dashed lines represent the contingent ties that play the biggest role in our story – which we explain below.

**Figure 3**

| | 1995-1999 | 2000-2004 | 2004-2008 |
|---|---|---|---|
| **COMPETING FRAME** | Standardizing interfaces will mitigate hold-up and to allow the mixing-and-matching of components | Volumes/scale is a means to leverage gains from standardization | Never send good money after bad: sell remaining assets (e.g. Ferrari, Alfa Romeo, engine technologies) |
| Coalitional partners<br><br>Lines represent ties (thick vs. thin vs. contingent)<br><br>North vs. South placement represents degree of adherence to frame<br><br>Area of unit represents power in period |  |  |  |
| **COMPETING FRAME** | Standardizing underlying engineering *concepts* will mitigate modularity traps while reducing development costs across models | Pragmatic alliances and "magic" (workarounds) needed due to reduced Fiat know-how/architectural limits driving projects off-schedule/over-budget | Fiat is a technology company, and a technology company must understand its technologies |
| **Observed outcome** | A frame that emphasizes the standardization of interfaces wins out, costs are reduced, the CDPs efforts to form strong ties with Global suppliers thwarted | Alliance with GM inked, a new product development process put in place but platform teams, in alliance with suppliers, defect and the network balkanizes | With crisis looming, purchasing allies with technical divisions in a grand coalition, big bet placed on efforts to map interdependencies between systems |

The relatively complexity of the figure is required given the complexity of the real story: ties between parties, and thus the range of potential coalitions, were (and are) many. Still, our underlying theoretical story can be easily seen in those dashed lines representing contingent ties. The purchasing department, as the lead actor in our first moment, was able to use its strong ties to historic suppliers and support of like-minded departments to thwart efforts by the CDP and its allies to build strong alternative ties with global suppliers. This enhanced the power of that department and led to a strategy that reduce costs, and – when those cost reductions in fact arrived – allowed proponents of the modularity frame to proclaim their successes and thus to maintain their dominance into the second moment. However, the sustainability of those cost reductions was premised on a presumption that Fiat's dominant faction had indeed mobilized key global suppliers to invest in the development of that architecture. They had not, however, and this was not observed due to the isolation of Fiat's dominant faction from those who had the relevant know-how to assess the inadequacies of that architecture.

This created the conditions for a balkanization of the production network, as product platforms hamstrung by deficiencies in the product architecture allied with the supplier engineers on their teams instead of building stronger ties with a centralized technical division (the splits in, and multiple connections to, the product platforms bubble in the second moment are meant to represent that balkanization). In our third moment, as it had become apparent that Fiat was in crisis, a grand coalition formed against financiers intent on breaking up the company. Some resistance was perhaps a foregone conclusion given the circumstances; but the nature of that coalition and the frame around which it was organized were shaped by powers and relations acquired in previous moments. We note also that the existence of a grand coalition does not preclude the possibility of a future countermobilization around some alternative frame, and in the figure we have recognized that some important ties remain contingent and in formation (i.e. those between the central technical divisions, key global suppliers, and the purchasing division; and those between engineering suppliers and the global suppliers with which they must work hand-in-glove).

We have sought with this narrative to convince the reader that it is useful to analyze Fiat's reorganization, fall, and rise – that is, the evolution of Fiat's production network – by looking at coalitional politics as they have been negotiated not just within the Italian automaker but also between the automaker and its many and varied suppliers. As noted in our introductory sections, however, ours is not the only potential possible theoretical explanation for evolution of that network. Partisans of field-level explanations (Delmas and Toffel 2008; Garcia-Pont and Nohria 2002), for example, can point out that Fiat outsourced radically at more or less the same time as did others; that Fiat sought a partner (GM) with which to ally when other relatively small automakers were doing likewise (Daimler-Chrysler in 1998; Renault-Nissan in 1999); that Fiat's recovery came as gasoline prices shot up, which of course favored a company that had been led by the particularities of its home market to specialize in the production of small fuel-efficient cars; and that Fiat turned back towards insourcing around the same time that growing complexity and, arguably, the dream of new powertrain technologies (i.e. electric and hybrid) were pushing the industry as a whole away from modular product architectures (see e.g MacDuffie and Fujimoto 2010 on this trend). Similarly, partisans of perspective that focus on the role of organizational leaders (see e.g Nadler and Tushman 1990; Tushman and O'Reilly 2005) can root –the company's decline in mistakes made by the managers who took over in 1996 as the health of scion of the controlling Agnelli family, began to waver. Those managers, as a popular story in

the business press goes, never quite had free reign and thus uncreatively followed the herd in their flawed pursuit of modularity and scale.[13] The possibility of real change hence came only when the death of Giovanni Agnelli (2003) and of his brother Umberto (2004), and the subsequent absence of a dominating heir, created space for the arrival in 2004 of Sergio Marchionne: a dynamic Italian-Canadian "Turnaround Artista" (*Time Magazine* 2009) who brought new people, new ideas, and led the insourcing and investments in new product development that have brought Fiat roaring proudly back.

Our response to partisans of a field-level explanation does not deny that field-level phenomena were important, but we offer also series of counterfactuals to show that the particular evolution of Fiat's production network cannot be understood absent attention to the contingencies documented in our own account (see Booth 2003 on the use of counterfactual analysis in the study of organizations). We readily concede, for example, that pressures from financiers forced Fiat and competitors alike to outsource radically in the 1990s, but we note also that a range of strategies were still quite realistically in play at the Italian automaker in those years. Not only does retrospective evidence from our interviews show that the CDP had been amassing effective engineering solutions, but the relative success of an heir to that strategy in more recent years gives reason to think that a different outcome to the framing contest narrated in our first moment might have left Fiat with a far stronger product palette going into the downturn of 2002. Similarly, though the rising price of oil surely helped Fiat to turn around, the company could not have reaped nearly the market share it did had Project X (a small car) not gone as well as it did, and had that project not served as the template for subsequent models. Finally, we note that strategy put in place by the rising faction after the crisis was greatly aided by thick social relations between project teams and key suppliers that had been maintained only as an accidental byproduct of the company's balkanization between 2000 and 2002.

Against the leadership-focused perspective, we note that the "bad choices" made by Fiat's leadership in the 1990s are only obviously bad with the benefit of hindsight. It is apparent *now* that the company's embrace of a modular outsourcing strategy and a "hybrid" purchasing strategy failed. It is far less obvious that their failure was inevitable. Each was well grounded in academic and prescriptive managerial writing of the period (e.g. Sanchez and Mahoney 1996; Garud, Kumaraswamy and Langlois 2003), and there is even evidence that Hyundai has successfully managed to use "modules to manage complexity, improve quality, and reduce costs" (albeit sustained by particularly strong relational embedding between Hyundai and its sole-source module supplier) (MacDuffie 2008: 25). And, while Sergio Marchionne has by all accounts – including our own – been an effective leader, it is worth noting that a leader needs followers: the seeds of mobilization, and thus of the recovery he has overseen, were planted in the form of lessons drawn (e.g. Project X) and of product development platforms begun prior to Marchionne's arrival in Turin. Fiat, in short, has long relied on, and continues to rely on, suppliers and partners; had to, and must, mobilize resources from actors with very diverse

[13] There are as yet few academic accounts, simply because the turnaround is so recent and publication cycles are long. For journalistic accounts, see for example Varvelli and Varvelli (2009) or Ruggeri (2010).

interests; and its goals and composition were, and are, very much bargained across a network of organizations with blurred-but-existent boundaries.

We have recognized, in short, that field level phenomena do matter – managerial discourses are the stuff of the frames actors use to interpret their interests, and that actors (including leaders) do in fact act. But we have shown that they do not *just* act. They also *mobilize*. We have hence portrayed Fiat's leadership as beholden to many parties as they negotiate the composition and activities not just of Fiat, but also of a broader array of firms linked by a combination of contract and familiarity. We have shown that organizational theorists would do well to rethink how power is got and mobilized in and across organizations in contexts in which boundaries have gotten blurred, and to recognize that power in organizational networks transformed by radical outsourcing will decreasingly be got from structural positions in hierarchies. Instead, managers faced with uncertainty and ambiguity will tend to rely not just on "discursive resources" (Levina and Orlikowski 2009), but will draw as well on their embedding in relations with actors in their won and other firms as they try to mobilize allies in concert with their understandings of their interests.

These claims are notably consistent with those put forth in Kaplan's (2008: 730) intensive study of a single firm and her claim that "framing practices define what is at stake and thus are a means of transforming actors' interests," and with Fligstein's (1990: 18; see also 2001) field-level work showing that powerful actors' pursuit of unprofitable strategies need not be caused less by the pursuit of an alternative private ends and can simply reflect "a limited view of the world" in which the criteria of success are defined by the dominant "conception of control." But we have sought relative to the former to extend our approach across time and across blurred-but-existent organizational boundaries; and, relative to the latter, we have sought to systematically trace and understand patterns of contingency at the network and firm level. We have done so first by focusing on framing contests and on the discursive resources (e.g. the evocation of Japanese best practices, economies of scale, learning processes, etc.) that actors tap and exploit as they construct frames they hope will resonate with the actors' whose cooperation they need achieve their goals. Secondly, we have shown also that attention to concrete patterns of relational embedding between parties within and across organizations can help to explain why and to what effect particular "framing contests" play out as they do.

These two points, in combination, underscore that the vertical network firm as we have depicted it is not so much *a* political coalition as it is a bundle of *potential* coalitions. They therefore help us to understand how organizational adaptation at the firm and the network level are intertwined. At Fiat, for example, the fact that a particular coalition took the lead at certain points in time did not mean that "losing" coalitions disappeared (through disaggregation or through exit of their members from the company), nor did the quashing of the frames around which coalitions organized mean that the ideologies from which they were built had been banished from the network. To the contrary, subordinate players and subordinate frames remained a latent source of continuous contestation; this is evidenced by the fact that cross-firm coalitions at the operational level of Fiat's network often acted independently, and did so in some cases with allegiance to frames that differed considerably from those dictated by the dominant faction (i.e. Fiat's engineers working on new product development projects worked more tightly with suppliers' engineers than they did with the central engineering division).

Though we have certainly in our analysis sought to identify winning coalitions and dominant frames, we have made clear that neither is sufficient to explain "the firm" at a given moment of time. A failure to observe that that the network contained an array of potential coalitions, and that subordinate frames remained as tools of potential mobilization, would have left us unable to explain how Fiat could recover so quickly with neither a massive infusion of capital nor the significant hiring of new talent in the engineering ranks. We would also have missed that the seeds of the engineering frame that now dominate the company were planted with the failure of the Component Development Platform (CDP), as well as the fact that the turnaround was curiously and contingently enabled by the existence of subordinate cross-firm coalitions that kept alive relations between elements of the technical division and key suppliers that could be mobilized later in the service of an alternative frame.[14]

So what is the upshot? Our specific goal has been only in the specific to show that strategic decision making at both Fiat and at key suppliers shaped and was shaped by a dynamic interplay of relations, actions and reactions that ran not just within but also across organizational boundaries. Our more general goal has been to re-ignite a once-fruitful dialogue between scholars of organizational politics and scholars of organizational networks in the hopes of helping scholars of each to better theorize processes of organizational change and adaptation in a world transformed by radical outsourcing. We have hence proposed an integrated framework that grafts a concept drawn from each literature – relational embedding from the one and cognitive frames from the other – into James March's classic Carnegie school model. The result is a depiction of the network firm as a political coalition that can explain processes of coalition formation driven not just by actors' interests as dictated by their location in organizational structures, but also by their understandings of those interests as dictated by (1) cognitive frames they cobble together from a variety of discursive managerial ideologies; and (2) path-dependent ties to others actors both inside and outside the focal organization. Importantly, it is also a useful model: using the reorganization, fall and rise of Fiat Auto as an exemplar, we have shown (1) how coalitional politics shape and are shaped by the shifting boundaries of the firm, and (2) how those coalitional politics in turn affect the evolution of the production networks that prevail across many contemporary industries.

**Methodological appendix available upon request. Email jw2212@columbia.edu, or consult joshwhitford.org, works-in-progress**

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[14] See Schneiberg (2007) for an analogical argument focused on ways in which actors can use institutional "flotsam and jetsam" in their efforts to generate institutional change.

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