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# Deals That Start When You Sign Them

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*This essay explores six sentences from Oliver Williamson—five providing broad background and the sixth the central topic. The background surfaces two binary distinctions: first, between integrated versus non-integrated control (the make-or-buy decision); second, between transactions that are priced versus those that are governed. Intersecting these two distinctions identifies two domains where transactions are governed by the parties themselves (“private ordering”) rather than priced in a market—not only transactions within organizations, but also some transactions between organizations. In short, non-integration is not always “the market.” It then becomes natural to ask what governance issues arise in these two domains, as well as what instruments might be available. Long ago, Williamson asserted that (a) “substantially the same factors” (1973: 316) create governance issues in both domains and that (b) relational contracting might be useful in addressing these issues (1979, Figure II). More recently, he suggested a perspective on relational contracting that again appears valuable in both domains: relational contracts as “deals that start when you sign them.” The bulk of this essay therefore explores past, present, and potential research on this perspective.*

## 1. Introduction

Among the many pearls and contributions in Oliver Williamson’s 180 (!) papers and five books, six sentences have etched themselves into my memory. For this essay, five of these sentences provide background and the sixth gives the essay its title and main topic.

Like many, I dove into Williamson’s work when I wanted to understand the make-or-buy decision that determines the boundary of the firm. I didn’t always find the writing easy going, but eventually seven words pierced my consciousness: “fiat is frequently ... more efficient ... than ... haggling” (1971: 114). I find it hard to imagine a more efficient summary of a (not “the”) theory of integrated versus non-integrated control.

Of course, others also contributed to this domain, so I sought to distinguish one contribution from another. I became fond of a new sentence—this one more in Olly’s unique patois: “The most consequential difference between the TCE and GHM setups is that the former holds that maladaptation in the contract execution interval is the principal source of inefficiency, whereas

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\* I am very grateful to: David Kreps for guidance I blithely ignored for twenty years; George Baker, Rebecca Henderson, and Kevin J. Murphy for decades of research and discussion about these issues; Charles Angelucci and Claude Ménard for suggesting improvements to this essay; and MIT Sloan’s Program on Innovation in Markets and Organizations for crucial support.

GHM vaporize ex post maladaptation by their assumptions of common knowledge and costless ex post bargaining” (2000: 605).<sup>1</sup>

While many came to Williamson (as I did) for his thinking on the boundary of the firm, those who then explored the corpus of his work encountered a broader vision. For example, “any issue that either arises as or can be recast as a problem of contracting is usefully examined in transaction cost terms” (1985: xii).

Put differently, I found Williamson because of the binary distinction between integration versus non-integration, but I learned from him to focus instead on another binary distinction: transactions that are governed by the parties themselves versus those that are priced in a market. Perhaps his own thinking evolved along similar lines: in terms of book titles rather than sentences, if *Markets and Hierarchies* (1975) emphasized the former distinction, *Mechanisms of Governance* (1996) embraced the latter.

Intersecting these two binary distinctions produces a trinary distinction among (1) transactions that are priced versus (2a) those that are governed within a single organization and (2b) those that are governed in non-integrated settings.<sup>2</sup> Comparing (1) versus (2a) is misleading—doing so either omits (2b) or, worse, conflates it with (1). In short, non-integration may not be “the market;” transactions may be governed between as well as within organizations.

Encompassing governance efforts in both (2b) and (2a), Williamson (2002: 438) wrote: “Private ordering efforts by the parties, to ... embed transactions in more protective governance structures, have the purpose and effect of mitigating the contractual problems that would otherwise arise.” In fact, he did more than just observe that transactions may be governed between organizations as well as within them; he also compared the two governance domains, (2b) and (2a), concluding that “substantially the same factors that are ultimately responsible for market failures also explain failures of internal organization” (1973: 316).<sup>3</sup>

To create a rough but suggestive illustration of these two binary distinctions and their resulting trinary distinction, I begin by borrowing Figure 1 below from Gibbons (2005). This figure considers which transactions are better conducted under integrated rather than non-integrated control—i.e., better governed by a boss (“fiat”) rather than a contract. Various models offer formal interpretations of this figure, so here I proceed informally: because “substantially the same factors” determine “failures” of both integrated and non-integrated control, both “effectiveness” curves fall as “transaction difficulties” increase.<sup>4</sup>

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<sup>1</sup> For readers new to this literature, “TCE” refers to transaction-cost economics, which might be roughly defined as work written or inspired by Williamson, whereas “GHM” refers to the property-rights models by Grossman and Hart (1986) and Hart and Moore (1990); see Gibbons (2005) on similarities and differences between the two.

<sup>2</sup> See Williamson (1979), Hodgson (2002), and Gibbons (2020) for more on this trinary distinction.

<sup>3</sup> See Gibbons (2010: 277) on how this similarity threatens the identification strategy of most empirical TCE studies of the boundary of the firm.

<sup>4</sup> Again for readers new to this literature, “effectiveness” might mean the total surplus enjoyed by the parties (with 100% being “first-best”) and “transaction difficulties” include private information, moral hazard, and more.

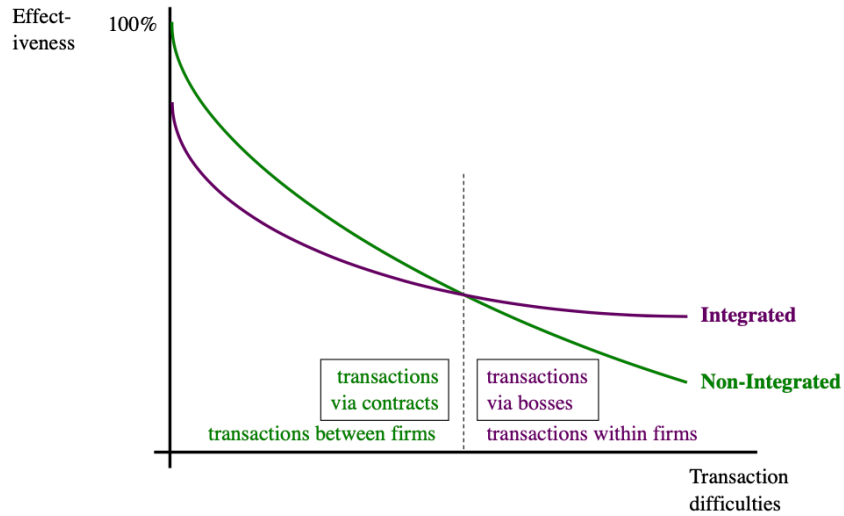


Figure 1 (color online): Which Transactions Are Integrated?

But how severe are “the contractual problems that would otherwise arise?” Towards the left, not very; towards the middle, more so. Figure 2 then adds the second binary distinction (with the boundary between governed versus priced again illustrative). From the left we now have (1) transactions that are priced, and then two regions I label *collaborations*: (2b) governance of non-integrated control and (2a) governance of integrated control, where parties “embed transactions in more protective governance structures” than pricing.<sup>5</sup>

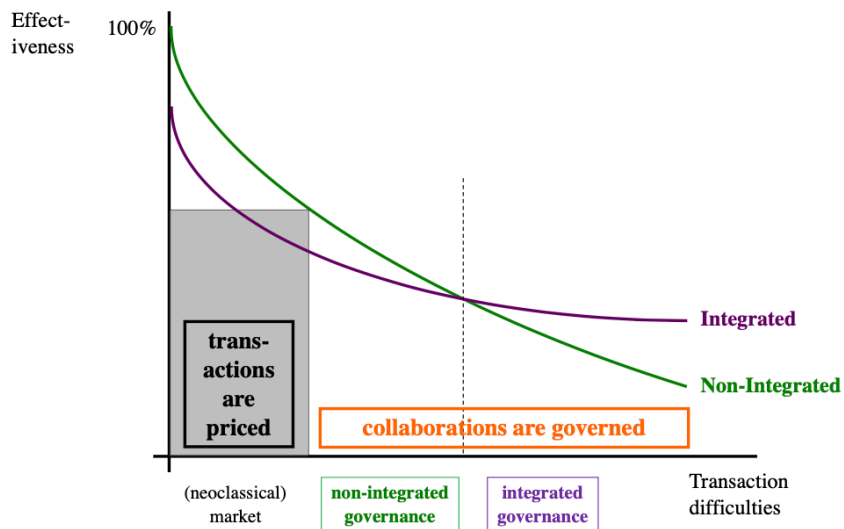


Figure 2 (color online): Where Are Governed Collaborations?

<sup>5</sup> There are three senses in which (2b) might be in the “middle” between (1) and (2a): *environments* (i.e., the position on the figure’s x-axis), *instruments* (e.g., the availability of contracts), and *behaviors* (e.g., coordination between the parties). Being an illustration, the figure shows the environments of (2b) between those of (1) and (2a). Even so, the instruments and behaviors in (2b) need not be between those in (1) and (2a); see below.

To depart, momentarily, from this essay’s focus on Williamson, it is important to note that a few economists, such as Richardson (1972) not only emphasized non-integrated governance (2b) but also argued that its empirical existence should play a role in our theorizing about markets versus hierarchies (the extremes of the figure). More often, however, it has been scholars in sociology and management who have studied this domain—often for its own sake, rather than as the middle of a continuum linking markets and hierarchies. Eccles (1981), Dore (1983), Granovetter (1985), Stinchcombe (1985), and Powell (1990) are important examples.<sup>6</sup>

Another important example of non-integrated governance, this time more rooted in political science and law than economics or sociology, is Ostrom’s (2010) “polycentric governance,” where more than two entities are attempting to collaborate and merger is not a realistic prospect. Ostrom developed her perspective by studying common-pool resources, such as water in California. In law, Ellickson’s (1991) cattle ranchers and Bernstein’s (1992) diamond merchants develop and enforce their own system of dispute resolution. And in a more contemporary example, consider a local government, a university, and an established local business trying to increase entrepreneurship in their region: no party is likely to acquire another, but leaving the collaboration to simple pricing seems bound to fail; indeed, it may be the poor result from lack of governance that brings these parties together.<sup>7</sup>

In summary, I have found these five sentences from Oliver Williamson—(i) “fiat” versus “haggling,” (ii) “vaporize ex post maladaptation,” (iii) “arises as or can be recast as a problem of contracting,” (iv) “private ordering ... in more protective governance structures,” and (v) “substantially the same factors”—very helpful in trying to understand the design and performance of governance within and between organizations. To me, however, productive as these sentences are, they emphasize more the formal than the informal aspects of governance (and, relatedly, more the static than the ongoing aspects). Enter the sixth sentence.

## 2. “I’m interested in deals that start when you sign them.”

Much to my dismay, I had the privilege of only one sustained two-person conversation with Oliver Williamson, but over time it has had a big effect on me. It was late afternoon on a beautiful summer day in 2002, in Lucca (Italy), and Olly had nobody walking back to the hotel with him after the conference in honor of Jim March’s 75<sup>th</sup> birthday.

Lucca is surrounded by a huge wall—broad enough for trees, benches, and pedestrians on top, and tall enough for a nice breeze up there. If you look up “stroll” in the dictionary, you

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<sup>6</sup> Continuing both this line of argument (that non-integrated governance may not lie on a continuum linking markets and hierarchies) and the previous footnote, note that Williamson’s assertion that “substantially the same factors” complicate governance in *environments* (2b) and (2a) is orthogonal to asking whether non-integrated and integrated governance have the same *instruments* available (such as the same access to formal contracting): they do not—see Masten (1988), Williamson (1991), Hodgson (2002), Freeland (2016), and Freeland and Zuckerman Sivan (2018)—so in at least this sense there is an important discontinuity, not a continuum, as one moves across the figure. See Ménard (2013) for discussion of related issues.

<sup>7</sup> See Potts (2018) for related theory on “Governing the innovation commons.”

should see a picture of that afternoon on top of the wall. The atmosphere loosened at least my conversation.

About halfway back to the hotel, Olly told me he wanted to teach negotiations. Surprised, I asserted that social psychology seemed to be the dominant input to negotiations teaching. He replied “They study deals that are done when you sign them; I’m interested in deals that start when you sign them.”<sup>8</sup>

I love this (third) distinction. There are indeed deals that are done when you sign them. Many of those require little or no negotiation, such as goods ordered from Amazon or services from TaskRabbit. And, of course, there are other deals that require massive negotiation but nonetheless are done when you sign them, such as some corporate acquisitions.

Then there are deals that start when you sign them but clearly are *not* what Williamson had in mind: complete contingent contracts, as introduced abstractly by Arrow (1953) and Debreu (1959) and as implemented more concretely by Moore and Repullo (1988) in extensive-form games.<sup>9</sup> For purposes of this essay, I will lump complete contingent contracts with deals that are done when you sign them: these are transactions where formal contracts work well—part (1) of the trinary distinction.

What, then, might Oliver Williamson have meant by “deals that start when you sign them”? My guess is that he meant something involving relational contracts (defined below)—both within and between organizations.

### 3. Relational Contracts as Deals that Start When You Sign Them?

Williamson’s most cited paper (1979) and most cited book (1985) both emphasized what he called “relational contracting.” Citing important work in law and sociology (Macaulay, 1963) and especially law itself (Macneil, 1978), the 1979 paper gave relational contracting a central role in the governance of recurrent, specific transactions both within and between firms—for Williamson’s purposes, the two most important of the six cells in Figure II (1979: 253).

The 1985 book continued this emphasis via its subtitle, *Firms, Markets, and Relational Contracts*, although this list of terms risks the interpretation—contrary to Figure II of the 1979 paper—that relational contracts arise only between firms, not within (i.e., that firms, markets, and relational contracts correspond to (2a), (1), and (2b), respectively). Importantly, Macneil (1978) discussed relational contracting not only between firms but also in employment relations.

In this section, I will use the term “relational contract” differently, to mean a shared understanding of the parties’ roles in and rewards from collaborating together (an understanding so rooted in the details of the parties’ relationship that it cannot be enforced by a court). In

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<sup>8</sup> Perhaps my memory is tricking me, but it feels like “No, no, young Gibbons” and an avuncular pat on the top of the head accompanied this sentence.

<sup>9</sup> Starting with his earliest writings, Williamson clearly distinguished his approach from complete contingent contracts: see (1971: 115), (1979: 236), and as early as page 7 of his 1975 book.

economic models, such a relational contract is an equilibrium of a repeated game and hence self-enforced (whereas a formal contract has standing in a court). Such relational contracts thus might be called “informal contracts,” in contrast to formal contracts, but “relational” better connotes the ongoing aspect of a relationship. This concept and terminology have been used to interpret Williamson (1975, 1985); see Kreps (1996). More generally, this concept and terminology are now standard in organizational economics.<sup>10</sup>

Within organizations, I see such relational contracts as representing part of the informal aspects of organizations.<sup>11</sup> Of course, the purely instrumental logic of repeated-game equilibria abstracts from non-economic considerations such as embeddedness (Granovetter, 1985), trust (Rousseau *et al.*, 1998), and social capital (Burt, 2005).<sup>12</sup> Without disputing the importance of these non-economic considerations, it is widely agreed that this instrumental logic—that the shadow of the future may influence behavior today—is sometimes important in ongoing relationships; for example, see Granovetter (1985: 490).

Between organizations, this purely informal conception of relational contracting is distinct (by definition) from agreements that have standing in courts. On the other hand, such self-enforcing relational contracts fit well with Williamson’s notion of “private ordering” where courts are not available—see Ostrom (1990), Greif (1993), and Clay (1997), for example.

Finally, parties often use formal and relational contracts together. As Klein (2000: 68) observed, “although Macaulay and others are correct in noting that many business relationships are self-enforced, transactors are not indifferent regarding the [formal] contract terms they choose to govern their self-enforcing relationships.”<sup>13</sup>

In the next three sub-sections I provide informal summaries of models developed with George Baker and Kevin J. Murphy (1994, 2002, 2011) that study different interactions between formal and relational contracts. These papers converged towards Williamson—from incentives (1994) to property rights (2002) to adaptation (2011). More specifically: the incentives paper was not motivated by Williamson and does not cite him, but nonetheless pushed our thinking in his direction; the property-rights paper addressed important questions raised by Williamson but made assumptions that “vaporize *ex post* maladaptation;” and the adaptation paper considered

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<sup>10</sup> See Malcomson (2013) for a survey of models, Gil and Zanarone (2017) for a survey of evidence, and Gil and Zanarone (2018) for a discussion of predictions and tests.

<sup>11</sup> As Granovetter (1985: 502) noted, “The distinction between the ‘formal’ and the ‘informal’ organization of the firm is one of the oldest in the literature, and it hardly needs repeating that observers who assume firms to be structured in fact by the official organization chart are sociological babes in the woods.”

<sup>12</sup> Williamson (1975: 37-39) devoted two pages to the possibility of “atmosphere,” especially within organizations, linking it to “quasimoral involvements” that, like the non-economic considerations just listed, seem different from the pure instrumental logic of repeated games. Atmosphere did not appear in the 1985 book and made only a cameo appearance in the 1996 book. Baudry and Chassagnon (2010: 494) suggest that “atmosphere has progressively been overtaken by the idea of ‘relational contracting’” in Williamson’s work.

<sup>13</sup> And within organizations, as Blau and Scott (1962: 6) noted, “It is impossible to understand the nature of a formal organization without investigating the networks of informal relations and the unofficial norms as well as the formal hierarchy of authority and the official body of rules, since the formally instituted and the informal emerging patterns are inextricably intertwined.”

how relational contracting might ameliorate “maladaptation in the contract execution interval [as] ... the principal source of inefficiency.”

We had presented the adaptation paper several times in the winter and spring of 2002, so I imagine that it was foremost in my mind when listening to Olly in Lucca that summer. But as I will argue after describing these three papers, even that adaptation paper was just a first step towards understanding relational contracts as deals that start when you sign them.

### *Incentives*

George, Kevin, and I started down this path because of a case study on Lincoln Electric—a *Fortune* 500 firm making arc welders in Cleveland (Fast and Berg, 1975). Lincoln’s compensation scheme made heavy use of both a formal piece rate and a discretionary bonus. In the notation of agency theory, a worker’s total compensation ( $w$ ) could be seen as including a salary ( $s$ ), an objective weight ( $b$ ) attached to an objective performance measure ( $p$ ), and a discretionary bonus ( $B$ ) meant to reflect aspects of the worker’s total contribution ( $y$ ) not captured by the objective measure.

Knowing no work on such combinations of formal and informal contracting, we analyzed a model in which  $w = s + bp + B(y)$ , where  $bp$  is enforced by a court but  $B(y)$  is at the discretion of the firm—that is,  $B(y)$  is a relational contract.<sup>14</sup> We intended the resulting paper (1994) as a contribution to agency theory, but it led us to the make-or-buy decision, as follows.

Of course, there would be no need to rely on the discretion of the firm if the formal contract were perfect. We therefore considered the optimal use of both formal and relational incentive contracting as a function of the imperfection of the formal contract (e.g., p. 1144). Surprisingly, we found that a mediocre formal contract can render all relational contracting impossible: even a small bonus is not credible because it produces an even smaller future profit, since after renegeing the firm could employ a new worker using only the mediocre formal contract.<sup>15</sup>

Perhaps surprisingly, we heard echoes of Williamson (1975) in the result that a mediocre formal contract could render all relational contracting impossible. The imperfect formal contracting was easy to map into Williamson’s ideas: that was the “market failure” that might induce integration. And the relational contracting was not hard: in Chapter 2, Williamson had discussed “atmosphere” within firms (see footnote 12 above), and in Chapter 4 he summarized Simon’s (1951) model of the employment relationship (which, although not formally a repeated

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<sup>14</sup> For those new to models of relational contracts as repeated-game equilibria, consider this version of the firm’s decision about whether to pay the bonus  $B(y)$  at the end of a particular period. This decision arises after  $p$  and  $y$  have been realized, and the firm is obligated by formal contract to pay  $s$  and  $bp$ , so paying the bonus produces profit  $y - s - bp - B(y)$  this period and some expected profit  $\pi_C$  in future periods, whereas not paying the bonus produces  $y - s - bp$  now and some expected profit  $\pi_D$  in future periods, where the subscripts C and D connote cooperation and defection. The expected profit  $\pi_C$  might be  $E\{y - s - bp - B(y)\}$ , exceeding the expected profit  $\pi_D$  determined by using only formal contracting (with some new coefficient  $b'$ ) after renegeing on this period’s promised bonus. If the firm is sufficiently patient then the present value of  $\pi_C - \pi_D$  in future periods exceeds the renegeing temptation  $B(y)$  today, so the firm pays the bonus.

<sup>15</sup> See Kranton (1996), Prendergast and Stole (1999), Di Tella and MacCulloch (2002), and Dhillon and Rigolini (2011) for related results.

game, did inspire Simon to note (p. 302) that the parties could both be better off in a repeated employment relationship than in a static one).

It was the next step where we needed to squint: did it make any sense to interpret our model as saying that mediocre non-integration (the formal contract) could make employment (involving relational contracts) impossible? In this sense, might a mediocre market crowd out what could have been a more effective firm? Eventually, we decided that (far) too much squinting was required in this interpretation. To consider these issues on a solid footing, we built our next model (2002) in terms of property rights instead of incentives.

### ***Property Rights***

One of our concerns with over-interpreting the 1994 model was that it would have been arbitrary to allow relational contracts within firms but only formal contracting between firms. Instead, in the 2002 model we allowed relational contracts both within and between firms; and to simplify the model, we ignored formal contracts entirely—within or between firms.

Absent formal contracts, to address formal governance we added to the model an asset that could be owned by either an upstream or a downstream party. We imagined that the downstream party already owned an unmodeled second asset, so if the downstream party also owned the modeled asset then the downstream party had integrated control over both assets, whereas if the upstream party owned the modeled asset then control was non-integrated. As in other property-rights models, we defined ownership of the modeled asset as conveying ownership of the intermediate good produced by the upstream party and used by the downstream.

For ease of exposition, I will re-use the notation from the agency-theoretic model: we solved for the optimal relational contract,  $B_I(y)$ , under integration (i.e., the downstream party owns the modeled asset) and the optimal relational contract,  $B_{NI}(y)$ , under non-integration (i.e., the upstream party owns the asset). Under integration, the downstream party already owns the intermediate good, so the bonus  $B_I(y)$  is an incentive contract, rewarding the upstream party for producing strong results, as in our 1994 model. In contrast, under non-integration, the upstream party initially owns the intermediate good, so the relational contract  $B_{NI}(y)$  is a sales contract, rewarding the upstream party for creating the good *and* transferring it to the downstream party.

The main analytical result from the model (obvious in retrospect) was that a given relational contract—say, some  $B^*(y)$ —typically has different renegeing temptations under integration versus under non-integration. As one stark example, under integration it is of course the downstream party who is tempted to renege on the relational incentive contract  $B_I(y)$ , but under non-integration it may be the upstream party who is tempted to renege on the relational sales contract  $B_{NI}(y)$  if the outside option for the intermediate good is unusually high. As in other property-rights models, we vaporized ex post maladaptation by assuming that bargaining under non-integration is efficient.

The fact that a given relational contract has different renegeing temptations under different formal governance structures taught us to turn the make-or-buy decision on its head: instead of asking whether integration or non-integration is preferred, and then fleshing out the details of the optimal governance structure, the model suggests that we ask what relational contract would be

most effective, and then choose the governance structure (integration or non-integration) to minimize the renegeing temptation. In short, in this model the integration decision is made in the service of the relationship.

### *Adaptation*

Once the property-rights model taught us that the integration decision could be made in the service of the relationship, that idea seemed to have wider application than our 2002 model had conveyed. In particular, while our property-rights model shared with Klein *et al.* (1978), Williamson (1979, 1986), Grossman and Hart (1986), and Hart and Moore (1990) an emphasis on specific investments as a source of governance problems, there was another theoretical tradition from Simon (1951) through Williamson (1971, 1975, 1991) that instead emphasized adaptation as a source of governance problems—even in the absence of specific investments.<sup>16</sup>

Furthermore, and at least as importantly, there were two growing empirical literatures studying optimal governance structures with few if any specific investments: one on contracting for control, where parties use formal contracts to allocate decision rights across fixed firm boundaries, and another on the classic make-or-buy problem, but again with little or no reference to specific investments.<sup>17</sup> Given these theoretical and empirical motivations, we wrote the 2011 paper to explore how formal governance might be chosen in the service of relational adaptation.

In an adaptation model, the issue is how well the parties choose decisions  $d_t = (d_{1t}, \dots, d_{nt})$  in response to  $s_t$ , the state of the world in period  $t$ . If complete contingent contracts were feasible, the parties could solve this problem in advance; and if decisions were costlessly contractible once the state was realized, the parties could solve this problem via sequential spot contracting. In contrast to these idealized situations, a growing theoretical literature recognizes the practical difficulties of state-contingent contracting by imposing the stark assumption that decisions are not contractible: the party controlling a decision can take it as they like.<sup>18</sup>

Like the first empirical literature mentioned above, the simplest interpretation of formal governance in our adaptation model was “contracting for control”—i.e., using contracts to specify which parties control which decisions, holding firms’ boundaries fixed in the sense that the payoff to firm  $i$  in period  $t$  is its profit  $\pi_i(d_t, s_t)$ , regardless of what decisions it controls. In the spirit of “polycentric governance,” we allowed for  $K \geq 2$  firms. Absent relational contracting, “maladaptation” arises if there is no allocation of decision rights across firms that produces the first-best decisions  $d^{FB}(s)$  as a Nash equilibrium of the one-shot game.

In this setting a relational contract specifies a decision rule  $d(s)$  and bonuses  $B(s, d)$  paid to and by appropriate parties based on the state that is realized and the decisions that are taken. This time we expected the model’s main result: a given relational contract has different renegeing temptations under different formal governance structures (i.e., different allocations of decision rights across firms). We therefore could once again ask what relational contract would be most

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<sup>16</sup> See Gibbons (2010: 271-2) for more on the latter theoretical tradition.

<sup>17</sup> See the 2011 paper for citations.

<sup>18</sup> Again, see the 2011 paper for citations.

effective and then choose the governance structure to minimize the renegeing temptation. That is, in this model, formal contract terms are chosen in service of the relationship.<sup>19</sup>

### ***Assessment***

As advertised, this sequence of three models converged towards Williamson, but to what extent do these models capture “deals that start when you sign them”? In one sense, they do: although in each of these models the formal governance structure—namely, the coefficient  $b$  in the agency model, the integration decision in the property-rights model, and the allocation of decision rights in the adaptation model—is chosen afresh at the beginning of each period in the repeated game, in a stationary equilibrium the choice is the same in each period, giving the impression of formal terms having been decided at the beginning and informal aspects of the deal then playing out over time.

In another sense, however, these models (and all the relational-contract models I know, whether or not they also include formal contracts) share a feature with the complete contingent contracts that Williamson explicitly eschewed: in a Nash equilibrium, the parties have a shared understanding of each other’s strategies; in a dynamic game with uncertain future states, such an equilibrium involves shared understanding of complete contingent *plans*, if not complete contingent *contracts*. In this second sense, the relational contracts in the models above are deals that are done when you sign them—from their inception, their possible futures are perfectly articulated, albeit contingent and uncertain.

My guess is that in Lucca I interpreted Olly’s remark in the first of these two senses: that models of formal and relational contracts like the three above should be seen as deals that start when you sign them, because the informal aspects of the equilibrium play out over time. Soon after that summer of 2002, however, discussions and research with Rebecca Henderson began to change my view. As I will describe next, I still see *actual* relational contracts as deals that start when you sign them, but I no longer see existing *models* of relational contracts in these terms.

## **4. The Clarity Problem**

Rebecca came to relational contracts on a different path than mine: from a strategic interest in competitive advantage, technology adoption, and organizational change, rather than a theoretical interest in the interaction of formal and relational contracts and a substantive interest in the informal aspects of organizations. Blending our perspectives, we eventually converged on the following three-step motivation for what we called *the clarity problem* (Gibbons and Henderson, 2013—hereafter GH).

- There are persistent performance differences among seemingly similar enterprises (where “enterprise” might mean work group, plant, division, firm, alliance, community, or more)—see Syverson (2011) and GH (Section 2).

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<sup>19</sup> See Gilson, Sabel, and Scott (2009, 2010), Bernstein (2016), Hadfield and Bozovic (2016), and Grandori and Furlotti (2019) on formal contracts that facilitate relationships.

- Within firms, proxies for management practices are correlated with these performance differences—see Bloom and Van Reenen (2007), GH (Section 3), and Bloom *et al.* (2019).
- Many of these management practices (especially competitively significant ones) rely on relational contracts—see Foss (2003), GH (Section 4), and Turco (2016).

Given these three steps, it is natural to consider what might slow the diffusion of competitively significant relational contracts.

Our conjecture relates to the conclusion of the last section: players in *models* of relational contracts are in equilibrium from the beginning, but parties in life may not find it easy to reach (efficient) equilibria. Put differently, game-theoretic models of relational contracts have made huge progress on the credibility problem (“Should I believe the promise you are making me?”) but such equilibrium models side-step the clarity problem (“Do we have a shared understanding of the promise you are making me?”), implicitly assuming it has already been solved.

Consistent with the clarity problem being a real issue, surely two firms about to launch an alliance would not only sign a formal contract but also discuss how they hoped their relationship would unfold. We imagine such discussions occurring on Sunday night, before the alliance begins its work on Monday, but these discussions do not arise in models that study equilibria—there is nothing to discuss.<sup>20</sup>

As another indication of the clarity problem, after long shared experience, parties may have deep shared understanding of their relational contract, but (a) it may be difficult to explain it to newcomers and (b) when times change there may be disagreement even among experienced insiders about what responses would be consistent with the original understanding.<sup>21</sup>

To sketch the clarity problem formally, consider a simplified version of the 2011 adaptation model above. Suppose there is only one decision right, and only two decisions are possible—say,  $d = L$  or  $d = R$ . Although the decision space is simple, suppose the state space is complex: each period, the state ( $s$ ) is drawn from a rich space ( $S$ ). The clarity problem then is to build a shared understanding of which decision should be taken in which state:  $L$  in some subset of states  $S_L$  and  $R$  in the complementary subset  $S_R$ .

To illustrate the potential difficulty in reaching such a shared understanding, consider psychology experiments such as Chiu (1972), where children are shown three objects and asked which two belong together. For example, if the objects are a cow, a tuft of grass, and a chicken, one might reason that the cow eats the grass or that the cow and the chicken are both animals. If the parties establish that the appropriate decision is  $d = L$  when the state of the world is a cow,

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<sup>20</sup> See Frydlinger *et al.* (2019) for extensive advice to alliance partners about such discussions—so extensive as to require a month of Sundays. It would be interesting to apply their advice within organizations.

<sup>21</sup> See GH (Section 6.1) on imperfectly shared understandings within organizations. For complementary work between organizations, see Doz (1996), Mayer and Argyres (2004), and Keller *et al.* (2021) on “disruptions” in alliances. And sacrificing external validity for laboratory control, see Gibbons *et al.* (2020) for an experiment.

does that mean it is the grass or the chicken that is also in  $S_L$ ? Could members of one organization think grass while members of another think chicken?<sup>22</sup>

In this sketch, the clarity problem concerns categorization: before a decision is taken, the parties ask themselves “Which kind of state is this?” The 2011 adaptation model described in Section 3 implicitly assumed that the parties had a shared way to interpret states of the world; more generally, equilibrium models of relational contracts assume the parties have a shared understanding of their strategies, specifying what to do in each possible contingency.

In short, at the start of a relationship the clarity problem is closer to “the parties *can't* be clear” (about the relational contracts of interest) than to “the parties *should* be clear” (about relational contracts that would need to be simple—perhaps simple enough to be formal contracts). And for purposes of this essay, the point is then that *the need to build clarity over time may be an important part of deals that start when you sign them.*

### ***Organizational Culture As Shared Understanding***

Pettigrew (1979: 574) discussed a “system of ... categories ... that interprets a people’s own situation to themselves.” Schein (1985 (2010): 14) described “mindsets and frames of reference.” Zerubavel (1991: 1) considered “the way we cut up the world.” Denzau and North (1994: 3) analyzed “shared mental models.” And Patterson (2014: 8) studied “our capacity to categorize.”

What topic were these disparate scholars discussing? Culture (and, for Pettigrew and Schein, specifically organizational culture)—the point being that such categories, frames, and mental models are shared by those within a given culture. DiMaggio (1994: 28) called this the *constitutive* aspect of culture, shaping how parties see and process the world around them. In this sense, relational contracts and organizational culture both involve shared understandings.<sup>23</sup>

If the clarity problem is the need to build shared understandings that underlie the relational contracts of interest, and if part of organizational culture is shared categories, frames, and mental models, might building relational contracts require *cultural work*—i.e., building shared categories, frames, and mental models?

Backing up, Kreps (1990) long ago proposed that repeated-game equilibria capture *part* of corporate culture: a principle specifying “how things are done, and how they are meant to be done in the organization” (p. 93). Given the multiplicity of equilibria in a repeated game, Kreps’s original analysis is consistent with the persistent performance differences noted above, but there is a discomfiting aspect of the model: low-performing parties know there exists a better equilibrium, but the model gives the parties no way to try to reach it (and, as a result, the model does not suggest why reaching it might be hard).

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<sup>22</sup> Nisbett (2004) synthesizes decades of related research in discussing how Westerners and Asians might answer such questions differently; the clarity problem considers that neighboring firms might answer them differently.

<sup>23</sup> In a similar spirit, Adelstein (2010: 336) argued that not just a firm’s culture but even the firm itself is a multilateral “relational contract ... [requiring] a ‘meeting of the minds’ of the individual contractors.”

Recently, Gibbons *et al.* (2021) revisited Kreps' approach, in a setting where parties (unknowingly) categorize the complex world around them. The parties play the best repeated-game equilibrium they can see, given their categorization; small differences in categorization can produce big differences in equilibria, again consistent with persistent performance differences. Reaching (or even just perceiving) a better equilibrium would require changing the parties' categorization, so the paper explores the roles of exemplars, stories, and the like in inducing such changes, finding that change can be slow, risky, and path-dependent.

To summarize, this analysis of building relational contracts when the parties unknowingly categorize the world around them is consistent with Barney's (1986) observation that, if organizational culture is to provide competitive advantage, it must be difficult to imitate. Put differently, *cultural work on the clarity problem may be crucial in deals that start when you sign them.*

## 5. Conclusion

This essay discussed three binary distinctions explored by Oliver Williamson. The first, between integrated versus non-integrated control, is illustrated by the 1975 book title *Markets and Hierarchies*. The second, between transactions that are governed by the parties themselves versus those that are priced in a market, is illustrated by the 1996 book title *Mechanisms of Governance*.

Intersecting these two binary distinctions yields the trinary distinction among (1) transactions that are priced versus (2a) those that are governed within a single organization and (2b) those that are governed in non-integrated settings. As Williamson noted, there are two important similarities between (2a) and (2b). First, the problems are similar: "substantially the same factors that are ultimately responsible for market failures also explain failures of internal organization" (1973: 316). Second, the instruments for addressing these problems are similar: relational contracting plays a central role in the governance of recurrent, specific transactions both within and between firms (1979: 253).

As far as I know, the third distinction, between "deals that are done when you sign them" versus "deals that start when you sign them" was never published. Certainly, it received much less attention, from Williamson and from others. The bulk of this essay therefore discussed the novel half of this third distinction: past, present, and potential research on relational contracts as deals that start when you sign them.

Models where optimal contracting involves a stationary formal contract and then a repeated-game equilibrium that plays out over time begin to explore the idea of deals that start when you sign them. But such models (including all those I have participated in building) ignore a conspicuous feature of the process of building real relationships: Sunday night. Put differently, the theoretical literature has developed great expertise on the credibility problem but essentially ignored the clarity problem.

In my view, we need more work on building (and refining, and updating, and repairing) relational contracts. Such work could be important for deepening our understanding of not only relational contracts, but also persistent performance differences, the informal aspects of organizations, and perhaps even organizational culture. Some of these might not be topics that Oliver Williamson studied in detail, but I hope he would think that his work had prompted and enabled productive new explorations.

## References

- Adelstein, Richard. 2010. "Firms as social actors." *Journal of Institutional Economics* 6: 329-49.
- Arrow, Kenneth. 1953. "Le role des valeurs boursieres pour la repartition la meilleure des risques." *Econometrie*, Centre National de la Recherche Scientifique, Paris, 41-48.
- Baker, George, Robert Gibbons, and Kevin J. Murphy. 1994. "Subjective Performance Measures in Optimal Incentive Contracts." *Quarterly Journal of Economics* 109:1125-56.
- \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. 2002. "Relational Contracts and the Theory of the Firm." *Quarterly Journal of Economics* 117: 39-83
- \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. 2011. "Relational Adaptation." Unpublished, <http://web.mit.edu/rgibbons/www/BGM%20ReInl%20Adapt%20Nov%202013.pdf>
- Barney, Jay. 1986. "Organizational Culture: Can It Be a Source of Sustained Competitive Advantage?" *Academy of Management Review* 11: 656-665.
- Baudry, Bernard and Virgile Chassagnon. 2010. "The close relation between organization theory and Oliver Williamson's transaction cost economics: a theory of the firm perspective." *Journal of Institutional Economics* 6: 477-503.
- Bernstein, Lisa. 1992. "Opting out of the legal system: Extralegal contractual relations in the diamond industry." *Journal of Legal Studies* 21: 115-157.
- \_\_\_\_\_. 2016. "Beyond Relational Contracts: Social Capital and Network Governance in Procurement Contracts." *Journal of Legal Analysis* 7: 561-621.
- Blau, Peter, and Richard Scott. 1962. *Formal Organizations*. San Francisco, CA: Chandler Publishing.
- Bloom, Nicholas, Erik Brynjolfsson, Lucia Foster, Ron Jarmin, Megha Patnaik, Itay Saporta-Eksten, and John Van Reenen. 2019. "What Drives Differences in Management Practices?" *American Economic Review* 109: 1658-83.
- \_\_\_\_\_ and John Van Reenen. 2007. "Measuring and Explaining Management Practices across Firms and Countries." *Quarterly Journal of Economics* 122: 1351-408.
- Burt, Ronald. 2005. *Brokerage and Closure: An Introduction to Social Capital*. Oxford: Oxford University Press.

Chiu, Lian-Hwang. 1972. "A Cross-Cultural Comparison of Cognitive Style in Chinese and American Children." *International Journal of Psychology* 7: 235-42.

Clay, Karen. "Trade Without Law: Private-Order Institutions in Mexican California." *Journal of Law, Economics, and Organization* 13: 202-31.

Coase, Ronald. 1937. "The Nature of the Firm." *Economica* 4: 386-405.

Debreu, Gerard. 1959. *Theory of Value*. New York, NY: John Wiley.

Denzau, Arthur and Douglass North. 1994. "Shared Mental Models: Ideologies and Institutions." *Kyklos* 47: 3-31.

Dhillon, Amrita and Jamele Rigolini. 2011. "Development and the interaction of enforcement institutions." *Journal of Public Economics* 95: 79-87.

Di Tella, Rafael and Robert MacCulloch. 2002. "Informal Family Insurance and the Design of the Welfare State." *Economic Journal* 112: 481-503.

DiMaggio, Paul. 1994. "Culture and Economy." In *The Handbook of Economic Sociology*. N. Smelser and R. Swedberg, eds. Princeton: Princeton University Press.

Dixit, Avinash. 2009. "Governance Institutions and Economic Activity." *American Economic Review* 99: 5-24

Dore, Ronald. 1983. "Goodwill and the spirit of market capitalism." *The British Journal of Sociology* 34: 459-82.

Doz, Yves. 1996. "The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes?" *Strategic Management Journal* 17: 55-83.

Eccles, Robert. 1981. "The Quasifirm in the Construction Industry." *Journal of Economic Behavior and Organization* 2: 335-57.

Ellickson, Robert. 1991. *Order without Law*. Cambridge, MA: Harvard University Press.

Fast, Norman and Norman Berg. 1975. "The Lincoln Electric Company." Harvard Business School Case #376-028.

Foss, Nicolai. 2003. "Selective Intervention and Internal Hybrids: Interpreting and Learning from the Rise and Decline of the Oticon Spaghetti Organization." *Organization Science* 14: 331-49.

Freeland, Robert. 2016. "The Employment Relation and Coase's Theory of the Firm." Pp. 148-59 in *The Elgar Companion to Ronald H. Coase*, C. Ménard and E. Bertrand (eds.). Cheltenham, UK: Edward Elgar.

\_\_\_\_\_ and Ezra Zuckerman Sivan. 2018. "The Problems and Promise of Hierarchy: Voice Rights and the Firm." *Sociological Science* 5: 143-81.

Frydlinger, David, Oliver Hart, and Kate Vitasek. 2019. "A New Approach to Contracts: How to build better long-term strategic partnerships." *Harvard Business Review* Sept.-Oct.

- Gibbons, Robert. 2005. "Four Formal(izable) Theories of the Firm." *Journal of Economic Behavior and Organization* 58: 202-47.
- \_\_\_\_\_. 2010. "Transaction-Cost Economics: Past, Present, and Future?" *Scandinavian Journal of Economics* 112: 263-88.
- \_\_\_\_\_. 2020. "Visible Hands: Governance of Value Creation—Within Firms and Beyond." *American Economic Review Papers & Proceedings* 110: 172-6.
- \_\_\_\_\_, Manuel Grieder, Holger Herz, and Christian Zehnder. 2020. "Building an Equilibrium: Rules versus Principles in Relational Contracts." Working paper.
- \_\_\_\_\_ and Rebecca Henderson. 2013. "What Do Managers Do? Exploring Persistent Performance Differences among Seemingly Similar Enterprises." Chapter 17 in R. Gibbons and J. Roberts (eds.), *Handbook of Organizational Economics*. Princeton, NJ: Princeton University Press.
- \_\_\_\_\_, Marco LiCalzi, and Massimo Warglien. 2021. "What Situation Is This? Shared Frames and Collective Performance." Forthcoming in *Strategy Science*.
- Gilson, Ronald, Charles Sabel, and Robert Scott. 2009. "Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration." *Columbia Law Review* 109: 431-502.
- \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. 2010. "Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice, and Doctrine." *Columbia Law Review* 110: 1377-447.
- Gil, Ricard and Giorgio Zanarone. 2017. "Formal and Informal Contracting: Theory and Evidence." *Annual Review of Law and Social Science* 13: 141-59.
- \_\_\_\_\_ and \_\_\_\_\_. 2018. "On the determinants and consequences of informal contracting." *Journal of Economics & Management Strategy* 27: 726-41.
- Grandori, Anna and Marco Furlotti. 2019. "Contracting for the unknown and the logic of innovation." *European Management Review* 16: 413-26.
- Granovetter, Mark. 1985. "Economic action and social structure: The problem of embeddedness." *American Journal of Sociology* 91: 481-510.
- Greif, Avner. 1993. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition." *American Economic Review* 83: 525-48.
- Grossman, Sanford and Oliver Hart. 1986. "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Ownership." *Journal of Political Economy* 94: 691-719.
- Hadfield, Gillian and Iva Bozovic. 2016. "Scaffolding: Using Formal Contracts to Support Informal Relations in Support of Innovation." *Wisconsin Law Review* 5: 981-1032.
- Hart, Oliver and John Moore. 1990. "Property Rights and the Nature of the Firm." *Journal of Political Economy* 98: 1119-58.
- Hodgson, Geoffrey. 2002. "The Legal Nature of the Firm and the Myth of the Firm-Market Hybrid." *International Journal of the Economics of Business* 9: 37-60.

Keller, Arne, Fabrice Lumineau, Thomas Mellewigt, and Africa Ariño. 2021. "Alliance Governance Mechanisms in the Face of Disruption." Forthcoming, *Organization Science*.

Klein, Benjamin. 2000. "The role of incomplete contracts in self-enforcing relationships." *Revue D'Economie Industrielle* 92: 67-80.

\_\_\_\_\_, Robert Crawford, and Armen Alchian. 1978. "Vertical Integration, Appropriable Rents and the Competitive Contracting Process." *Journal of Law and Economics* 21: 297-326.

Kranton, Rachel. 1996. "Reciprocal Exchange: A Self-Sustaining System." *American Economic Review* 86: 830-51.

Kreps, David. 1990. "Corporate Culture and Economic Theory." Chapter 4 in J. Alt and K. Shepsle (eds.), *Perspectives on Positive Political Economy*. Cambridge, UK: Cambridge University Press.

\_\_\_\_\_. 1996. "Markets and Hierarchies and (Mathematical) Economic Theory." *Industrial and Corporate Change* 5: 561-95.

Macaulay, Stewart. 1963. "Non-contractual relations in business: A preliminary study." *American Sociological Review* 28: 55-67.

Macneil, Ian. 1978. "Contracts: Adjustments of Long-Term Economic Relations under Classical, Neoclassical, and Relational Contract Law." *Northwestern University Law Review* 72: 854-905.

Malcomson, James. 2013. "Relational Incentive Contracts." Chapter 25 in R. Gibbons and J. Roberts (eds.), *Handbook of Organizational Economics*. Princeton, NJ: Princeton University Press.

Masten, Scott. 1988. "A Legal Basis for the Firm." *Journal of Law, Economics, & Organization* 4: 181-98.

Mayer, Kyle and Nicholas Argyres. 2004. "Learning to Contract: Evidence from the Personal Computer Industry." *Organization Science* 15: 394-410.

Ménard, Claude. 2013. "Hybrid Modes of Organization." Chapter 26 in R. Gibbons and J. Roberts (eds.), *Handbook of Organizational Economics*. Princeton, NJ: Princeton University Press.

Moore, John and Rafael Repullo. 1988. "Subgame Perfect Implementation." *Econometrica* 56: 1191-220.

Nisbett, Richard. 2003. *The Geography of Thought: How Asians and Westerners Think Differently ... and Why*. New York, NY: The Free Press.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press.

\_\_\_\_\_. 2010. "Beyond Markets and States: Polycentric Governance of Complex Economic Systems." *American Economic Review* 100: 1-33.

- Patterson, Orlando. 2014. "Making Sense of Culture." *Annual Review of Sociology* 40: 1-30.
- Pettigrew, Andrew. 1979. "On studying organizational cultures." *Administrative Science Quarterly* 24: 570-81.
- Potts, Jason. 2018. "Governing the innovation commons." *Journal of Institutional Economics* 14: 1025-47.
- Powell, Walter. 1990. "Neither Market Nor Hierarchy: Network Forms of Organization." *Research in Organizational Behavior* 12: 295-336.
- Prendergast, Canice and Lars Stole. 1999. "Restricting the means of exchange within organizations." *European Economic Review* 43: 1007-19.
- Richardson, George. 1972. "The Organisation of Industry." *Economic Journal* 82: 883-896.
- Rousseau, Denise, Sim Sitkin, Ronald Burt, and Colin Camerer. 1998. "Not So Different After All: A Cross-Discipline View of Trust." *Academy of Management Review* 23: 393-404.
- Schein, Edgar. 1985. *Organizational Culture and Leadership*. 1<sup>st</sup> ed., San Francisco, CA: Jossey-Bass. (4<sup>th</sup> ed., 2010).
- Simon, Herbert. 1951. "A Formal Theory of the Employment Relationship." *Econometrica* 19: 293-305.
- Stinchcombe, Arthur. 1985. "Contracts as Hierarchical Documents." Chapter 2 in A. Stinchcombe and C. Heimer, *Organization Theory and Project Management*. Oslo: Norwegian University Press. Reprinted as Chapter 6 in A. Stinchcombe (1990), *Information and Organizations*. Berkeley: University of California Press.
- Syverson, Chad. 2011. "What Determines Productivity?" *Journal of Economic Literature* 49: 326-65.
- Turco, Catherine. 2016. *The Conversational Firm: Rethinking Bureaucracy in the Age of Social Media*. New York: Columbia University Press.
- Williamson, Oliver. 1971. "The Vertical Integration of Production: Market Failure Considerations." *American Economic Review* 63: 316-25.
- \_\_\_\_\_. 1973. Markets and hierarchies: Some elementary considerations. *American Economic Review* 63, 316-325.
- \_\_\_\_\_. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*, New York, NY: Free Press.
- \_\_\_\_\_. 1979. "Transaction-Cost Economics: The Governance of Contractual Relations." *Journal of Law and Economics* 22: 233-61.
- \_\_\_\_\_. 1985. *The Economic Institutions of Capitalism: Firms, Markets, and Relational Contracts*. New York, NY: Free Press.
- \_\_\_\_\_. 1991. "Comparative Economic Organization: The Analysis of Discrete Structural Alternatives." *Administrative Science Quarterly* 36: 269-96.

- \_\_\_\_\_. 1996. *The Mechanisms of Governance*. Oxford, UK: Oxford University Press.
- \_\_\_\_\_. 2000. "The new institutional economics: Taking stock, looking ahead." *Journal of Economic Literature* 38: 595-613.
- \_\_\_\_\_. 2002. "The Lens of Contract: Private Ordering." *American Economic Review* 92: 438-443.
- Zerubavel, Eviatar. 1991. *The Fine Line*. New York, NY: The Free Press.