Overcoming Contractual Incompleteness: The Role of Guiding Principles

by

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Abstract: Transactions of any complexity between buyers and sellers are supported by long-term contracts and these contracts are inevitably incomplete. Some parties try to include as many contingencies as possible, but this approach often fails. A significant number of companies have adopted an alternative, a "formal relational contract," whose purpose is to lay the foundation for and support a relationship characterized by trust and reciprocity. We describe one such transaction in detail—Vancouver Island Health Authority and South Island Hospitalists—and provide a theory to explain why a conventional contract failed and a formal relational contract succeeded.

Key words: incomplete contracts, guiding principles, communication, aggrievement, shading, loyalty, equity

JEL codes: D23, D86, K12

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1. Introduction

Companies increasingly choose to outsource key economic activities rather than carrying them out in-house (see Deloitte (2016)). However, outsourcing poses a challenge. Transactions of any complexity between buyers and sellers are supported by long-term contracts and these contracts are inevitably incomplete. It is simply too hard for the parties to anticipate and incorporate all the contingencies that may occur. The Covid-19 pandemic is just the latest example of an uncontracted-for contingency (for many firms).

Even though the parties cannot incorporate all the contingencies, some try to include as many as possible. This is what Dell and FedEx did when Dell selected FedEx in 2005 to handle all aspects of its hardware return-and-repair process[1]. The companies drew up a traditional 100-page-plus supplier contract that was filled with statements that detailed FedEx's obligations and outlined dozens of metrics for measuring success. For nearly a decade, FedEx met all its contractual obligations, but neither party was happy with the relationship, not least because Dell constantly pushed for lower prices while at the same time demanding innovations and investment from FedEx. By the eighth year, the parties were at the breaking point. Each lacked trust and confidence in the other, yet neither could afford to end the relationship.

Contractual incompleteness is, of course, not just a problem between firms; it arises also inside firms. Employment contracts are famously incomplete, but rather than trying to include more and more detail as Dell and FedEx did, many firms supplement these contracts with handbooks of rules and processes that govern behavior. Some firms also successfully establish a corporate culture that, as Kreps (1990) has argued, can serve as a

[1] See Vitasek (2016).

commitment to act fairly when unforeseen events occur[2]. This raises the question as to whether there is something akin to corporate culture that independent firms can use to govern their transactions. In this paper we argue that a "formal relational contract" can play that role. Dell and FedEx eventually adopted such a contract and a significant number of companies, including Accenture, PwC, ISS, Intel, Telia, and a Canadian Health Authority, have also done so, reporting considerable success.[3]

A formal relational contract is an enforceable contract whose purpose is to lay the foundation for and continuously support a relationship characterized by trust and reciprocity. The parties create a shared vision, put in place communication and governance mechanisms, and adopt guiding principles, such as equity, loyalty and honesty, that they will apply if and when an uncontracted-for event occurs. Although there is some overlap between the ideas behind a formal relational contract and those emphasized in the work of Macaulay (1963) and Macneil (1977, 1983) as well as the repeated games literature, the details are different[4].

The purpose of this paper is to describe the approach and analyze how and why it works. To this end we focus on a single transaction, which we have studied in detail, involving the Vancouver Island Health Authority and South Island Hospitalists. Like FedEx and Dell, these entities originally chose a conventional contract and then when it did not work switched to a formal relational contract. We describe the failure of the

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[2] Gibbons and Henderson (2012, 2013) argue that a good corporate culture can explain the difference between a firm's success and failure.

[3] The solution is based on research carried out at the University of Tennessee. See Vitasek et al. (2013). To date more than fifty-seven companies have adopted a formal relational contract. See Frydlinger et al. (2019) and Frydlinger et al. (2021). David Frydlinger has been involved in developing the formal relational contracting approach and has consulted on many of these deals.

[4] The ingredients of a formal relational contract have evolved over time. In early versions, "intended behaviors" substituted for guiding principles and were not part of the formal contract. This was the case for Dell and FedEx.

initial contract and how the adoption of a formal relational contract improved matters. We then provide some theory, based on the idea that contracts are reference points (Hart and Moore (2008)), to explain what happened.

Before we proceed, we should note some qualifications. First, we are not suggesting that a formal relational contract is for everyone. As will become clear such a contract requires a great deal of communication and discussion both ex ante and ex post, and this is undoubtedly time-consuming and costly. For simple transactions where unanticipated events are not a major issue, a standard contract will suffice and be cheaper. Second, we do not claim that a formal relational contract is the unique way to solve the problems we discuss. Some companies have experienced success by laying out rules of behavior that they will follow, and that they expect their trading partners to follow, but without making these part of a formal discussion or a formal contract[5]. In other situations, parties have adopted a "relational charter" as a way to establish a consistent framework for interactions and norms across a network of independent and interdependent parties[6]. We do not regard these approaches as fundamentally different from ours—they all involve establishing guiding principles and norms for how parties will behave-- and we believe that similar theoretical arguments can explain their

[5] For a discussion, see Bernstein and Peterson (2021). They note that large buyers provide prospective suppliers with manuals extolling the firms' values. Ingersoll Rand, for example, encourages both its suppliers and its employees to maintain the firm's core values: integrity, respect, teamwork, innovation and courage. See Bradley and Peterson (2021, p.23). As another example (provided by an anonymous referee), Symetra Life Insurance Company states that its guiding principles in all its relationships include value, transparency, and sustainability, and that it is committed to integrity, honesty, and responsibility ("We do what's right—every time").
https://www.symetra.com/AboutSymetra/Careers/ApplicantResources/SymetrasCoreValues/

[6] For a discussion, see Cummins and Guyer (2021). The Australian Navy has, for example, experienced significantly improved results by, among other things, using a "relational charter" (a written document laying out rules of cooperation) as a basis for their cooperation with certain suppliers. The relational charter is informal in the sense that it is separate from the formal contract (Vitasek et al. (2018)).

success. However, we do think that there can be a significant added benefit from parties discussing and agreeing on the guiding principles governing their relationship compared with one party imposing its principles on the other party (or on several parties with which it deals). In Section 6 we also discuss why there can be benefits from making the guiding principles part of a formal contract.

The paper is organized as follows. In Section 2 we describe the relationship between Island Health and the Hospitalists. In Section 3 we construct a model that we believe captures the essence of the transaction, and in Sections 4-5 we argue that the model can explain why a conventional contract failed and why a formal relational contract improved matters. In Section 6 we consider whether other theories can explain what happened and also discuss some extensions and open questions. Section 7 concludes with some remarks on the generalizability of our analysis.

2. Vancouver Island Health Authority and South Island Hospitalists[7]

In 2008, Vancouver Island Health Authority contracted with South Island Hospitalists, a group of doctors in British Columbia, to provide inpatient care for patients in two hospitals on Vancouver Island. A hospitalist is a physician who works solely in a hospital and has developed expertise in the care of patients with complex medical problems in the hospital setting. Prior to 2016, Island Health Authority and the Hospitalists had a conventional contract, but it was not working well, and the relationship was severely

[7] We are grateful to Vancouver Island Health Authority and the South Island Hospitalists for giving us access to three contracts they signed, dated April 1, 2008-March 31, 2010, April 1, 2011-March 31, 2013, and July 1, 2018-. (The contract from 2010-2011 is missing. The 2011 contract apparently continued to operate until 2018.) The first two listed contracts are similar and we refer to them as the "conventional contract". The July 1, 2018 contract was the culmination of efforts to explore a new approach and we refer to it as the "formal relational contract". We conducted interviews with Jean Maskey, a doctor with South Island Hospitalists, and Kim Kerrone, Island Heath Authority's Vice President Support Services and Chief Financial Officer; we are deeply indebted to them. Our discussion also draws on Frydlinger et al. (2019). See also Vitasek and DiBenedetto (2018).

strained. One issue was how to manage variation in the demand for health services (numbers of patients cared for by hospitalist physicians on any given day). The contract recognized that under some circumstances volume changes would affect the “hours”, and thereby funds, allocated to the Hospitalists, but these circumstances were not clearly spelled out. The funds allocated in turn determined hospitalists’ compensation and how many physicians the Hospitalists could hire (hiring decisions were in their hands). From 2001 onwards, the service delivery model had been changing whereby more and more care in Vancouver Island hospitals was done by hospitalists and less and less by family physicians. There was a shortage of family physicians in many communities, and an increasing number of patients who were admitted to hospital did not have a family physician. As fewer family physicians were involved in hospital care, the Hospitalists were put under a great deal of pressure to increase the number of patients they looked after, without financial support from the Health Authority. Matters came to a head in 2009-2010. The Health Authority did not engage with the Hospitalists on how their increased workload could be managed. Although the Hospitalists put in repeated requests for more hours, no solution was forthcoming. Since the Hospitalists were not able to respond by hiring additional staff, at times workloads soared and many felt that they could not devote adequate time to patients to provide safe, high quality care.

Hospitalists became fatigued. Some hospitalists eventually responded by refusing to accept the responsibility for admitting patients from the emergency room, which was a requirement to facilitate flow into the hospital. This led to a heavy strain on the relationship, and the administration eventually temporarily suspended the privileges of some hospitalists in 2015.

In 2016, over two years after their conventional contract had expired and countless hours of contentious negotiations had failed to replace it, the parties decided to explore a

"formal relational contract," eventually signing one on July 1, 2018. This involves a five-step process, which we now describe.

The first step is to establish a partnership mentality. Island Health and South Island made a conscious effort to create an environment of trust—one in which they would be transparent about their high-level aspirations, specific goals, and concerns. The parties chartered a team of 12 administrators and 12 hospitalists, who agreed to work together to establish a meaningful and healthy relationship.

"We were no longer interested in just developing a contract," recalled Jean Maskey, a hospitalist at South Island, who co-headed the contracting team, "but in building excellent relationships at multiple levels that would allow all of us to be leaders in Canadian health care, whether as administrators or hospitalists."

In Step 2, the parties create a shared vision and objectives. The Island Health and South Island team held a three-day off-site workshop to do this. They drafted a statement of intent, which included the following: "We will be recognized leaders in Healthcare. We will achieve this by building a relationship grounded in trust and respect…" They further established a set of four desired outcomes that flowed from the shared vision: excellence in patient care, a sustainable and resilient hospitalist service, a strong partnership, and a best-value hospitalist service. The joint team delved deeper, crafting high-level desired outcomes, goals, and tactical and measurable objectives.

According to Marko Peljhan, Executive Director, Victoria Acute Hospitals: "Our ability to move forward as a group was grounded in identifying a shared vision for health service delivery in Victoria. Before that we were not able to see that we shared common ground."

In Step 3, the parties adopt six guiding principles. The six principles—reciprocity, autonomy, honesty, loyalty, equity, and integrity—provide a framework for resolving

potential misalignments when unforeseen circumstances occur[8]. Note that the guiding principles are not just ad-hoc principles; they rest on strong social norms and are thus better described as being 'activated' rather than 'chosen'.

Island Health and South Island discussed and embedded the meanings of the principles in the preamble of their contract. Under "loyalty," they explained, "We will value each other's interests as we value our own." Under "equity," they acknowledged the unavoidable imbalances that arise in contracts: "We are committed to fairness, which does not always mean equality. We will make decisions based on a balanced assessment of needs, risks, and available resources." Under "honesty," they said: "We will be truthful and authentic even when that makes us feel vulnerable or uncomfortable. This includes honesty about facts, unknowns, feelings, intentions, perceptions, and preferred outcomes."

Jean Maskey of the Hospitalists said: "I think the guiding principles are at the root of why our relationship is no longer contentious. We are now talking about tough issues in a tight fiscal environment in a healthy and more productive way. We work together toward mutual benefits in an open and honest manner so that solutions are beneficial for the Health Authority, hospitalists, and most importantly for the patients we care for. The guiding principles provide a 'Home Base'. Because of trust in the relationship, the administration are comfortable giving the Hospitalists autonomy and we're both being honest and respectful about our limitations and best practice for excellent patient

[8] The importance of integrity has been emphasized by Erhard et al. (2009), although not in the contracting context. Chassang and Zehnder (2016) and Ashraf and Bandiera (2018) discuss how the adoption of social preferences can increase efficiency when parties cannot write fully contingent contracts or there is moral hazard.

centered care." The parties report that they bring out their statements of the guiding principles, discussing them and re-activating them before every meeting begins.

Marko Peljhan, Executive Director, Victoria Acute Hospitals said: "The guiding principles were set as 'rules of engagement'. This helped us get into the foundation of a relational contract, which is grounded in developing a trusting relationship. By committing time, through regular meetings, both parties had the opportunity to practice the relationship guiding principles we co-developed. We practiced loyalty to one another, holding our shared vision at the forefront. Over time, honesty became a prevalent guiding principle. Our ability to bring forward honest perspectives helped us work as a more cohesive team."

In Step 4, the parties hammer out the terms of "the deal"—including, responsibilities, pricing, and metrics-- making sure that all terms and conditions of the formal relational contract are aligned with the guiding principles. With the mindset achieved through Steps 1-3, the development of the contract becomes a joint problem-solving exercise rather than an adversarial contest.

In Step 5, contracting parties go beyond crafting the terms of the agreement and establish governance mechanisms that are formally embedded in the contract. Island Health and South Island created four joint Governance teams: Relationship, Excellence, Sustainability, and Best Value. Each team meets at regular intervals to review progress against the shared vision, goals, outcomes, and measures.

The contract also specified a second governance mechanism—a "two in a box" communication approach in which an administrator "buddied" with a hospitalist for each of the four governance teams. The approach encourages trust and honesty between the two sides, said Ken Smith, a hospitalist at South Island. "Before, we had no one to speak with [if concerns arose]. Now I have someone I know fairly well at a high level in

administration. If I need to make an urgent decision or have a difficult issue that can't wait for the next formal meeting, I can phone my two-in-a-box partner and ask to meet."

It is, of course, impossible to know how a formal relational contract would have mitigated the workload problems in 2009-2010 (although we will make some conjectures in Section 5). However, we can be more confident about how difficulties have been avoided since a formal relational contract was signed in 2018. One example occurred when a Canadian law legalizing medical assistance in dying went into effect. At the time the contract was developed in 2016 and 2017, the legislation had just been passed and there were too many unknowns about how it would be implemented to incorporate it in the contract (even though the contract was not signed until 2018, many parts were agreed on earlier). The joint Sustainability Team, which focuses on recruiting and retention of hospitalists and their workloads and scheduling, came up with a pilot project to help the parties incorporate this new scope of work fairly into their schedule and pricing model. In the past there would have been battles about whether or not the new services were within the scope of the existing contract, in the sense that this new responsibility could have been assumed to be part of the overall workload. Now there was a spirit of how can we fairly solve for this given our statement of intent? And how can we do this in a respectful manner for the benefit of the patients and the system in which we work?

In the spring of 2020, the Covid-19 pandemic hit. The contract did not contain language on how to deal with a pandemic. An important first step was to send the less seriously ill patients home, in order to open hospital beds and resources to treat patients with Covid. As a result, the patient count dropped by 60%, but the remaining patients were sicker and more complex. Island Health administrators and the Hospitalists turned to their formal relational contract to work out what to do in a fair and flexible manner. Using the guiding principles as the backdrop for decisions, the Hospitalists found an

effective way to rethink schedule allocations to reduce Hospitalist hours, that is, pay, while keeping all physicians employed.

3. Model

In this and the next two sections, we develop a model to explain both why the conventional contract starting in 2008 worked badly for Island Health and the Hospitalists, and why the formal relational contract signed in 2018 succeeded. The latter task is harder than the former. As we have described, there are many elements of a formal relational contract – creating a shared vision, putting in place communication and governance mechanisms, and agreeing to guiding principles. Some elements are probably more important than others and some cannot easily be formalized. We will focus on (a subset of) the guiding principles, both because we can make some progress in formalizing these and because we believe that they are key to the success that Island Health and the Hospitalists enjoyed. To (re-)quote Jean Maskey, "I think the guiding principles are at the root of why our relationship is no longer contentious…" However, in Section 6 we will discuss whether other aspects of the formal relational contract can explain what happened.

We make a further simplification. The South Island Hospitalists represent about 75 doctors but we will treat it as a single entity. In this and the next section we suppose that the parties write a conventional contract, turning to a formal relational contract in Section 5.

Suppose that buyer B, the Vancouver Island Health Authority, wants services from seller S, the South Island Hospitalists. B and S write a contract at date 0 specifying the nature and price p of the services, and trade takes place at date 1. There is no discounting, and the parties are risk neutral and wealth unconstrained.

The actual contracts from 2008 through June 30, 2018 between Island Health and the Hospitalists were, of course, much more complicated than this—covering many pages—but we believe that in essence the Hospitalists agreed to look after the patients admitted to two hospitals in return for an (approximately) fixed sum of money (budget). In rough terms the annual budget was determined by multiplying the number of hours thought to be necessary to look after patients by the hourly rate for hospitalists ($136 in 2011). The contract recognized that under some circumstances the budget could be changed but these circumstances were not clearly spelled out. Thus in our model the services are "looking after patients in two hospitals" and the price p is the budget allocated to the hospitalists[9].

There are two states of the world, which we refer to as "normal" and "abnormal." The normal state N occurs with probability $1-\pi$, and the abnormal state *A* occurs with probability π. We interpret the abnormal state as representing situations such as: the service delivery model changes whereby fewer family practitioners care for their patients in hospitals; a law legalizing medical assistance in dying goes into effect; the pandemic hits.

In the normal state *B*'s value from the service is *v* (unverifiable) and S's cost of supplying it is c (unverifiable). Thus in the normal state *B*'s payoff is $v-p$ and *S*'s payoff is $p-c$. Here c might represent the disutility of labor incurred by the hospitalists in treating the patients. In practice some measures of disutility are available, such as the number of hours hospitalists spend at the hospital. However, the number of hours is a crude measure: a hospitalist can spend eight hours frantically looking after patients or six hours treating patients and two hours chatting with the nurses. Thus we think that it is

[9] The contract was constructed so that each hospitalist was an independent contractor. A natural question is whether things would have changed if the hospitalists had been employees. Given that the hospitalists did not own any significant assets except for their human capital we think that the answer is no: in particular, the same issue of how to respond to changes in workload would have arisen.

reasonable to assume that c is unverifiable. To simplify matters we will suppose that c and v are both observable (symmetric information).

We turn now to the abnormal state. We will distinguish between two cases. In the first, the existing contract can be carried out as it stands, although possibly with considerable hardship to at least one of the parties. In the second case, the contract has to be revised.

For instance, if family practitioners are no longer available to look after hospital patients, Island Health managers might (and indeed did) expect the hospitalists to absorb the increased workload. If a pandemic hits and at least initially there are fewer patients in the hospital, the hospitalists could insist on the budget staying the same even though they were able to treat the patients in less time. In contrast, if the law changes so that hospitalists can provide medical assistance in dying, it is not clear whether this service is covered by the old contract (although Island Health might claim that it is). Rather it might be viewed as a new service for which a new contract must be written.

We will start by analyzing the case where the existing contract *can* be carried out as it stands, and deal with the case of a new service in Section 5.

If the contract is carried out as it stands in the abnormal state, *B's* payoff becomes $v+\Delta v-p$, and *S*'s payoff becomes $p-(c+\Delta c)$, where Δv, Δc are the payoff changes for each party. For example, if family practitioners are no longer available to look after hospital patients, then hospitalists will have to work longer hours ($\Delta c>0$). The effect on Island Health in this situation is less clear, but if hospitalists are exhausted the quality of patient care may fall ($\Delta v<0$). In many cases the abnormal state is collectively a bad state for the parties, that is, $\Delta v-\Delta c<0$. However, our analysis also covers the case where $\Delta v-\Delta c\geq 0$.

The above represent the payoffs if there is no adjustment to the way the contract is carried out. However, we suppose that one party can make a concession to the other party, while staying within the contract. This concession reduces the payoff of the party making it but increases the payoff of the other party by at least as much, that is, it is (weakly) efficiency-enhancing. For example, if fewer family practitioners are available, Island Health can increase the budget (something that it said it would do under some circumstances), so that existing hospitalist can be paid for the extra work they are doing or more hospitalists can be hired. Or, if as a result of a pandemic there are fewer patients in the hospital, the hospitalists can offer to be paid at the same hourly rate but for fewer hours.

To simplify matters we will focus in this and the next section on the case where it is up to *B* to make a concession, turning to the case where *S* makes a concession in Section 5. Under the concession we write *B*'s payoff as $v+\Delta v'-p$ and *S*'s payoff as $p-(c+\Delta c')$, where $\Delta v'<\Delta v$ $(\text{the concession makes } B \text{ worse off})$and $\Delta v'-\Delta c' \geq \Delta v-\Delta c$ $(\text{the concession is efficiency}-\text{enhancing})$[10]. We also allow for partial concessions, which we represent by convex combinations of concession and no concession. That is, a concession of degree γ, where $0\leq \gamma \leq 1$, yields payoff $v+\gamma\,\Delta v'+(1-\gamma)\,\Delta v-p$ to *B* and payoff $p-(c+\gamma\,\Delta c'+(1-\gamma)\,\Delta c)$ to S.

Later in the paper we will introduce some further ("shading") actions that B and S can engage in, which will affect costs and benefits. These actions play no role under the assumptions of this section, and so we postpone discussion of them.

[10] If a concession involves a price change this is incorporated in $\Delta v'$, $\Delta c'$.

We suppose that it is still worth going ahead in the abnormal state if the contract is carried out as it stands, even if no concession is made: $v - c + \Delta v - \Delta c > 0$.

Figure 1 provides a time-line.

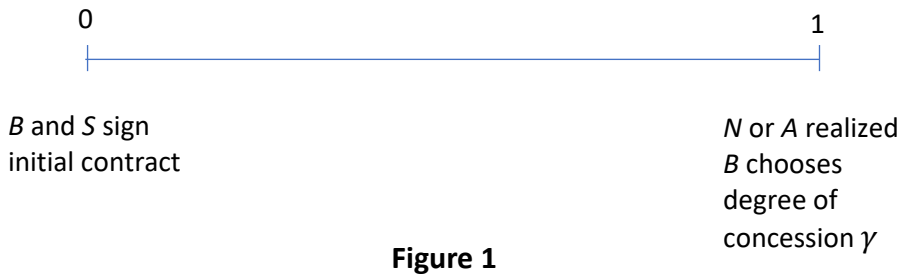

Figure 1

The first-best

A social planner chooses a full concession ($\gamma = 1$) in state A. Expected surplus is given by

(3.1) $v - c + \pi(\Delta v' - \Delta c')$.

A simple contract that achieves the first-best under classical assumptions

In what follows we will suppose that state A cannot be contracted on[11]. In spite of this, there is a simple way to achieve the first-best under "classical" assumptions that the parties are self-interested and rational: write an incomplete contract and renegotiate if

[11] We do not model why state A cannot be contracted on. For analyses of this, see, e.g., Anderlini and Felli (1994), Bolton and Faure-Grimaud (2010), and Tirole (2009).

state A occurs (recall that information is symmetric and there are no wealth constraints).

Proposition 1. Under classical assumptions, a contract that specifies the price of the service, and that permits renegotiation ex post, achieves the first-best.

Proof: In state N everything proceeds smoothly. In state A, B must decide whether to make a concession. B's incentive is to set γ=0 since $\Delta v' < \Delta v$. However, since $\gamma = 1$ is socially efficient, B will agree to choose $\gamma = 1$ in return for a sidepayment from S. (The sidepayment will depend on the parties' relative bargaining power, lying between $\Delta v - \Delta v'$ and $\Delta c - \Delta c'$.) Q.E.D.

4. Why we think that the classical contracting solution did not work in the Island Health-Hospitalists case

The contractual solution in Proposition 1 does not seem to correspond to what happened with Island Health and the Hospitalists when the service delivery model changed and family practitioners provided less patient care in hospitals. In this section we offer an explanation based on Hart and Moore's (2008) theory of contracts as reference points. In a nutshell, we argue that an efficient ex post outcome may not be achieved in the abnormal state for two reasons. First, as a result of self-serving biases, parties may have different views of what a reasonable or fair outcome is, and, when it does not occur, may engage in destructive retaliatory behavior (shading). Second, a party may be reluctant to pay another party for an outcome to which they feel entitled under the original contract and as a result some mutually beneficial renegotiations may fail to take place.

Island Health and the Hospitalists certainly seemed to disagree in 2009-2010 about what an appropriate response was when the service delivery model changed. Island Health expected the Hospitalists to absorb the increased workload ($\gamma = 0$) while the

Hospitalists thought that Island Health should increase the budget so that they could be paid for extra work and more hospitalists could be hired ($\gamma = 1$). Island Health controlled the decision and went with its preferred outcome. Hospitalists were upset and some retaliated by not admitting patients from the emergency room. Island Health responded by suspending the privileges of some hospitalists.

Much of this behavior fits the model of Hart-Moore (2008). In that model, each party has an extreme self-serving bias and feels entitled to the best outcome under the existing contract (Island Health feels entitled to $\gamma = 0$ and the Hospitalists feel entitled to $\gamma = 1$). A party who feels entitled to a payoff s but receives a payoff $s' < s$, will retaliate by shading so that the other party's payoff falls by $\theta(s - s')$, where $0 < \theta < 1$ is an exogenous parameter. In this case the Hospitalists were aggrieved by Island Health's decision and shaded. Since there are no dynamics in the Hart-Moore model, the model does not capture Island Health's decision to respond to the Hospitalists' shading by suspending the privileges of some hospitalists.

In the Hart-Moore model the person doing the shading neither gains nor loses, the only effect is on the recipient. However, when hospitalists refused to admit patients from the emergency room, they were arguably not only punishing Island Health, but also helping themselves by reducing their stress; they also avoided ethical issues arising from not being able to devote adequate time to patients (a doctor can ethically decline to accept new patients if he or she cannot provide an expected and consistent standard of care both to these new patients and to existing patients). In contrast, Island Health's response, to temporarily suspend the privileges of some hospitalists, does not seem to have benefited Island Health.

In spite of these complexities, in the analysis below, we maintain the assumption that shading affects only the recipient of the shading.

Note that, since $0 < \theta < 1$, it never pays one party to hand over money to the other party to reduce shading: a transfer of t reduces shading by θt but costs t> θt[12].

We come now to the issue of renegotiation. There is no sign that Island Health and the Hospitalists renegotiated the contract once it became clear that Island Health was not going to increase the budget under the existing contract. Such a renegotiation would have involved Island Health choosing $\gamma = 1$ instead of $\gamma = 0$ in return for the existing hospitalists taking a pay cut. It is not difficult to see why the Hospitalists might not have looked kindly on such an offer. The Hospitalists are being asked to pay for something to which they already feel entitled (that is, $\gamma = 1$). Kahneman et al. (1986) have documented the fact that people respond negatively to offers that are deemed to be coercive or extortionate. The courts may also look askance at renegotiations that lead to an outcome (a larger budget) that was already achievable under the existing contract (the contract mentioned the possibility of a budget change; where is the consideration?)[13]. In any event in what follows we rule out renegotiation concerning outcomes already possible under the existing contract.

In the context of the model, then, the outcome is $\gamma = 0, \text{i. e.}, \text{no concession}$, with consequent ex post inefficiency equal to $\Delta v' - \Delta c' - (\Delta v - \Delta c)$. Further, since *S* feels entitled to $\gamma = 1$, she is aggrieved by $\Delta c - \Delta c'$, and shades by θ ($\Delta c - \Delta c'$). Thus total deadweight losses in state *A* equal

[12] Shading is assumed to be noncontractible in the Hart-Moore model. However, the retaliatory actions described could in principle have been contracted over: Island Health could have paid the Hospitalists to admit patients to the emergency room; the Hospitalists could have paid to have their hospital privileges returned. There is no sign that this kind of bargaining took place, and in what follows we assume that shading either cannot be contracted on or is not contracted on.

[13] For a further discussion, see Hart and Moore (2008, Section 6).

(4.1) $\Delta v' - \Delta c' - (\Delta v - \Delta c) + \theta(\Delta c - \Delta c')$[14].

Finally, expected deadweight losses are given by

(4.2) $\pi(\Delta v' - \Delta c' - (\Delta v - \Delta c) + \theta(\Delta c - \Delta c'))$[15].

In other words, contrary to the classical approach, the first-best is not achieved.

5. How the adoption of a formal relational contract can help

In this section we suggest that B and S can improve matters by writing a formal relational contract. As discussed in Section 2, embarking on a formal relational contract involves several steps, including establishing a partnership mentality, creating a shared vision and objectives, and agreeing to guiding principles and governance mechanisms[16]. As mentioned in Section 3, we focus on (a subset of) the guiding principles—specifically, equity and loyalty—for tractability reasons and because we believe that they are key to the success that Island Health and the Hospitalists enjoyed. We discuss this further in Section 6.

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[14] There is one small lacuna that needs to be dealt with. The above discussion implicitly assumes that $\Delta v - \Delta v' > \theta\,(\Delta c - \Delta c')$, that is, B's gain from not conceding exceeds the shading cost S imposes. We assume this in what follows.

[15] As in Hart and Moore (2008), we suppose that the date 0 division of surplus is regarded as fair since it is determined in a competitive market, and so there is no aggrievement or shading at date 0. This assumption is plausible in the current context if several alternatives to the South Island Hospitalists were available for Island Health to contract with at date 0.

[16] It is important to note that the governance mechanisms chosen by Island Health and the Hospitalists are best seen as communication and discussion mechanisms. They did not change the effective allocation of decision rights: Island Health maintained a veto on any budget increase and the Hospitalists maintained a veto on any budget decrease.

To understand the equity and loyalty principles, we suppose that each party takes the payoffs in the normal state as "fairly determined" and does not try to use adjustments in the abnormal state to offset these payoffs. (This is consistent with the idea that the initial contract is a reference point.) In other words, the parties consider the feasible set

(5.1) $F=\{\gamma\,\Delta v' + (1-\gamma)\Delta v, -(\gamma\,\Delta c' + (1-\gamma)\Delta c) | 0 \leq \gamma \leq 1\}$,

where the first term is the buyer's incremental payoff in state *A* and the second term is the seller's incremental payoff, to determine what degree of concession γ is appropriate. Experimental evidence by Andreoni and Miller (2002) and Fisman et al. (2007) supports the idea that in determining a reasonable outcome party i maximizes $((1-\lambda)u_i^\rho + \lambda u_j^\rho)$, where u_i , u_j represent respectively i and j's payoffs, i,j=1,2, $0 \leq \lambda \leq 1, 0 < \rho < 1$[17]. That is, the parties have CES preferences, which we take to be the same for the two parties, with each party putting weight λ on the other party's utility and weight $1-\lambda$ on their own. The analysis in Section 3 corresponds to the case where λ=0, that is, each party cares only about its own well-being. We will argue that agreeing to the equity and loyalty guiding principles, and more generally embracing a formal relational contract, has the effect of making λ (significantly) positive[18].

We cannot assume that party i maximizes $((1-\lambda)u_i^\rho + \lambda u_j^\rho)$ directly over the set F since some or all of the payoffs in F are negative. Thus we measure the payoffs of the buyer and seller relative to the worst possible outcome for them ($\Delta v'$ for *B* and $-\Delta c$ for *S*). This transforms the set F into

[17] In a different context, Hart and Zingales (2017) and Broccardo et al. (2020) model social preferences for the case where ρ=1.

[18] Of course, even without the guiding principles, λ may be positive given that people are naturally somewhat other-centered. Our view is that a formal relational contract can build on people's natural tendencies to make λ significantly larger.

(5.2) F'={$(1-\ \gamma)\ (\Delta v-\Delta v'),\ \gamma\ (\Delta c-\ \Delta c')|0 \leq \gamma \leq 1$}.

F' is illustrated in Figure 2 (the frontier has slope $-(\Delta c-\ \Delta c')/(\Delta v-\ \Delta v')$). We suppose that party i maximizes $((1-\lambda)u_i^{\rho}+\lambda u_j^{\rho})$ over F' . This yields the following choices of γ for the two parties:

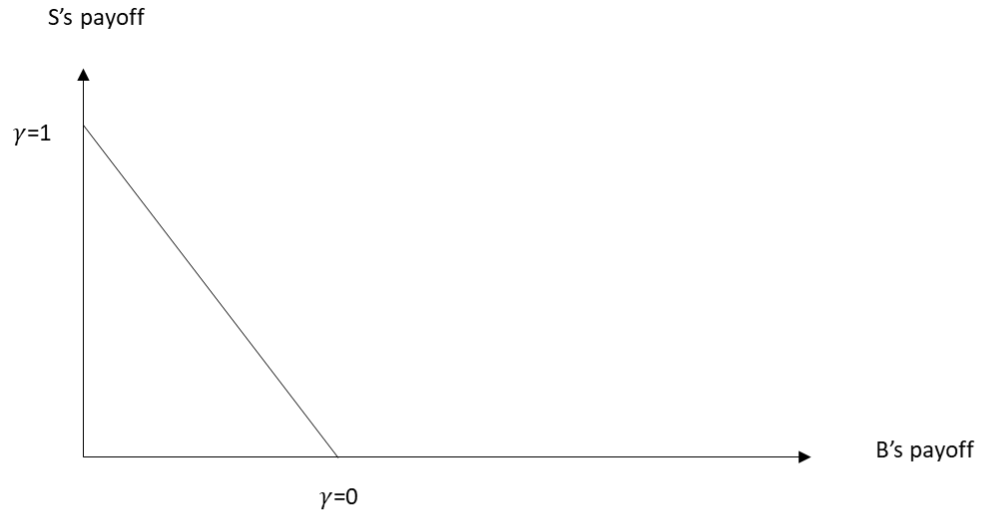

Figure 2

(5.3) *B*'s preferred choice of γ is $\gamma_B=\frac{k}{1+k}$

where

(5.4) k=$((\frac{\lambda}{1-\lambda})^{1/1-\rho})(\frac{\Delta c-\Delta c\prime}{\Delta v-\Delta v'})^{\rho/1-\rho}$,

while

(5.5) *S*'s preferred choice of γ is $\gamma_S=\frac{\hat{k}}{1+\hat{k}}$

where

(5.6) $\hat{k}=((\frac{1-\lambda}{\lambda})^{1/1-\rho})(\frac{\Delta c-\Delta c\prime}{\Delta v-\Delta v'})^{\rho/1-\rho}$.

The formula for $\hat{k}$ is the same as for *k* except that λ is replaced by $1-\lambda$.

If λ=0, γ_B=0 and $\gamma_S = 1$. As long as λ <1/2 (as we would expect), $\gamma_B < \gamma_S$. It is easy to see that γ_B is increasing in λ and γ_S is decreasing in λ. Note also that each party takes efficiency into account: each party will want a higher value of γ if $\Delta c - \Delta c'$ is large relative to $\Delta v - \Delta v'$.

As we have noted, when the service delivery model changed, Island Health was in the position to decide γ. If guiding principles had been in place, we argue that Island Health would have chosen γ_B rather than γ=0, and S would have felt entitled to γ_S rather than γ=1. Total deadweight losses in state *A*, consisting of the inefficiency from the choice of γ_B (as opposed to the socially efficient outcome $\gamma = 1$) plus the costs from *S's* shading, would have equaled

(5.7) *L*= $(1-\gamma_B)(\Delta v' - \Delta c' - (\Delta v - \Delta c))+\theta(\gamma_S - \gamma_B)(\Delta c - \Delta c')$.

This is obviously less than the expression in (4.1) (which is obtained by setting $\gamma_B = 0$, $\gamma_S = 1$). More generally, it is clear that an increase in λ reduces *L* since it increases γ_B and lowers γ_S . In a nutshell this is why we believe that adopting the guiding principles of equity and loyalty, or more generally embracing a formal relational contract, works.

Of course, in carrying out this efficiency calculation, we have completely ignored the costs of writing a formal relational contract. These costs include the many discussions that must take place to ensure that each party understands and is willing to abide by the guiding principles. Such costs are significant and presumably explain why for relatively simple transactions a conventional contract suffices. But in the case of Island Health and the Hospitalists a conventional contract was not adequate and they turned to a formal relational contract instead.

So far we have explained why a formal relational contract could have reduced the problems that occurred between Island Health and the Hospitalists in 2009-2010. We now argue that the same logic can explain how the formal relational contract that the parties adopted in 2018 helped them to navigate the pandemic and adjust to medical assistance in dying.

As noted in Section 2, when the pandemic hit in the spring of 2020, patient count dropped 60%, but the remaining patients were sicker and more complex. According to the 2018 contract, the Hospitalists could have insisted on being paid the same amount as before even though they were working less. Island Health very likely would have found such an outcome unreasonable. However, a concession was available to the Hospitalists: unilaterally accept a reduction in salary (reflecting a fall in the number of hours they were actually working) until the situation changed. (So this time it is up to *S* to make a concession.As before, this is a concession that keeps the parties within the existing contract: the hours were reduced but the hourly wage stayed the same.) Indeed the Hospitalists did this: their pay fell by approximately 11%, with each hospitalist reducing their hours while keeping all hospitalists employed.

To represent this in the model assume again that absent the concession *B*'s payoff is $v+\Delta v-p$ and *S*'s payoff is $p-(c+\Delta c)$. It is plausible that Δv =0 and Δc <0: hospitalists gain by having less to do (even though their patients are sicker), while Island Health is unaffected since it is paying the same amount as before. We assume this in what follows. Under the concession the budget falls, that is, there is a monetary transfer from *S* to *B*. We write *B*'s payoff as $v-p-\Delta p$ and *S*'s payoff as $p+\Delta p-(c+\Delta c)$, where $\Delta p \leq 0$ is the change in hospitalist pay. As before, we focus on incremental payoffs relative to the normal state, that is, the set,

(5.8) $G=\{(-\Delta p,\ \Delta p-\Delta c)|\Delta p \leq 0\}$.

The set *G* is illustrated in Figure 3 (the frontier has slope -1) . We suppose that party i maximizes $((1-\lambda)u_i^{\rho} + \lambda u_j^{\rho})$ over G . This yields the following choices of Δ *p* for the two parties:

(5.9) *B*'s preferred choice of Δ *p* is $\Delta p_{\ B} = \frac{\Delta c}{1+l}$

where

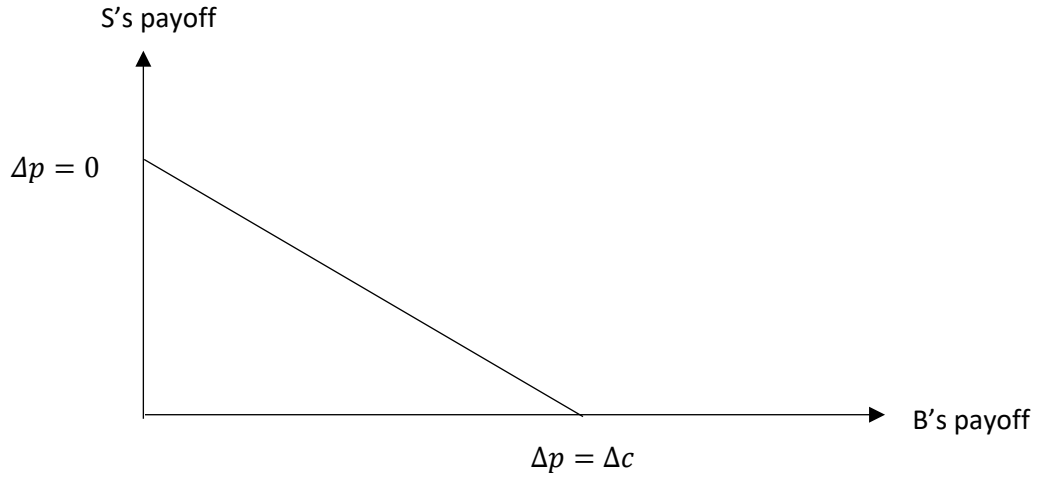

Figure 3

(5.10) $l = (\frac{\lambda}{1-\lambda})^{1/1-\rho}$

while

(5.11) *S*'s preferred choice of Δ p is $\Delta p_{\ S} = \frac{\Delta c}{1+\hat{l}}$

where

(5.12) $\hat{l}$=1/ l.

The formulae for l , $\hat{l}$ are the same as for *k,* $\hat{k}$ in (5.4), (5.6), where we now set $\Delta v - \Delta v' = \Delta c - \Delta c'$. The Hospitalists were in the position to decide the extent of the concession and so the model predicts a choice of $\Delta p = \Delta p_S$. Island Health felt entitled to Δp_B, and so the deadweight cost from shading amounted to

(5.13) *L*= $\theta(\Delta p_S - \Delta p_B) = \theta\Delta c(\hat{l} - l)/[(1 + l)(1 + \hat{l})] = \theta\Delta c(1-l)/(1 + l)^2$.

Our conjecture is that absent the decision to use a formal relational contract in 2018, the pandemic would have led to a worse outcome: The hospitalists might have chosen Δp_S=0, Island health would have felt entitled to $\Delta p_B = -\Delta c$, and *L* would therefore have been higher[19].

There is an important element missing from our analysis. it is clear from our conversations with participants that one reason the Hospitalists made a concession was that, by demonstrating flexibility and reasonableness now, the Hospitalists expected Island Health to act in a similar way in the future; specifically, they would increase the budget when capacity went up. (Capacity did go up later and the hours were increased.) This can be thought of as the reciprocity principle at work, something that is outside the scope of our simple model (we would need at least one more date to incorporate this). We were told by participants that this kind of reciprocal behavior would never have occurred before a formal relational contract was adopted. Until then the parties simply

[19] Our model predicts some shading even under a formal relational contract (since $\hat{l} > l$). However, we are not aware of any shading that occurred during the pandemic (in contrast to the experience in 2009-2010). One possibility is that the equity and loyalty principles moved λ all the way to ½. Another possibility, not captured by our model, is that when it is up to *S* to make a concession, *B* does not expect *S* to choose the concession that *B* would select, and is not aggrieved when this does not happen. In this respect our model overstates shading.

did not trust each other, and the Hospitalists would have thought it foolhardy to make a concession on budget because they might never get it back.

The lack of trust, which was a hallmark of the pre-2016 relationship, throws further light on the challenge Island Health and the Hospitalists faced in 2020. Casual evidence suggests that many parties who did not have a formal relational contract were able to adjust to the pandemic quite well. It was such an exceptional event that parties adopted a "We are in this together" attitude. However, participants in the Island Health-Hospitalists transaction told us that there was no guarantee that this would have happened in their case since "trust had fallen through the floor." In other words, the adoption of a formal relational contract in 2018 was necessary to restore the relationship not just to a better than normal one but to a normal one.

We turn now to the analysis of the case where medical assistance in dying became legal in 2016-2017. As we argued in Section 2 medical assistance in dying is perhaps best viewed as a new service rather than one covered by the existing contract (although as we also noted Island Health might have taken a different view absent the guiding principles). If it is a new service a renegotiation is called for. We can represent this as follows. Let Δv be the value of the new service and Δc its cost, where $\Delta v > \Delta c$. The question is how to divide the surplus, $\Delta v - \Delta c$, or equivalently what should the price of the service be. With the CES utility functions described earlier, each party feels entitled to a fraction $\frac{1}{1+l}$ of the surplus. Suppose that they bargain to a 50:50 split. Each party feels aggrieved by the surplus he did not get: $(\left(\frac{1}{1+l}\right) - 1/2)(\Delta v - \Delta c)$.The deadweight losses from shading will therefore be

(5.14) $$L = \theta(2\left(\frac{1}{1+l}\right) - 1)(\Delta v - \Delta c).$$

Since l is increasing in λ, the parties are able to incorporate the new service into their agreement with less disruption using a formal relational contract than without. We think

that this can explain why the parties were able to incorporate medical service in dying into their contract fairly seamlessly.

6. Other explanations, extensions, and open questions

In this section we consider whether other theories can explain the Island Health-Hospitalists experience, specifically, why the initial, conventional contract failed while the formal relational contract succeeded. We also mention some extensions and open questions.

The main problem the contracting parties faced when they wrote their first contract in 2008 was how to respond to fluctuations in the number of patients. Island Health did not want to spend more money on hospitalist services than required but recognized that in some situations it would be necessary to hire more hospitalists or employ them for longer hours. An ideal contract would have been state contingent: it would have specified the circumstances in which hours would increase or decrease. The change in the service delivery model and the pandemic were events that both parties observed once they had happened. The difficulty seemed to be anticipating such events and describing them clearly in advance.

The parties chose a simple approach: they wrote an incomplete contract, specifying the number of hours (and the corresponding payment), and left open the possibility of adjustments. But this did not work out for them. The simplest incomplete contracting model based on symmetric information has a hard time explaining why (see Proposition 1). What about asymmetric information? It is certainly plausible that the Hospitalists knew more than Island Health about the extra burden they faced when the service delivery model changed. Arguably, this is why Island Health repeatedly turned down the Hospitalists' requests for a larger budget in 2009-2010—they did not believe it was necessary. But asymmetries of information alone cannot easily explain the bad feeling

and retaliatory behavior that resulted, or the fact that the relationship was soured for years after.

At the same time, a reduction in asymmetric information may be one of the beneficial consequences of a formal relational contract. One of the purposes of a formal relational contract is to build trust, and trust can overcome asymmetric information. As noted, Island Health may have turned down the Hospitalists' requests for an increased budget in 2009-2010 because they did not believe it was necessary. Under a formal relational contract the parties have agreed to an honesty norm and so it is more likely that the Hospitalists will report their needs honestly and that Island Health will believe them.

Some might argue that repeated games models can explain the Island Health-Hospitalists experience (see, e.g., Baker et al. (1994), Gibbons and Henderson (2012), and Malcomson (2013)). In such models cooperative behavior is sustained by the threat that opportunism by one party will lead to the end of cooperation. However, these models cannot easily explain why the parties stick with such a commitment. If Island Health's decision not to increase the budget in 2009-2010 was viewed as opportunistic by the Hospitalists, why would the parties maintain a soured relationship for the next six-seven years, rather than letting bygones be bygones? Our answer is that the Hospitalists were genuinely angry, but this is not a feature of most repeated games models. Also it is unclear why repeated game considerations led to cooperation after 2016 but not before.

Repeated game models have also been used to explain how a corporate culture can be sustained inside an organization (see Kreps (1990) and, for a survey, Hermalin (2013)). But similar questions arise. Why cannot a firm instantaneously establish a good corporate culture by picking the appropriate (repeated game) equilibrium? The analysis presented here suggests that embarking on a formal relational contract (with workers) may be one way for a company that does not have a good culture to create one.

The merging of the conventional and relational parts of the contract into a single formal relational contract distinguishes our approach from that of Macaulay (1963) and Macneil (1977,1983). Macaulay (1963) showed that businesses often do not rely on their written contracts but instead on social norms and industry standards to overcome challenges posed by incomplete contracts. Macneil (1983) argued that contracts are "instruments of social co-operation", by which he meant instruments to mitigate a tension between self-regarding and other-regarding preferences in commercial relationships. He specifically pointed to two important social norms – reciprocity and solidarity (with a similar meaning to what we here call loyalty) – as serving this role. Neither Macaulay nor Macneil analyzed how norms or guiding principles can be made part of a formal contract, which we have argued was important for the success of the Island Health-Hospitalists transaction (for more on formality, see below).[20]

A reasonable question to ask is whether we have identified the key aspects of a formal relational contract. The guiding principles are only one element. Could it be that these principles were merely a side-show and that increased communication, say, was the crucial element in improving the Island Health-Hospitalists experience? While increased communication was undoubtedly important, we do not think that it alone can explain the changes of behavior. Communication, not least when it is face-to-face, has been

[20] Hadfield and Bozovic (2016) document a shift from the informal to the formal in a related context. They show that, while many organizations still rely on informal norms and mechanisms, there is also a growing reliance on the formal contract in what they call innovation-oriented commercial relationships, where the parties lack background support from social ties or reputational mechanisms. Using an expanded view of contracts-as-reference-points, they show, based on empirical studies, how the formal contract can help the parties to get on the same page not only regarding what the parties are explicitly entitled to under the contract but also, through ex post communication, concerning how unexpected events should be dealt with. The idea behind a formal relational contract is similar, but with the added element that the contracting parties can benefit by explicitly including social norms in the contract.

shown to improve cooperation and reduce deadweight losses in some situations.[21] But communication does not always improve cooperation (see, e.g., Fehr et al. (2015, 2017)). In particular, Fehr et al. (2017) show, experimentally, that, under certain competitive conditions, communication, rather than being used by parties to align expectations and improve cooperation, is instead abused for the purpose of carrying out influence activities. Our belief is that it is the combination of the guiding principles and communication that worked in the case of Island Health and the Hospitalists.

Another important question is, would it not be enough to make the guiding principles part of an informal agreement rather than an enforceable contract? As we noted in the Introduction, Informal agreements about guiding principles, or relational charters, can certainly be helpful. However, we think that formalization can have additional value. The signing of a contract has significant symbolic meaning. Formalization is also useful in the eventuality that the people who negotiated the original deal are no longer the ones overseeing it ("the new sheriff in town"); the new parties might question whether the informal elements apply to them[22]. Finally, even though it may be challenging to litigate over the breach of a guiding principle, the parties are more likely to abide by a guiding principle if it is formalized since few would want to risk an expensive court case.[23]

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[21] An area of particular focus in research has been how communication can mitigate conflicts of interest in social dilemmas, starting with studies by Deutsch (1958, 1960) and Loomis (1959).

[22] As an example, Shleifer and Summers (1988) argue that one of the costs of a hostile takeover bid is that new management may breach implicit agreements made by previous managers with workers.

[23] Although guiding principles are somewhat nebulous, courts may be willing to adjudicate their meaning should there be a dispute. The contract laws of most jurisdictions include some version of a "good faith" doctrine, which courts can and do apply when interpreting contracts, sometimes by including implied terms, even though there is no universally-agreed meaning of "good faith". The guiding principles can be thought of as setting out the parties' understanding of what good faith means in their relationship. In Canada and the UK, the courts have recently applied the concept of a "relational contract" in interpreting the good faith doctrine (see for example the Canadian Supreme Court in *Basin v. Hrynew* and the UK High

A natural question that our analysis raises is, what is special about the six guiding principles that form the basis of a formal relational contract? Why could the parties not use other principles, which might lead to a better outcome? For example, why couldn't the parties adopt the principle that in an abnormal state they will sort things out using the bargaining protocol underlying the first-best contract described in Proposition 1 (50:50 division of the surplus, say, using side-payments)? This bargaining outcome would become the new reference point and neither party would be aggrieved or would shade. The first-best would be achieved. Other possibilities would be that the parties agree that if something unexpected happens B will make a take-it-or leave-it offer to S about how to proceed, or the parties will play a Maskin-Tirole (1999) mechanism to make observable information verifiable.

Our tentative answer is that the guiding principles are not just ad-hoc principles chosen by the parties. They rest on strong social norms and are thus better described as being 'activated' than 'chosen'. This makes them different from mechanisms such as take-it-or-leave-it offers or Maskin-Tirole revelation games, which have no motivating power in themselves[24]. Making a promise to fulfill a social norm has more force than making a promise to apply a principle not based on a social norm, for example to receive a take-it-or-leave-it offer. We should stress that this is a preliminary answer and understanding the difference at a deeper level is an important topic for future research.

Court in *Bates & Ors v Post Office Ltd*). Of course, it cannot be denied that there can be a downside of formality: an opportunistic party could use the threat of litigation over an ambiguous guiding principle to extract a concession from the other party.

[24] Experimental evidence suggests that people are reluctant to use revelation mechanisms. See, e.g., Fehr et al. (2021).

Let us make two final observations. While we have focused on how formal relational contracts can reduce aggrievement and shading, they may also mitigate other problems associated with contractual incompleteness, such as hold-up behavior (see, e.g., Klein et al. (1978), Williamson (1975), and Grossman and Hart (1986)) or quality-shading /corner-cutting (see, e.g., Hart et al. (1997)). Such problems do not seem to have been of paramount importance for Island Health and the Hospitalists but may be significant in other contexts. In addition we have not explored how a change in firm boundaries might substitute for or complement a formal relational contract. As pointed out in footnote 9, firm boundaries do not seem to be a major issue in the Island Health-Hospitalists transaction, where human assets dominate, but they may, of course, be important in other situations.

7. Concluding remarks

In this paper we have developed an analysis to understand what happened in the relationship between Vancouver Island Health Authority and South Island Hospitalists over the period 2008-2020. An obvious question to ask is, do our results generalize?

As we noted in the introduction, more than fifty-seven companies have adopted a formal relational contract. In an earlier version of this paper (Frydlinger and Hart (2019)), we described some of the transactions, specifically those involving Accenture and ISS, PwC and ISS, Telia and Veolia, and Dell and FedEx; and we reported on interviews with participants in the Accenture and ISS and PwC and ISS deals. Even though the entities involved are significantly different from Island Health and the Hospitalists—for-profit companies trading with each other rather than a government entity obtaining medical services from doctors--the transactions share important similarities. The parties wrote incomplete contracts and faced challenges when something unexpected happened. Consequent bad feeling and shading behavior could be clearly identified in some cases. In all cases, matters improved considerably when the parties switched to a formal relational contract. There are also a number of cases where

companies have used a formal relational contract not to repair an existing relationship but to transact with new artners[25]. Two examples involve Vancover Coastal Health[26] and the Belgian telco, Telnet, both of which have reported success.[27]

Yet to go further and show that not only does the analysis presented here shed some light on these transactions, but also that it provides the *best* explanation of what happened, one would have to carry out an in-depth study of each deal similar to that for Island Health and the Hospitalists. We leave that for future work.

[25] When embarking on a new transaction a buyer might engage in a Request for Partner process. In such a process, suppliers are assessed not only on offered solutions and price but also on "softer" factors such a cultural compatibility and willingness to act in accordance with the guiding principles. In the typical process, the customer initially selects a few suppliers, with which a number of workshops are held where the parties, among other things, adopt a shared vision and the guiding principles, in addition to discussing scope and how the customer's needs can be met. Also, the suppliers are asked to provide indicative cost levels, which are made part of the customer's overall assessment. Thereafter, the customer chooses one or sometimes two suppliers with which the rest of the formal relational contracting methodology is implemented, after which contracts are signed. For a more detailed description of this approach, see Vitasek et al. (2019).

[26] See Vitasek et al. (2017).

[27] See Vitasek and Diender (forthcoming).

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