

**Qualifying the concept of 'contractual equilibrium':
From equality of exchange to fair play**
(Executive Summary)

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Introduction

This paper challenges the conventional intuition that 'contractual equilibrium' can be adequately understood as an exchange of value reflected in the parties' performance. It critiques this perspective as founded upon outdated pre-neoclassical theories of value, from which legal scholarship has yet to fully separate. By distinguishing between market value and intra-contractual value, the paper sets the stage for a deeper analysis of the functional differences between contracts and markets. Aligned with the recent microeconomic 'contract theory' scholarship, the paper emphasizes the role of adjustment processes over static value determination in maintaining contractual equilibrium. Drawing from the insights of evolutionary game theory, it suggests that procedurally fair adjustment procedures should be fostered to preserve and harness the advantages of transacting in contracts as opposed to transacting in markets. An overarching theme is that sophisticated parties have to a great extent incorporated such practices in their contracts even in the absence of a rigorous theoretical framework — a finding consistent with the inductive methodology of Elinor Ostrom (1990).

Part I. — Dissecting contractual equilibrium

The concept of contractual equilibrium is most usually not expressly contemplated in positive contract law. Despite the gradual disengagement from the doctrine of *causa*, the underlying assumption of some balance of value between performance and counter-performance remained intact. While under the looming influence of a liberal approach to contract law (Eidenmüller *et al.*, 2008) legal consequences were no longer ascribed to its absence, equality of exchange as an analytical instrument remained present in legal scholarship (Rösler, 2012; Doralt, 2012; Terre *et al.*, 2022: 742). European contract laws in various provisions —dealing with potentially unconscionable deals (*laesio enormis* cases) or provisions dealing with supervening impossibility or hardship (eg. FrCC 1168, 1674; AustrCC 934; ItCC 1448; BGB 138; Swiss CO §20.1, 21.1)— imply a principle of equivalence of exchange. Case law recognizes that significant disparities between the 'value of performances' exchanged under a contract should lead to its invalidity (Fischinger, 2021). Following the 2016 French Civil Code reform, the acknowledgement of the disequilibrium and adjustment approach is almost universal across civilian jurisdictions.

European model codifications leaned even more in the direction of equality of exchange. In the February 2009 Draft Common Frame of Reference, the revision of the contract was based

on the principle of "contractual justice." Article III—1:110(2) DCFR stipulates that judicial intervention in a contract is warranted only if 'it would be manifestly unjust' to hold the debtor to the obligation. The emphasis has moved away from implied conditions or will theory, centering instead on the concept of contractual justice (see, Pichonnaz, 2012). A similar approach is reflected in the 2016 edition of the Unidroit PICC that introduced a sophisticated version of hardship provisions that ostensibly crystallises the pertinent scholarship and practice from a commercial parties' viewpoint. Article 6.2.2 PICC expressly refers to an alteration of the 'contractual equilibrium' as the primary condition of hardship. Seemingly, the premise that contractual performance has an inherent and objective value is as strongly rooted in contract law as it is in tension with neoclassical economics.

Before the advent of neoclassical economics, value was seen as inherent to resources —the subject matter of contractual obligations. This view was adopted by medieval scholastic jurisprudence and —influenced by Thomas Aquinas' interpretation of Aristotle's *Nicomachean Ethics*— projected ideas of commutative justice to contracts. Although Roman law did not explicitly require a just price (*justum praetium*), its reception after the Glossators was shaped by equitable ideals, leading to the belief that a severely unjust price conflicted with natural equity (Gordley, 1981; 2011: 94). This perspective, reflected in the doctrine of *causa*, treated transactions as zero-sum games over the distribution of a fixed amount of wealth, except where liberality justified the contract. Later, Grotius and Pufendorf introduced a cost of production theory of value (de Roover, 1958), which, combined with Marx's and Weber's labour theory of value, anchored legal scholarship. However, these classical theories ultimately led economics to a dead end, particularly with respect to explaining changes in value over time (Deane, 1978:115). The marginal revolution, spearheaded by Jevons (1871), Walras (1874), Marshall (1890), and Menger (1871) in the late 19th century, gave rise to neoclassical economics, which rejected the connection of value to total utility, identifying marginal utility as the main driver behind price and value (Landreth & Colander, 1996). It is submitted that legal doctrine coevolved along pre-classical theories for centuries and has still not fully adjusted to the neoclassical paradigm shift.

In light of these insights, the legal doctrine of equality of exchange is rather obscure. What one can infer from a contract is that at the time of formation one party's expected marginal utility is sufficient to induce her to promise her own performance to the counterparty, and *vice versa*. Orthodox economic analysis further illuminated this finding to comprise a risk allocation. But unlike what legal theories assume, there is no value inherent in the performance of the parties (Marchisio, 2021); moreover, not such that could be tracked over time. This is why texts on the economics of contracts and microeconomic contract theory do not deal with this question at all (e.g. Hermalin, Katz, and Craswell, 2007; Bolton & Dewatripont, 2004). The very concept of (objective) equality of exchange is absurd from a modern microeconomic point of view.

Part II. — Transacting through vs within contracts

At this point it has already started to emerge that while value is a characteristic factor in the market space, the subeconomy of contract may function differently. Contracts are generally considered the legal building blocks of the market, hence integral structural elements of its mechanism. Yet the relationship is more complex as contracts simultaneously offer an institutional alternative to transacting in markets. Building on the rich framework provided

by microeconomic contract theory and new institutional economics (Williamson, 1979; Scott, 2020; Vatiello, 2020), I suggest that the legal vehicle 'contract' may serve three distinct—and possibly overlapping—functions: (i) they help parties hedge against the movements of the market, (ii) they offer a pareto-superior platform for transactions as opposed to the market, and (iii) they offer the institutional vehicle for transacting in the hybrid space between market and hierarchy.

The **first function** is most usually assumed to be the standard function of contracts. This function is crystallised in the principle *pacta sunt servanda*. Parties to a contract are expected to abide by their contractual commitments in spite of the expected changes of circumstances and movements of the market. This is the situation contemplated in classical economic analysis of law (Posner & Rosenfeld, 1977). In this respect contracts are considered devices for risk allocation and management. Foreseeable risks are supposed to have been allocated efficiently by the parties. Posner & Rosenfeld's theory of impossibility is supposed to offer a yardstick as to how to project such risk allocation on unforeseeable contingencies.

The **second function** is that of an institutional alternative to the market (Vatiello, 2020). The flexible framework of the contract provides the platform which allows the parties to invest and cooperate over a period of time. Jurists have long identified that there might be some added value in introducing a degree of flexibility in contracts (Karampatzos, 2005; Pichonnaz, 2011). Primarily, transacting through contracts may enable the parties to tackle the trade-off between flexibility and underinvestment. The development of microeconomic contract theory illuminated the inner workings of this mechanism.

A primary element in this framework is the function of contracts as 'reference points'. Through this mechanism a contract effectively reduces the aggregate amount of 'shading' in a transaction as opposed to a 'no contract' market transaction alternative (Hart & Moore, 2008; Fehr, Hart, and Zehnder, 2013). The existence of reference points in conjunction with the inevitable incompleteness of contracts with the element of duration calls for the ex-post adjustment of contractual obligations (Hart and Frydliinger, 2022).

The **third function** is that of a legal vehicle for transactions in the economic space identified as 'vertical disintegration' (Gilson, Sabel, and Scott, 2009). The latter comprises long-term cooperative partnerships as well as transactions along supply chains and the so-called 'network forms of organisation'. In vertical disintegration transactions the parties are faced with the need to navigate continuous uncertainty. Continuous uncertainty demarcates the limit of the reference points mechanism as the latter only functions with reference to contracts where at 'time 1' uncertainty may be resolved (Hart & Moore, 2008).

Parties dealing with environments of continuous uncertainty have devised a different solution. They introduce a governance mechanism harnessing the power of both formal rules and informal norms to motivate and sustain long-term cooperation and adjustment of their contracts ('braiding'/scaffolding', Gilson, Sabel, and Scott, 2009; Bozovic & Hadfield, 2016).

In the next section I will *first* assess the current hardship framework with respect to how well it integrates within these contractual functions. *Second*, I will employ game-theoretical insights to illuminate the importance of fair processes in efficiently adapting contracts.

Part III. — Adjusting contracts: a view from evolutionary game theory

Civilian contract laws¹ deal with the question of contractual adjustment primarily through the mechanism of supervening hardship (Karampatzos, 2005). Hardship is founded upon a theoretical framework that misinterprets both the concept of value and the functions of contract. This mechanism provides that in case of an unforeseeable event that renders performance disproportionately burdensome for one of the parties, the parties should engage in negotiations in good faith and if such negotiations fail, the contract should be adjusted by a court aiming to 'restore its equilibrium' (Hondius & Grigoleit, 2011; Kötz, 2017). Hence, while it is recognised that there are subjective evaluations of a performance by the parties, a superior 'objective' evaluation by the court is expected. This mechanism is essentially imposing a solution on parties without amending the subjective reference points to which they are anchored, hence even if contractual obligations are adjusted the parties are expected to engage in shading. The readjustment of contracts by the courts on the ground of hardship rules is expected to —and has indeed— proven to be inefficient (Unberath, 2009; Schwenzer & Munoz, 2019).

Hardship and readjustment challenge the civilian paradigm orthodoxy that substantive law may operate in isolation and on a different level from processes to apply it (cf. Karampatzos, 2005). My paper will then go on to indicate that microeconomic contract theory and evolutionary game theory have —largely working in isolation— devised a set of principles for the fair and efficient readjustment of contracts. Adjustment mechanisms emerging from the practice of sophisticated parties may be explained based on this framework.

1. Principles for adjustment:

The hardship framework has —in spite of its flawed design— rightly identified two essential preconditions for the readjustments of contracts, ie the bargaining in good faith rule and the recourse by priority to the perception of the parties.

i. Guiding principles and social norms. An adversarial negotiation/ bargaining process can result in inefficient Nash equilibria. Frydinger and Hart (2022) indicated that the use of guiding principles as 'rules of engagement' in the course of readjustment can greatly reduce shading. Good faith obligations and social norms embedded in a Formal Relational Contract (Vitasek *et al.*, 2021) framework may act as a choreographer/coordinating device that enables the negotiating parties in accessing correlated equilibria in their strategic interaction (Deakin, 2011; Gintis, 2014).

ii. Fair play. Evolutionary game-theory (Binmore, 1994; 1998) has connected the question of fairness to the problem of interpersonal comparison. For bargaining to be fair, the preferences of the negotiating parties should be aligned through a process that Binmore (2005) describes as achieving a 'symmetric empathy equilibrium'. Essentially, the parties are invited to play the game without knowing their position in it, a process that resembles the setting described by Rawls (1971) as the 'original position'. Hence, both parties should have empathetic preferences that are self-consistent and aligned in a way that they perceive the

¹ This analysis is primarily relevant to civilian contract law, although after the 2016 Yam Seng judgement, it is marginally relevant to English contract law as well. Furthermore, the paper does not aim to deal with all the scenarios of discharge of contracts due to unforeseen contingencies. Thus, impossibility of performance and frustration remain outside its scope.

process and outcomes as fair. This observation is of great importance to contract adjustment, a process faced primarily with the tension between divergent individual reference points.

2. Real-world examples:

Application 1 — Research and Development Agreements

Research and Development Agreements (Gilson, Sabel, and Scott, 2008) are a primary example of contracting in the vertical disintegration economic space. These agreements comprise a governance mechanism consisting of express stipulation routines of interaction and exchange of information, and a Joint Steering Committee. This mechanism serves a twofold function: *first*, it reduces noise in the strategic interaction of the parties (Gilson, Sabel, and Scott, 2009) so that they can effectively employ a tit-for-tat strategy to sustain their long-term cooperation; *second*, it acts as a choreographer emitting a timely and clear signal for the parties to access a correlated equilibrium. It is submitted that a mere good faith rule would be an insufficient alternative as the signal emitted by the expected conduct of a court through backwards induction would be weak.

Application 2 — Final-Offer-Arbitration

This is a dispute resolution method where each party involved submits their final offer to an arbitrator, who must select one of these offers in its entirety without modification. It is used widely in natural-gas price and corporate M&A disputes. Essentially, this process forces the parties to make offers that reflect their true valuations of the dispute outcome, considering the arbitrator's potential preferences (Kilgour, 1994; Brahm, 2003), essentially allowing the parties to access a symmetric empathy equilibrium which would result from their subjective reference points.

This paper does not seek to offer a fully developed theory of contractual readjustment. Rather, its purpose is to clarify fundamental misunderstandings and thereby contribute to the foundation of a research program that highlights the complexities inherent in contract transactions. The principal objective is to redirect the focus of contract law scholarship from a misguided, substance-oriented perspective to a more nuanced, process-oriented approach. Through this shift, the paper aspires to enhance the understanding and application of contract law in addressing the dynamic realities of contractual relationships.