ROCKWOOL Foundation Berlin
Institute for the Economy and the Future of Work (RFBerlin)

DISCUSSION PAPER SERIES 128/26

Trust and Cooperation in Labor-Management Relations

Rafael Gomez, Alex Bryson, Paul Willman

www.rfberlin.com MAY 2026

Trust and Cooperation in Labor-Management Relations

Authors

Rafael Gomez, Alex Bryson, Paul Willman

Reference

JEL Codes: J5; J53

Keywords: trust; cooperation; labor-management relations

Recommended Citation: Rafael Gomez, Alex Bryson, Paul Willman (2026): Trust and Cooperation in Labor-Management Relations. RFBerlin Discussion Paper No. 128/26

Access

Disclaimer

Imprint

RFBerlin
ROCKWOOL Foundation Berlin –
Institute for the Economy
and the Future of Work

Gormannstrasse 22, 10119 Berlin
Tel: +49 (0) 151 143 444 67
E-mail: info@rfberlin.com
Web: www.rfberlin.com

TRUST AND COOPERATION IN LABOR-MANAGEMENT RELATIONS

Rafael Gomez*
(Centre for Industrial Relations and Human Resources,
University of Toronto)

Alex Bryson**
(Social Research Institute,
University College London and IZA)

Paul Willman***
(London School of Economics and Political Science)

* Professor Rafael Gomez is Professor of Employment Relations and Director of the Centre for Industrial Relations and Human Resources at the University of Toronto. ** Professor Alex Bryson is Professor of Quantitative Social Science at UCL's Social Research Institute. ***Professor Paul Willman is an Emeritus Professor of Management in the Department of Management.

ABSTRACT

We review the social science literature on trust and cooperation with application to labour-management relations. We begin with the neo-classical economic view of self-regarding individuals operating with perfect information and show that once one abandons the dyadic case with perfect information, cooperation deteriorates as group size increases and the probability of behavioural or perceptual error rises. In fact, we show that self-regarding models have no way of explaining cooperative outcomes between management and labour under typical conditions and lead to less optimal forms of non-cooperative strategic bargaining. By way of contrast, models of cooperation with other-regarding preferences and trust – drawn from behavioural economics, social psychological, economic sociology and industrial relations literatures – show that a high level of cooperation can be attained even in large groups, with modest informational requirements, and that conditions allowing the evolution of trust and other-regarding social preferences are plausible and find empirical support. We also show that actors' perceptions of the employment relationship (i.e., Fox's frame of reference approach) underpin assumptions (implicit or otherwise) of human nature, which is what inevitably determines strategies (cooperative or otherwise) used in labour-management relations.

Key words: labor-management relations; trust; cooperation

JEL Code: J53

1. INTRODUCTION

Cooperation and trust are separate yet highly interdependent concepts. Cooperation is said to occur when two or more actors engage in joint actions that result in mutual benefits. Examples include the exchange of goods, team production, common pool resource management, collusion among firms, organizing to form a union, participating in a public demonstration and adhering to socially beneficial norms (Bowles and Gintis, 2008). In a labour-management context, cooperation includes the canonical example of a trade union and management agreeing to a set of mutually beneficial terms and conditions of work in return for a period of labour peace (i.e., the signing of a collective bargaining agreement).

Trust can be defined as the propensity of actors to cooperate and avoid inefficient non-cooperative traps such as mutual defection in a prisoner's dilemma game (LaPorta et al., 1997). Again, in a labour-management context, the example of a firm and its workers having a high-degree of mutual trust, would enable cooperative bargaining to emerge quickly without incurring the costs of 'tit-for-tat' punishments over early defections (Axelrod, 1997; Binmore, 1998).

Both these definitions are limiting, of course, but offer a useful starting point for this chapter where we review the social science literature on trust and cooperation with application to labour-management relations. We begin with the traditional neo-classical (non-game theoretic) economic view of self-regarding individuals operating with perfect information. We show that once the dyadic case with perfect information is abandoned, cooperation deteriorates as group size increases and the probability of behavioural or perceptual error rises. In fact, we show that traditional economic models are not very good at explaining cooperative outcomes between management and labour and lead to less optimal forms of non-cooperative strategic bargaining.

For example, neo-classical approaches with self-regarding preferences can account for labour-management 'cooperation' via the principal-agent (P-A) problem (Milgrom and Roberts, 1988). The resolution of such conflict, however, within the context of the P-A model, is achieved by efficient contracting and high-powered incentives; something that (empirically) only emerges in settings with clear performance metrics and very low degrees of work intermediation (i.e., a job/task that does not depend on the effort of other workers or that does not impact the upstream or downstream tasks of other workers). These intermediation tasks are termed unitary (a task that requires the combination of worker outputs into a single product) or conjunctive (a task that can only be completed by having all members of a group preform it) in the literature (Steiner 1972, Goodman 1986).

In terms of trust, economics is often perceived as being near silent. We will show that this popular view is incorrect. Because the risk of opportunism was assumed to be high in the "governance" of economic relations, traditional self-regarding economic approaches -- such as game theory and transaction-cost economics-- neglected trust as a mechanism for ensuring cooperation. Contemporary self-regarding game-theory models (Dixit and Naelbuff, 1991; Dixit and Skearth, 2004), however, have quite a bit to say about trust that is highly relevant to the case of labour management relations (Costa, 2004).

Similarly, models of cooperation with other-regarding preferences – drawn from behavioural economics, sociology and industrial relations literatures – have always shown that a high level of cooperation can be attained even in large groups, with modest informational requirements. Likewise, conditions allowing for the emergence of trust, focal points, norms and other-regarding social preferences are plausible and find empirical support. We also demonstrate how assumptions concerning the nature of the employment relationship -- i.e., Fox's (1974) frame of reference -- inevitably drive the strategies used in labour-management relations and predict rather well levels of trust as well as cooperative (trust-based) versus non-cooperative (strategy-based) outcomes.

This chapter begins in section 2 with a set of working definitions of trust, cooperation and the concept of labour-management relations. The chapter is then organized in section 3 into three main subject area views of trust and cooperation: i) the economic, ii) the sociological/political science, and the iii) industrial relations perspectives. In each, key findings from theory, experiments and field research are discussed. The reader will note that a common thread across each of these sections is an appreciation of labor-management relations in contexts that involve *all* forms of bargaining (i.e., formal and informal). Even when a workplace setting or employment environment is free from 'formal union-management bargaining', there are still individual as well as joint-bargaining situations where the various findings in the literature on trust and cooperation can be applied. We therefore look at the general case of employer-worker (or labor-management) negotiations regardless of union presence. The chapter wraps up with a conclusion summarizing the findings from the literature.

2. TRUST, COOPERATION AND LABOUR-RELATIONS: WORKING ASSUMPTIONS

2.1 Trust

A traditional view of trust, broadly agreed upon across various academic domains, mixes other-regarding motives with self-interest. A canonical definition is captured by the well-known sociologist James Coleman, whose work influenced economists and sociologists alike:

> "An individual trusts if he or she voluntarily places resources at the disposal of another party without any legal commitment from the latter, but with the expectation that the act of trust will pay off" Coleman (1990).

Note the self-interest motive (i.e., that trust has a non-zero pay off), closely aligned with economic rationality, at work in this definition. A definition provided in an economic context similarly mixes the pro-social and self-interest conceptions:

> "Trust can be defined as the propensity of actors to cooperate and avoid non-cooperative (inefficient) traps such as that in the prisoner's dilemma" (LaPorta et al., 1997).

These definitions might be suggestive that "trust" became relevant, certainly to economic theory, in the 1990s, but this would be incorrect. The interest in trust goes back further. Neo-classical economics has long viewed "trust" as important, at least implicitly, to economic modelling:

> "Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence" (Arrow, 1972).

And the interest in trust goes back further still, to the foundations of political economy:

> "There are countries in Europe ... where the most serious impediment to conducting business concerns on a large scale, is the rarity of persons who are supposed fit to be trusted with the receipt and expenditure of large sums of money" (John Stuart Mill, 1848, p. 132.

Modern definitions of trust infused from disciplines outside of economics and sociology (e.g., management and organizational behaviour) have emphasised the psychological preconditions required for interpersonal trust to occur. Rousseau et al. (1998) established that trust consists of three individually derived components: (1) a willingness to be vulnerable to the actions of others; (2) confident or positive expectations about future outcomes; and (3) conditions of interdependence between the two trusting parties. Only if the trusting party is confident that the party to be trusted will behave positively will they make themselves 'vulnerable' (Mayer et al., 1995). A less often cited, but generalizable definition of trust is provided by Sako (1992). Trust is distinguished three ways: *contractual trust* (i.e. will you do what you say you will do), *competence-based* trust (i.e. are you capable of doing it) and *relationship trust* (when things go wrong will we cooperate to fix it). The original context was supplier-customer relations and applied to the privatised firm-regulator relationship by Willman et al (2003). The taxonomy, however, can of course be extended to employer-employee relationships. Imagine the canonical union-management collective agreement: do the parties (union and management) *want* to uphold the terms and conditions of the agreement; *will* they be able to uphold their commitments; and if things breakdown, *can* the parties repair any mistakes/unexpected outcomes?

This last point is crucial. These are high-level definitions of trust that require adaptation – in the context of labour-management relations – to the industry and organisational level. The reason for adapting definitional theory to context is because the foregoing views of trust tend to focus on atomized situations (i.e., where pre-existing personal relationships are largely absent), whereas at a workplace, employees have interpersonal relationships among each other and with their managers. Perceived social distance among workers and managers might vary between firms, yet, working for the *same* company in the *same* workplace provides all members of the organisation with a common social identity through their shared group membership (Akerlof, 1997; Ashforth and Mael, 1989). The trust relationship between employees and managers is therefore shaped by complex organisational and interpersonal factors that require the application of theories (explored in this chapter) that are closely related/adapted to the workplace.

2.2 Cooperation

Cooperation occurs when two or more actors engage in behaviours that result in joint benefits. Examples include the mutually beneficial exchange of goods, team production, common pool resource management, collusion among firms, workers voting to join a union, participating in collective actions such as demonstrations, and adhering to socially beneficial norms (Bowles and Gintis, 2008)

In a labour-management context, cooperation includes the canonical example of a trade union and management agreeing to a set of mutually beneficial terms and conditions of work in return for a period of labour peace (i.e., the signing of a collective bargaining agreement). However, labour-management relations are not confined to the canonical "union-management" situation. There are at least three forms of labour-management relations that can be derived and defined from real-world settings. These are described below.

2.3 Labour-Management Cooperation

The degree of formality (or informality) in a given labour-management relationship can be used to differentiate three general forms of labour management relations that exist in practice (see Figure 1).

[Figure 1]

Traditional labour relations scholarship would deny or downplay anything but the canonical union-management bargaining relationship. In many ways, it is also the easiest to "model" since it is dyadic (two-player) and well established institutional roles exist among the main actors. We might call this the "formal" labour-management model that includes traditional US-style Wagnerism (e.g., where individual workplaces are organized by unions and workers bargain with their direct employers); British-style voluntarism (e.g., where unions form when informal labour organization produces enough labour power to compel an employer to recognize a union for the purposes of collective bargaining); to German sectoral bargaining where more organized and centralized bargaining occurs outside of the individual workplace and instead takes place at geographical and sectoral levels (e.g., where the Bavarian metal workers union bargains with the Bavarian employer association).

1. Union-management collective bargaining (the formal union model)
    a. Wagner-style US model
    b. British Voluntarism and Statutory model
    c. Sectoral bargaining models

Beneath this most formalised structure, there exists "semi-formal" non-union collective voice that ranges from structured – and statutorily supported – works councils as in Germany, joint-health and safety committees in Britain, Canada and the US, to the history of non-certified employee associations, 'company' unions and other forms of non-union voice inside the firm (Gollan, Kaufman, and Taras, 2015). Statutory works councils in Germany are clearly the most emblematic form of this style of voice, but elements exist in the Anglo-American world too. Britain experimented with joint-consultative-committees (JCCs) following WWI (also known as 'Whitley Councils'). Though more common in public sector organizations, JCCs still exist today (Gomez et al., 2018). In fact, variants of JCCs exist in all the Anglo-American world, even in the US which supposedly "bans" such institutions under Section 8(a) 2 of the NLRA (LeRoy, 2006).

2. Non-union forms of collective voice (the formal non-union model)
    a. Statutory systems like German Works Councils
    b. Statutory Health and Safety Committees
    c. British Joint Consultative Committee (JCC) system
    d. Canadian non-certified employee associations

A final level of labour-management relations exists at the least formalised level and includes organically arising social relations, structured and semi-structured teams, employee groups and the informal 'day-to-day bargaining' that occurs between (and among) workers and managers. The simplest form would be a group of (2 or more) employees coming together to bring something forward to management.

3. <u>Norms/relationships that emerge in workplace and non-workplace settings between management and workers (the informal workplace model).</u>

    a. Teams

    b. Social groups and informal committees

    c. Day-to-day informal bargaining

These three levels of labour-management relations typify different national typologies but can, in practice, also co-exist at the national, sub-national, industrial and workplace level. Next, we explore the various approaches to trust and cooperation drawn from the economic, sociological/political and industrial relations perspectives and apply these to the case of labour-management relations.

3. THREE VIEWS OF TRUST AND COOPERATION IN LABOUR-MANAGEMENT RELATIONS

Three main disciplinary views of trust and cooperation are described in this section: i) the economic, ii) the sociological/political science perspective, and the iii) industrial relations perspectives. This will be followed by a fourth iv) "synthesis view" that reconciles the diverse perspectives from economics, sociology, and industrial relations. In each, key findings from theory, experiments and field research are discussed.

3.1 The Economic View

Economics is a broad field with many divergent views on trust and cooperation. We begin with the traditional neo-classical view of cooperation (without notions of trust) and then expand.

3.1.1 Economic Models with Self-Interested Actors

A major goal of neo-classical economic theory has been to explain how wide-scale cooperation can arise among otherwise self-interested individuals. This problem is exacerbated in a decentralized setting, something prefigured in the work of classical economics such as Adam Smith ([1986] 1776). Cooperation arises (without trust) in the neo-classical case through Walrasian general equilibrium (Inouye, 2005), culminating in the celebrated 'invisible hand' theorem (Arrow and Debreu, 1954; Debreu, 1959; Arrow and Hahn 1971). This theorem rests on the assumption that contracts can completely specify all relevant aspects of all exchanges and can be enforced at zero cost to the exchanging parties.

Complete contracting and zero-cost enforcement, however, are not plausible assumptions in real world settings and do not apply to many important forms of cooperation. This is evidenced by the mere fact that most economic institutions as firms, financial institutions, and labour relations institutions like collective bargaining, depend heavily on social relations or incentive mechanisms involving negotiation and strategic interaction rather than explicit contracts (Blau 1964; Gintis 1976; Stiglitz 1987; Tirole 1988; Laffont 2000).

The second neo-classical approach to explaining cooperation eschews complete contracting and relies on game-theoretic models of strategic interaction (i.e., repeated games not one-shot instances). These models are based on the idea that most 'real world' situations involve repeated interactions between two or more players (i.e.., which is actually quite applicable to the employment relationship that evolves between workers and management inside the firm).

The insights of Shubik (1959), Taylor (1976), Axelrod and Hamilton (1981) and many others (Scheling, 1978; Aumann, 1985) determine that repetition of social interactions, plus credible threats of retaliation against defectors, can lead to the 'evolution of cooperation' among otherwise self-interested actors. A statement of this line of thinking, applied towards the sweep of human experience is found in the work of Aumann (1985) and Binmore (1993, 1998a, 2005). Aumann's contributions to the cognitive foundations of game theory focused on the implications of players' informational states, specifically through the formalization of common knowledge. Unlike early game-theoretic models that simplified analysis by assuming perfect information, Aumann accounts for how a party's behavior is influenced by their knowledge of another's rationality and the subsequent iterations of that mutual awareness. This systematic approach to the relationship between knowledge and strategic outcomes is complemented by the idea of "correlated equilibrium", a solution concept broader than the Nash equilibrium. In the context of labour-management relations, correlated equilibrium provides a theoretical justification for the emergence of "neutral third parties"; e.g., how a mediator can facilitate more efficient outcomes by strategically distributing information—either jointly or separately—to the participating parties.

For Binmore, a society's moral rules are instructions for behaviour in conformity with one of the many Nash equilibria of a repeated n-player social interaction. Because the interactions are repeated, and these rules form a Nash equilibrium, self-interested actors who comprise the social order will conform to the moral rules and will (eventually) cooperate. But even here, Binmore (1998b) reminds us that not *all* actors will necessarily conform and act cooperatively. The rules of conformity and cooperation will apply to insiders (those that agree to play by the rules of the game), but outsiders (by definition) do not have to comply. As Binmore (1998b) notes; "It just isn't true that nastiness is irrational, or that evolution will eventually sweep it away. As Hume

([1985]1758) warned, our constitutions therefore need to be armoured against the modern methods that rogues and knaves posing as insiders have developed to subvert our social contract. Even more urgent is the problem of finding ways of reducing conflict between mutually hostile groups." In the context of insider versus outsider dynamics he also astutely notes (Binmore, 1998b):

> "Insiders who don't conform soon find them selves treated as outsiders unless they mend their ways. However, this is as far as the analogy with [cooperative behaviour] goes. Nature has not brought the same sweetness and light that operates within middle-class insider-groups to the world at large. The outsiders who lurk in dark alleys with rape and mayhem in their hearts are neither nice nor forgiving. Nor do sharks only cruise in murky waters. They also swim in brightly lit boardrooms and patrol the corridors of power. Such upper-crust sharks show beautiful teeth as they prey upon our bank accounts and raid the pension funds of elderly widows. But we would be the fools they take us for if we returned the smiles with which they try to convince us that they are nice people like ourselves."

It should be noted this passage with its "sharks…swimming in brightly lit boardrooms" was written a decade before the 2008 global financial crisis and the litany of Madoff-type scandals that subsequently became public.

In short, the idea that cooperation will emerge as a stable outcome simply because there are repeated interactions, or in the context of labour-management relations 'many rounds of bargaining', is not *a priori* possible with what Binmore (1998b) describes as 'tit-for-tat' loose evolutionary cooperative thinking of the kind popularised by non-economists such as Axelrod (1984, 1997). This is true even in the case of the most likely scenario, where economic cooperation *should* emerge with self-interested actors, i.e., models of repeated dyadic (two-player) interaction.

The theoretical bridge between these self-interested models and stable industrial peace is most clearly articulated in the work of the aforementioned Robert Aumann (1985) and Thomas Schelling (1978). Aumann's contribution to the "Folk Theorem" provides the formal mathematical proof for why long-term cooperation is possible in repeated games, i.e., the "shadow of the future" makes present-day cooperation a rational equilibrium, as the long-term benefits of a stable relationship outweigh the one-time gain from defection. However, because repeated interactions produce an infinite number of possible Nash equilibria—the "equilibrium selection problem"—the question remains: how do labor and management settle on a *specific* cooperative outcome?

This is where Schelling's concept of "focal points" becomes indispensable. Schelling argued that actors coordinate their expectations around prominent, culturally or historically significant solutions—such as a standard industry wage—that allow them to converge on a single equilibrium without explicit or costly communication. This logic also can explain why it may be advantageous for negotiating parties to allow an impartial mediator to speak to the parties either jointly or separately, and in some instances give them different information. Aumann's work on "correlated equilibrium," shows that a mediator acts as a crucial information broker who provides a shared "frame of reference" to both parties. By offering symmetric information or a neutral recommendation, the mediator transforms the negotiation into a coordinated game, helping the parties synchronize their strategies and reducing the risk of "perceptual errors" that often lead to mutual defection. Together, Aumann's formal rigor and Schelling's strategic psychology provide the foundation for "integrative bargaining," anticipating the industrial relations "web of rules" approach, discussed later in this chapter, that prevent the inherent pressures of the employment relationship from collapsing into conflict.

In sum, self-regarding game theory models show that if the probability of game repetition is sufficiently great and individuals in the two-person game are sufficiently patient, a cooperative equilibrium (amongst self-interested individuals) can be sustained once it is implemented. The behaviour whereby each individual acts cooperatively if this cooperative act has been reciprocated by the other player in the previous encounter, is called 'tit-for-tat'. Although termed 'reciprocal altruism' by biologists, this behaviour is still self-interested because each individual's decisions depend only on the individuals' net-benefit from the (cooperative) long-term relationship. There is one crucial point to add. In economic models – especially game theoretic models - with self-interested actors, the "equilibrium selection problem" is the primary hurdle: if a repeated game has an infinite number of possible outcomes (as the so-called 'Folk Theorem' suggests), how do actors settle on a specific cooperative one? Economists in this field explain cooperation by invoking concepts like focal points, correlated equilibria or "norms". By framing "norms" as the mechanism for this selection, economists are essentially using a structural term for what sociologists and industrial relations scholars call "trust", something we shall return to in this chapter.

3.1.2 Economic Models with Other-regarding Actors

The second major school within the economic literature that addresses trust and cooperation is the "behavioral economic" school. This perspective represents a modern revival of what Binmore (2006) characterizes as the "Butlerian" view—named after Joseph Butler's 1726 rebuttal of Thomas Hobbes. Where the Hobbist view sees cooperation as a strategic necessity for the self-interested, the Butlerian view posits that human cooperation is driven by intrinsic, other-regarding preferences.

Proponents of this school, such as Fehr and Schmidt (1999) and Gintis (2000), argue that the neoclassical model fails to account for the persistent "niceness" observed in laboratory settings and also emergent from anthropological theories and human evolutionary biological arguments. They suggest that evolution has "wired" humans with a bias toward *strong reciprocity*, where individuals derive direct utility from reciprocating favors or punishing "free-riders," even at a personal cost and with no prospect of future gain. In the context of labor markets, this suggests that workers and managers might treat each other fairly, choose more equitable compensation or choose to cooperate not because they fear retaliation in the next round of bargaining or because a manager is worried about a worker exiting the employment relationship, but because they possess an innate "inequity aversion"—a biological distaste for unfair outcomes.

While moving economics closer to the mainstream social science perspective, a trenchant critique of this behavioral economic turn in "other-regarding" tastes is still present within mainstream economics. Ken Binmore (2005, 2006) and Nobel prize laureate Vernon Smith (2003) are proponents of behavioral approaches and experimental methods but dismiss much of the new behavioural work as "idealism" that ignores the mechanics of adaptation. The critique rests on three primary pillars:

- The Fallacy of Transparent Dispositions**:** Behavioral economists rely on reliable signaling of trustworthiness through involuntary cues. The mainstream neo-classical economic view counters that if "niceness" were truly a transparent biological trait, the "sharks" and "knaves" of the boardroom would have long ago evolved to mimic those signals perfectly. The historical reality of successful deceit and Bernie Madoff-type scandals suggests that strategic masks are more prevalent than biological transparency.
- Social Norms as a "Backdoor" for Trust**:** Adherents of self-regarding modelling argue that the development of "social norms" in this literature often serves as a backdoor method to introduce the concept of trust. In game-theoretic terms, repeated interactions suffer from a surfeit of possibilities; the "Folk Theorem" suggests there are an infinite number of Nash equilibria. To solve this "equilibrium selection problem"—i.e., to explain why players settle on a cooperative outcome rather than a predatory one— behavioral economists by-pass the hard work of rigorous modelling (Aumann's coordinated equilibrium) and instead

invoke a loose form "norms." In doing so, they are essentially importing the sociological concept of trust into a mathematical framework to bypass the indeterminacy of multiple Nash equilibria. For self-regarding economic models, these norms are not evidence of innate altruism but are "equilibrium selection devices" that players misapply in laboratory settings because they have been conditioned by the real-world employment relationship (where there is a real job that may be lost "tomorrow").

- The “Contagion” of Weak Reciprocity**:** For labour relations, the Hobbist critique of behavioral economics demonstrates that wide-scale cooperation does not require a majority of “other-regarding” actors. Instead, the evidence shows, through “contagion models”, that even if a small fraction of a group (the “reciprocating robots”) is programmed to cooperate, it becomes the cold, calculated interest of the “self-regarding” majority to mimic that cooperation in order to keep the benefits of the relationship flowing.

In short, the view of the “self-regarding” economic camp is that standard Nash equilibrium modeling predicts rather well when and where cooperation occurs, without departing from the naive assumption that players are seeking to maximize their average monetary gain. The behavioral economic school’s focus on other-regarding behaviour and “intrinsic niceness” risks creating a “retro-classical” economics that ignores how quickly cooperation collapses when the “rogues” are no longer audited or when the “knaves” realize they are being treated as “chumps.” For the study of labor-management relations, this implies that cooperation is a fragile equilibrium maintained by the credible threat of punishment and the coordination of action around more credibly secured “norms” that emerge from focal-points and correlated equilibria, rather than a stable byproduct of human altruism.

3.2 The Socio-Political View: From Social Capital to Encapsulated Interest

While economics does open the door to trust via the establishment of norms and focal points, it has historically focused on the transactional and strategic mechanics of cooperation. The disciplines of sociology and political science, by contrast, have traditionally been more concerned with social structures and institutions that make such cooperative interactions possible (Lucas and Lovaglia, 2006). It is important to note, however, that these fields are not always centrally interested in the world of work or the specificities of the employment relationship. Instead, their focus often lies with the "community," the "state," or "civil society." Consequently, applying their insights to labor-management relations requires a degree of extension—viewing the firm not just as a site of production, but as a mini-polity or a specific social network.

The most prominent socio-political contribution to this discourse is the contribution provided by the late James Coleman (1988, 1990). Unlike human capital (i.e., an individual's array of accumulated knowledge and skills), Coleman (1990) argues that *social capital* is a more important individual and communal resource, residing in the structure of relations between actors. It is created through "closure" in social networks, where dense, interconnected ties allow for the emergence of trust but also effective sanctions against "free-riders". In a labor relations context, this implies that the "social infrastructure" of the workplace—such as a long-standing union local or a stable management team—provides the closure necessary to enforce cooperative norms. Without this structural closure, perceptual errors and opportunism identified in the self-regarding view of economics become more likely, as there are fewer social connections and consequences for defecting from a cooperative agreement.

The nature of these ties is further elucidated by Granovetter (1973, 1985), who famously distinguished between strong and weak ties. Granovetter's insight is particularly relevant to the problem of scale in labor relations. "Strong ties" (the dense, frequent interactions within a small work group) generate high levels of trust and emotional support—what is sometimes called “bonding" social capital (Putnam, 2000). However, for a large organization or a sectoral bargaining unit to function, "weak ties" are equally essential. These are the social "bridges" that connect disparate groups (e.g., different departments or management and labor groups), thereby reducing information asymmetries. Granovetter argues that weak ties are primary channels for information flow across social distance. If a firm relies solely on strong, insular ties within its silos, it may suffer from "perceptual errors" mentioned earlier, where management and labor develop mutually exclusive echo-chambers and hostile understandings of the same reality. Institutions like joint-consultative committees (JCCs) or works councils are not just providing voice to workers but are “efficient” institution, which arise to deal with these informational and social network problems (Freeman and Lazear, 1996).

The strategic importance of network structures is expanded upon by Burt (1992, 2005), who focuses on “structural holes”—the social-informational gaps between groups that lack a direct connection. In labor-management relations, those who bridge these holes (such as union representatives, a government appointed mediator or empowered HR managers) act as "brokers." Burt argues that trust is often a byproduct of how these brokers manage the flow of information. In a "low-trust" firm, structural holes remain open and information hoarded, leading to the non-cooperative strategic bargaining typical of self-regarding models. Conversely, a high-trust firm is one where institutional knowledge-brokers successfully bridge these holes, reducing the "informational requirements" for cooperation and preventing the breakdown of trust as the organization grows.

The idea of social capital is not exclusive to sociology. It was also popularized in political science by another well-known academic, Robert Putnam (1993; 2000). For Putnam, trust is a byproduct of dense horizontal networks of civic engagement. These networks foster "generalized reciprocity," where individuals cooperate based on the expectation that "I will do this for you now... in the confident expectation that someone else will do something for me down the road" (Putnam 2000, p. 21). Putnam largely focused on regions rather than individuals, but when extended to the labor relations context, unions and professional associations can be viewed as "civic associations" that generate the social capital necessary for cooperation. However, as noted in our opening, a central challenge arises as groups scale up in size. Putnam distinguishes between "bonding" social capital (tight-knit, exclusive groups) and "bridging" social capital (outward-looking, inclusive networks). In labor-management relations, the transition from the "bonding" trust of a small workplace team to the "bridging" trust required for sectoral bargaining or large-scale corporate restructuring is where the probability of "behavioral or perceptual error" rises sharply. As social distance grows, the "thick trust" of face-to-face interaction is replaced by a "thin trust" that is significantly more fragile.

This problem of scale is further explored in the political science literature by Fukuyama (1995). Regarding trust in large-scale institutions, Fukuyama (1995) argues that trust is a culturally embedded structural variable (an ‘initial condition’ or ‘fixed-effect’ in economic terms), whereby "high-trust" societies and organizations possess a distinct competitive advantage because they can sustain complex cooperation with "modest informational requirements." Conversely, "low-trust" environments are burdened by high transaction costs, as every agreement must be "armoured" by exhaustive legal monitoring. This insight is particularly relevant to the industrial relations landscape: a firm with high internal trust can pivot more quickly to new market demands, whereas a low-trust firm remains trapped in the "non-cooperative strategic bargaining" typical of the self-regarding models discussed earlier. La Porta et al. (1997) provide empirical weight to this, showing that trust tends to be lower in large organizations. This suggests that as firms grow or bargaining units expand, the inherent "social distance" and “noise” of the system increases internal fragmentation and the risk that "sharks" and "knaves" (Binmore 1998b) will take advantage of reduced visibility and weaker social sanctions.

Contemporary socio-political literature offers a pragmatic alternative to the "other-regarding" optimism of social capital theory. Cook, Hardin, and Levi (2005) propose a model of "cooperation without trust," centered on the concept of *encapsulated interest*. They argue that in many modern settings, including disorganized Wagner-style labor markets (Traxler, 1996) where non-union worker populations are large, cooperation is not born of mutual affection or shared social preferences, but of a cold calculation: I cooperate with you because I believe it is in *your* interest to maintain the relationship and your reputation (Hardin 2002). This view, though it aligns with the Hobbist perspective described in the economic approach, departs from economics by emphasizing that it is the socio-political environment, e.g., the presence of reliable institutions, reputation markets, and legal frameworks etc., that makes such cooperation possible. For labor-management relations, this implies that even in the absence of other-regarding actors, cooperation can be sustained if institutions are robust enough to make defection too costly to contemplate (Brandl and Traxler, 2011). Thus, the socio-political view reinforces that the evolution of trust is not merely a propensity to cooperate or a psychological event, but a structural one, dependent on the design of the networks and institutions that frame the employment relationship. This is also a perspective, as we shall see, shared in the industrial relations approach.

3.3 The Industrial Relations View: The Institutional "Third Way"

The Industrial Relations (IR) perspective, although less recognized in the broader social sciences partly because of the few schools offering degree programs in the field, offers a sophisticated synthesis of cooperation and trust that moves beyond the behavioral "idealism" versus game-theoretic "cynicism" dyad. One might characterize the IR school as a kind of "third way" that prefigured the work of Nobel Prize laureates like Schelling and Aumann, as it does not rely on the "evolution of cooperation" in a vacuum or the assumption of perfectly aligned interests (i.e., a view termed as “unitarist” in the IR approach).

IR, for the uninitiated, has both political and academic origins. The industrial relations political origins emerged in the late 1910s-early 1920s in the Britain, Canada and the United States (Kaufman et al, 2018). The impetus was growing public alarm in Anglo-American countries over the escalating level of conflict, violence, and class polarization in employer-employee relations. Canada and the US established federal-level government investigative committees, the Royal Commission on Industrial Relations (1919) in Canada and the Commission on Industrial Relations (1911-1915) in the US, to travel cross-country, gather evidence, and report their findings and overall evaluation. Simultaneously, on the academic side, IR begins with the historical insights of three Anglo-American scholars operating in all three countries at the turn of the 20th century. In the British case, Sidney and Beatrice Webb ([1897] 1920) wrote in the context of late 19th and early 20th century British experience with the industrial revolution. They viewed collective bargaining as the essential mechanism to replace the individual "higgling" of the market with a "common rule." For the Webbs, cooperation was a structural achievement rather than one rooted in innate human other-regarding behaviour; institutions like collective bargaining provide a baseline of stability in an otherwise volatile employment relationship. This was echoed in America by John R. Commons (1934), who emphasized that the "working rules" of collective action were what allowed for "reasonable value" and industrial peace. These early scholars recognized that without institutional intervention, the inherent power imbalance and divergence of interests between labor and capital would inevitably lead to conflict and non-cooperative outcomes predicted by self-regarding models.

Less well-known, but no less impactful, is the institutional foundation of (future Prime Minister of Canada) Mackenzie King (1918) in his "Industrialists' Creed," which argued that labor, capital, management, and the community (as represented by elected government officials) are four partners in industrial relations (Kaufman et al., 2018). King's non-union solutions to the 'labour problem", at the time, were published in a book, *Industry and Humanity* (1918), and adopted by none other than J.D Rockefeller across his vast industrial empire, some would say cynically to deflect unionization drives and deal with the often-violent unrest that was spreading across North American worksites.

Today, modern pluralist models of labour relations still rely on this idea of "actors" in the system – management, union, and government -- interacting with each other to produce outcomes, mediated by institutions. King's view suggested that conflict is a natural condition that must be mediated through government assistance and managed partnership, rather than suppressed through command and control (an idea far ahead of its time).

This IR logic reached its theoretical zenith in Walton and McKersie's (1965) *A Behavioral Theory of Labor Negotiations*. Walton and McKersie's view of labour relations was pragmatic: "Labor negotiations usually contain a mixture of conflict and collaborative items: the need to defend one's self-interest and at the same time engage in joint problem-solving (Walton and McKersie, 1991: 3)". IR behavioral theory provided the bridge between the early IR scholarship of the Webbs and the burgeoning field of game theory, by distinguishing between distributive bargaining (win-lose zero-sum games) and integrative bargaining (non-zero-sum win-win problem solving). The 1965 volume and its later iterations (Walton and Mcvkersie, 1991), demonstrated that while conflict is inherent, "integrative" success requires "attitudinal re-structuring"— i.e., the deliberate cultivation of trust and the reduction of "perceptual errors" through disciplined communication. Their work also influenced the "Getting to Yes" (Fisher and Ury, 1981) framework famously applied in the Camp David Accords, providing an example that high levels of cooperation can be attained in large groups when informational requirements are met through "principled negotiation". By providing a framework where parties could expand the "pie" before dividing it, Walton and McKersie showed that cooperation could be attained even in high-stakes, large-group interactions, so long as the "informational requirements" for trust were met.

Building on these foundations, especially the work of Commons (1934), Bruce Kaufman (2004) has argued that the "institutions" of industrial relations are the essential channels that allow a system to converge to cooperative outcomes. This approach recognizes that the employment relationship is governed by a "web of rules" (Dunlop, 1958), an emergent property of shared knowledge/understanding that is generated by the interaction of labor, management, and state actors (i.e., an idea not too dissimilar from the 'norms' that arise to solve multiple Nash equilibria in game theoretic settings). Unlike the neoclassical economic view, which sees these rules as "frictions" or as loose "norms" that form as a means of solving multiple equilibria in strategic game situations, the IR view sees them as essential "vessels" that prevent the high-pressure divergence of interests from prompting mutual defection or exploding into a work stoppage.

These labour market institutions—ranging from trade unions and statutory works councils to informal non-union communication systems—serve as information-sharing centers and guardians of pro-social behaviour. By providing workplace/labour-market "voice" (Hirschman, 1970; Freeman & Medoff, 1984), they reduce information-asymmetries and lower the probability of behavioral or perceptual errors mentioned in our opening. For instance, the "mutual gains" model proposed by Kochan and Osterman (1994) demonstrates that when labor is treated as a stakeholder rather than a variable cost, a high level of cooperation can be attained even in large groups. This is not because the actors have suddenly become "nice," but because the institutions provide a predictable "tit-for-tat" framework that punishes opportunism and rewards transparency.

IR also acknowledges that while actors are constrained by the external environment (e.g., market forces, technology, legal system etc.,) they are not bound by these forces. There is scope for “strategic choice” as introduced by Kochan, Katz, and McKersie (KKM) (1986). The idea that firm and union conduct, and hence performance, is not constrained by industry structure, but is instead a strategic choice variable, served as a critical precursor to modern economic studies of managerial performance. It effectively prefigured the work of Bloom and Van Reenen (2007, 2016, 2018) by two decades. By arguing that the locus of industrial relations had shifted from the "middle tier" of collective bargaining to the "top tier" of executive discretion, KKM identified that the internal organization of the firm—specifically the move toward sophisticated, non-union human resource management—was no longer a secondary administrative function but a primary determinant of competitive survival. While Bloom and Van Reenen later utilized large-scale econometric data to quantify "management as a technology" and its impact on productivity, KKM’s *Transformation* thesis had already established the theoretical groundwork: that the "black box" of workplace organization is the fundamental engine of economic performance. In this light, the modern focus on managerial quality is the empirical fulfillment of KKM’s earlier observation that firm-level strategic choices are the true architects of the modern labor landscape.

Contemporary research by Bryson, Gomez, and Willman has refined this institutional framework by analyzing employee-relations systems as specific "voice regimes." This research stream moves the IR approach away from a simple union/non-union or collective bargaining/HRM dichotomy to a framework of "make or buy" decisions by employers (Willman, Bryson, and Gomez, 2006), in which a range of voice options might be accepted or invested in. In this view, an employer seeking a cooperative outcome with labour faces a governance choice: the employer can "make" their own voice system (non-union direct voice via an HR unit) or "buy" it by subcontracting the management of labor to a union. This suggests that unions can provide – if the 'price is right' - a unique "comparative advantage" in managing workplace conflict, particularly where the costs of 'making voice" and labor defection are high (Willman et al., 2013).

The voice-regime approach highlights the experiential nature of voice systems, noting that the benefits of any voice regime, in particular the "buy decision" (i.e., union-outsourced collective representation) are often hard for both parties to observe *a priori*; that is, until the voice regime has been purchased or experienced by the parties (Bryson, Gomez, and Willman, 2006).

Though invoked in various ways in other disciplines via "focal points" and "shared norms", the efficacy of the "third way" IR institutional approach depends on one final concept unique to the IR view: the "frame of reference" held by the participants (Fox, 1974). A unitarist frame assumes a natural harmony/alignment of interests between management and labour (often leading to a "Butlerian" disappointment when conflict arises). Pluralists, on the other hand, assume conflict is inherent in worker-management relations; not via the struggle over control of the "means of production" – as the Marxist frame would – but inherent in the hierarchies of modern industry (i.e., managers often have to 'boss' workers around and this creates social frictions). Moreover, again unlike the Marxist frame, the pluralists assume that this form of inherent conflict is manageable through institutions that, over time, build trust and/or increase the costs of conflict (or likewise raise the benefits to cooperation).

This perception of how to interpret the employment relationship —whether employees see their employer counterparts as a "partner" or a "shark"—is what ultimately determines whether a relationship settles into a cooperative or non-cooperative equilibrium. While Fox famously distinguished between the unitarist, Marxist and pluralist perspectives, recent work by Budd (2011, 2020) has expanded this typology to better capture the complexities of modern global economies. Budd introduces the "egoist" frame—a direct parallel to the self-regarding neoclassical model—where labor is viewed strictly as a commodity and trust is irrelevant. More crucially, Budd replaces the Marxist frame with the "critical" frame, which in contemporary society views the employment relationship through the lens of systemic power imbalances and inherent antagonism not just between capital and labour, but also along other social cleavages such as race and gender. By delineating these four frames—unitarist, pluralist, egoist, and critical—Budd shows that the "choice" to cooperate is not just strategic, but ideological. If an actor operates from a critical or egoist frame, the institutional "vessels" of the IR system are likely to be viewed as mere obstacles or instruments of control. It is only within the pluralist frame that "third way" IR institutions can function as intended, mediating divergent interests and "armouring" the social contract against the strategic traps of mutual defection. When unitarist or critical frames begin to dominate IR actor views – workers, managers and the state– there is a likelihood that cooperation is eschewed and more latent conflict becomes manifest.

3.4 A Synthesis View: The Trust-Conflict Matrix

To reconcile the diverse perspectives from economics, sociology, and industrial relations, this review of the literature allows one to map the likelihood of cooperation onto two primary dimensions: the level of Trust (i.e., interpersonal or institutional) and the Cost of Conflict (i.e., the economic or social penalty for failing to reach an agreement). This 2x2 matrix (as seen in Figure 2) identifies four emergent "climates" of labor-management relations. The decision to extricate “trust” from an emergent phenomenon and instead make it an ‘input’ into the determination of cooperation, is based on the view obtained from almost every perspective reviewed here that either views ‘norms’ as lying outside the system (economic view), as emergent from social networks (sociology/political science) or as a ‘web of rules’ surrounding the actors (industrial relations).

[Figure 2]

In <u>Quadrant I (High Trust / Low Cost of Conflict),</u> we find the "evolution of cooperation" described by Axelrod (1984) and the social capital theorists. Here, because trust is high, parties default to a "tit-for-tat" strategy. Cooperation is relatively easy to sustain because the social ties among the parties are strong (Granovetter's "strong ties"), even if the immediate economic stakes of an impasse are not existential. This is the domain of "Butlerian" optimism, where pro-social preferences carry the relationship.

<u>Quadrant IV (Low Trust / High Cost of Conflict)</u> represents the classic Hobbist or neoclassical economic trap. In this space, the parties recognize that a breakdown in the relationship would be devastating (high cost), but they lack the trust to cooperate openly. This leads to the "distributive bargaining" identified by Walton and McKersie (1965). The interaction is characterized by strategic gaming, information hoarding, and "hard" bargaining, as each party

attempts to claim a larger share of a fixed pie, while "armouring" themselves against the other's potential defection.

Quadrant III (Low Trust / Low Cost of Conflict) is a zone of chronic friction and instability. Because the costs of walking away are low and trust is non-existent, there is little incentive to invest in "integrative" problem-solving. This quadrant is often characterized by high turnover (exit) and open conflict, mirroring the breakdown of cooperation seen in economic self-regarding models as group size increases and monitoring fails.

The most critical area for our "Third Way" IR analysis is Quadrant II (High Trust / High Cost of Conflict). This is the domain of *Integrative Bargaining* and "win-win" outcomes. We argue that this quadrant is rarely reached by accident or through simple evolution; rather, it is a structural achievement of industrial relations institutions. Where the stakes are high, the "perceptual errors" and "noise" of large-group interaction are most dangerous. It is here that the pluralist "frames of reference" (Fox 1974; Budd 2020) and the voice regimes analyzed by Bryson, Gomez, and Willman (2006, 2013) become essential. These institutions provide the "vessels" that allow distributive tensions to diffuse productively and trust to remain high even under pressure, transforming latent conflict into mutual gains. By lowering the "informational requirements" for trust, these IR systems ensure that parties can navigate high-stakes negotiations without falling into the strategic traps of Quadrant IV.

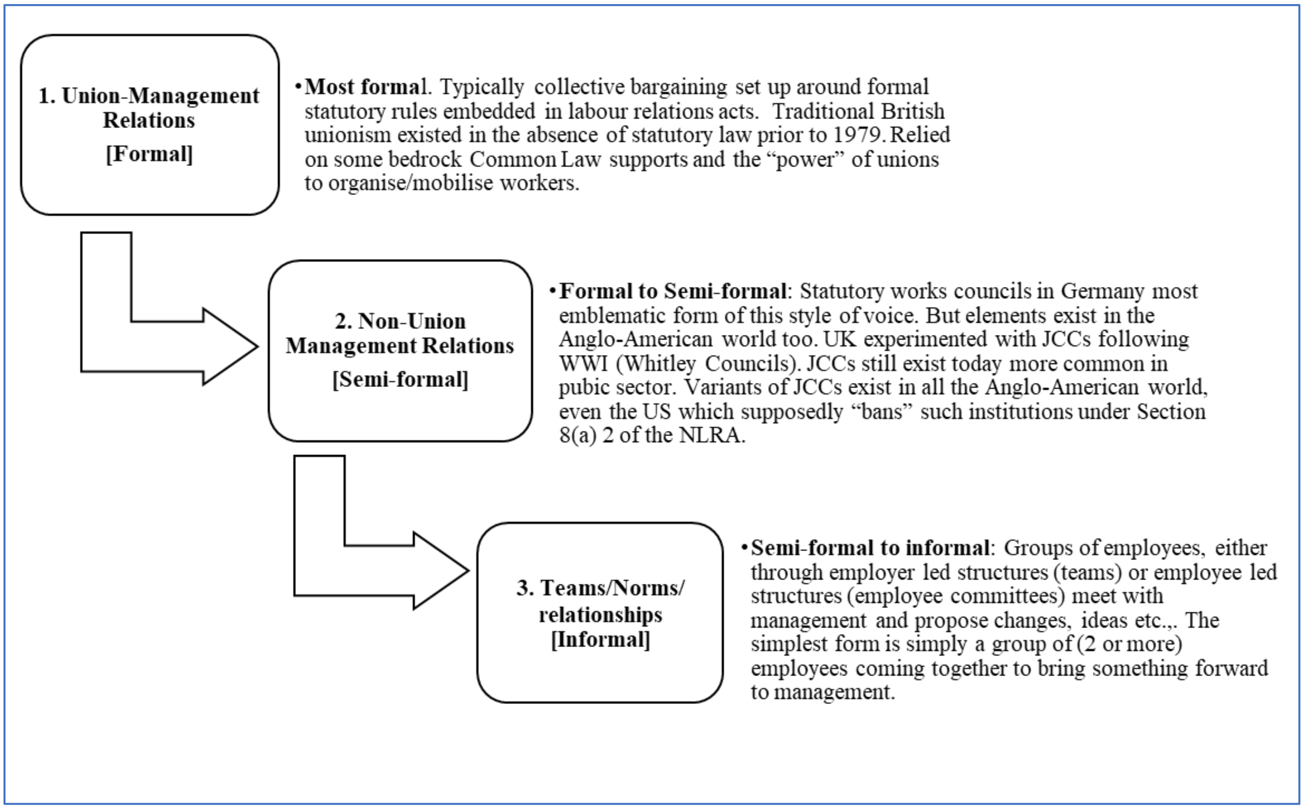
4. CONCLUSION

The review of the social science literature on trust and cooperation as applied to labour-management relations, reveals a fundamental tension between the innate human capacity for pro-social behavior and the structural challenges of modern, large-scale industrial organization. The literature demonstrates that while humans may be "wired" for reciprocity in dyadic or small-group settings, the probability of cooperation falls as group size increases and the system becomes prone to behavioral and perceptual errors.

In the absence of intervention, self-regarding economic models correctly predict a descent into non-cooperative strategic bargaining or chronic friction. The "Problem of Scale" in labor-management relations is not merely an issue of increasing numbers, but one of increasing social distance and "noise". As organizations grow, the "thick trust" of face-to-face interaction is often replaced by a "thin trust" that is easily subverted by the "sharks" and "knaves" of strategic interaction. The literature reviewed suggests that the resolution to this problem is not found in the "Butlerian" optimism of intrinsic niceness, but in the structural achievement of Industrial Relations (IR) institutions. By acting as release valves in the employment relationship, these institutions—whether through formal union-management collective bargaining, statutory works councils, or robust HR systems—provide the necessary outlets for distributive tensions at work and as a means of enforcing the social contract. IR institutions such as collective bargaining and high-performance HR management lower the informational requirements for trust to evolve and transform potential conflict into integrative bargaining and "win-win" outcomes.

As synthesized in the Trust-Conflict Matrix (Figure 2), reaching the ideal climate of integrative bargaining requires more than just high stakes; it requires a pluralist frame of reference that recognizes conflict as inherent but manageable through structured voice. Ultimately, the choice of "voice regime"—whether an employer chooses to "make" or "buy" their cooperative infrastructure—is a critical governance decision that determines the long-term stability of the firm. For practitioners and policymakers, the implication is clear: trust is not a static resource to be assumed, but a variable to be institutionalized. By countering the eroding quality of critical frames of reference and instead fostering pluralist environments that invest in transparent voice regimes, organizations can navigate the complexities of scale. Likewise, societies can ensure that cooperation remains a stable equilibrium even in the face of divergent employer-employee interests.

Figure 1: Three Levels of Labour-Management Relations



Source: Authors contribution

Figure 2: The Trust-Conflict Matrix in Labor Relations

	Cost of Conflict	
Trust	**Low**	**High**
High	**Quadrant I: Evolutionary Cooperation** *Mechanism:* Tit-for-Tat / Social Capital *Outcome:* Spontaneous, "Butlerian" Cooperation	**Quadrant II: Institutional Integration** *Mechanism:* "Third Way" / Pluralist IR *Outcome:* Integrative Bargaining (Win-Win)
Low	**Quadrant III: Chronic Friction** *Mechanism:* Exit / Disengagement *Outcome:* Open Conflict / Low Productivity	**Quadrant IV: Strategic Gaming** *Mechanism:* Hobbist / Self-Regarding *Outcome:* Distributive Bargaining (Win-Lose)

Source: Authors contribution

References

Akerlof, G. A. (1997). Social distance and social decisions. *Econometrica*, 65(5), 1005–1027.

Arrow, K. J. (1972). Gifts and exchanges. *Philosophy & Public Affairs*, 1(4), 343–362.

Arrow, K. J., & Debreu, G. (1954). Existence of an equilibrium for a competitive economy. *Econometrica*, 22(3), 265–290.

Arrow, K. J., & Hahn, F. H. (1971). *General competitive analysis*. Holden-Day.

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39.

Aumann, R. J. (1985). What is game theory trying to accomplish? In K. J. Arrow & S. Honkapohja (eds.), *Frontiers of economics*. Basil Blackwell.

Axelrod, R. (1984). *The evolution of cooperation*. Basic Books.

Axelrod, R. (1986). An evolutionary approach to norms. *American Political Science Review*, 80(4), 1095–1111.

Axelrod, R. (1987). The evolution of strategies in the iterated Prisoner's Dilemma. In L. Davis (ed.), *Genetic algorithms and simulated annealing*. Morgan Kaufmann.

Axelrod, R. (1997). *The complexity of cooperation: Agent-based models of competition and collaboration*. Princeton University Press.

Axelrod, R., & Hamilton, W. D. (1981). The evolution of cooperation. *Science*, 211(4489), 1390–1396.

Binmore, K. (1993). *Game theory and the social contract, Vol. 1: Playing fair*. MIT Press.

Binmore, K. (1998a). *Game theory and the social contract, Vol. 2: Just playing*. MIT Press.

Binmore, K. (1998b). The evolution of the social contract. *The Journal of Socio-Economics*, 27(4), 475–480.

Binmore, K. (2005). *Natural justice*. Oxford University Press.

Binmore, K. (2006). *The origins of fair play*. Oxford University Press.

Blau, P. M. (1964). *Exchange and power in social life*. Wiley.

Bloom, N., Sadun, R., & Van Reenen, J. (2016). *Management as a technology?* (NBER Working Paper No. 22327). National Bureau of Economic Research.

Bloom, N., & Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *The Quarterly Journal of Economics*, 122(4), 1351–1408.

Bowles, S., & Gintis, H. (2008). Cooperation. In S. N. Durlauf & L. E. Blume (eds.), *The New Palgrave Dictionary of Economics*. Palgrave Macmillan.

Brandl, B., & Traxler, F. (2011). Labour relations, economic governance and the crisis: Turning the tide again? *Labor History*, 52(1), 1–22.

Bryson, A., Gomez, R., & Willman, P. (2006). *From the two faces of unionism to the Facebook society: Union voice in a 21st century context*. LSE Centre for Economic Performance.

Bryson, A., Gomez, R., & Willman, P. (2013). Workplace voice and civic engagement: What theory and data tell us about unions and their relationship to the democratic process. *Osgoode Hall Law Journal*, 50(4), 963–998.

Budd, J. W. (2011). *The thought of work*. ILR Press.

Budd, J. W., & Bhave, D. (2020). The employment relationship. In A. Wilkinson, N. Bacon, S. Snell, & D. Lepak (eds.), *The SAGE handbook of human resource management* (2nd ed.). SAGE Publications.

Burt, R. S. (1992). *Structural holes: The social structure of competition*. Harvard University Press.

Burt, R. S. (2005). *Brokerage and closure: An introduction to social capital*. Oxford University Press.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120.

Coleman, J. S. (1990). *Foundations of social theory*. Harvard University Press.

Commons, J. R. (1934). *Institutional economics: Its place in political economy*. Macmillan.

Cook, K. S., Hardin, R., & Levi, M. (2005). *Cooperation without trust?* Russell Sage Foundation.

Costa, A. C. (2004). Trust. In C. D. Spielberger (ed.), *Encyclopedia of applied psychology* (pp. 611–620). Elsevier.

Debreu, G. (1959). *Theory of value: An axiomatic analysis of economic equilibrium*. Yale University Press.

Dixit A. and B. Nalebuff (1991): Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life, W.W. Norton.

Dixit, A. and S. Skeath (2004): Games of Strategy, 2.ed., W.W. Norton.

Dunlop, J. T. (1958). *Industrial relations systems*. Henry Holt and Company.
Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The Quarterly Journal of Economics*, 114(3), 817–868.

Fox, A. (1974). *Beyond contract: Work, power and trust relations*. Faber and Faber.

Freeman, R. B., & Medoff, J. L. (1984). *What do unions do?* Basic Books.

Freeman, R.B & Lazear, E.P (1996). An Economic Analysis of Works Councils. In *Works Councils: Consultation, Representation and Cooperation in Industrial Relations*, University of Chicago Press, 1996. Eds. Joel Rogers and Wolfgang Streeck.

Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. Free Press.

Gintis, H. (1976). The nature of labor exchange and the theory of capitalist production. *Review of Radical Political Economics*, 8(2), 36–54.

Gintis, H. (2000). Strong reciprocity and human sociality. *Journal of Theoretical Biology*, 206(2), 169–179.

Gollan, P. J., Kaufman, B. E., & Taras, D. (2015). *Voice and involvement at work: Experience with non-union representation*. Routledge.

Goodman, P. S. (1986). *Designing effective work groups*. Jossey-Bass.

Gomez, R, Michael Barry, Alex Bryson, Bruce E. Kaufman, Guenther Lomas, Adrian Wilkinson,. 2018. The "good workplace". *Journal of Participation and Employee Ownership*, Volume 2, Issue 1 2018,

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.

Granovetter, M. S. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.

Hardin, R. (2002). *Trust and trustworthiness*. Russell Sage Foundation.

Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Harvard University Press.

Hume, D. ([1758] 1985). *Essays: Moral, political, and literary*. Liberty Classics.

Inoue, T. (2005). Do pure indivisibilities prevent core equivalence? Core equivalence theorem in an atomless economy with purely indivisible commodities only. *Journal of Mathematical Economics*, 41(4-5), 571–601.

Kaufman, B. E. (2004). *The global evolution of industrial relations: Events, ideas and the IIRA*. International Labour Office.

Kaufman, B. E., Barry, M., Gomez, R., & Wilkinson, A. (2018). Evaluating the state of the employment relationship: A balanced scorecard approach built on Mackenzie King's model of an industrial relations system. *Relations Industrielles / Industrial Relations*, 73(4), 664–701.

King, W. L. M. (1918). *Industry and humanity: A study in the principles underlying industrial reconstruction*. Thomas Allen.
Kochan, T. A., Katz, H. C., & McKersie, R. B. (1986). *The transformation of American industrial relations*. Basic Books.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Trust in large organizations. *The American Economic Review*, 87(2), 333–338.

Laffont, J. J. (2000). *Incentives and political economy*. Oxford University Press.

LeRoy, M. H. (2006). Not ready for prime time: Why a generalized statutory ban on non-union employee representation groups should be retained. *Socio-Economic Review*, 4(2), 293–311.

Lucas, J. W., & Lovaglia, M. J. (2006). Legitimation and institutionalization as trust-building: Reducing resistance to power and influence in organizations. *Advances in Group Processes*, 23, 79–102.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.

Milgrom, P., & Roberts, J. (1988). An economic approach to influence activities in organizations. *American Journal of Sociology*, 94, S154–S179.

Mill, J. S. (1848). *Principles of political economy*. John W. Parker.

Putnam, R. D. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393–404.

Sako, M. (1992). *Prices, quality and trust: Inter-firm relations in Britain and Japan*. Cambridge University Press.

Schelling, T. C. (1978). *Micromotives and macrobehavior*. W. W. Norton & Company.

Shubik, M. (1959). *Strategy and market structure: Competition, oligopoly, and the theory of games*. Wiley.

Smith, A. ([1776] 1986). *The wealth of nations*. Penguin Books.

Smith, V. L. (2003). Constructivist and ecological rationality in economics. *American Economic Review*, 93(3), 465–508.

Steiner, I. D. (1972). *Group process and productivity*. Academic Press.

Stiglitz, J. E. (1987). The causes and consequences of the dependence of quality on price. *Journal of Economic Literature*, 25(1), 1–48.

Taylor, M. (1976). *Anarchy and cooperation*. Wiley.

Tirole, J. (1988). *The theory of industrial organization*. MIT Press.

Traxler, F. (1996). Collective bargaining and industrial change: A case of disorganization? A comparative analysis of eighteen OECD countries. *European Sociological Review*, 12(3), 271–287.

Walton, R. E., & McKersie, R. B. (1965). *A behavioral theory of labor negotiations: An analysis of a social interaction system*. McGraw-Hill.

Webb, S., & Webb, B. ([1897] 1920). *Industrial democracy*. Longmans, Green & Co.

Willman, P., Bryson, A., & Gomez, R. (2006). The sound of silence: Which employers choose no employee voice and why? *Socio-Economic Review*, 4(2), 231–253.

Willman, P., Bryson, A., Kretschmer, T., & Gomez, R. (2013). The comparative advantage of non-union voice in Britain, 1980–2004. *Industrial Relations: A Journal of Economy and Society*, 52, 194–220.

Willman, P., Coen, D., Currie, D., & Siner, M. (2003). The evolution of regulatory relationships: Regulatory institutions and firm behaviour in privatized industries. *Industrial and Corporate Change*, 12(1), 69–89.