ATMOSPHERE, PRIVATE ORDERING AND INDUSTRIAL PLURALISM: WILLIAMSON'S EVOLVING SCIENCE OF ORGANIZATION

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Abstract. The major contribution of Oliver Williamson, who was a 2009 Nobel Prize co-Laureate in economics, consists of proposing a heuristic analysis of governance structures, namely, the firm, the market, and what he will later call the "hybrid forms". This cardinal issue in organizational economics has made it possible to propose rigorous arbitration tools for the famous "make or buy" decisions in modern market economies based on asset specificity and quasi-rents. However, Williamson's work goes far beyond these contributions alone. His contribution is based on a multidisciplinary theoretical background in building the science of organization. This is the important but sometimes neglected aspect of Williamson's work that I wish to highlight in this article in memory of Williamson in regard to three major pieces on atmosphere (and informal organization), private ordering and industrial pluralism. In doing so, I also propose reconsidering the different stages of Williamson's evolving science of organization from recent neo-institutional works.

Keywords. Oliver E. Williamson, science of organization, atmosphere, private ordering, industrial pluralism, informal organization

JEL Classification. B20, B40, D20, L20

1. Introduction

It had barely been 6 months since I had started my PhD when I had the wonderful opportunity to meet Oliver Williamson in 2006 in France, in Cargèse in Corsica, during summer schooling at what was at the time called ESNIE (the European School for New Institutional Economics). Fortunately for me, by chance Williamson would be the discussant at my session, in which we were to discuss our doctoral thesis projects. I chose to present what was my first working paper, entitled “Power, Ownership and Entity: Some Issues on the Nature of the Firm.” The commentary provided on my juvenile work was brief, but it marked a crucial moment in my career and convinced me of the importance of pragmatic methodology (see Williamson, 2009), providing a heuristic analysis of the firm.

To realize the theoretical and empirical significance of Williamson's contribution to economics, I decided to continue the analysis of his work, which I had already begun. To do this, I chose a particular prism, the one defended by Williamson (1993b) through the notion of "eunomics" developed by Lon Fuller, which is defined “as the science, theory, or study of good order and workable arrangements” (Fuller, 1954: 477). Williamson (1993b: 43) reminds us that the legal work of Fuller on organizations “never realized that ambition”; in many ways, Williamson appeared to pursue Fuller's unfinished work by proposing a general theory of organization.

Indeed, since the defense of his doctoral thesis in 1963 (which was published the following year; see Williamson, 1964) and the publication of his first article, “Selling Expense as a Barrier to Entry” (see Williamson, 1963), his contributions have been numerous and widely disseminated in social science communities. An original methodological work of Williamson was published in 2009—with the article ‘Pragmatic Methodology: a Sketch, with Applications to Transaction Cost Economics’—which also marked his year as the Nobel Prize co-Laureate in economics. Other recent works include his speech at the *Sveriges Riksbank* and academic tributes to Ronald Coase, and syntheses on his work that have nevertheless been published since (see Williamson, 2010a, 2010b, 2014, 2016).

Williamson has benefited from a great influence in economics, especially in institutional and organizational economics but also in management, sociology and law and to a lesser extent in political science. Williamson's major contribution consists of proposing a heuristic analysis (which is concerned with the way of discovering facts) of governance structures that include the firm, the market, and what he will later call the “hybrid forms” (see Williamson, 1991, 1999b, 2005b).

In his main books, Williamson (1975, 1985, 1996c) studies the notion of transaction costs and their impact on the existence and complex organization of the firm. In a way, the Williamsonian approach cultivates multidisciplinarity in social sciences (see Williamson, 96a, 2005a). His work, which has been the subject of numerous empirical studies at the international level, has the great merit of shedding light on a central question in industrial economics, namely, that of the boundaries of the firm; i.e., when should an economic agent decide to no longer use the market to carry out a transaction but rather resort to vertical integration, that is to say, to the firm (see Williamson, 1971, 1974, 1979, 1984a, 1988)? This cardinal question of debates in organizational economics has made it possible to propose rigorous arbitration tools between subcontracting and the internal realization of an economic activity (the famous “make or buy” strategic decision) in market economies based, more and more, on the specificity of assets (whether they are physical, human or immaterial) and quasi-rents (see Williamson, 1983, 1984b).

Williamson sets out to understand the superiority of the firm vis-à-vis the market in these economic situations where the optimal allocation of specific resources is no longer guaranteed due to limited rationality and the potentially opportunistic behavior of economic agents (see Williamson, 1993c). The firm then emerges as the most efficient institution of capitalism for generating the creation of economic value and minimizing transaction costs. Thus, Williamson develops the building blocks of a theory of the firm as a hierarchy based on the employment contract. Thus, subordination justifies the superiority of the firm vis-à-vis the market, particularly in legal matters, because it allows employers to benefit from hierarchical authority (in short, to be able to give legitimate directives to employees with a very high probability of acceptance and without additional costs), thereby allowing resources to be allocated without resorting to the price mechanism (see Williamson, 1967, 1995, 1996b; Williamson and Ouchi, 1983; Williamson et al., 1975).

For Williamson, this is the firm that constitutes the best governance structure to ensure the smooth running of the transaction when the specific assets generate (due to the process of "fundamental transformation"[1]) high value, i.e., through the employment relationship. It is clear that the employment relationship is at the heart of capitalism and that the employment contract, which brings out the formal relationship of subordination, is an invariable principle of modern firms that can be found at the heart of social regulations in developed countries. Williamson's theory of the firm thus unveils a realistic approach in view of the initial work of the 1991 Nobel Prize winner in economics, Ronald Coase (1937), who, alongside John Commons (1934), is one of the economists who most influenced Williamson's work. The analysis of governance structures should not be disconnected from that of the institutional environment—that is, of the set of rules influencing production—because these rules structure the attributes of transactions that themselves determine the type of contract to be implemented (see Williamson, 1979, 2000).

For Williamson, the firm is a hierarchical institution based on an internal private ordering specific to the firm itself (Williamson, 2002). Market regulation is then replaced by "both public and private" authoritarian regulation (Williamson, 1999a). Authority is a source of value in the organization, in the view of Kenneth J. Arrow (1974). Authority allows one to divide and direct the work of the employee but also to settle disputes at a lower cost. The authority sets the "rules of the game within" the firm. However, firm organization does not stop at formal rules (see also North, 1986). Private collective logic falls within the realm of governance. For Williamson (2002: 439), "not only does transaction-cost economics name the transaction as the basic unit of analysis, but governance is the means by which to infuse order, thereby to relieve conflict and realize mutual gain."

I have just offered a synthesis of what constitutes for me a part of the most obvious and resilient organizational contributions of Williamson's work. I am convinced of the fact that this aspect of his work, which deserves to be recalled in this special issue in memory to Williamson, resists the ongoing institutional evolution of capitalist firms[2].

[1] See Baudry and Chassagnon (2012), Hart (2020) and Vatiero (2020).

[2] With regard to the resilience of the firm as a hierarchy based on private ordering, in my opinion, it is rather true that Williamson's analysis of hybrids (hybrid forms are neither firms nor markets, but a sort of synthesis of the two, similar to interfirm cooperation networks) is open to criticism (see Baudry and Chassagnon, 2012) and obscures this quasi-ontological distinction between the firm and the market (see Hodgson, 2002, Chassagnon, 2014b, Pagano and Vatiero, 2015). However, it is above all his desire to dismiss the power of economics and of the economy while resorting to a multidisciplinary theoretical background and while wishing to build a "science of organization" (see Williamson, 1990, 1993b) that appealed to me the most in the work of Williamson (see Baudry and Chassagnon, 2010, 2019), and this in particular in the spirit of his first reflections in his doctoral thesis being clearly more Simonian (see Simon, 1957) than Coasian (see Williamson, 1964).

Moreover, Williamson's contributions to a science of organization are also great and are very useful for rethinking the internal organization of modern firms from the concept of atmosphere (which refers to the organizational atmosphere). This is an important but sometimes neglected aspect of Williamson's work that I wish to highlight in this article in memory to Williamson because it constitutes a research program in the making, which coincides with the development of organizational economics (Gibbons and Roberts, 2013).

In his 1993 paper on “the evolving science of organization,” Williamson argues “the science of organization that is herein described has progressively evolved through four successive stages. The first stage is associated with Ronald Coase and entails "informal" analysis. Stages two and three involve "preformal" and "semiformal" analysis and are associated with transaction cost economics. A "fully formal" treatment of what transaction cost economics describes as "in-complete contracting in its entirety" completes the sequence” (Williamson, 1993b: 36). I think that we can now add a fifth stage, which would be the formalization of the informal organization that has made it possible to use Williamson's words (see Williamson 1996a) to make organizational economics a subfield of economics unorthodox. Likewise, I think that the first works of Williamson (1964-1975) in particular offer material for designing a sixth stage of the evolving science of organization, which will be in tune with the modern institutional environment.

To account for this, the paper is organized into four sections preceding a conclusion (opening a new research perspective). Section 2 proposes to approach the organizational atmosphere in Williamson’s work, notably from consummate cooperation and reciprocity considerations, and to inscribe the concept of atmosphere in his objective to build a science of organization. Section 3 adds a fifth step to Williamson’s evolving science of organization based on recent work on relational contracts, organizational design and informal organization. Section 4 shows the value of rethinking atmosphere and the foundations of informal organization in light of private ordering and industrial pluralism to lay the groundwork for the sixth and new stage of the evolving science of organization of Williamson.

2. Atmosphere, consummate cooperation and reciprocity in the science of organization

The concept of atmosphere can be basically defined as a satisfying exchange relationship that exists within the boundaries of what Williamson calls the “internal organization” of the firm. Williamson’s organizational atmosphere has barely been exploited in the economic literature (see Swedberg, 1990). However, this original concept gives the opportunity to question quantitative and calculative neoclassical economics and to develop cross-fertile studies in organizational economics, management studies and corporate law. This statement was made by Williamson himself, who wrote that “atmosphere is a concept that non-economists are apt to find less objectionable than economists. Indeed, much of what economists do is rationalize how human behavior is to be understood in familiar net gain terms and debunk such relatively loose concepts as atmosphere. Scratch an economist and you find a deeply committed rationalist” (Williamson, 1975: 256).

Williamson criticizes neoclassical economists who compare a firm to a productive function, such as a “machine model of organization” (1993a: 116), and who focus on the intended consequences to the detriment of unintended consequences. In contrast, for Williamson, “individuals regard transactions in a strictly neutral, instrumental manner,” whereas for him, it is essential “to regard the exchange process itself as an object of value” (1975: 38). The internal organization must supply a motivating exchange relation to individuals from the atmosphere (ibid.). Williamson clearly links the notion of atmosphere to the notion of transaction and reminds us then that “atmosphere refers to interactions between transactions that are technologically separable but are joined attitudinally and have systems consequences” (1993a: 135). Three elements can influence the atmosphere of internal organizations and contribute to organizational efficiency: the control of work, the incentive system, and the settlement of disputes (see Baudry and Chassagnon, 2010).

Indeed, Williamson considers that the control of individual productivity can lead to a calculative atmosphere that could be negative for both the governance of the employment relationship and the firm as such. He evokes direct measurement costs but also negative externalities linked to the fact that employees will opt not for consummate cooperation (which involves a substantial level of individual or inter-individual cooperation; see Chassagnon, 2014b).

Williamson adds that incentive systems that are too strong (too close to market incentives and prone to opportunistic behaviors; see also Hodgson, 1988) based on individual performance (on a piece-rate basis) could lead to inefficiency. In contrast, “workers in internal labor markets are metered less intensively” (Williamson, 1975: 79) because their wage rests on a long-term basis so that workers are more involved in their work for the whole organization. For Williamson, the rule of the internal labor markets (see Doeringer and Piore, 1971) that characterizes the traditional vertically integrated firm contributes to what he calls a “sense of justice.” It should then be understood that market incentives can harm the organizational atmosphere (see Baudry and Chassagnon, 2012). Williamson writes: “market exchange tends predominantly to encourage calculative relations […]; internal organization, by contrast, is often better able to make allowance for quasi-moral involvements among the parties” (Williamson, 1975: 38).

Finally, Williamson bases the organizational atmosphere on the settlement of disputes and shows the efficiency of the acceptance logic based on private ordering (Williamson, 2002). This idea is very clearly explained in his 1975 book: “a grievance procedure, with impartial arbitration as the usual final step, allows the firm and the workers to address continually changing conditions in a relatively non-litigious manner” (Williamson, 1975: 81). The author concludes then that “contract revision and renewal occur in an atmosphere of mutual restraint in which the parties are committed to continuing accommodation” (*ibid.)*.

Contracts matter in organizations (including from a relational perspective), and it is clear that to develop his economic analysis, Williamson relies on law and in particular on the American approach known as “industrial pluralism” (with the idea that there are several sources of law in the regulation of industrial relations; see *infra*). Williamson thus often recalls the influence on law in his works of Karl Llewellyn and Ian Macneil. However, through the concept of organizational atmosphere, the contribution of organization theory to the work of Williamson is great, even if he has not explicitly continued its work in this vein. According to him, this is what distinguishes him from the orthodox approach and differentiates his work from other theories of the firm (this point of view is also shared by Puterman, 1986) by casting doubt on the classical rationalism of Frederick Taylor and on the mechanical approaches to the economic organization. In a 1996 article “revisiting legal realism,” he thus opposes, in his work, what he calls orthodox economics based on Chicago's Law & Economics (which he calls L&E) and "his" neo-institutional economics based on law, economics and organization theory (which he calls LEO for Law, Economics, Organization; see also Williamson, 2008).

Very early on, Williamson understood, following the work of Chester Barnard (1938), the importance of informal organization to the *raison d'être* of the capitalist enterprise. It is in this precise spirit that this concept of organizational atmosphere must be considered. The concept of organizational atmosphere must be appreciated as a base for a new, modern vision for firms. Before the development of experimental economics and dynamic game theory in economics and the analysis of prosocial preferences in organizational behavior, Williamson seems finally to set aside the opportunism hypothesis in favor of the hypothesis of reciprocity.

The internal organization of the firm can offer its members a satisfying exchange relationship by considering their feelings, which are intrinsic to individuals and are thus variable. In his 1975 book, Williamson proposes a study of peer groups and simple hierarchy where he explains that internal organization “will presumably be organized by individuals who find market transactions less satisfying than a nonmarket relationship” (Williamson, 1975: 45). The main point on which to focus here is the fact that atmosphere can be considered in an internal organization as the systemic framework between human factors (agency and Simon’s bounded rationality) and environmental factors (structures and North’s institutional environment; see also here the neo-institutional sociology work of DiMaggio and Powell, 1983). In summary, the internal organization of the firm encourages moral commitments (Williamson, 1975), consummate cooperation and reciprocity. The work of Williamson is here similar to the work of Alvin Gouldner (1960) on the “norm of reciprocity” (as he has recalled and in a way anticipates 1984 Akerlof's work on gift exchange in my opinion).

Conceptually, the organizational atmosphere is Williamson's way of bringing the teachings of organization theory into economic analysis; this is why this concept has a multidisciplinary dimension. In particular, Williamson seems explicitly influenced by three distinct but complementary schools of thought, namely, the human relations school of Barnard and Elton Mayo, the behaviorist theory of Simon, and the bureaucratic dysfunctions theory of Robert Merton. Regarding certain organizational aspects, Williamson’s theory is also close to Michel Crozier’s strategic approach to organization (see Baudry and Chassagnon, 2010). However, Barnard's 1938 work plays a special role in the organizational theory of Williamson, as he clearly states in 1990 in a collective work titled *Organization Theory: From Chester Barnard to the Present and Beyond*. In the chapter entitled “Chester Barnard and the incipient science of organization” of this collective book on the ideas of Barnard, Williamson (1990) insists on his debt to this author and highlights the many points they have in common. The Williamsonian concept of organizational atmosphere is influenced by the works of Barnard (1938) and Mayo (1945) that have profoundly criticized the rationalist classical thought to add to the traditional economic function (linked to cost, benefit, and technical efficiency considerations) a collective satisfaction function.

The firm is considered a genuine social system and must be treated as a whole because each individual part is interdependent on the others so that the whole is more than the sum of its parts (see Hodgson and Knudsen, 2010). It is interesting that if systemic analysis is barely investigated by Williamson, he explains in his 1975 book that “reference to atmosphere has the advantage that it expressly raises systems considerations” (Williamson, 1975: 256). In view of the human relations school, organizational atmosphere is for Williamson based on a double logic, i.e., a logic of productivity and a logic of feelings. The latter means that workers are motivated not only by economic interests but also by noneconomic motivations. Again, Williamson is close to Barnard, who makes a clear distinction between formal and informal organizations (both are important for human motivations). Williamson argues from a Barnardian perspective that informal organization “may be a manifestation of a more general condition of atmosphere” (1990, p. 184) and should be profoundly analyzed to establish a science of organization.

We then understand that for Williamson, the informal organization of the firm counts in the minimization of transaction costs. Informal organization matters, notably in terms of economic performance and employee motivations, and this is an aspect that economists must understand and analyze. The concept of organizational atmosphere becomes central in the economic analysis of the firm, its nature, its internal organization and its boundaries. More broadly, the organizational atmosphere is based on informal institutional rules that create satisfying exchange conditions for employees. Williamson (1990: 184) notes that "informal organization arguably helps to safeguard the security and integrity needs of employees."

Williamson also seems to have always been convinced by the value of the concept of organizational atmosphere—that he also envisioned from a perspective of both reciprocity and loyalty (see *infra*)—and even regretted the fact that no researcher had truly pursued the ideas that he himself had decided not to pursue. This is clearly what emerges from the interview he gave to Geoffrey Hodgson and David Gindis published in 2007 in the *Journal of Institutional Economics*. He said: "It struck me when I was writing about markets and hierarchies and the role of informal organization that you should not try to quantify everything. If you do, then you may transform the relationship from one of mutual give and take into one of adversarialness. Some things that are better left in an informal way to which both parties can relate and infer from the relationship. An amount of added responsibility and judgement would implied. At that time I was also interested in some of Albert Hirschman's ideas on loyalty. I was trying to understand what were the important features. Maybe atmosphere was related to some of them. I actually attended a conference and wrote a paper in which I tried to explicate atmosphere. On the one hand it seemed an important concept and on the other it was hard to give a specific content. I actually invited one of my Yale colleagues who embraced the concept to work on this with me jointly but he declined. Although I let it drift away, that does not mean that I don't think that it is important. I haven't been able to persuade any of my students to take it up and work it through. In immediate terms it seems a dead end. I am still intrigued by the concept of atmosphere but it is not something that I am currently active or plan to be active in" (Williamson, 2007: 377-378).

3. Reconsidering atmosphere: "neo-Williamsonian" developments for a fifth stage in the evolving science of organization

I agree with Williamson that organizational economists could take atmosphere up and work it through, notably by stressing the specificity of the institutional environment based on a modern knowledge economy, an economy that makes human resources a decisive and durable competitive advantage. The organizational atmosphere must allow the development of new organizational capabilities that correspond to the modern institutional environment (see Aoki, 2007), which is also likely to create dynamic transaction costs (see Langlois, 1992). In this context, a good atmosphere-based firm is capable of strong productive efficiency. The modern firm is a human firm based on complex institutional and organizational designs. The issue of organizational design has been compellingly analyzed by who I propose to call here "neo-Williamsonian economists" – such as Gibbons (2003, 2005), Gibbons and Roberts (2013), Roberts (2004, 2010), Rajan and Zingales (1998, 2001) or Hart and Holmström (2010).

If no clear attention has been given by those authors to the Williamsonian concept of atmosphere, they have shown the importance of informal organizational factors to contractual dynamics. The organizational atmosphere should be appreciated in these modern neo-institutional works within a specific institutional structure of production (see Coase, 1992) and with the idea that modern firms improve their productive efficiency when they invest in horizontal organizational designs In a recent empirical paper, Virgile Chassagnon et al. (2020) analyze the relationship between what they call in a Williamsonian perspective “organizational atmosphere” and “productive efficiency” from a treatment effect model run on a sample of 11378 observations based on 3627 French firms. Their results show that the main determinants of an efficient organizational atmosphere are weak human capital control, employee participation, good social climate, and the search for both extrinsic and intrinsic motivations.

In view of the human relationships school, I also believe that organizational economics must be interested in the role of management. Management aims to preserve the equilibrium of the social system “firm” and to identify and resolve potential dysfunctions. To do this, it is necessary to remember the two logics of individuals based on productivity and feelings so that individuals are satisfied and willing to cooperate. Hence, one of the more important roles of managers is to sustain and maintain cohesion and satisfying exchange conditions; another is to avoid internal dysfunction (see, Baker et al., 2002, for a formal neo-institutional point of view on that question).

One important distinction concerning the firm is related to the fact that individual members are also workers who receive financial compensation for their subordination. The employment contract is at the core of the firm as an economic entity, as Simon (1951) explained. In this sense, the nature of the firm as an economic organization differs from those of other social entities for which the process of collective creation is fully voluntary and not based on any form of compensation. Rajan and Zingales (1998: 388) thus consider the firm a specific economic organization in which “the sense of belonging arises from the expectation ‘good citizens’ of an organization have in which they will receive a share of future organizational rents.” More broadly, the firm has a specific legal status that maintains the cohesiveness of the whole and guides contractual (perfunctory) individual cooperation.

However, in a modern knowledge economy, managers must develop consummate cooperation and the highest human potential and act to limit human behavior failures that stop potential human development. To develop human capital, modern firms must invest in the training of workers and improve the qualifications and competencies of the actors who contribute dynamic capabilities to the firm (e.g., Nelson and Winter, 1982; Williamson, 1999b). Regarding the previous arguments I develop, it is also important that we consider worker training and development from an “internal labor market” perspective (see also Holmström, 1999). As Williamson (1985) explains, workers in internal labor markets are monitored less intensively, which allows the firm to implement a good organizational atmosphere and shows that atmosphere differences exist between collective (internal organization) and individualistic (based on market considerations) contracting (see Chassang, 2010).

Social controls can negatively affect the atmosphere in modern firms, so managers must find an efficient interval between strong and weak control in the workplace. Arguably, Williamson writes that “internal controls can be unduly emphasized and pressed with excessive zeal, more attention to the economics of atmosphere is simultaneously required” (Williamson, 1975: 262). In this case, the efficiency of the internal organization is based on human investments (see the notion of specific human assets from the perspective of transaction cost theory) that have more value in a given firm than in any other organization. The empowerment of employees and the reduction of control procedures constitute leverage for a cooperative organization of production (see Dickinson and Villeval, 2008 for an experimental economics perspective).

Thus, organizational atmosphere appears to be strongly related to the notion of organizational capital defined by Tomer (1999: 2) as “a type of human capital in which productive capacity is embodied in the organizational relationships among people; it is not simply embodied in individuals, as in the case of human capital deriving from education. Investment in organizational capital means using up resources to bring about lasting improvement in organizational relationships, and thereby, improving productivity, worker well-being and social performance”. For this reason, I believe that workers’ empowerment and participation (see Baron and Kreps, 1999) should be appreciated as a strong investment in the organizational atmosphere that reduces the internal X-inefficiency defined by Leibenstein (and thus produces organizational slack; see Leibenstein, 1966). However, the organizational atmosphere cannot be dissociated from the strict social climate and from the capacity of the modern firm to internally settle disputes and conflicts, which is undoubtedly the main force of the private ordering framework of Williamson (see Williamson, 2002). Additionally, extrinsic (satisfaction related to reward-related activity) and intrinsic motivations (satisfaction related to labor activity itself) coexist and coevolve in the modern firm (see Deci and Ryan, 1985) because there must be organizational glue in the firm that holds the whole together through mechanisms that cannot be identified as strictly rational but instead emotional (Lawler, 1992).

Experimental economics has made important contributions to the subject of intrinsic and extrinsic motivations in the last decade by softening the neoclassical arguments regarding the role of explicit economic incentives in the institutional structure of production. By underlining the existence of a crowding-out effect, it is common for experimental studies to demonstrate that these extrinsic motivations provided by economic incentives scarcely increase the contribution and can even be counterproductive to the collective interest due to the force of prosocial behaviors and human reciprocity (see, for example, Fehr et al., 1997; Fehr and Gächter 2000, Fehr et al., 2002; Fehr et al., 2011; Fehr and Schmidt, 2013). Economic incentive devices could also negatively affect altruism, ethical behavior, and intrinsic human motivations (see, on this last point, the works of Bénabou and Tirole 2003, 2006).

From a modern institutional point of view, the recent pluralistic works of Bowles and Gintis (2011) on cooperative species use experimental and ethnographic data (and even computer simulations) to provide a “compelling and novel account of how humans came to be moral and cooperative.” Incentives and social preferences are complements because, as Bowles and Polania-Reyes (2012: 368) explain, human motivations may “(i) provide information about the person who implemented the incentive; (ii) frame the decision situation to suggest appropriate behavior; (iii) compromise a control-averse individual’s sense of autonomy; and (iv) affect the process by which people learn new preferences.”” All of these elements offer crucial insights into what an organizational atmosphere is and how it affects the internal organization and productivity of the firm.

The last arguments are very close to the work of Williamson, who believes that “modes of organization or practices which would have superior productivity consequences if implemented within, and thus would be adopted by, a group of expected pecuniary gain maximizers may be modified or rejected by groups with different values. For one thing, favourable productivity consequences may no longer exist, which is to say that efficiency and a sense of well-being (that includes but transcends equity) are intrinsically (nonseparably) joined. In addition, preferences for atmosphere may induce individuals to forego material gains for nonpecuniary satisfaction if the modes or practices are regarded as oppressive or otherwise repugnant” (Williamson, 1975: 39). From an economic perspective, productive efficiency rests on the interlocking of the structural and agency dimensions, which leads us to regard the firm as both an organization and as an institution that structures the internal functioning rules of the firm and is directed toward production and even profitability.

Williamson is a major corporate and organizational thinker (see Mahoney and Nickerson, 2021) who has influenced a large number of contemporary researchers in organizational economics, such as the work of the 2016 Nobel Prize winners Oliver Hart and Bengt Holmström, who develop Williamson's work through what we will call the formalization of incomplete contracts and the analysis of incentive contracts, constituting the fourth stage of the evolving science of organization. However, I therefore defend the idea herein that the neo-institutional modern works presented in Section 3, which relate to both organizational and institutional economics, have often aimed to "formalize the informal" by different methods and seem to take up the reflections of Williamson (1993b) and constitute a fifth stage in the evolving science of organization. In doing so, these works have made it possible, directly or indirectly, to take the organizational atmosphere up and work it through in the mind of Williamson (2007).

In addition, Williamson (1985: 247) introduces the notion of the "relational team" (see also Macneil, 1978) to refer to firms engaged "in considerable social conditioning to help assure that employees understand and are dedicated to the purposes of the firm." As Williamson seems to explain in this 1985 book (see Williamson, 1985: 246-247), the concept of atmosphere has progressively been overtaken by the idea of "relational contracting" (see also Gibbons, 2021). I believe that the concept of organizational atmosphere has been indirectly developed through the concept of the relational contract based on a modern perspective of industrial pluralism.

4. Atmosphere, private ordering and industrial pluralism: toward a sixth stage in the evolving science of organization?

As I explain above, Williamson clearly links the concept of atmosphere to that of informal organization, while associating the lessons of organization theory with legal analysis (see also here the original institutional analysis of Commons, 1934 and the recent paper of Hodgson and Vatiero, 2021). For him, public ordering gives the firm the possibility of maintaining a private ordering internally. This private ordering gives existence and meaning to informal organizations that may be a manifestation of the atmosphere. On this point, Williamson (1996c) clearly fits in the vein of industrial pluralism and complements Barnard's pioneering reflections. In addition, Williamson writes that "like Barnard, transaction cost economics works out of a private ordering rather than legal centralism approach to contract law" (Williamson, 1996c: 42). Therefore, for Williamson, private ordering is used to serve the distinction between market and hierarchical modes or organizations, which supports the "comparative analysis of a discrete structural rather than (as is more customary) of a marginal analysis kind" (ibid.). We can then clearly understand Williamson's interest in shifting the question of the atmosphere toward the question of relational contracts (see Williamson, 1985), even if Williamson will return very little to the concept of the relational contract in his last writings, including in his review article on pragmatic methodology (see Williamson, 2009).

Organizational economics has been recently enriched by modern literature on relational contracts. Relational contracts refer to real governance mechanisms found in long-term relationships, which are expected not only to reproduce but also to change over time based on unpredictable contingencies of the *ex ante* contract. Relational contracts occur when the contracting parties behave cooperatively and do not use external circumstances to opportunistically exploit the relationship. Applied to the internal organization of the firm, I believe that relational contracts encourage employees to comply with the objectives of the firm, including whether they are outside the *ex ante* defined contractual framework (see also Chassagnon and Haned, 2019). For Robert Gibbons et al. (2002), relational contracts have the characteristics of informal agreements reproduced by the value of future relations, and execution is carried out *ex ante* in terms of the behavior of the involved actors. In the view of Victor Goldberg (1976), relational contracts promote fairness and reciprocity in labor relations because these contracts provide specific incentives that complement formal contracts. As Williamson reminds us in his 1985 book, the responsibility of managers matters in terms of the ability to manage informal organization and contracts in the firm. I agree with Gibbons (2000: 37), who seems to extend this Williamsonian argument and asserts that "understanding the role of managers, who conceive, communicate, and implement the relational contracts that underpin informal organizational processes, is essential to understanding firms".

For me, the concept of atmosphere has also been overtaken by the idea of relational contracting in Williamson's work because relational contracts are more likely to be operationalized than organizational atmosphere. For example, it is clear that the work of Gibbons et al. (2002, 2008) made it possible both at the interfirm and intrafirm levels to make relational contracts operational from game-theoretical models. However, the literature on relational contracts deserves to be further developed to better define all of the aspects (in terms of organizational identity, culture, loyalty, consummate cooperation and reciprocity) that such a concept imposes. The first works of Williamson, in particular those published between 1964 and 1975, then constitute very useful milestones. Moreover, Gibbons (2021: 14) seems to share this observation and recently wrote the following: "such models (including all those I have participated in building) ignore a conspicuous feature of the process of building real relationships: Sunday night. Put differently, the theoretical literature has developed great expertise on the credibility problem but essentially ignored the clarity problem".

It is therefore important to recall the rich analysis of the contract by Ian MacNeil (1980), who considers a contract as no more and no less than relations between parties regarding an exchange process projected into the future. Macneil emphasizes the relational constitution of intrafirm contracts based on what he calls "cooperative social behavior" grounded in solidarity and reciprocity (see also Goldberg, 1976). More generally, the firm as such could be approached as an emergent relational entity (see Chassagnon, 2014a). Thus, relational contracting and dynamic firm performance are clearly related. In certain ways, both the ideas of consummate cooperation and relational contracting we find in Williamson's 1985 book are useful for enriching the theory of contracts as reference points of Hart and John Moore (2008: 3), for whom "a party is happy to provide consummate performance if he feels that he is getting what he is entitled to, but will withhold some part of consummate performance if he is shortchanged—we refer to this as shading. An important assumption we will make is that a party's sense of entitlement is determined by the contract he has written. This is the sense in which a contract is a reference point." I am convinced that the concept of atmosphere must be the subject of new research to better understand what allows us to achieve consummate performance through the contract (see also Fehr et al., 2011 for an experimental economics point of view). In the words of Gibbons (2021), more work now needs to be done on the "clarity problem" (and on the question of the shared understanding of the promise of social exchange; see also, for a complementary point of view, the cognitive institutional approach of DiMaggio and Powell, 1983). Likewise, I am convinced that progressing toward the understanding of individual commitment (which I personally see here as the real, albeit informal, conditions of arrangement and cooperation) will make it possible to renew the doctrine of industrial (also often similarly called "legal") pluralism.

Indeed, Galanter (1981: 34) writes that "courts comprise only one hemisphere of the world of regulating and disputing. To understand them, we must learn how they interact with other normative orderings that pervade social life." The author explains that individuals are guided by motivations, beliefs, and different standards that can be legal and/or not legal. In other words, the private nature of firms exists and makes firms subject to regulations that are not binding in positive law. This means that there are positive rules based on external influences that regulate the internal organization of the firm, but these rules also allow private rules to be implemented at the boundaries of the firm. The coexistence and entanglement of public and private orderings are at the root of industrial pluralism, which is here a concept that envisions "collective bargaining as a form of self-government under which the participants legislate rules for the workplace" (Carney, 1983, 253). In this view, as explained by Chassagnon and Haned (2019), firms generate internal rules that may face threats of sanctions by the very members of the organization itself; the private internal ordering of the firm is based on intrinsic organizational standards and complements positive law. However, it is important to note in line with Geoffrey Hodgson (2009) that the firm is based on a system of plural normative rules, which does not mean that there are plural systems of law in the firm. The private governance of a firm is not the law but, according to me, reflects a type of middle ground between market norms and public normativity, which deserves to be the subject of new work in organizational economics.

My last argument is at the heart of Williamson's heuristic work on governance. For Williamson, governance is strongly linked to industrial pluralism because as he explains (see Williamson, 1985, 2002), an enforceable legal system and a private, internal nature of firms coexist, which corresponds to the personal rights of firms. Specifically, from a Northian perspective, the internal governance structure of the firm is influenced not only by the institutional environment that sets the rules of the game but also by the parallel development of rules and procedures that are specific to the firm that allow it to regulate its own organizational behavior and function in its own environment. The private ordering is specific to and defined by the firm itself. Williamson is then opposed to the doctrine of legal centralism.

In different contributions (and notably in his 1985 book), to justify and build on his analysis of the entanglement of formal and rational rules (from law) and informal rational rules (from internal organization), Williamson has used the work of Barnard as well as the legal theory of industrial pluralism and notably the work of American labor lawyers who consider the firm as an island of self-rules (see Stone, 1992). In his 1991 and 2002 papers, Williamson proposes circumscribing the nature of the firm to a private normative ordering based on hierarchical governance structure and workable contractual arrangements in a view that corresponds to the contractual tradition of the United States. The author advocates the autonomy of the firm and private self-enforceability to complete the failures of legal enforceability; private institutional arrangements contribute to firm productive efficiency.

Thus, governance mechanisms should be analyzed as order-preserving mechanisms that prevent behavioral opportunism. Here, relational contracting plays a strong role in governance dynamics and in the productive entanglement of normative orderings. Plural normative orderings and the "let live" private nature of firms' internal organizations are also reasons for transaction cost savings (Williamson, 1985). The entanglement of normative orderings serves Williamson's economizing logic and the sovereignty of the firm. For Williamson (1985, 2002), the latter indeed refers to the firm ordering resolving disputes between its members through both the authority of the courts (legal centralism) and the "internal own law" of the firm (industrial pluralism), which can be extended in some circumstances to external suppliers (see Héritier et al., 2009) and to the network-firm (Chassagnon, 2011).

It is undoubtedly interesting to work further on the relationship between the atmosphere, the logic of private ordering and the economic foundations of industrial pluralism. Such a project, in my opinion, requires rigorous conceptual and axiomatic work that allows us to better understand the foundations of the "formalization" of the informal organization. This is perhaps the sixth stage of Williamson's evolving science of organization. We understand this stage to be fundamentally "multidisciplinary." As the institutional environment of organizations is constantly evolving, the science of the organization is itself intrinsically evolving.

6. Conclusion

Williamson's contribution to the theory of the firm is significant. His pragmatic methodology (Williamson, 2009) differentiates his work from previous orthodox contributions and has paved the way, in the wake of economists, jurists and organization theorists having influenced him, to a science of organization. In view of the eunomics of Fuller (see Williamson, 1993b), he is interested in workable arrangements that characterize the second and third stages (the preformal and formal stages) of the evolving science of organization (see Williamson, 1993c). In this article, I have shown, according to this perspective, the interest of extending Williamson's reflections by developing the concept of atmosphere and by reconsidering, in doing so, the logics of the private ordering of the firm in the development of industrial pluralism. I have proposed adding a fifth stage to the evolving science of organizations through recent institutional and organizational economics to allow what I call a "formalization of the informal."

The work of Williamson underwent significant evolution between *Markets and hierarchies: analysis and antitrust implications* in 1975 and *The economic institutions of capitalism* in 1985 (but also all of his following works), which seems to correspond to the passage from the preformal stage to the semiformal stage (see Williamson, 1993b). What follows is an interesting focus on the "contractual man." Therefore, I believe that explanatory progress in the field of organizational economics is now further linked to the reconsideration of the "first" works of Williamson to go toward a sixth stage of the evolving science of organization. This stage could allow, for example, a better understanding of the organizational economics of employee participation, shared governance and industrial democracy in our post-COVID-19 economies.

Indeed, the interaction of public and private orderings guides the institutional evolution of the firm's internal governance. I believe that public policy might provide more representation to employees in decision-making to have a real voice and to contribute to private normativity and the logic of internal efficiency. Perhaps boldly, I see even here, almost certainly indirectly because their research areas are different, a fruitful complementarity between the work of Williamson and that of the co-Laureate of the 2019 Nobel Prize in economics, Elinor Ostrom (1990, 2005). Certainly, the firm does not fall into her categories of entities forming commons (it does not significantly meet the conditions of rivalry and nonexclusion associated, in general, with commons). However, in several respects, the firm presents characteristics of a commons (see here the work of Chassagnon, 2018, on the firm as private commons or of Deakin on the corporation as commons, 2002): the firm is indeed a non-appropriable real entity. No one owns the firm whose government (not to say self-government) must be provided by an identified community (i.e. the constituent members of the firm; see Chassagnon and Hollandts, 2014) in a shared way to increase its efficiency and sustainability (its preservation over time). Then, the participation of firm's actors (which undoubtedly includes mainly shareholders, managers and employees who should seek to maximize the collective welfare of all the firm's constitutive stakeholders, see Blair and Stout, 1999; Chassagnon and Hollandts, 2019) is required for its reproduction (see the concept of management right of Schalger and Ostrom, 1992). On this point, I have demonstrated the interest of the work of Williamson (1975, 1985, 2002), who clearly defends the pioneering idea that the *raison d'être* of the firm is to create a specific private ordering embedded in a public ordering but based on reciprocal internal industrial relations to instill order and cooperation, to prevent organizational conflicts, and increase mutual gains from productive activity[3].

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[3] This pioneering vision of Williamson seems to be a prerequisite for democracy to exist in the private government of the firm. For a point of view in terms of political and moral philosophy on this question, see Anderson, 2017.

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