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A Neo-Weberian Theory of the Firm

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Abstract
In the field of organization studies, two types of theories of the firm exist: "why" and "how" theories. "Why" theories use the instrument of comparative analysis to explain why firms exist despite various institutional alternatives. "How" theories, in contrast, employ intra-organizational perspectives to explore how firms meaningfully connect the actions of many interdependently operating individuals to collective outcomes. Since both theories are complements rather than substitutes, the field of organization studies would benefit from the development of a parsimonious theory that integrates "why" and "how" perspectives. It is argued that Max Weber's writings on bureaucracy, and especially his focus on the organization as a set of decision rules (*Urteilsgründe*), provide an exceptionally meaningful conceptual background structure for such a theory. The paper demonstrates that a Neo-Weberian, decision rule-based theory of the firm can simultaneously provide reasons for the existence of the firm and explore the nature of coordination and cooperation within the firm itself.

Keywords: decision rules, theory of the firm, Weberian sociology, transaction cost economics, knowledge-based perspectives

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INTRODUCTION

Weber's *Wirtschaft und Gesellschaft* arguably marks the birth of organization studies as a self-contained discipline. Since the publication and reception of this landmark project, it has become increasingly unthinkable that any of the big questions about the relationship between economy and society might possibly be answered without resort to a solid concept of human organization in general, and a theory of the firm in particular. Scholars from a variety of disciplines as diverse as economics (Coase, 1937; Williamson, 1975), corporate finance (Fama, 1980; Zingales, 2000), and corporate strategy (Liebeskind, 1996; Poppo & Zenger, 1998) have since then therefore started to incorporate unabashedly organizational conceptions in their work, in the hope of finding a deeper and more solid theoretical underpinning for the processes of human interaction and exchange they study professionally.

The varied contributions by these scholars have of course not led to a single, unified theory of the firm. The late Fritz Machlup (1967) has reminded us that theoretical variation with respect to the theory of the firm is inevitable, since the choice for certain theoretical parameters will always depend on the problem the theoretician attempts to solve. Generally, the differential objectives of economy and society scholars have led to the development of two separate streams of thought. Scholars who seek to explain *why* firms exist tend to focus on concepts like property rights, incentives, and contracts. Their efforts have resulted in contributions such as transaction cost theory (Coase, 1937; Masten, 1993; Williamson, 1981, 1991), agency theory (Jensen & Meckling, 1976), and team production theory (Alchian & Demsetz, 1972). In rather sharp contrast, scholars conducting research on *how* firms function normally focus on concepts like organizational knowledge, organizational learning, and associated higher-order organizing principles. Representative contributions to this second perspective are the behavioral theory of the firm (Cyert & March, 1956; 1963), the knowledge-based theory of the firm (Conner & Prahalad, 1996; Kogut & Zander, 1992), and the evolutionary theory of the firm (Dosi, 1997; Nelson & Winter, 1982).

In general, functional specialization and incremental puzzle solving among scientists stimulate scientific progress, and the division of the theory of the firm project into separate “why” and “how” streams has thus led to a host of fascinating new insights. The fundamental problem with such compartmentalization, however, is that certain empirical phenomena require a simultaneous analysis of firms’ boundaries (the “why” dimension) on the one hand, and their internal organization (the “how” dimension) on the other. To understand processes of organizational innovation, for example, we must know which bundles of resources must be kept in common ownership (i.e., why the innovative firm exists), as well as what drives the relative efficiency of a particular bundle of resources vis-à-vis similar but different bundles controlled by other organizations (i.e., how the innovative firm converts inputs into innovative outputs). If we want to explain phenomena like organizational innovation and learning, which involve simultaneous boundary- and internal organization choices, we thus need a novel, integrative theory of the firm. The research question for this paper is therefore as follows: *Is it possible to develop an integrative theory of the firm that combines “why” and “how” perspectives?*

It is argued that Weber’s work on economy and society, and especially his writings on bureaucracy, provides an exceptionally fruitful conceptual point of departure for such a theory. Weber purposefully reduces the process of organization to the establishment and subsequent observance of a set decision rules

(*Urteilsgründe*), which may be interpreted as normative constraints that operate on the behavioral options open to organization members. A theory will be developed here which takes the concept of decision rules seriously, and puts them at the heart of conceptual advancement. In particular, the theory will simultaneously demonstrate why rule following is more efficient than other organizing principles in certain contexts and how rule following connects individual actions to collective outcomes. The result will be an integrative, decision rule-based theory of the firm, which can be used to explain phenomena that span the boundaries of the "why" and "how" approaches.

This paper is organized in three further sections. First, a brief synopsis will be presented of Weber's writings on bureaucracy, and the Weberian legacy will examined for evidence of both "why" and "how" elements. Second, a Neo-Weberian theory of the firm will be presented, which follows Weber closely in that it proposes that organizational structures and processes can be expressed as decision rules. The theory simultaneously explains that rule following can as an organizing principle be more efficient than alternative organizing principles (implying that the Neo-Weberian perspective can handle the "why" question) and that rule following as an organizational mechanism solves coordination and cooperation problems by connecting individual action to collective outcomes (which represents an answer to the "how" question). Third, before this paper finishes with a concise conclusion, a discussion section will address the issue of the empirical content of the theory promoted here.

"WHY" AND "HOW" ELEMENTS IN WEBER'S *BUREAUCRACY*

What is meant by "a theory of the firm" is a theory that addresses the issues of (a) the existence and boundaries of the multi-person firm, and/or (b) its internal structure and organization (Foss, 1996). In this paper, the former approaches will be called "why" theories of the firm, and the latter "how" theories of the firm. At present, the field of organization studies lacks an integrative theory of the firm that can handle both perspectives simultaneously. It is proposed here that theorists with an interest in developing such an integrative theory are well advised to look for points of departure in Weber's works on formally rational organization. This section will first present a brief synopsis of Weber's writings on bureaucracy, after which it will proceed by investigating the extent to which Weber's work harbors elements of "why" and "how" theories of the firm.

Weber's *Bureaucracy*: A Synopsis

Perhaps Weber's greatest contribution to the field of organization studies is his exposure on the single characteristic that differentiates all modern organizations – governments, business firms, and non-governmental organizations alike – from their traditional counterparts – such as patriarchy, feudalism, gerontocracy – notably: the presence of a formally rational bureaucracy (Albrow, 1970; Kalberg, 1980).[1] The contours of his description of bureaucracy are justly famous: (1) modern organizations are ordered into multiple jurisdictional areas; (2) the offices of the organization are ordered according to the principle of office hierarchy, in which lower offices are controlled and supervised by designated higher offices; (3) the offices are staffed with officials, whose official training corresponds with formalized job requirements; (4) these officials are appointed rather than elected; (5) appointments are typically made for life; (6) compensation takes the form of salary; (7) officials are personally free and protected against arbitrary decisions; (8) the means of production or administration they use belong to the organization and may not be appropriated; (9) a stable and comprehensive system of decision rules governs official actions and decisions; and (10) actions and decisions taken are recorded in formal files to accommodate subsequent consultations and appeals. Given this exposé, the question that matters most for the present project is as follows: To what extent is this seemingly descriptive analysis of modern bureaucratic structures conducive to a universal and comprehensive theory of modern organizations? This question will be addressed by exploring Weber's writings for "why" and "how" elements.

"Why" Elements in *Bureaucracy*

The distinguishing characteristic of all "why" theories of the firm is that they treat formal organizations as aberrations, which require explanation because alternative institutions for organizing economic activities exist. In the words of Ronald Coase, theoreticians should "attempt to discover why a firm emerges at all in a specialised exchange economy" (1937: 390). Oliver Williamson has put it as follows: "Comparative economic organization never examines organization forms separately but always in relation to alternatives" (1991: 269). The comparative logic simultaneously provides "why" theories with (a) an argumentative structure *and* (b) a strategy for inquiry. The argumentative structure entails that comparative analysis adds relevance to the "why" question. Asking the "why" question without reference to institutional alternatives is a conceptually inappropriate strategy, because it invites purely functionalist responses (e.g., "organizations exist to generate products and services”). Asking the same question in a comparative fashion urges the respondent to think about the added value of organizations over and above other institutions that could potentially deliver the same products and services, thereby stressing the uniqueness of the organizational alternative. The comparative logic also suggests a strategy for inquiry. To explain the existence of the modern business firm empirically, collecting data on firms alone is insufficient. Adequate empirical investigations into the “why” perspective require the collection of data on both firms and their alternatives (usually markets or hybrids), and a marginal efficiency analysis of their production functions (e.g., see: D’Aveni & Ravenscraft, 1994; Leiblein, Reuer, & Dalsace, 2002; Poppo & Zenger, 1998).

Although new institutional economists like Ronald Coase, Oliver Williamson, and Armen Alchian have made good use of the method of comparative institutional inquiry, they should not be heralded as the ones who pioneered the method in the study of (political) economy. That honor must go to Max Weber, who used the method to explain the institution of bureaucracy against the institutional counterparts that were most relevant at the time of writing – primitive and patrimonial governance.[2] He writes of bureaucracies in general: “Permanent agencies, with fixed jurisdiction, are not the historical rule but rather the exception” (p. 956),[3] and concludes that they must be explained against the background of the available alternative institutional arrangements. Weber’s works also lend themselves well to other research strategies, such as sequential-internal analyses, sequential-external analyses, cross-sectional-internal analyses, and cross-sectional-external analyses (cf. Delany, 1963), but the apotheosis of his labors in *Wirtschaft und Gesellschaft* is the comparative analysis of three ideal-typical authority arrangements, notably: (1) primitive governance, manifested as gerontocracy or patriarchism; (2) patrimonial governance, in the form of pure patrimonialism or as state patrimonialism; and (3) bureaucratic organization.

The outcome of this analysis is that bureaucracy is a superior organizational form, the establishment of which inevitably leads to the administrative decline of other governance arrangements wherever it is introduced.[4] In Weber's words: "Bureaucracy is *the* means of transforming social action into rationally organized action. (…) Under otherwise equal conditions, rationally organized and directed action (*Gesellschaftshandeln*) is superior to every kind of collective behavior (*Massenhandeln*) and also social action (*Gemeinschaftshandeln*) opposing it" (p. 987; emphasis in the original). The source of this superiority lies in bureaucracy's capacity to rationally calculate the most precise and efficient means for the resolution of problems by subjecting them to universal and abstract decision rules.[5] According to Weber: "The decisive reason for the advance of bureaucratic organization has always been its purely *technical* superiority over any other form of organization. The fully developed bureaucratic apparatus compares with other organizations exactly as does the machine with the non-mechanical modes of production. Precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs—these are raised to the optimum point in the strictly bureaucratic administration" (p. 973; emphasis in original).[6] Weber thus stresses repeatedly that the root of bureaucracy's superiority lies in its "reduction of modern office management to rules" (p. 958) or, alternatively put, the bureaucratic tendency to "discharge of business according to calculable rules" (p. 975). Weber's answer to the "why" question is thus that organizations exist because they have a unique capacity for developing, sustaining, renewing, and depleting sets of decision rules, which cannot be found in other forms of governance (cf. Schulz, 1998, 2003). These decision rules provide formal organizations with the analytical tools they need to conduct their business in a way that minimizes inefficiencies, and enlarges reliability and calculability. For the sake of the present project, it is precisely this insight that will be used to develop the "why" part of an integrative, decision rule-based theory of the firm.

"How" Elements in *Bureaucracy*

The essence of all "how" theories of the firm is that they seek to explain how organizations accomplish the difficult task of producing homogeneous collective outcomes from fundamentally heterogeneous individual inputs. For the purposes of the present project, the various "how" theories can be distinguished from one another primarily by the types of heterogeneous inputs they aim to homogenize: knowledge-based theory seeks to accommodate interpersonal knowledge differentials (Conner & Prahalad, 1996; Spender, 1996), evolutionary theory aims to routinely facilitate choices amongst multiple decision and action alternatives (Dosi, 1997; Nelson & Winter, 1974), and behavioral theory aims to prevent organizational paralysis in the face of potential conflicts amongst differentially interested organizational coalitions (Cyert & March, 1963; Petit, 1967). In line with these distinctly organizational theories, Weberian bureaucratic theory also has a very clear "how" dimension. It seeks to explain how bureaucratic organizations can reach collective goals by aligning the efforts of numerous independently trained but interdependently operating officials. The explicit aim of this section is to demonstrate how Weber frames and solves this bureaucratic adjustment problem.

A first question that must be addressed in this respect is for which types of collective goals bureaucratic governance structures are especially appropriate. Weber insists that "one has to remember that bureaucracy as such is a precision instrument which can put itself at the disposal of quite varied interests, purely political as well as purely economic ones, or any other sort" (p. 990). In other words, there are few collective goals for which bureaucracy cannot provide the appropriate means. But Weber goes further. There are a number of collective goals for which bureaucracy is not only an appropriate instrument, but also an indispensable one. He points, for example, at tasks which: (a) are highly complex, (b) span significant geographical territories, (c) structurally require longitudinal action, and which (d) involve problems of collective action. Tasks that fit one or several of these criteria are the ends that principally require bureaucratic means for their accomplishment. This category includes the following tasks identified by Weber in *Wirtschaft und Gesellschaft*: (a) the regulation of complex water economies, (b) the creation of standing armies, (c) great expansions of state power and territory, (d) the production of increasingly diverse consumption goods, (e) policing tasks, or the pacification for order and protection, (f) implementing the manifold tasks of social welfare policies, and (g) the establishment of specifically modern means of transportation and communication, such as public roads and water-ways, railroads, and the telegraph. Given these plentiful bureaucratic ends, the ultimate "how" question then becomes: how can bureaucratic organizations connect the efforts of many interdependently operating officials to these strictly collective outcomes?

Weber's answer to this question involves the identification of three distinct areas in which bureaucracies excel: (a) resource mobilization, (b) organizational control, and (c) rule-guided action. First, Weber points out that all of the aforementioned tasks require substantial resources for their accomplishment. Bureaucratic organizations are thus especially fit to perform such tasks, because "[t]he bureaucratic structure goes hand in hand with the concentration of the material means of management in the hands of the master. This concentration occurs, for instance, in a well-known and typical fashion in the development of big capitalist enterprises, which find their essential characteristics in this process. A corresponding process occurs in public organizations" (p. 980). Bureaucratic organizations thus enable the performance of complex tasks by concentrating the required economic means in the hands of a master who has the authority to administer them at will. Second, bureaucratic structures strongly facilitate processes of organizational control by forcing individual bureaucrats into role-taking behavior. As Weber has put it: "the individual bureaucrat is chained to his activity in his entire economic and ideological existence. In the great majority of cases he is only a small cog in a ceaselessly moving mechanism which prescribes to him an essentially fixed route of march" (p. 988).[7] Bureaucracies thus limit diversity in terms of their members' beliefs and action alternatives in an attempt to funnel their efforts towards the accomplishment of common interest tasks. Third, and finally, bureaucracy promotes the stability, accountability, and legitimacy of organizational actions by steering away from arbitrary decisions. As Weber suggests, bureaucracy involves "the principled rejection of doing business 'from case to case'" (p. 983) by the introduction of calculable rules for each type of recurring decision. This reliance on rules rather than on *ad hoc* decision criteria promotes the personally detached and strictly objective professional decision apparatus supportive of the aforementioned collective goals. Of these three characteristics of formally rational organization, Weber suggests that the element of "calculable rules is the most important one for modern bureaucracy" (p. 975). In the present project, these calculable decision rules (*Urteilsgründe*) will therefore be put at the very center of the "how" part of an integrative, Neo-Weberian theory of the firm.

A NEO-WEBERIAN THEORY OF THE FIRM

"Why" theories like transaction cost economics (Arrow, 1969; Williamson, 1985), team production theory (Alchian & Demsetz, 1972), and agency theory (Fama, 1980; Jensen & Meckling, 1976) offer a compelling answer to the question why firms exist given that institutional alternatives are available. Furthermore, "how" theories like the knowledge-based theory of the firm (Conner & Prahalad, 1996; Poppo & Zenger, 1998), the evolutionary theory of the firm (Langlois, 1995; Nelson & Winter, 1982), and the behavioral theory of the firm (Cyert & March, 1956; March & Simon, 1958) show how organizations connect individual actions to collective outcomes. These are beautiful achievements, because both perspectives complement one another in important ways. The problem remains, however, that there are still a number of fundamental questions in economic and societal life that require a simultaneous explanation of boundary choices and internal organization (e.g., phenomena like organizational innovation and learning). In the present state of affairs, when such explanations are proposed, they represent rather eclectic compilations of "why" and "how" theories. In the field of strategic management, for example, scholars have repeatedly attempted to integrate "why" theories like transaction costs economics with "how" theories like the resource-based view (e.g., see Madhok, 1996, 2002; Williamson, 1999). Similar eclectic approaches have been tried in the field of international business studies (Dunning, 1988; Madhok & Tallman, 1998).

The fundamental problem with eclecticism is that the bodies of theory that are being combined are often principally incommensurable. This problem manifests itself in three ways. First, the theories often focus on different core concepts. For example, the notion of transaction costs plays no role of any significance in the evolutionary theory of the firm, and *vice versa* the evolutionary concept of organizational routines is not an essential ingredient of the transaction cost approach. Second, to the extent that "why" and "how" theories *do* employ the same concepts, they are often not similarly operationalized across theoretical contexts. For example, the concept of "teams" plays a role in both team production theory and in evolutionary theory, but in the former approach the concept denotes a "production unit under common supervision" (Alchian & Demsetz, 1972), whereas it represents a "social group as carrier of routines" (Nelson & Winter, 1982) in the latter. Third, "why" and "how" theories of the firm are often rooted in potentially irreconcilable assumptions. For example, the behavioral assumption of (latent) opportunism plays a towering role in transaction cost economics, whereas the competing notion of fundamentally cooperative behavioral intentions is crucial to the evolutionary theory of the firm.

A unified theory of the firm should therefore possess three characteristics, in order to compensate for the aforementioned shortcomings of eclecticism. First, it should focus on a single core concept, which must play a towering role in both the "why" and "how" realms of theory. Second, this core concept should be singularly defined and operationalized. Third, the theory should be grounded in a single set of theoretical assumptions. Since the primary objective of this paper is to develop a unified Neo-Weberian theory of the firm, our focus should now be directed towards the discovery of this theoretical trinity of core concept, singular definition, and shared assumptions.

Background Structure

The unified theory of the firm proposed here is explicitly Neo-*Weberian* in that it focuses on the single core concept that features so prominently in all of Weber's writings on formally rational organization in modern societies, notably: the concept of decision rules (*Urteilsgründe*). Weber describes such decision rules as properties of organizations that are "more or less stable, more or less exhaustive, and which can be learned" (p. 958). The work proposed here continues the Weberian tradition by putting decision rules at the very heart of an integrative theory of organizations. This commitment to a single concept guards against the first aforementioned peril of eclecticism, notably: the simultaneous use of two (or more) potentially incommensurable core ideas.

The theory is *Neo*-Weberian, however, because it expands and reinterprets the Weberian legacy rather than merely restating it. A first reorientation takes place by introducing a singular definition of the concept of decision rules, which has contextual relevance in both the "why" and "how" realms of the theory. In this paper, decision rules will be defined as "normative constraints that guide the behavior of individuals by determining the relative appropriateness of all the behavioral options open to them" (Heugens, van Riel, & van den Bosch, 2004: 6). This definition is consistent with a view on organizations that depicts them as fundamentally rule-driven systems, a propensity which contrasts them with institutional alternatives like markets and hybrids. Decision rules occupy a much less prominent position in these alternatives than they do in formal organizations, thus offering some fruitful points of departure for the type of comparative institutional analyses that tend to color "why" theories of the firm. But, like most "how" theories known to date, this definition is also explicitly microfounded in the sense that it is "consistent with a story of what agents do and why they do it" (Dosi, 1997: 1531). It hints at norm-giving organizational properties like standard operating procedures, manuals, job descriptions, and codes of conduct that simultaneously enable and constrain the behavior of individual organizational members, thus laying the foundation for further theorizing on the question how organizations connect individual actions to collective outcomes. This singularly operationalized definition of the core concept of decision rules thus offers protection against the second peril of theoretical eclecticism, notably: the erroneous transfer of a highly contextualized concept from a more to a less appropriate realm of application (Sartori, 1971).

The theory presented here is also *Neo*-Weberian in the sense that it makes explicit certain core assumptions that help to extend the Weberian legacy into a full-fledged integrative theory of the firm. These assumptions are meant to specify the contexts and social phenomena to which the integrated theory applies. A property that is of crucial importance to the aforementioned ambition of developing an integrated theory of the firm is that the assumptions presented here are similar for both the "why" and "how" realms of theory. This joint specification of background assumptions shields against the third peril of eclectic theorizing, notably: the erroneous concurrent use of incommensurable theories characterized by irreconcilable systems of assumptions. In sharp contrast, the present paper develops an integrative decision rule-based theory of the firm against the background structure[8] of three universal groups of assumptions. In a way that mimics Roberts and Greenwood's (1997) attempts to integrate transaction cost economics and institutional theories, the assumptions suggested here apply at three theoretical levels of analysis: (a) the individual level, (b) the organizational level, and (c) the institutional level. Specifically, the following conditions will be assumed:

1. ***Individual-level assumptions***: According to Douglass North, "All theorizing in the social sciences builds, implicitly or explicitly, upon conceptions of human behavior" (1990: 17). Three assumptions that are more or less commonly

employed to typify *Organizational Man* appear relevant for the theory developed here:

a. ***Bounded rationality***: Human behavior is often intendedly rational, but only boundedly so (Simon, 1945/1998). People root their decisions in subjectively derived cognitive models, which diverge among individuals, and seldomly converge due to the incompleteness of available information.
b. ***Opportunism***: Whenever people cooperate, opportunities exist for individuals to advance their self-interests "with guile" (Williamson, 1985: 47). Opportunistic tendencies play a towering role in many "why" theories of the firm, but Foss (1996) argues that the potential for opportunistic action is also a relevant consideration in "how" theories. In his view, organizations are relatively efficient vehicles for connecting individual action to collective outcomes because hierarchies can more successfully control the moral hazard that hampers collective action in markets.
c. ***Rule following***: Obeying rules rather than questioning them is default behavior for most human agents. Individuals have a natural tendency to root their behavior in a decision logic that is neither willful nor consequential in the normal sense, notably: the logic of appropriateness (Cyert & March, 1963). Weber has somewhat insinuatingly sketched the rule following inclination of the bureaucratic official as "its habit of painstaking obedience within its wonted sphere of action" (p. 988).

2. ***Firm-level assumptions***: The firms for which this theory accounts must have fully developed bureaucratic structures, so they are typically quite large and mature organizations. They are typified by means of four assumptions:

a. ***Rule-driven systems***: Modern, complex organizations are portrayed as rule-driven systems, in the sense that they are managed in accordance with sets of implicit and explicit decision-rules, operating on the set of behavioral options open to their members. Much of the efficiency and effectiveness of modern organizations can be credited to their ability to inscribe the lessons of experience in codified rule structures, which simultaneously constrain and facilitate the actions of their constituents and symbolize organizational commitments (March, Schulz, & Zhou, 2000).
b. ***Command and control structure***: The fully developed bureaucratic structures of rule-driven organizations typically entail control by a hierarchical pyramid of managers. Its upper echelons consist of a few key executives who bear ultimate responsibility and who are involved in basic policy and planning decisions. Middle managers are typically operating executives under top management who are responsible for organizing various specialized tasks within the firm. Lower management consists of department-level or functional-level supervisory personnel.
c. ***Ownership structure***: The ownership structure of the firms under consideration is deliberately left unspecified. Firms can be owner-managed or managerially controlled. Furthermore, the ownership of the managerially controlled firms can be widely dispersed or concentrated in the hands of blockholders (cf. Monsen & Downs, 1965). This assumption contrasts with "why" theories of the firm like agency theory, which uses a framework that applies best to publicly held firms in which ownership and control are separated (cf. Fama, 1980).

d. ***Organizational environment***: Each firm operates in a complex world full of uncertainty and risk. Significant costs are associated with gathering and processing information, and perfect knowledge is therefore typically unattainable. These conditions apply both to the external environment in which the firm is embedded (its set of interorganizational relationships) and to the internal environment of the firm (the set of relations amongst various parts of the firm itself). The assumption of environmental complexity is included in the conceptual background structure of the theory developed here because it emphasizes and enacts the previously stipulated individual-level behavioral assumptions (cf. Williamson, 1985: 64-67).

3. ***Institutional-level assumptions***: All "why" theories of the firm see modern, complex organizations as aberrations that must be explained against the background of institutional alternatives. These alternatives exert efficiency-based competitive pressures on business firms, which discipline managers and favor the adoption of comparatively efficient decision rules (cf. Roberts & Greenwood, 1997). Specifically, the existence of two concrete institutional alternatives is presumed:

   a. ***Markets***: According to Ian Macneil, social exchanges that are organized via markets follow the adage "sharp in by clear agreement, sharp out by clear performance" (1974: 738). Market exchange in its archetypical form thus consists of brief, sporadic, and incidental encounters between exchange partners; a condition that offers little room for the development of complex sets of socially enacted and sustained decision rules (Uzzi, 1999).[9] As will further be argued below, markets are therefore not rule-driven systems in the same sense and to the same extent as rational bureaucratic organizations.

b. ***Hybrids***: The term "hybrids" connotes a set of non-market arrangements in which two or more potentially competing organizations collaborate to produce joint results (Borys & Jemison, 1989; Gulati, 1998). Because of the (partially) competitive orientation of the exchange partners, typically none of the parties to the exchange enjoys full and unrestricted access to the complete range of decision-rules involved in operating the hybrid arrangement (Hamel, 1991; Khanna, Gulati, & Nohria, 1998). Even though decision rules potentially play an important role in stable non-market exchanges between independent parties, the configuration of any hybrid's decision rules will therefore be qualitatively different from the decision-rule configuration in any bureaucratic organization.[10]

"Why" Aspects of a Neo-Weberian Theory of the Firm

Any approach that claims to produce a unified Neo-Weberian theory of the firm should offer a compelling answer to the question why firms exist. Through the Neo-Weberian lens, firms are seen as fundamentally rule-driven systems, which must be explained against the background of institutional alternatives. To explain the emergence and sustenance of rule-driven organizations, three important questions must be addressed. First, *why is it that rule-following breeds efficiency?* This question addresses the issue of the differential efficiency of rule-driven forms of social interaction versus less rule-oriented institutional alternatives. Second, *for which types of exchange transactions is rule following efficient?* This question addresses the issue of organizational boundary choice through the analysis of the cognitive decision properties of exchange transactions. This cognitive focus contrasts sharply with the more conventional analysis of substantive transaction dimensions propagated by transaction costs economists (e.g., Masten, 1993, Williamson, 1985). Third, *why can rules only be sustained durably in bureaucratic organizations?* This final question addresses the issue of the institutionalization (largely in the sense of depersonalization) of decision rules. These three sub-questions of the "why" perspective will be addressed in the following three paragraphs.

Why is it that Weber heralds decision rule-driven systems as the hallmark of efficiency? It is because rules represent simplifying strategies that allow individuals to preserve cognitive energy by adopting them well before on-the-spot decisions must be made. According to Sunstein and Ullmann-Margalit, "A central point here is that people seek to overcome their own shortcomings—calculative, moral, or otherwise—by making some metachoice before the moment of ultimate decision" (1999: 6). Rule-driven systems allow human decision makers to cope with their calculative limitations, even under conditions of great complexity and time pressure, by offering them a full *ex ante* specification of their behavioral options and expected decisions in individual cases. Rules also offer a solution to moral predicaments like sympathy, affection, and prejudice, which could possibly interfere with principles of organizational democracy and justice. They "cut the Gordian knots" of decision making (Perrow, 1986: 25) by demanding that decision-makers discharge of their business objectively, "without regard for persons" (Weber, p. 975). Rule following therefore preserves personal and organizational efficiency by excluding the particular merits of particular cases from consideration at the moment of ultimate decision (Warnock, 1971).

For which type of exchange transactions is it efficient to follow rules? The central postulate of transaction costs economics is that to minimize transaction costs, the choice for a particular institutional alternative – which will differ from other discrete structural alternatives in terms of its costs and competencies – should be rooted in the substantive characteristics of the exchange transaction the alternative is supposed to govern (cf. Williamson, 1991: 277). In contrast with the transaction cost approach, the Neo-Weberian theory of the firm proposed here suggests an alternative focus on the cognitive decision properties of economic exchanges. The logic underlying this suggestion is as follows: all economic exchange transactions involve human decision-making. These decisions are critically influenced by the cognitive properties of those transactions (i.e., the degree to which they lay a claim on the scarce decision-making capacities of individuals; cf. Simon, 1945/1998). Such properties also determine the extent to which decisions can adequately be captured by rules (as opposed to requiring the type of deliberative decision-making suggested by rational instrumentalists; March, Schulz, & Zhou, 2000). Thus, in order to preserve the efficiency of human decision-making, transactions characterized by rule-favoring cognitive properties should be executed through rule-driven systems, whereas transactions with rule-defiant cognitive properties are best left to institutional alternatives. Rule-favoring properties include *repetitiveness* (as rules produce decision-making economies; Schulz, 1998), *complexity* (as rules formalize unstructured decisions; Blau, 1955), and *time pressure* (as rules facilitate decision-making "on automatic"; Dutton, 1993). Thus, repetitive, complex decisions that must be made under time pressure belong in rule-driven systems, whereas non-recurring, simple decisions for which ample decision-time is available are best organized via markets or hybrids.

Why is it that phenomena like rule birth, revision, and suspension are more commonly observed in the context of modern bureaucratic organizations than in institutional alternatives? With respect to this final sub-question of the "why" perspective, Weberian and Neo-Weberian views of the firm jointly point at bureaucracies' potential for rule institutionalization (DiMaggio & Powell, 1983, 1991; Weber, 1978). Weber sees the recording of administrative decisions in official files as one of the key characteristics of formal organizations, and organizational scholars have repeatedly noted that this encoding of past experiences is perhaps the key process by which new organizational rules are formed (Levitt & March, 1988; Schulz, 2003). Rule production is certainly not a uniquely organizational activity, as decision rules can also emerge in markets and hybrids. But while exchange transactions executed via these latter institutional alternatives are typically of temporary duration only, which naturally limits the longevity of the decision rules they produce, formal organizations feature unique capacities for the institutionalization of such rules. In formal organizations, decision rules are typically codified in official manuals, standard operating procedures, and codes of conduct. Even implicit rules can attain social facticity in organizations, especially when they are shared and sustained through organizational socialization (Van Maanen & Schein, 1979). Rules therefore acquire a depersonalized status in organizations, which protects them against personnel turnover and external shocks and jolts. Modern organizations thus form unique contexts in which decisions rules can be observed, preserved, and revised over various generations of rule-followers, before they are finally suspended.

“How” Aspects of a Neo-Weberian Theory of the Firm

A unified Neo-Weberian theory of the firm should also be able to offer a satisfactory answer to the question how firms connect individual actions to collective outcomes. The Neo-Weberian perspective suggests a focus on decision rules as the primary vehicle for simultaneously facilitating and constraining the behavior of organization members. To explain the production of coherent collective outcomes in the face of continuous variation at the micro level, three important questions must be addressed. First, *how do individual organization members know what to do in complex organizational settings?* This question addresses the problem of individual-level decision making in the face of bounded rationality (Simon, 1955). Second, *how do interdependently operating individuals adjust their behavior to one another in complex organizational settings?* This question addresses the issue of group-level coordination in multi-person teams (Grant, 1996a, 1996b). Third, *how can individuals be persuaded to follow the decision rules prescribed to them in complex organizational settings?* This final question addresses the issue of human motivation in light of the balance between potential opportunism and rule-following tendencies (Frey, 1998). These three sub-questions of the “how” perspective will be addressed in the following three paragraphs.

How do boundedly rational individuals know how to act in sometimes overwhelmingly complex organizational contexts? A “how” theory of the firm has to be compatible with realistic assumptions on the access to information and the computational capacities individuals possess in complex organizational environments (Simon, 1955: 99-100). We know that the decision-making ability of human beings is subject to both limitations and systematic biases (Tversky & Kahneman, 1974), but this is not a problem *per se*. Problems only start to arise when individuals are put in a setting where the complexity of the decisions they have to make greatly outweighs their cognitive capacities—like in modern organizations. Organizations must therefore make provisions to protect their members from the ordeals of choice-based action (Cyert & March, 1963). Such provisions involve the stipulation of clear decision rules that accommodate the boundedly rational decision-maker by specifying *ex ante* how that individual is supposed to act, whether or not there is a good reason to act as such in every case that may be encountered (Eisenhardt & Sull, 2001). This allows individuals to root their behavior in a decision logic that is neither willful nor consequential in the normal sense—the logic of appropriateness (Cyert & March, 1963). This logic does not require individuals to anticipate the consequences of all behavioral options open to them in every decision situation they encounter, but merely asks them to follow a set of rules telling them which of these options are more appropriate than the others (March, 1994). Hence, by engaging in a certain course of action individuals do not signal any attempt to maximize their expected utility, but rather demonstrate their willingness to fulfill the duties assigned to them by some central administration (March & Olson, 1984).

How should a collective of interdependently operating specialists adjust their behaviors to one another in complex organizational settings? Tsoukas has described organizations as "distributed knowledge systems" (1996:13) in the sense that they must somehow utilize knowledge that is widely dispersed over many individual specialists and that cannot be known or controlled by any individual mind. An observation of this kind has led Robert Grant to state that "the fundamental task of organization is to coordinate the efforts of many specialists" (Grant, 1996a: 113; also see Demsetz, 1991). Decision rules play a crucial role in helping organizations overcome the problem of coordination, because they can act as coordinating mechanisms that integrate the specialist knowledge of many interdependently working individuals by focusing their efforts on a restricted set of shared or complementary behavioral options. As James D. Thompson has put it: "By delimiting responsibilities, control over resources, and other matters, organizations provide their participating members with boundaries within which efficiency may be a reasonable expectation" (1967: 54). According to well-established views in the field of organization studies, the exact make-up of the required set of decision rules depends on the type of interdependencies that exist between the tasks required "to get a job done" (cf. Cyert & March, 1958; Thompson, 1967). In the situation that each task renders a discrete contribution to the whole, rules to coordinate efforts among specialists must take the form of standardization. Where interdependence takes a serial form, such that one specialist's output forms the input for another, rule-based coordination through formal planning is key. When interdependencies are reciprocal, and each specialist simultaneously produces inputs for other specialists and processes their outputs, coordination rules inevitably become more informal and will hinge strongly on mutual adjustment.

Finally, how can individuals be motivated to follow the aforementioned how-to and coordination rules? Decision rules in organizations allow individuals to operate in a noncalculative way by enabling them to model their behavior after ethical requirements or norms of appropriateness (Frey, 1998). But Sunstein and Ullmann-Margalit (1999) warn us that the decision to adhere to the logic of appropriateness is not a noncalculative decision but in fact a rational attempt to reduce the problems associated with on-the-spot decision making in a later stage. In other words, the *a priori* decision to act noncalculatively at a later point in time is a calculative decision, which is made while the individual is still operating under the logic of consequentialism (Cyert & March, 1963). Like the problem of bounded rationality, this is not a problem *per se*, but it is in fact a problem in modern complex organizations where opportunities for opportunistic behavior abound. Given a discrepancy between their private interests and those of the organization, intendedly rational decision makers may be led to the conclusion that it is not in their best interest to blindly follow the decision rules prescribed to them by the organization. A realignment of interests between organization and individual therefore has to take place *before* the latter is put in the position where he or she has to choose between surrendering to the logic of appropriateness or remaining in the deliberative mode of practical reasoning. This realignment can be accomplished by adopting incentive systems—composed of decision rules—that reward individuals for rule-following and penalize them for rule-defiant behavior (Prendergast, 1999).

DISCUSSION AND CONCLUSION

These are the contours of an integrated, Neo-Weberian theory of the firm. By focusing on a singularly operationalized core concept, and by adhering to a strict set of shared assumptions, the theory offers a framework for understanding why firms exist, as well as how they connect individual actions to collective outcomes. The "why" aspect is addressed by pointing out (a) why rule following is a comparatively efficient decision-making strategy; (b) which cognitive elements of economic exchange transactions favor inclusion in rule-driven systems; and (c) why rules can only be born, revised, and dispensed in the context of formal organizations. In turn, the "how" aspect is addressed by clarifying (d) how individuals should receive behavioral instructions in organizational settings; (e) how collectives of interdependently operating specialists should be directed towards coordinated action; and (f) how individuals should be induced to adhere to a non-consequential decision logic. Before this paper will be brought to a close by means of a brief concluding section, the issue of whether the theory presented here has empirical content will briefly be discussed.

Empirical Content of the Theory

An important aspect of the justification for the present project was the observation that organizational life is colored by a number of complex phenomena that require a concurrent analysis of firms' boundaries (the "why" dimension) on the one hand, and of their internal organization (the "how" dimension) on the other. A crucial issue is therefore whether the present integrative theory is able to generate empirically testable propositions for both the "why" and "how" aspects of complex phenomena like organizational innovation and learning.

Any integrative theory of organizational innovation (or learning) would first have to be able to produce an answer to the question: which types of innovative activities (or learning processes) should be performed by rule-driven organizations, and which activities are best to be left to the market? The Neo-Weberian theory proposed here would suggest that innovation (as well as learning) is a decision-intensive process, for which both preserving the cognitive energy of organizational decision makers and focusing it on a limited number of key decisions are key. Activities that therefore must necessarily be brought within the organizational boundaries are those characterized by cognitive decision properties like repetitiveness, complexity, and time pressure. Alternatively, innovative (or learning) activities that can be broken down into sequences of non-recurring, simple decisions are best left to the market. Future empirical studies should test whether these empirical expectations hold.

Furthermore, integrative theories of organizational innovation (or learning) would also have to be able to provide insight into the question: how should innovative activities (or learning processes) be shaped in organizations, such that they can connect the innovative actions and decisions of individual members to collective innovative outcomes? The Neo-Weberian theory developed here portrays innovative, learning organizations as complex contexts, in which both the bounded rationality and latent opportunistic tendencies of organization members could obstruct the efficiency and effectiveness of key organizational processes. Also, the theory predicts that organizations that effectively engage in innovative or learning-oriented activities must have at least three sets of decision rules in place: (a) *how-to rules*, which guide and direct the contributions of individual organizational members to organizational learning and innovation; (b) *coordination rules*, which bring coherence at the collective level to the contributions of many interdependently operating specialists; and (c) *incentive rules*, which reward individuals for rule-following behavior and punish them for rule defiance. Future research should assess whether the decision rule structure of innovative, learning organizations indeed contains representative examples of all these three hypothesized rule types (e.g., see Heugens, van Riel, & van den Bosch, 2004).

Concluding Remarks

This paper embraces the view that the best way to celebrate the Weberian legacy is to use Weber's writings on formally rational organizations as a basis for further contemporary theorizing in the field of organization studies. Specifically, this paper has pursued the following research question: *Is it possible to develop an integrative theory of the firm that combines "why" and "how" perspectives?* The approach chosen to address this question explicitly builds on the Weberian tradition by focusing on the single core concept that Weber saw as a defining characteristic of bureaucracy and that distinguishes formal organizations from traditional organizations and informal social groups: the concept of decision rules. At the same time, the approach also extends the Weberian view on modern, complex organizations into a Neo-Weberian theory of the firm by (a) proposing a singular definition of decision rules that has validity in both the "why" and "how" contexts, (b) rooting the theory in a unified set of background assumptions, and (c) bringing together insights into the differential efficiency and internal structuring of rule-driven organizations.

One cautionary seems appropriate in this respect, however. The proposed theory was specifically developed to address complex organizational phenomena like organizational innovation and learning. Such phenomena require explanations that can concurrently address organizational boundary choices and internal structuring decisions, and it was argued that to date no unified body of theory exists that can step up to this challenge. The new theory should therefore be judged on its merits as a basis for further theorizing on organizational phenomena that span the intellectual boundaries of the traditional "why" and "how" approaches. But Occam's razor applies, and any unnecessary terms in a theory must be kept out (or shaved off). Many organizational phenomena can satisfactorily be explained by pure "why" theories like transaction cost economics, team production theory, or agency theory, or by distinct "how" approaches like knowledge-based-, evolutionary-, or behavioral theories of the firm. No integrative theory is necessary for such less complex phenomena, and this paper therefore does not reject any of the aforementioned perspectives on principle.

Instead, the body of theory suggested here should be seen as an emerging alternative that may eventually begin to offer answers to questions that are not presently addressed by extant theories of the firm.

REFERENCES

Albrow, M. 1970. Bureaucracy. New York: Praeger.

Alchian, A. A., & Demsetz, H. 1972. Production, information costs, and economic organization. American Economic Review, 62: 777-795.

Arrow, K. J. 1969. The organization of economic activity: Issues pertinent to the choice of market versus nonmarket allocation. U.S. Joint Economic Committee, The Analysis and Evaluation of Public Expenditure, Vol. 1: 59-73. Washington, DC: US Government Printing Office.

Blau, P. M. 1955. The Dynamics of Bureaucracy. Chicago: University of Chicago Press.

Borys, B., & Jemison, D. B. 1989. Hybrid arrangements as strategic alliances: Theoretical issues in organizational combinations. Academy of Management Review: 234-249.

Coase, R. H. 1937. The nature of the firm. Economica, 4(November): 386-405.

Collins, R. 1986. Weberian Sociological Theory. Cambridge: Cambridge University Press.

Conner, K. R., & Prahalad, C. K. 1996. A resource-based theory of the firm: Knowledge versus opportunism. Organization Science, 7(5): 477-501.

Cyert, R. M., & March, J. G. 1956. Organizational factors in the theory of oligopoly. Quarterly Journal of Economics, 70(1): 44-64.

Cyert, R. M., & March, J. G. 1963. A Behavioral Theory of the Firm. New Jersey: Prentice-Hall.

D'Aveni, R. A., & Ravenscraft, D. J. 1994. Economies of integration versus bureaucracy costs: Does vertical integration improve performance? Academy of Management Journal, 37(5): 1167-1206.

Delany, W. 1963. The development and decline of patrimonial and bureaucratic administrations. Administrative Science Quarterly, 7(2): 458-501.

Demsetz, H. 1991. The theory of the firm revisited. In O. E. Williamson, & S. Winter (Eds.), The Nature of the Firm: 159-178. New York: Oxford University Press.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48: 147-160.

DiMaggio, P. J., & Powell, W. W. 1991. Introduction. In W. W. Powell, & P. J. DiMaggio (Eds.), The New Institutionalism in Organizational Analysis: 1-38. Chicago: University of Chicago Press.

Dosi, G. 1997. Opportunities, incentives and the collective patterns of technological change. The Economic Journal, 107(September): 1530-1547.

Dunning, J. H. 1988. The eclectic paradigm of international production: A restatement and some possible extensions. Journal of International Business Studies, 19(1): 1-31.

Dutton, J. E. 1993. Interpretations on automatic: A different view of strategic issue diagnosis. Journal of Management Studies, 30(3): 339-357.

Eisenhardt, K. M., & Sull, D. N. 2001. Strategy as simple rules. Harvard Business Review, 79(January): 106-116.

Fama, E. F. 1980. Agency problems and the theory of the firm. Journal of Political Economy, 88: 288-307.

Foss, N. J. 1996. Knowledge-based approaches to the theory of the firm: Some critical comments. Organization Science, 7(5): 470-476.

Frey, B. S. 1998. Institutions and morale: The crowding-out effect. In A. Ben-Ner, & L. Putterman (Eds.), Economics, Values, and Organization: 437-460. Cambridge: Cambridge University Press.

Grant, R. M. 1996a. Toward a knowledge-based theory of the firm. Strategic Management Journal, 17(Winter Special Issue): 109-122.

Grant, R. M. 1996b. Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. Organization Science, 7(4): 375-387.

Greif, A. 1989. Reputation and coalitions in Medieval trade: Evidence on the Maghribi traders. Journal of Economic History, 49(4): 857-882.

Gulati, R. 1998. Alliances and networks. Strategic Management Journal, 19(4): 293-319.

Hamel, G. 1991. Competition for competence and inter-partner learning within international strategic alliances. Strategic Management Journal, 12(Special Issue): 83-103.

Heugens, P. P. M. A. R., van Riel, C. B. M., & van den Bosch, F. A. J. 2004. Reputation management capabilities as decision rules. Journal of Management Studies, 41(8): In print.

Jensen, M. C., & Meckling, W. H. 1976. The theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3: 305-360.

Jernier, J. M. 1998. Introduction: Critical perspectives on organizational control. Administrative Science Quarterly, 43: 235-256.

Kalberg, S. 1980. Max Weber's types of rationality: Cornerstones for the analysis of rationalization processes in history. American Journal of Sociology, 85(5): 1145-1179.

Khanna, T., Gulati, R., & Nohria, N. 1998. The dynamics of learning alliances: Competition, cooperation, and relative scope. Strategic Management Journal, 19: 193-210.

Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. Organization Science, 3: 383-397.

Langlois, R. N. 1995. Capabilities and coherence in firms and markets. In C. A. Montgomery (Ed.), Resource-Based and Evolutionary Theories of the Firm: Towards a Synthesis: 71-100. Boston, MA: Kluwer Academic Publishers.

Leiblein, M. J., Reuer, J. J., & Dalsace, F. 2002. Do make or buy decisions matter? The influence of organizational governance on technological performance. Strategic Management Journal, 23(9): 817-833.

Levitt, B., & March, J. G. 1988. Organizational learning. Annual Review of Sociology, 14: 319-340.

Liebeskind, J. 1996. Knowledge, strategy, and the theory of the firm. Strategic Management Journal, 17: 93-108.

Machlup, F. 1967. Theories of the firm: Marginalist, behavioral, managerial. American Economic Review, 52(March): 1-33.

Macneil, I. 1974. The many futures of contract. Southern California Law Review, 47: 691-896.

Madhok, A. 1996. The organization of economic activity: Transaction costs, firm capabilities and the nature of governance. Organization Science, 7(5): 577-590.

Madhok, A., & Tallman, S. 1998. Resources, transactions and rents: Managing value in interfirm collaborative relationships. Organization Science, 9(3): 326-339.

Madhok, A. 2002. Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource-based theories of the firm and the institutional structure of production. Strategic Management Journal, 23: 535-550.

March, J. G., & Simon, H. A. 1958. Organizations. New York: Wiley.

March, J. G., & Olsen, J. P. 1984. The new institutionalism: Organizational factors in political life. American Political Science Review, 78: 734-749.

March, J. G. 1994. A primer on decision-making: How decisions happen. New York: Free Press.

March, J. G., Schultz, M., & Zhou, X. 2000. The Dynamics of Rules: Change in Written Organizational Codes. Stanford, CA: Stanford University Press.

Masten, S. E. 1993. Transaction costs, mistakes, and performance: Assessing the importance of governance. Managerial and Decision Economics, 14: 119-129.

Monsen, R. J., & Downs, A. 1965. A theory of large managerial firms. The Journal of Political Economy, 73(3): 221-236.

Nelson, R. R., & Winter, S. G. 1974. Neoclassical versus evolutionary theories of economic growth: Critique and prospectus. The Economic Journal, 84: 886-905.

Nelson, R. R., & Winter, S. G. 1982. An Evolutionary Theory of Economic Change. Cambridge, MA: Harvard University Press.

North, D. C. 1990. Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press.

Osborne, D., & Gaebler, T. 1992. Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector. New York: Addison-Wesley.

Perrow, C. 1986. Complex Organizations: A Critical Essay (3rd ed.). New York: McGraw-Hill.

Petit, T. A. 1967. A behavioral theory of management. Academy of Management Journal, 10: 341-350.

Poppo, L., & Zenger, T. 1998. Testing alternative theories of the firm: Transaction cost, knowledge-based, and measurement explanations for make-or-buy decisions in information services. Strategic Management Journal, 19(9): 853-877.

Prendergast, C. 1999. The provision of incentives in firms. Journal of Economic Literature, 37: 7-63.

Roberts, P. W., & Greenwood, R. 1997. Integrating transaction cost and institutional theories: Toward a constrained-efficiency framework for understanding organizational design adoption. Academy of Management Review, 22(2): 346-373.

Roth, G. 1978. Introduction. In G. Roth, & C. Wittich (Eds.), Economy and Society, Vol. 1: xxxiii-cx. Berkeley, CA: University of California Press.

Sartori, G. 1970. Concept misformation in comparative politics. American Political Science Review, 64(4): 1033-1053.

Schulz, M. 1998. Limits to bureaucratic growth: The density dependence of organizational rule births. Administrative Science Quarterly, 43: 845-876.

Schulz, M. 2003. Impermanent institutionalization: The duration dependence of organizational rule changes. Industrial and Corporate Change, 12(5): 1077-1098.

Scott, W. R. 2003. Organizations: Rational, Natural, and Open systems (5th ed.). New York: Prentice Hall.

Simon, H. A. 1945/1998. Administrative behavior (Third ed.). New York: Free Press.

Simon, H. A. 1955. A behavioral model of rational choice. Quarterly Journal of Economics, 69(1): 99-118.

Spender, J.-C. 1996. Making knowledge the basis of a dynamic theory of the firm. Strategic Management Journal, 17(Winter Special Issue): 45-62.

Sunstein, C. R., & Ullmann-Margalit, E. 1999. Second-order decisions. Ethics, 110: 5-31.

Swedberg, R. 1998. Max Weber and the Idea of Economic Sociology. Princeton: Princeton University Press.

Thompson, J. D. 1967. Organizations in Action: Social Science Bases of Administrative Theory. New York: McGraw-Hill.

Tsoukas, H. 1996. The firm as a distributed knowledge system: A constructionist approach. Strategic Management Journal, 17(Winter Special Issue): 11-15.

Tversky, A., & Kahneman, D. 1974. Judgments under uncertainty: Heuristics and biases. Science, 185: 1124-1131.

Uzzi, B. 1999. Social embeddedness in the creation of financial capital. American Sociological Review, 64: 481-505.

Van Maanen, J., & Schein, E. 1979. Toward a theory of organizational socialization. Research in Organizational Behavior, 1: 209-264.

Warnock, G. J. 1971. The Object of Morality. London: Methuen & Co.

Weber, M. 1978. Economy and Society: An Outline of Interpretative Sociology. Berkeley: University of California Press.

Williamson, O. E. 1975. Markets and Hierarchies: Analysis and Antitrust Implications. New York: Free Press.

Williamson, O. E. 1981. The modern corporation: Origins, evolution, attributes. Journal of Economic Literature, 19(December): 1537-1568.

Williamson, O. E. 1985. The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York: Free Press.

Williamson, O. E. 1991. Comparative economic organization: The analysis of discrete structural alternatives. Administrative Science Quarterly, 36: 269-296.

Williamson, O. E. 1999. Strategy research: Governance and competence perspectives. Strategic Management Journal, 20(12): 1087-1108.

Winter, S. G., & Szulanski, G. 2001. Replication as strategy. Organization Science, 12(6): 730-743.

Zingales, L. 2000. In search of new foundations. Journal of Finance, 55(4): 1623-1653.

ENDNOTES

[1] The secondary literature on Weber is immense. No attempt will be made here to review these writings, as I trust that the other contributors to this special issue will provide competent synopses. Interested readers are nevertheless advised to have a look at: Collins (1986), Roth (1978), Scott (2003, pp. 43-50), and Swedberg (1998).

[2] In our time, the most evident institutional alternatives to compare bureaucracy with are the market and the organization—market hybrid. Whereas Weber primarily compared bureaucracy with primitive and patrimonial governance alternatives, he also explicitly compared bureaucracies with markets. What the two have in common is a characteristic shared by "all pursuits of naked economic interests," notably an "'[o]bjective' discharge of business (…) 'without regard for persons'" (p. 975; cf. endnote 3). In their pure forms, both markets and hierarchies are "dehumanized," implying that they succeed in "eliminating from official business love, hatred, and all purely personal, irrational, and emotional elements which escape calculation" (p. 975).

[3] All Weberian quotes in this paper were taken from *Wirtschaft und Gesellschaft: Grundriss der verstehenden Soziologie*. The page numbers refer to the English translation, edited by Günther Roth and Claus Wittich, which was published in 1978 by the University of California Press.

[4] One of the enduring critiques on Weber is that he did not foresee any debureaucratization movement (Delany, 1963). Debureaucratization has subsequently been used as an epitaph for processes like deregulation or the infusion of state bureaucracies with market principles (Osborne & Gaebler, 1992).

[5] Another oft-heard critique on Weber is that even though rationality is perhaps the major theme in his oeuvre, his conception of rationality is polymorphous (Kalberg, 1980).

[6] The "victory" of bureaucracy over other governance alternatives is of course never instantaneous nor will it ever be complete. Instead, bureaucratization is best perceived as a process, and the speed with which it unfolds is dependent on the relative advantage of the

bureaucratic form of organization over existing governance arrangements. In turn, this relative advantage is dependent on the state of technical development of the available alternatives, and the process of bureaucratization will thus be particularly slow in countries where the older structural forms, although nonbureaucratic, are "in their own way technically highly developed and functionally particularly well adapted to the requirements at hand" (p. 987).

[7] This quote probably represents the most famous and surely the most infamous fragment of *Bureaucracy*. An entire secondary literature exists which links Weber's views on bureaucratic organization to ideas on organizational domination. This essay is not the place to provide a more balanced view on the issue, but readers interested in a critical theory perspective on organizational control are advised to consult Jermier (1998).

[8] The idea of using an explicit background structure of assumptions to simultaneously highlight and delineate the contributions of the theory of the firm developed here was taken from Monsen and Downs (1965: 223-224).

[9] It may be argued that decision rules can only develop in markets when market transactions take the form of quasi-organization, in which the participants represent an unusually stable set of social actors whom are engaged in multiple, enduring forms of social and economic exchange (cf. Greif, 1989).

[10] It is imaginable, for example, that the configuration of decision rules in a hybrid will be imperfectly holographic, in the sense that each partner must replicate certain aspects of the other's less than perfectly observable system of decision rules for the inter-partner exchange interface to function properly. The imperfect observability of the partner's knowledge base guarantees a replication process that produces sets of decision rules that are functionally equivalent at best, but never completely identical (Winter & Szulanski, 2001).