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Economics of identity and economics of the firm: why and how their three central questions overlap

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Abstract. This paper shows how the literature on identity can enhance the so-far underdeveloped appreciation of social context in the theory of the firm. While taking context into account, I explain why the literatures overlap in significant ways and I propose an analytical map which relies on and matches the three central questions of both literatures. The three central questions on identity – identification, individuation and multiple social identities – are coupled respectively with the three central questions on the firm – the nature of the firm, internal organization and firm boundaries. This identity-based extension of the economics of the firm contributes to the organization of the literature by extending the analysis of identity to questions that go beyond the primary question of identification. In doing so, it identifies two key research agendas: the role of internal organization in enabling individuation and the role of firm boundaries in enabling collective intentions.

1. Introduction

The fact that the literatures on cognition and on motivation are not well connected in the economics of the firm has legitimately raised concerns, notably by Foss (2004), as, in the absence of a common research agenda, the study of the interactions between organizational characteristics, identity and behavior is made difficult. This concern brings to light a fundamental underlying issue which is that the literatures on identity and on the firm are not well connected in economics. This paper proposes to tackle this issue by identifying the main lines that structure the dialogue between the economics of the firm and the economics of identity. In doing so, it identifies the areas of research that have been underexploited and proposes a path for further developing the integration of the two literatures.

In the economics of the firm, the question of how identity affects behavior is mainly conceived through the prism of identification, which analyzes to what extent workers identify with the organizational goals and studies the mechanisms which facilitate this process. The role of the nature of the firm in enhancing

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identification is central in these views, notably in the seminal contributions of March and Simon (1958), Simon (1976) and in the recent works by Akerlof and Kranton (2000, 2005, 2008). This research agenda relies on the hypothesis that firms differ from the market because of their ability to create shared identities, as argued notably by Kogut and Zander (1996) and Hodgson (1996).

While the economics of the firm has focused on the question of identification, it has relatively neglected two other questions that the literature on identity addresses and that are essential to the study of behavior in firms. First, it has neglected the question raised by Davis (2007) that deals with how individuals manage the different affiliations to social groups they interact with. I label this question 'the management of multiple social identities' and rely on Davis's definition by making it a central feature of personal identity strategies. The idea of 'management' refers to individuals' efforts and involvement in the organization of his/her different social affiliations. Second, the economics of the firm has neglected the question of individuation. The question of individuation is related to how people decide to distinguish themselves from each other, notably through identification with specific social groups. Its use in economics is discussed by Davis (2003, 2011).

The focus on identification in the literature is consistent with the fact that, with regard to identity, firms are primarily seen as different from the market because they can enforce hierarchical relationships while allowing identification. But their roles in generating innovation and organizing the production process are also central elements of their distinctive nature. These aspects, which are related to firm boundaries and internal organization, are not well connected to the identity literature. This state of the literature is problematic because firm boundaries and internal organization require assigning roles and related tasks to individuals. Those roles and tasks matter to the identity strategies that individuals develop when managing their multiple social identities and when individuating.

This paper examines the relationships between the central questions that are related to identity and those that are related to the firm. I explain why and how the three central questions of the economics of identity overlap with the three central questions of the economics of the firm and propose an analytical map. I identify elements of the research agenda which are specific to the combinations of the central questions in both literatures. The main contribution of this paper is to provide a framework in which, when dealing with identity issues, the study of the nature of the firm may be completed by the inclusion of questions related to the firm's internal organization and its boundaries. This renewed framework provides a guide to explain what roles firm boundaries and internal organization play in the management and development of identities inside firms.

This proposal is made possible by the renewed interest in the theory of the individual and the theory of identity in economics. In economics, identity describes how individuals conceive their own selves and how identity-related motivations operate in economic analysis. The concept of identity has gained an audience among economists over the last 30 years and has literally emerged in the last decade as a sub-discipline (Kirman and Teschl, 2004). This recent literature opens up new theoretical perspectives. Davis (2011) brings out the central questions of the literature on identity, which were often merely assumed or alluded to in economists' discourse.

The three central research questions of the economics of identity are identification, individuation and multiple social identities. They respectively refer to the impact of a sense of affiliation, in this case with the firm, on individual economic decisions, the economic outcomes that result from actions and processes through which individuals differentiate themselves from each other, and finally the economic outcomes that arise from the way individuals arrange their own multiple social identities. Identification deals with the efforts individuals make to build affiliation strategies with social groups and institutions in their environments. Individuation refers to the efforts individuals make to relate to the social groups and institutions in their environments in a way that allows them to position themselves in the social and organizational spectrum. The manner with which individuals organize their multiple social identities deals with the efforts made to manage their personal identity, as defined by Davis (2007), in a way that is consistent with their self-image. In the context of the firm, firm boundaries help organize multiple social identities that are associated with the various social groups individuals interact with, some of them being inside the boundaries of the firm and some being beyond them.

The three well-identified central questions to the economics of the firm are the nature of the firm, its internal organization and its boundaries. The nature of the firm refers to the specificity of the firm as a mode of economic organization and coordination that differs from market transactions. Internal organization refers to the analysis of hierarchies (Radner, 1992), organizational devices and incentives that structure and enable production and decision processes. The question of the boundaries of the firm refers to the frontier that separates the firm from other firms or organizations. It is often identified through make-or-buy decisions; identity boundaries also constitute an argument in the definition of boundaries (Eisenhardt and Santos, 2005).

By proposing an analytical map, this paper identifies a structure to the relationships between the firms on individual identity which extends the current analytical framework. This essay aims at providing an identity-based extension of the analysis of the firm. It explains how using insights from the recent advances in identity theory in economics can serve the economics of the firm by shedding light on issues that were under-considered, focusing on how the nature of the firm, along with the role of internal organization and of firm boundaries, shapes individual identity. Thus, this work will help overcome limitations which result from the gap between the renewed perspective on identity and its actual use. The current use of the concept of identity in the economics of the firm remains mainly limited to the study of identification; apart from the link between the nature of the firm and identification, the main questions of the literatures are not aligned. This proposal discusses the research agendas that can be developed by using the analytical tools provided by the new developments on identity in economics.

This paper aims at providing the economics of the firm with the reasons why and how the questions of both literatures can be matched more clearly. It focuses on the main questions of both literatures and organizes the discussion in order to contribute to the three main questions of the economics of the firm. This perspective enables the construction of the argument in the following order. In the next section, I explain that the traditional link between questions related to identity and those related to the firm has been built around the questions of identification and of the nature of the firm. Building on the literature on identity, I then explain that the firm's internal organization plays an important role in determining how individuals individuate themselves through the process of embracing the roles and tasks that are assigned to them by the firm's internal organization. This argument reconnects the process of learning to identity through the individuation process. It also lays the ground to study the role of the firm's boundaries in organizing multiple social identities by distinguishing social identities which are inside the firm from those that are outside the firm. In doing this, it makes it possible to explain how collective intentions can be linked to individuals. I finally summarize the argument and the contributions.

2. Why and how the focus on the coupling of social identity-based identification and the nature of the firm participated in the decentralization of context and the misalignment of the central questions on identity and on the firm

The literature on identity in the firm was initially developed through the study of identification. Identification is central to the economics of the firm and to organizational economics, as it describes what individuals experience when they acquire a sense of affiliation to an organization, thereby increasing firm productivity. The traditional economics of the firm perspective on identity in firms examines the relationship between the nature of the firm and identification with the firm.

This research agenda relies on prominent hypotheses according to which individual identity may be affected by the firms' internal relations and norms in such a way as to enhance productivity (Alchian, 1991; Conner and Prahalad, 1996; Cook and Yanow, 1993; Hodgson, 1996; Hodgson and Knudsen, 2007). Seminal studies in economics on the use of the concept of identity to address the question of identification go back to March and Simon (1958) and Simon (1976). Their definition of identification stresses the fact that individuals who identify with their firm make decisions after considering the organization's objectives, independently from monetary rewards. In this literature, the firm is both a theoretical and an empirical framework of great importance for individual identity, and the study of firms contributes to a better understanding of economic organizations. As pointed out by Simon (1991), individuals spend most of their lifetime at work within organizations and the economy is a network of firms which are interconnected by market transactions and authority connections.

Prominent contributions to the analysis of identification to the firm include the work of Crémer (1993), Lazear (1995), Kogut and Zander (1996), Hodgson (1996), Akerlof and Kranton (2000, 2005, 2008) and van den Steen (2005, 2010). Crémer (1993) was first to focus on this issue. The premise of his conception is that no code is given to individuals when they enter a firm; individuals learn about the available social identities they can possibly adopt through repeated interactions while being in the firm. The analysis of the diffusion of values within organizations was further developed by Lazear (1995) who focused on the role of management in promoting certain preferences.

The argument was taken one step further by Kogut and Zander (1996) and Hodgson (1996), who argued that identification is enforced by the firm precisely because its role and nature are to promote shared identities. Kogut and Zander (1996) focus on the firm's comparative advantage over market transactions in diffusing knowledge, most specifically tacit knowledge. Central to their understanding is individuals' willingness to belong to a community and the promotion by firms of learning and communication within a moral community: the division of labor increases individual's desire to participate in a moral order, to develop an 'unsocial sociability' (Foss, 1996). In the same line, Hodgson (1996) explains how the firm 'molds' individuals' identity: individuals' identities are shaped by the contexts in which they evolve and the way in which firms shape employees' cognition. Corporate culture becomes an essential part of the nature of the firm in its role in influencing individual behavior inside a firm: firms change behavior patterns, the perception of problems as well as their potential solutions. Learning processes, which individuals go through *de facto* when first joining a firm, also promote cooperative prescriptions.

In recent contributions, the literature has pursued the interest in the link between identity and cooperative behavior. Akerlof and Kranton (2000, 2005, 2008) argue that social categories play a role in the identification process. They make identity and identity-related behaviors central arguments for explaining individual motivation: identity can foster a cooperative mindset and influence individual behaviors in organizations. Rob and Zemsky (2002) explain that social capital within the firm and the preference for cooperation that individuals have makes defection a source of disutility. Van den Steen (2005, 2010) argues that managerial vision plays a role in implementing and sustaining shared beliefs as members of a firm prefer to avoid conflicts and remain within a group in which individuals tend to have similar strategies.

As explanations based on monetary incentives have failed to give a full explanation of effort in organizations, the reference to non-monetary explanations of workers' motivations has become more prominent (Gibbons, 1998; Prendergast, 1999). Contributions on the role of intrinsic motivation and of the crowding-out effect following the large literature initiated in part by Deci *et al.* (1999) have motivated changes in economics, as illustrated by Bénabou and Tirole (2003). A recent appraisal of intrinsic *versus* extrinsic motivation in experiments is provided by Bardsley *et al.* (2009). Also, attention has been paid to the combination of both types of incentives, as in Holmström and Milgrom (1994), who showed why and how using incentives, including non-monetary ones, in a combined way can increase agents' efforts more than when they are used independently.

The economics of the firm has largely focused on the role of non-monetary sources of motivations, rather than on organizational aspects of identity strategies. This focus, which was driven by the importance of the recognition of non-monetary incentives, has not regarded contextual aspects of internal organization and firm boundaries as core theoretical elements. Even in the behavioral theory of the firm, which is the primary body of literature dealing with organizational aspects of individual behavior and identity in organizations, the study of organization goals, which were central to the study of intra-organizational behavior in Simon and March's views and in the seminal works of the Carnegie School, has been relatively neglected (Gavetti *et al.*, 2007).

I argue that, surprisingly, in the economics of the firm, reference to the nature of the firm through its traditional and prominent focus on identification led the literature to de-center elements that relate to context. Broadly defined as in cultural psychology by the situation or circumstances in which events occur, context is de-centered because the nature of the firm refers primarily to the employment relationship, its features and the relationships that are associated with it, notably the non-monetary motivations and subsequent gains in transaction costs. The focus is essentially concentrated on the implications of the nature of the firm for social identity through the employment relationship, and little attention is deliberately paid to internal organization and firm boundaries. Although the relationship between the nature of the firm and identification is central, it does not cover all the questions that economists could raise.

I further argue that this focus misaligns the main questions that are tackled in both literatures. The questions are misaligned because identification, through the prism of social identity, does not include the identity strategies associated with internal organization and firm boundaries, i.e. individuation and the management of multiple social identities. This argument is the mirror of the main underlying proposal, which is that the main questions in both literatures overlap because a firm's context, also captured through the questions of internal organization and firm boundaries, affects the identity strategies that individuals invest in when working in the firm.

This state of the literature and standpoint on identification in economics is similar to the perspective in the social sciences, where identification is studied, in particular by social psychologists,[1] through choices of affiliation which they assume to be individually motivated. In contrast, evolutionary psychologists and neuroscientists focus on the underlying social and organizational motives of identification by studying how the selection of behaviors that favor affiliation with the group occurs at the level of small groups (Ben-Ner and Putterman, 2000). This capacity to develop social feelings is conceived as being selected through evolution and to have grown out of the social instincts of primates (de Waal, 2006). This 'other-regarding' tradition in the social sciences is underused, despite the fact that it has helped in providing an explanation of why individuals may identify with goals that are related to social organization and not solely to self-centered individual motivation.

I now turn to explaining how questions related to firms' internal organization match with questions related to individuals' identity strategies.

3. How and why the research agendas on internal organization and individuation can be matched and why it can facilitate the study of what individuals do in firms

The main argument developed in this section is that the research agenda on internal organization is well coupled with the research agenda on individuation. This section explains the reasons why they have not been matched so far and the reasons why the two agendas can be matched. Then, it identifies the main questions this can help to address in the economics of the firm.

Traditionally, economists have paid less attention to the question of internal organization than management scholars. This state of the literature has not facilitated the development of a theory of identity related to internal organization and research questions linked to organizational arrangements. From this perspective, the theory of the firm in economics remains under-developed (Garrouste and Saussier, 2005) and understanding of the internal organization in economics remains unsystematic. Internal organization is described in a number of ways in theories of the firm that emphasize the role of contracts, ownership, entrepreneurship and hierarchy to describe the firms' organizational structure.

In the economics of the firm, the prominence of contractual theories of the firm, which deal with the formalization of contracts that rule transactions inside and outside firms, embraces the Walrasian tradition that shifted attention away from production processes toward the market (Hodgson, 1998). Following this framework, firms were mainly represented through the family enterprise with simple organizational setups, as described by Robinson (1977: 1324).

Competing representations of internal organization have since emerged in economics. In the line of Coase's emphasis of the role of hierarchy (1937),

1 Surveys of the social psychology literature can be found in Brown (2000) and Hogg and Abrams (2001).

Arrow's conception of internal organization (1974) made authority the primary source of the structure of internal organization and focused on explaining how organizational features provide firm members with institutions that allow them to coordinate through a system in which authority matters. Following Williamson's approach (1975), the transaction cost perspective focuses on the role of hierarchical organizational schemes in organizing the execution of contracts given the *ex ante* nature of contracts. The adaptation theory of the firm, developed in the line of Simon (1951) and in part by Williamson (1975), analyzes the 'selective intervention puzzle' by focusing on the fact that the firm may facilitate 'adaptive, sequential decision-making' (Gibbons, 2005; Williamson, 1975: 40), which puts a great emphasis on the role of centralized authority. The capabilities approach to the firm, which comprises the evolutionary theory of the firm, the resource-based view of the firm and the knowledge-based explanations of the firm, makes internal organization a determinant of firm capabilities.

Nevertheless, there is no consensus on the role and importance of internal organization. For instance, many do not acknowledge its existence, as in Alchian and Demsetz (1972), who do not recognize authority as an element of the relationships between employees and employers. The now dominant transaction cost economics approach is, thanks to its empirical successes, 'appealing for an "underdeveloped" theory of intra-firm organization' (Garrouste and Saussier, 2005: 182).

The difficulty in tying the identity-related research agenda to the one concerning internal organization is linked in part to the lack of a unified vision of the nature of the firm. The initial focus on a definition of authority mainly through the hierarchical dimensions of firms has contributed to making the employment relationship, and not contextual elements, the central feature of internal organization. This argument does not aim at overturning the importance of authority. Instead, it aims to point out the fact that, despite the role of authority, its relationship with the nature of the firm and to internal organization, is central; the focus on these relationships does not cover all the questions that an economics of identity in the context of the firm raises.

Internal organization and identity issues remain loosely connected to the economics of the firm, mainly because identity theory is centered on identity development through the performing of tasks, which is not a central research object in the economics of internal organization, except in the literature on routines, which deals with the performing of tasks, and is developed mainly in evolutionary economics and in the behavioral theory of the firm. However, these literatures do not focus on the role of the efforts that individuals make to develop their identity as routines are usually studied at the level of the firm.

I propose to match the literatures on internal organization and identity through the study of individuation processes, which can be imported from the literature on identity. A reason why individuation processes remain under-considered in the economics of the firm is that the question of identification does not allow explaining of how individuals distinguish themselves from others. However, given that individuation relates primarily to the individual, and not to the firm, it may be relatively easy to include as a research object in the economics of the firm.

Individuation can shed light on the effect of internal organization on individual identity inside the firm and ultimately on behavior. The matching relies on the fact that the main feature that both internal organization and individuation have in common is that both the firm and individuals discover their individuality – i.e. they individuate themselves – through the performing of tasks. This enables individuals to improve their self-understanding with regard to the roles that they have in the organization, which corresponds to the internal organization of the firm.

In psychology, individuation is the crucial step an individual takes in the process of becoming an autonomous whole: it is the stage at which the individual interprets rules and norms and identifies with others in an individuated way. In economics, there are two characterizations of individuation. The atomistic conception of the individual describes individuation through the internal mental states that provide the unique set of preferences that characterizes an abstract and hypothetically distinct individual. In this framework, individuation aims at describing how individuals can distinguish themselves from others. In fact, this conception abandons subjectivity, as explained by Davis (2003). The socially embedded conception of the individual, that 'sees social relationships as embedded in individuals' (Davis, 2003: 170), describes individuation as the processes engaged in by individuals when they identify their own self with others, as participants of social groups. These individuation processes correspond to the commitment to social groups, as defined by Sen (2002: 217n) and Davis (2006: 378), that enable individuals to construct their identity through distinctive identification decisions.

The two definitions of individuation relate differently to internal organization. In the first sense, when individuation is defined as the process that an individual may engage in when differentiating himself/herself from others, internal organization may be used to explain how it can trigger distinct differentiation strategies between individuals. In the second sense, individuation describes the process by which individuals build their distinctive identity while identifying their own selves with others. In this case, internal organization may be used to explain how individuals conceive themselves, given their firm's internal organization and their position in their organization. In the context of the economics of the firm, this combination of individuation and internal organization allows operationalization of the role of commitment to specific social groups to describe individuals' identity strategies. Overall, the two definitions make it possible to describe different uses of internal organization in the process of understanding how the individuals' identity may change within firms.

Akerlof and Kranton (2005, 2008) illustrate the argument that internal organization triggers individuation strategies. They illustrate the relationship between internal organization and individuation in the first sense when referring to the role of supervision. Strict supervision, which corresponds to the situation in which the supervisor reports information about workers' actions to management, makes individuals into outsiders who reject the firm they work for. They also illustrate the relationship between internal organization and individuation in the second sense, especially when referring to the story of Shirley from the ethnographic writing of Smith (2001). Shirley works in a reprography business and takes pride in her position, despite daily insults from customers. She is an insider because management trains employees to deal with insults from clients and because the firm provides a specific environment that enables her to identify with the firm. Employees know that the work conditions and the training opportunities are better than the alternative jobs available on the job market, which contributes to their pride and motivation. The firm's internal organization provides them with opportunities that allow them to individuate themselves, in the second sense of the definition, as they can identify with socially successful groups.

I argue that the literature on knowledge in the economics of the firm may relate to individuation because of internal organization: knowledge may contribute to individuals' ability to individuate themselves through their position in the firm's internal organization. There are firms in which employers do not have information about the knowledge that employees have (Demsetz, 1988; Conner and Prahalad, 1996) and situations in which the specificity of knowledge sometimes does not allow principals to monitor agents (Minkler, 1993). In those cases, the inclusion of individuation enables the description of another type of identification, which may be complementary to the traditional focus on identification through social identity and the nature of the firm.

Ultimately, the effort to link knowledge to individuation through internal organization may facilitate the study of tasks, of what individuals do in firms. The inclusion of individuation in the economics of the firm shows that, with regard to the formation of identity strategies, an authority-based mode of coordination appears as an incomplete account of coordination in the firm. It is particularly salient in the case of the new post-Chandlerian firm in which production processes and individuals' positions in the firm do not necessarily rely on the 'visible hand' of the manager (Chandler, 1977).

In line with the transaction cost approach, most work on knowledge in the economics of the firm focuses on the relations between specific knowledge, as a specific asset, and firm capabilities, including those that are linked to internal organization. This stress on the role of specific assets makes it difficult to describe how individuals relate to their identity when working in firms which are not knowledge-intensive. The recent focus on the role of capital intensiveness in determining motivation may distract the attention from the features of the firm by placing too much weight on the role of bargaining power that individuals may be endowed with in some cases. The role of firms' specific features is central to identity strategies, but the quality of the knowledge involved may not necessarily be so. The inclusion of individuation may provide another tool to describe how motivation and identity strategies are formed when knowledge is not specific.

This focus on firm specificity underlies the role that firm boundaries play in the management of identity by individuals. I now turn to explain how the main questions of firm boundaries match with the questions related to identity.

4. How and why the matching of the questions of firm boundaries and the management of multiple social identities can help introduce the issue of collective intentions inside the firm and contribute to the study of identification

The question of the boundaries of the firm is fundamental, as firm boundaries define the size of the firm, the core technologies it develops and the competences required from its employees and managers. This question has led economics to achieve major progress in the subject of the firm (Garrouste and Saussier, 2005): efforts undertaken to define firm boundaries considerably helped the explanation of the firm as a context in which economic activity may take place and be organized. The study of the boundaries of the firm focuses on the analysis of the economic and social forces that reside behind the distinction between the transactions and interactions that are within the firm boundaries and those that take place outside its boundaries.

Understanding the boundaries of the firm is a challenge for economists. Coase (1937), who first studied them in the theory of the firm, stated that their location is the result of make-or-buy decisions. Depending on the transaction costs of organizing productive processes, the firm will grow until the costs of organizing production inside the firm exceed profits, leading managers to externalize production activities. His approach was continued by Williamson (1975, 1985), Grossman and Hart (1986) and Hart and Moore (1990) who focused on firm boundaries' ability to set incentives and maintain them. Dominant explanations of firm boundaries are mainly based on the idea that firms try to protect their investments as *ex post* bargaining and holdups may occur. The literature focusing on the hold-up issue has shown that in an environment with incomplete contracts and when parties must make relationship-specific investments, integration may be desirable and may lower transaction costs (Grout, 1984; Klein *et al.*, 1978). Later in the development of the literature, Rajan and Zingales (1998) reinterpreted the role of the firm as an organization which brings transactions into the firm in order to control employees' ability to benefit from access to the resources of the firm.

The literature has narrowed its focus on the role of specific assets and the hold-up issue, as argued by Holmström and Roberts (1998). They further explained that knowledge is the first reason why internalization occurs and the key concern when dealing with the management of firm boundaries. Thus, it is surprising that leading economic theories of firm boundaries do not systematically include organizational knowledge in their analysis. Also, their role for managerial and efficiency dimensions, power and identity considerations is of crucial importance, and those dimensions are not central in economics (Eisenhardt and Santos, 2005). Building on these concerns and comments, I analyze the relationship between the questions raised in the literatures on identity and the firm.

The two literatures overlap primarily on the question of firm boundaries and the question of personal identity management strategies because they both relate to how individuals inside organizations manage their relationship with their environment. The study of the relationship between firm boundaries and identity can help depict individuals' strategies with regard to their identity in the firm. Firm boundaries can be used to explain how individuals conceive themselves in the firm by describing their strategies for managing their multiple social identities. The perception of firm boundaries by employees separates social identities that are associated with social groups inside the firm and those that are associated with social groups outside the firm.

This argument is made possible by the new representation of personal identity in economics proposed by Davis (2007) who defines it as the organization of individuals' multiple social identities. The concept of personal identity, through this definition, allows us to use organizational structures that are exterior to the individual to describe identity management. It also allows us to think about an individual's self as a collection of social identities which may be competing while co-existing. The idea behind this segmentation of social identities is that employees' personal identities are affected by firm boundaries as they shape the list of tasks that they are assigned and the core competences they develop. In the process of carrying out these tasks, acquiring these competences and communicating with individuals that are either inside the organization or outside the organization, individuals develop social identities in a manner that is related to this segmentation.

The introduction of personal identity theory through the prism of the relations between firm boundaries and multiple social identities provides a tool which allows us to link institutions that are related to the firm to individual identity; it provides a tool to analyze the effect of institutions on specific individuals. This feature of the theory can help include the question of collective intentions, which, with the exception of Hodgson (1996), has been largely disregarded in the literature on identity in the firm. Collective intentions were brought into economics from philosophy to explain how the goals of various groups inside firms can influence individual identification strategies (Davis, 2003). They deal with the formation and existence of intentions at the level of groups in the firm and help explain the effect of organizational goals on identity, when they are shared collectively.

The absence of collective intentions in economics limits the research agenda on organizational goals in that firms' motivations do not match collective intentions. More fundamentally, firms' internal structure and firms' internal organization are not at the core of the economics of the firm theory, which explains that the variety and diversity of social spaces in which agents formulate intentions is not well captured. In economics, agents are traditionally individuals. But agents could also be groups of individuals which can have collective intentions, as in transnational firms, where business meetings unite groups from different geographical regions. Collective intentionality could allow to identify levels of a firm's internal organization at which affiliation may be promoted, overcoming the limits of the concept of organizational goals as a more general and space-free concept and capturing actual individual identification strategies.

The methodological difficulty of integrating collective intentions resides in the conventional self-centered individual in economics. Collective intentions depart from the traditional self-centered conception, in which the individual relates to experience solely through introspection and inwardness (Davis, 2003). In the modernist conception of the autonomous individual, she/he is disengaged from the world and thinks apart from the material world and its influences, including those of others and institutions. This conception is grounded in the Hobbesian tradition and treats humans as prone to avoid social commitments, engaging in them only when the cost of living autonomously is too high. With regard to identification, the autonomous representation of the economic agent expels from motivation and decision-making discussions references to specificities in relation to groups and organizations.

In contrast, the proposal to rely on personal identity theory to include information about the perception of firm boundaries is consistent with recent developments in forms of collective self-reference, which build on the philosophical concept of the 'we-mode' (Tuomela, 2007). This mode is to be distinguished from the I-mode where the main argument is that an accurate representation of individuals' actions requires an account of the forms of collective intentionality that individuals use. Recent theoretical developments in economics have developed this idea.

Bacharach's (2006) fundamental point is that game theory relies on an ambiguous use of language, which does not reflect the experience of individuals when they make decisions: individuals use 'we' to refer to themselves. Thus, this self-reference mode may affect decision-making. Bacharach portrays identification through 'social group identification' and 'personal identification' (Davis, 2011): both the individual, who is a team member, and the group exist through identification. The team is a weak subset of a set of individuals: an individual identifies with a team if he/she considers the team as a unit of agency, acting as a single entity which pursues a goal. Ross (2005) proposes an alternative and complementary conception of the individual as a team. In this conception, individuals have sub-personal neural agents and the individual is both the product of intrapersonal and interpersonal interactions (Davis, 2011). This process of 'sculpting' the individual is done through the ability individuals have to produce 'self-reports' and rely on narratives.

The study of how individuals organize their multiple social identities through these recent developments could help explain individuals' identity strategies in the context of the firm. To this end, firm boundaries are tools to separate the context of the firm from other social groups that may affect individuals' identity. Thus, this research agenda may facilitate the study of social identities that are distinctive to the firm.

5. Conclusion

This paper proposes an approach to improve our understanding of the relationships between the questions that are related to the firm and those that are related to identity. By doing so, it identifies an extension-based theory of identity in the economics of the firm and provides a framework which can account for the impact of the firm on individual identity. I explain that identification is linked to the nature of the firm, as the specific features of the firm can contribute to changing an individual's identity by favoring the emergence of a sense of affiliation. Internal organization plays a key role in determining individuation strategies as internal organization devices, just as hierarchy, or personalized compensation schemes, play a role in differentiating individuals inside the firm. Firm boundaries can be used to understand the impact of the firm on how individuals 'manage' their different social identities, some of which relate to socialization processes which occur within the firm, and some of which relate to social groups that are outside the firm.

This paper makes two contributions, which serve both the economics of the firm and the economics of identity. The first contribution is to use the division of the questions related to identity in a manner that can contribute to explaining how a firm's internal organization has an impact on identity strategies. Identity strategies are divided into two categories: identification and individuation. The inclusion of the concept of individuation enables significantly improvement the analysis of the relationship between internal organization and identity. Firms may allow individuals to individuate themselves through creating channels of identification with several social groups while preserving identification with firms' goals.

The second contribution is to explain how firm boundaries can be used to understand how individuals organize their different social identities in the firm. The traditional focus on the efficiency dimensions of firm boundaries is challenged by rising concerns about the identity boundaries of the firm. Identity boundaries deal with the firm as a context in which coherent knowledge and behavioral prescriptions operate. To overlap the question of firm boundaries and the question of multiple social identities, I use the concept of personal identity as defined by Davis (2007) to identify social identities that are related to the firm as compared to those that are related to the outside. Thus, through the suggested framing of the problem, personal identity theory can help account for the role of individual identity strategies, which are the management of their social identities, in the explanation of collective intentionality. This enables to account on how firms individuate.

This paper calls for further research in the economics of the firm which would include direct reference to the new and emerging theories of identity in economics. The suggested analytical map may help match the research questions that are related to both literatures.

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