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## Structural Holes and Encroaching Processes



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### ■ Résumé

#### ■ Abstract

*Individuals typically - though not necessarily - populate organizations. Individuals typically - though not necessarily - develop relationships with other individuals. These relationships, or links, are generically known as social networks. This paper is embedded in the dual fields of social capital and organizational change. We explore the relationship between social capital, structural holes, and encroaching processes - a particular type of organizational change. Currently, we are able to determine the social network of a particular ego at Time A, and then again at Time B. To this point, what we do not know are the mechanisms of this social network change. The thesis of this paper is: encroaching processes provide an explanation for how structural holes are bridged (links are made) in social networks. The argument of the paper takes the following form: all things being equal, individuals prefer more social capital to less; to increase social capital, individuals bridge structural holes; consequently, individuals engage in encroaching processes to bridge structural holes.*

#### ■ Mots clés / Keywords

*Encroaching process; structural holes; social network; organizational change.*

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## Introduction

Individuals typically - though not necessarily - populate organizations. Individuals typically - though not necessarily - develop relationships with other individuals. These relationships, or links, are generically known as social networks. This paper is embedded in the dual fields of social capital and organizational change. We explore the relationship between social capital, structural holes, and encroaching processes - a particular type of organizational change.

The current field of Social Capital deals with the “collective value of all '[social networks](#)' and the inclinations that arise from these networks to do things for each other,” (Putnam, 2000). These networks are structural representations of interdependencies. A social network consists of an individual (ego) and all of his contacts. These contacts exist within ego’s own organization (cluster) or may span clusters. Much of the early investigation in this area viewed social capital as a resource (c.f., social resource theory, Lin, 1992; Lai, Lin, and Leung, 1998). While most researchers have been interested in the links that exist, Ron Burt (1992, et. seq.) has been interested in the links that do not exist. He calls these non-existent networks structural holes. Structural holes - far from being viewed as problems - are seen as opportunities. When structural holes exist, at the most detailed level of analysis, we can observe that task processes have been changed - encroaching processes have targeted them. Encroaching describes a set of processes that are emerging as an area of research in organizational change (Marker 2000a; 2000b). Encroaching processes are responsible for organizational change due to their capacity to target structural interdependencies and changing the arrangement of task processes.

Currently, we are able to determine the social network of a particular ego at Time A, and then again at Time B. To this point, what we do not know are the mechanisms of this social network change. The thesis of this paper is: encroaching processes provide an explanation for how structural holes are bridged (links are made) in social networks. The argument of the paper takes the following form: all things being equal, individuals prefer more social capital to less; to increase social capital, individuals bridge structural holes; consequently, individuals engage in encroaching processes to bridge structural holes.

To begin our presentation we review the main points of social capital and structural holes. This discussion is followed by a presentation of encroaching processes of organizational change. We then make the argument for how encroaching processes provide one explanation for how structural holes are bridged. In the paper that supports this proposal, we will present a current business example of the workings of this mechanism. This presentation is developed through a process framework. The process framework reveals how encroaching processes bridge structural holes and change social networks



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## 1 Social capital, a wide range of conceptions and uses

Following foundational works such as Bourdieu's (1980, 1986, & 1992), Coleman (1990), Burt (1992), and Lin (2001), the concept of social capital has been used extensively. Various recent reviews try to order and clarify the debate (Sandefur, Laumann, 1998; Portes, 1998; Lin, 2001; Adler, Kwon, 2002; Borgatti, Foster, 2003). Research streams are numerous and in a wide variety of themes in our field. Topics such as career success and mobility in the internal and external labor markets (Granovetter, 1973, 1974; Flap, 1999; Lecoutre, 2003, 2005; Burt, 1992, 1995; Leana, 1999; Seibert, Kraimer, Liden, 2001), or inter-organizational exchanges and R&D team performance (Kreiner, Schutz, 1993; Hansen, 1999; Bouty, 2000). The detailed reviews of Adler and Kwon (2002) followed by Borgatti and Foster (2003) add analyses of recruitment and human resources practices, power, leadership phenomena, individual performance and creativity, innovation enticements and intellectual capital creation (Nahapiet, Ghosal, 1998), in addition to entrepreneurship and supplier-customer relationships in the markets. Some studies emphasize the negative features of social capital, highlighting the associated risk of heavy closure or manipulation (Uzzi, 1997). Much of this research details the organizational or individual positive outcomes related to the development of goodwill, or the resources held by the social relationships, or associated with the filling of a particular position in social network. The definitions of social capital are as wide and numerous as the researchers engaged in the discussion. They include such definitions as the mutual willingness of individuals and groups toward each other (Adler, Kwon, 2002 ; Putnam, 1995, 2000), or the social "quality" of the members of the network you can mobilize for successful actions (Lin, 2001), or even the value of non redundant ties for the individual network (Burt, 1992).

Consequently, for Bourdieu, social capital is composed of "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words to membership of a group," (1986: 248), and more precisely, "... the sum of capitals and power such a network allows to mobilize," (1992:95). Coleman (1990) clearly has a similar, albeit broader, conception. For him, social capital is all that facilitates "the achievement of goals that could not be achieved in its (social capital's) absence or could only be achieved at a higher cost" (1990: 304). Relationships between individuals form social structures that are particular social and reticular layouts in which social capital appears. They always collectively involve a group of persons. It is embedded in the structure of the relationships between individuals, and "...is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspects of a social structure, and they facilitate certain actions of individuals who are within the structure," (Coleman, 1990: 302). In the end, the value of social capital is specific at one time for a particular person within a group and for particular actions. Coleman's conception is broad; more precise studies emphasize the relational definition of social capital (Borgatti, Foster, 2003).

According to Granovetter (1973, 1974), individual actions influence the shape of a relational network and the strength of its links. The extended network of persons weakly tied to ego (the entity at the center of a particular social network) and located in far clusters, i.e. weak ties bridging ego's cluster with other clusters, allows him to mobilize persons, resources, or information he does not usually access. From that starting point, the conception of social capital emphasized on one hand what circulates in the networks (values, local norms, mutual expectations, information, material, or social support, power, control, etc.). i.e.: This is what is set in motion by individual actions. On the other hand the other concept emphasizes the shape of the networks, their topology, or their structure, that generate social capital. The first approach has been followed by researchers such as Lin (1982, 2001). He states that social capital leading to successful actions relies on the social status of ego's contacts: the higher the relative position of ego's contact in a social

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structure, the better the social resources ego can access and therefore improving his likelihood of success. The second approach, and the one that is used in this investigation, is presented by Burt. Burt (1992, 2000b) defended a strictly relational concept of social capital based on the identification of “holes” in the structure of a network and the strategic behaviors of actors trying to link these clusters that are not connected. We discuss Burt’s approach in the following section.

## 2 Structural Holes, a network conception of social capital

Burt (1992, 2000b) systematized the idea of discontinuity in the social structure and the relative strength of links according to their position within the structure. Granovetter built his argument on the natural tendency of strong ties to be transitive, of social groups to develop closure. A weak tie entitling someone to jump outside his usual network establishes a bridge upon two unconnected clusters within social structures. In contrast, Burt’s point of view states that a strategic actor can quite intentionally spend time and energy to create and maintain a link between two social circles. For Burt, it is the lack of ties between members of a particular network that provides advantages and constitutes one’s social capital. For Burt, the decisive characteristic of a link bridging over a hole in the social structure is not its strength, but the fact that it is non redundant, that is the link created by ego is - relatively - the only one connecting separated clusters. Strategically, it is irrelevant for ego to keep up another link with the same cluster. Let us take three individuals, ego, A and B. If the contacts of A and B are the same, A and B will give access to the same information held by these contacts. In this case, one of the two contacts is redundant and it’s useless keeping it for ego: he would gain advantage to break one of the two links and to allot energy and time thus released to develop a new and non redundant relationship located in a group worth of interest for him.

Burt applied these principles to the career of high level managers in a large US firm, in a strongly competitive environment within which each one maintains a strategic position and relationships providing relative advantages. These actors deal instrumentally with their relational network to better achieve their professional activities (Burt, 1992). For them, “...the absence of ties (structural holes) represented entrepreneurial opportunities to become broker controlling information flows and the coordination of actions between the actors located on each side of this hole,” (Burt, 1995: 602). The career inequalities among directors result thus from contextual differences, that is from a different structural position, allowing them to better identify the opportunities: those having numerous structural holes in their network are always in a best position to manage their actions. Actors have interests situating themselves between two unconnected clusters, developing thus, according to Burt (2000a) a “network entrepreneur” strategy. Last point, from the organizational point of view, Burt’s approach provides a way, relying on the strategic abilities of the actors, to understand the evolution and transformation of the network structure.

So, identifying and occupying structural holes is strategic process that had lead to previous studies, in the line of Burt. But how does this process occur? In the following section, we present an emerging theory of organizational change that provides an explanation for how structural holes are bridged where strategically beneficial or increased if strategically desirable.

## 3 Description of Encroaching Processes

*Encroaching* is a foray by individuals or units (the encroacher) into the boundaries of another individual or unit (the encroachee) (Marker, 2000a; 2000b). The process of encroaching occurs for many reasons and may originate from inside an organization or from outside the targeted entity. An example of encroaching from inside the organization is the addition or elimination of tasks or

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responsibilities. There are many encroaching processes originating from outside the organization such as the imposition of government regulations, requests for additional documents from financial institutions, or a customer's demands for special treatment. Children negotiating their way around a playground or in a water line and adults driving on city streets have experienced this issue. Everyone has familiarity with the process of encroaching. Although ordinary, encroaching is ubiquitous, appearing at every level of social life.

Six components comprise the machinery of encroachments:

- 1) *the domain* - the venue where the change occurred;
- 2) *the encroacher* - the entity originating the change;
- 3) *the encroachee* - the entity that is accountable for the task process being changed;
- 4) *the target* - the subject of the change;
- 5) *the preemptor* - the entity with authority to quash an encroachment; and
- 6) *the preemptor network* - the structure of preemptor authority.

There is a difference between encroaching processes and encroachments. Encroaching describes a process that may result in an encroachment. There are three necessary conditions for an encroachment. An encroachment has occurred when:

- 1) An encroaching process is initiated;
- 2) The process produces a change; and
- 3) The encroachee recognizes the change.

Encroaching may occur as a single event or incorporated in a series of events. In order for an encroaching episode to occur, the encroacher must change part of the set of processes of the target. That which is changed is the domain of the encroaching process. For the episode to become an encroachment, the encroaching process must be recognized by the encroachee. Thus, for an encroaching process to become an encroachment the process must result in change AND the target must recognize the change. This paper is not concerned with determining whether or not an encroaching process has risen to the level of an encroachment. Thus, we will refer to the phenomena in their generic form as encroaching processes.

*Encroachees* are entities that are accountable for the targets of encroaching processes. The set of *targets of encroachments* are task processes, roles, positions, and resources. A task process is a time dependent series of events ruled by a process framework (Mackenzie, 2000). Roles are the specific set of task processes an individual or unit undertakes. A position is the formal arrangement of various roles. A position may possess multiple roles. Likewise, roles might traverse several positions. Resources are those items brought to bear to accomplish these tasks. Structural holes may be bridged by encroaching processes targeted at any of these in the set.

*Encroachers* are entities that initiate encroaching processes. Some types of encroachers that could initiate encroaching processes could be task processes, individuals, units, or organizations. Since it is individuals that seek to bridge structural holes, in this research, we focus on individuals as the initiators of encroaching processes and encroachments.

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Encroachers often have the option of selecting the domain in which an encroaching episode takes place. Whether observable or not, some authority presides over every domain. Entities with authority possess official power to enforce decisions. Power is the control of interdependence uncertainty. Consequently, authority is the official ability to control interdependence uncertainty. This leads to the third set of entities in encroaching episodes: *preemptors*. Preemptors are entities with the authority to end an encroaching episode. A preemptor could be a manager with supervisory authority or a preemptor could be a process (e.g., a state or federal regulation). Preemptive authority does not always have to be exercised. A preemptor could decide to allow an encroaching process to proceed without interruption. Additionally, it is possible for a preemptor to be ignorant of an encroaching process or not recognize an encroaching process. In a domain with multiple preemptors, the preemptors form a *preemptor network*. Not all preemptors are equal; certain preemptors have more authority than others. Accordingly, the preemptor network is the structure of preemptor relationships. This is a strict authority network - those with authority to overrule another preemptor sit higher in the preemptor network.

Each set of preemptors possesses different preemptive authority. In the preemptor network, a directly related set of preemptors is called a preemptive tree. A preemptive tree is a hierarchical arrangement that represents the direct lines of authority. Each entity in a direct line of authority resides at a certain level. When encroachers initiate encroaching processes, they select a preemptive tree and a level. Encroachees might respond to encroaching processes by becoming an encroacher. When the response to encroachment is an appeal to a preemptive authority in the same direct line of authority but above the current preemptive authority, the encroachee (now an encroacher) is said to be jumping levels. If a response to an encroaching episode is to appeal to a preemptive authority in a different tree, the encroacher is said to be jumping trees.

When an encroachee responds to an encroachment by moving to another set of preemptors, that encroachee (now the encroacher) is said to be jumping trees. When an encroacher jumps trees and begins at the lowest preemptor level available on that tree, the encroacher only jumped trees but did not jump levels. If an encroacher jumps trees and selects a preemptor that is not the lowest available on that tree, the encroacher is said to have jumped trees and jumped levels. An example in industry of jumping trees but not jumping levels is an encroachment that takes place in the regional marketing department and the encroachee responds by initiating an encroaching process in the regional production department. Jumping trees and jumping levels occurs when the encroachee responds to an encroachment originating in the area marketing department by initiating an encroaching process in the regional production department. Encroachers would engage in jumping trees and jumping levels in order to take advantage of a particular preemptive authority.

Encroaching processes and interdependence are vitally linked: encroaching cannot exist in non-interdependent environments. The existence of an encroaching process exposes changes in interdependence. It is supposed that encroachments often reveal interdependencies that had been unknown.

*Encroaching event* is the general term used for both encroaching processes and encroachment episodes. Each encroaching event commences with the initiation of an encroaching process and ends with either a response to the encroachment or satisfaction by encroachee in an encroaching process. In order for an encroaching event to occur, the encroacher must effect a change in some part of the set of task processes of the target. Encroaching processes may be single events or repeated as a series of events. Each encroaching process that becomes an encroachment is an

encroaching episode. An *encroaching episode* is the cycle of encroaching and responding. For the event to become an encroachment, the encroaching process must be perceived by the encroachee.

#### 4 Encroaching and Bridging Structural Holes

Encroaching describes how individuals, tasks, or processes change organizational relationships. This is realized through change in the links - interdependence relationships of another individual, task, or process. In the particular case of social capital, we are principally interested in the relationship between individuals. In studying encroaching processes, we are investigating how ego completes desirable links to bridge a structural hole. Recall that encroaching processes possess six components; the corresponding social capital components are presented here.

<i>Table Corresponding Components</i>		
Encroaching Component	Definition	Social Capital Component
Domain	The venue where the change occurred	Social network of ego
Encroacher	The entity originating the change	Ego
Encroachee	The entity that is accountable for the task process being changed	Targeted Entity
Target	The subject of the change	Object of the relationship
Preemptor	The entity with authority to quash an encroachment	Entity within particular clusters of ego's social network
Preemptor network	The structure of preemptor relationships	Structure inside clusters

We believe that egos, in their attempt to create links to bridge structural holes, engage in encroaching processes. In order to reveal these relationships, we use a process framework (Mackenzie, 2000). The purpose of this process framework is to capture the behavior of ego in bridging structural holes. In this research, the behavior of multiple egos operating in similar networks is observed. From this we can predict the outcome of encroaching process and the resulting change in ego's social network.



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## Contribution

We have presented here the main ideas for a paper that provides five primary contributions. First, we provide a link between social capital theory and the processes of organizational change. Upon close examination, it is obvious that both social capital and organizational change processes are phenomena concerned with the arrangement of interdependencies. Traditionally, how these interdependencies are arranged is the focus of organizational development researchers. The gap we bridge here is between understanding various individual relationships (the domain of social capital) and the processes of organizational change.

Our second and third contributions are: 2) we explore and depict the relationship between actors in the same social network cluster; and 3) we examine and depict the relationship between actors in different social network clusters. Our fourth contribution is in the area of research methodology. By using process frameworks, we are able to provide a “contrast material” against which moves by ego are made. To date, we have been able to visualize the social network of ego at Time A and then at Time B. By using process frameworks, we are able to capture the moves of ego. Our final contribution is to the practice of management. By showing how process frameworks capture the moves of ego, we are in the position to develop a tool usable by practitioners in developing their social network; or to impede the development of some other actor’s social network.



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