

INTERNAL CONTROLS AND THE POWER OF NEGOTIATION: THE ROLE OF IDENTITY MANAGEMENT IN THE PROTECTION OF INFORMATION ASSETS

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Abstract

This research is focused on developing an understanding of how individuals identify with their assigned roles and responsibility structures within an organization. Additionally it is concerned with how individuals approach their responsibility and accountability for protecting information assets within an organization. We utilize Social Identity Theory and Identity Theory as a lens for analyzing the negotiation process between an organization and their stakeholders, with respect to identifying and creating roles and responsibility structures. The results of this study suggest that a good understanding of this negotiation process will assist organizations in establishing stronger internal controls for the protection of information assets.

Key Words: Internal Controls, Role and Responsibility Structures, Accountability, Social Identity Theory, Identity Theory.

Introduction

Information security is one of the most important and challenging issues facing organizations today. Organizations are no longer characterized by physical assets, but rather by individuals who create, process, hold, and distribute information (Dhillon and Backhouse, 2000). Information helps organizations achieve competitive advantage, by enabling the delivery of cheaper, or more differentiated products (Porter, 1985). The changing nature of information however, has both benefits and liabilities: on the one hand, information is dynamic and valuable as a resource; whilst on the other hand, it needs to be controlled and protected to ensure that it is utilized effectively (Oppenheim et al., 2001). Keeping information secure is not only the responsibility of security professionals, but is also the responsibility of all employees within the organization. Therefore, all users should be aware of what their roles and responsibilities are for the protection of information assets (Backhouse and Dhillon, 1996).

There is a problem with the manner in which individuals identify with a given role in an organization, and in how organizations allocate individuals to formal roles. This arises from a mismatch between individual and organizational expectations, and it can lead to discordance in the organizational-individual dyadic value systems. If such discordances persist, it can well lead to highly vulnerable situations, where existing controls may become subverted. In situations where the primary responsibility of an organizational role is to manage information assets, then the intangible nature of such assets increases the likelihood of losses.

The motivation for this research stems from well-documented issues within IS Security literature: that many of the breaches of information systems in organizations are a result of insiders' failure to protect information (Schultz 2002). Over the past decades, incidents arising from such discordance between expectations have been on the increase. A report, by PGP Corp. examined the costs incurred by 43 organizations that had experienced a data breach. Breaches ranged as high as 113,000 records and the average total cost per company ranged from more than \$613,000 per breach, to nearly \$32 million (<http://www.ponemon.org>). These breaches of information are not restricted to loss of information only, or to data theft, but they also include internal control failures. In May of 2003, Mirage Casino was fined \$5 million for failure to file 15,000 currency transaction reports, which had a potential fine of \$500 million. In this case, a Mirage employee who was responsible for filing the CTRs possessed all the required information for filing the reports, but chose not to do so for personal reasons. As result of this incident, Mirage's management investigated the violation and then decided to fire several employees below and above this individual in the hierarchy, whom they felt should have been in a role/position to have identified the disgruntled employee's actions sooner. The irony of the of this case is that, in June of 2008, a Nevada court awarded a \$4.5 million compensation to an executive who was fired as a result of Mirage's internal investigation. This is a clear example of an organization failing to identify

how an employee identified with his responsibilities, and how it also failed to identify which tasks are associated or assigned to each role/position.

In light of the increasing demands on corporations to increase productivity and efficiencies in order to improve bottom line results, organizations have been forced to lay off and reduce staff. Therefore, one can decipher that employees are taking on additional responsibilities further to their initial role, that they were not originally designed to perform (Mishra and Spreitzer, 1998). This results in the roles and responsibility structures within an organization becoming more blurred with time, and eventually the concept of maintaining a separation of duties becomes a challenge. It is even becoming difficult for either the organization, or the individual to determine who is responsible for what, or which role is accountable for performing a specific task. If each role is to function, it must be able to rely on the expected interaction with other roles.

Although unique, each role is interrelated to counter-roles: in that the individual interests of the role and counter-role compete with each other, such that proper role performance can only be achieved through negotiation (Stets and Burke, 2000). The importance of negotiation in working out differential performances, relationships, and interconnections of roles within a group or interaction context, is at the core of the role identity theory (McCall and Simmons, 1978). When different, but interrelated role behaviors and meanings are negotiated to ensure that role identities are confirmed, then a strong connection to the group develops (Burke and Stets, 1999). By maintaining the meanings, expectations and resources associated with a role, role identities help perpetuate the unique complexity of social structures (Stets and Burke, 2000).

This introductory section presents a foundation for understanding the importance of identity-related issues within organizations. This research aims to understand better those sociological processes that impact the formulation and negotiation of roles and responsibilities within contemporary organizations. The underlying social dynamics that influence how an individual performs a given role with respect to the management of information assets are complex, and are currently not well defined. This study focuses on the negotiation process between individuals and the organization in the development of roles and responsibility structures.

Development of Research Questions

There are many interesting questions relating to why individuals fail to protect information assets from being compromised, such as: Why do employees fail to perform their assigned duties? Do organizations fail to properly assign responsibility to an identified role? Why is it that employees do not identify with the responsibility of assigned roles?

From an organizational perspective, it would seem that the notion of identity work in organizations offers a number of distinctive concepts and perspectives as to why employees do not identify with their responsibilities. One of these concepts is a process within the social identity theory which is called 'self-categorization', whereby the self is reflective, in that it can view itself as an object and is able to categorize, classify, or name itself in particular ways in relation to other social categories or classifications (Turner, 1987). A similar concept in identity theory is called 'identification' (McCall and Simmons 1978). An identity is formed through the processes of self-categorization and/or identification. It is important to examine how a person categorizes themselves as a member of a group, and also to observe the role that the person carries out while acting as a member of a group. When an individual identifies with a specific social identity, this means that they consider themselves to be at one with a certain group, and thus tend to see things from the group's perspective. Furthermore, those individuals who identify with a group tend to feel a strong attraction to the group as a whole, independent of the individual attachments within the group (Hogg and Hardie 1992).

These group and roles identity bases are similar to the organic and mechanical forms of societal integration that were analyzed by Durkheim (1893). Individuals are tied organically to their groups through their social identities, and are tied mechanically through their role identities within a group. This means that an individual who has a particular role identity will act to fulfill the expectations of their role. This includes coordinating and negotiating the interaction with role partners, whilst manipulating the environment in order to control those resources that they are responsible for (Stets and Burke, 2000). Stets and Burke noted an important aspect of role identity, namely the differences in perceptions and actions related to a role in comparison to its counter roles. To comprehend how the individual interpretation of a particular role interacts with counter-roles, it is useful to consider the negotiation of interpretations for specific situations and identities, and also to analyze how they fit together to provide a situational context for interaction (Burke 1980; Burke and Reitzes 1991).

In the case of role-based identities, some form of interaction and negotiation is usually involved with the person performing the role (McCall and Simmons 1978). Different perspectives among those involved in the group exist, as each person negotiates and performs their respective roles, creating micro social structures within the group (Riley and Burke 1995; Stets 1997). This negotiation process is an interpersonal decision-making process, by which two or more people make mutual decisions concerning the allocation of responsibilities (Pruitt and Carnevale, 1993). During this process, the employee and their employer may both recognize the value of reaching a mutual agreement, yet each is motivated to maximize their own gain within a given context. In negotiation theory, the realization that value can be gained from reaching mutual agreement through cooperation is known as 'integrative negotiation', whilst the motivation to maximize their own personal objectives through a competitive stance is known as 'distributive negotiation'.

Integrative negotiation is the process whereby negotiators reach mutually beneficial agreements. When people have different preferences, beliefs, and interests, it is possible to craft outcomes that are better for both parties, rather than just simple “split it down the middle” solutions. Even though most negotiation situations contain potential for mutually beneficial agreements, they often go unrealized, as most individuals adopt an all-or-nothing approach to negotiating, because they feel that the other party’s interest are directly and completely opposed to their own interests (Neale and Bazerman, 1983; Thompson and Hastie, 1990; Thompson and Hrebec, 1996).

The process of maximizing personal objectives by claiming as much of the available “resource” as possible, is known as ‘distributive bargaining’ (Deutsch, 1985; Walton and McKersie, 1965). However in order for distributive bargaining to end in an agreement, a positive bargaining zone must exist first, which means that there must be a range of possible agreements that both parties are willing to accept. For example, if the employee is willing to accept the responsibility for performing a specific task, but they would like to receive a promotion and a 5% raise, yet management is willing to award a maximum raise of 10%, plus a promotion. As there is a positive bargaining zone of 5% in this case, it is up to both parties involved to decide how the additional 5% will be divided. Negotiation is a mixed-motivate endeavor, whereby negotiators are motivated to cooperate with one another to reach agreement, but compete with one another to claim resources (Lax and Sebenius, 1986; Walton and McKersie, 1965).

Based on the understanding of these negotiation processes, the following questions arise:

1. How does an individual’s social identity impact their adherence to internal controls with respect to their role within an organization?
2. How does the negotiation process within an organization impact on the protection of information assets?
3. How does the negotiation process in an organization during the formulation of roles and responsibility structures impact on how individuals identify with their existing roles?
4. In what ways does the negotiation process of an organization affect the way that individuals identify with the responsibility of protecting information assets?

We believe that the way to gain a better understanding of how individuals identify with their existing roles and whether they identify with the responsibility of protecting information assets is through carrying out an analysis of the negotiation processes that take place in an organization during the formulation of roles and responsibility structures. During the remainder of this paper we will first discuss the theoretical foundations that support this line of questioning. Secondly we will discuss and clarify the concepts and definitions that are presented throughout this

study. This will be followed by a discussion about the mismatch between individual and organizational expectations and the effects this has on identity management and internal control systems. Lastly we will describe the potential contributions and identify future research directions for this study.

Theoretical Foundations

This study is centered on two primary theories. The first is the 'Social Identity Theory', and the second is the 'Identity Theory'. Tajfel first introduced the concept of social identity in 1972, when he proposed "that the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" is paramount. Basically, group membership or social group is a set of individuals who hold a common social identification, or who view themselves as members of the same social category. Through a social comparison process whereby an individual internalizes as to how they identify with social groups that they feel they belong to, is referred to as 'self-categorization' in social identity theory (Abrams and Hogg, 2006). Individuals who are similar to the self are categorized as 'self', and are labeled the 'in-group' and those individuals who differ from the self are categorized as the 'out-group'. Social identity rests on intergroup social comparisons which seek to verify, or to create, favoritism for members of in groups, as opposed to out groups, which is motivated by an underlying need for self-esteem (Turner, 1975). This supports the belief that the process of how self is conceptualized in intergroup contexts creates a system of social categorizations, which defines an individual's own place in society (Tajfel, 1972).

Similar to the social identity theory, the identity theory deals principally with the components of a structured society and also how individuals interact within it. Individuals acting in the context of social structure will name one another and themselves in the sense that they recognize one another as occupants of positions (roles). This process is referred to as 'identification'. In identity theory, the core of an identity is the categorization of the self as an occupant of a role, and the incorporation, into the self, of the meanings and expectations associated with that role, and its respective performance (Burke and Tully 1977; Thoits 1986). Individuals do not view themselves as being similar to others with whom they interact, but as being different, possessing their own interests, duties, and resources (Stets and Burke, 2000). Stryker (1980) equated that the self-identification process within identity theory is relevant to the formation of one's identity.

McCall and Simmons (1978) make it clear that the identification process within identity theory includes all those things that take on a meaning in relation to one's plans and activities. We posit that this includes information assets as well. To substantiate this belief, we found that researchers have drawn on this meaningful relationship between persons and things in the literature to incorporate the concept of resources (things that sustain persons and interactions) as a central component

for identity processes (Freese and Burke 1994). Much of the meaningful activity within a role that is governed by an identity revolves around the control of resources (Burke 1997).

Based on these theoretical foundations, we believe that the social identity theory and identity theory can both be utilized as a means to gain a better understanding of the negotiation process between organizations and their stakeholders, in relation to the protection of information assets. This will thus assist management in the creation of identity management systems that help to reduce the likelihood of individuals circumventing internal controls that protect information assets.

Research Concepts and Definitions

The goal of this study is to initiate a discussion on how to provide a structured analysis of these social dynamics, bearing in mind that they particularly relate to the formulation of roles and responsibility structures. It is important to thoroughly demonstrate these foundational constructs in order to avoid any misunderstandings. For this purpose, we define and briefly discuss the following 6 concepts: Information Assets, Organizations, Roles and Responsibility Structures, Accountability, Internal Controls, and Identity Management.

Information Assets

The concept of information as an asset has its roots in information resource management. Information can be considered an organizational resource that has a specific life cycle of: creation, distribution, use and disposal. This life cycle view of information was also considered by Porter (1985) to be important for organizational value when he stipulated, "Information systems have a profound impact on competition and competitive advantages, because of the pervasive role of information in the value chain". Some organizations have considered information to be just like any other resource, and they have assigned a cost and a value to it. The process of determining a specific value is difficult, as its value often depends on context and use (Eaton and Bawden, 1991). Attributing value distracts from appreciating the dynamic role that information plays in organizations. This dynamic environment is well described by Burk and Horton (1988) in their definition of an information resource entity, which they claim is "a configuration of people, things, energy, information, and other inputs that has the capacity to create, acquire, provide, process, store or disseminate information." This view of information as an asset, and thus as a corporate resource, has resulted in information being viewed as a creator of value, rather than just as an overhead and it encourages profit centers/generators to treat information inputs as a vehicle for management to add value to their organization. It is also important to note that information has also been defined as a datum point within a given context, which is interpretable by an

individual. We consider information assets to be information that is unique to an organization, which is either valuable for the production of a product or the delivery of a service, or it is employee or client confidential information, which could be a liability if the organization fails to protect it properly.

Organizations

The philosophical question of what constitutes an organization is an ongoing debate within management research literature. For the purpose of this study, we consider an organization to be made up of more than just its employees and managers. It can be argued that the survival of an organization depends on how well internal and external factors are merged together to produce an effective and productive outcome. These diverse internal and external factors are representations of various interest groups, all of which have diverse information needs and uses. The process of fulfilling these diverse needs means that the significant attributes of information assets for these groups need to be identified. By locating information assets and their attributes within an organization and also the interdependency among the groups for shared information, we are able to identify how these various groups are coupled together to form an organization framework. It is important to note that an organization will only be effective and be able to survive when all interest groups are retained within the organizational framework.

Role and Responsibility Structures

In the dynamic environment of today's organizations it is ever more important for individuals to understand what their respective roles and responsibilities are (Dhillon and Backhouse, 2001). Due to the complexity of the interaction between the multiple roles of an organization, the definition of a role therefore often involves the expectations of others as to how the behavior of a role should be. Typically the assessment process of role responsibility is based on the fulfillment of these expectations. Failure to meet these expectations for one's behavior often results in negative sanctions or punishments, whereas positive sanctions or rewards depend on fulfilling or exceeding these expectations. When an individual proves to be reliable in performing their role to the expected level, then they are often described in terms of responsibility as being either "responsible" (those who meet the role's expectations), or "irresponsible" (those who fail to meet the role's expectations). These expectations are also referred to as 'explicit obligations held by the individual who occupies the role'. This concept of obligation leads to the belief that the failure of an individual to perform a role will be blamed or punished, whereas adequate performance of a role will not be praised (Hamilton, 1978). These concepts of obligations or responsibilities have commonly been referred to in literature as the 'notion of morality of aspiration'. Morality of aspiration refers to the standard to which individuals should aspire to, rather than the standard to which they are just

accountable for (Fuller, 1964). Therefore, being responsible means not just being accountable when something goes wrong, but also refers to how an individual handles the development of unknown events within a given context. (Dhillon and Backhouse, 2001).

Accountability

Accountability is the acknowledgment and assumption of responsibility for actions, decisions an individual makes. For employees, this also includes accepting the responsibility for adhering to an organization's policies and procedures within the scope of their role or employment position, which includes the obligation to report, explain and be answerable for the consequences of their actions. Hamilton (1978) explored the relationship between responsibility and accountability within organizations by building upon Heider's (1958) stages of responsibility attribution model. Hamilton (1978) found that:

“Society is responsive to the fact that different roles may necessitate different standards of attributionally, roles can best be viewed as normative contexts that determine the standards of accountability of the actor, rather than as external compulsions imposed upon on the actor”.

This implies that management is held to more rigorous standards of accountability, and that occupational prestige can serve as a proxy across various professions to determine whether the individual is, or is not, in a position of authority, which implies the need for a higher level of scrutiny. Therefore, an individual's acceptance of accountability is dependent on which identity is salient at the time of retrospective reflection by the employee, according to the social identity theory. Thus, different roles can lead to different rules for determining levels of accountability, and high-prestige roles invoke more stringent applications of accountability standards.

Internal Controls

Internal controls are critical for maintaining order within an organization. For the purpose of this study we adopt the COSO's Internal Control-Integrated Framework. COSO defines internal control as being a process that is designed to provide reasonable assurance with regards to the achievement of objectives, in the following categories: a) effectiveness and efficiency of operations; b) reliability of financial reporting, and; c) compliance with laws and regulations. COSO defines internal control as being comprised of the following five components:

- **Control Environment:** sets the tone for the organization, influencing the control consciousness of its people. This is the foundation for all other components of internal control.

- Risk Assessment: the identification and analysis of the relevant risks of achieving objectives, forming a basis for how the risks should be managed.
- Information and Communication: systems or processes that support the identification, capture, and exchange of information in a form and time frame that enables people to carry out their responsibilities.
- Control Activities: the policies and procedures that help ensure that management directives are carried out.
- Monitoring: processes used to assess the quality of internal control performance over time.

Management needs to consider these five items in order to design and implement an ideal set of internal controls that provide assurance that the organization's control objectives are being met. It is important to realize that the effectiveness of internal controls depends on the competency and dependability of the people using it (Dhillon, 2001). Therefore, it is important to establish identity management practices that support the organization's objectives for the protection of information assets.

Identity Management

Identity Management is a growing concern for citizens, businesses and governments alike. Identity management has been referred to in the past as being "the process of representing and recognizing entities as digital identities in computer networks" (Josang et al., 2005). Authenticating a component of identity management controls serves to verify who has access to digital information. Therefore, identity management is fundamental to protect information assets by maintaining strict authorization and access controls. This view of identity management is rather narrow, and focuses just on a purely technical view of controlling access to the resources in a computer system. For the purpose of this study, we adopt a broader view of identity management that also incorporates a social-technical view, in that not only do identity management systems include technical controls such identification and authentication controls, but they also include formal and informal controls for organizational practices, which determine when, why, and who, is granted access to information assets.

Discussion

A primary concern of management should be how to ensure that their information assets are being protected properly. There should also be a concern to establish internal control processes, which effectively convey and meet their objectives. In order to do so, it is imperative that management understands the negotiation

process within their organization, and the degree of an individuals' social identity and their impact on the negotiation process, and also their identification with a role's responsibility for information assets. Stets (1995) noted that when the meanings and expectations associated with role identities conflict with the meanings of individual identities, then they may well act without regard to the role identities, in order to maintain their personal identities. The context of a situation whereby a set of roles is activated which influence an individual's meanings and expectations of their role will vary, depending on the person's own perspective. It is impossible to guide the actions of an individual simply by guiding their relationship with role identities, as each individual maintains individual personal identities which are unaffected by role identities. People need to be able to balance the demands of role identities with the demands of their individual personal identities, otherwise personal conflicts will exist, resulting in the individual opting not to meet the responsibilities of the role's identity (Stets 1995).

It has been argued that individuals who are ascribed to a role carry multiple identities. It is important for organizations to manage the correct identity amongst the individuals associated with a specific task for an identified role. Failure to do so, results in highly vulnerable situation. The use of the Social Identity theory allows us to consider the implications of individuals maintaining multiple identities and consequently their relationship to groups within the organization. Let us consider the interaction between the shaping of individual identities and their relationship to internal boundaries within groups, as they can influence their roles and responsibilities with respect to sufficiently protected information assets in a given context. In doing so we can recognize the individual's desire to improve their perception of their social identity status by granting access to information assets not only to individuals or groups who are accountable for them, but also to those who are unauthorized to have access, but demand access in exchange for group acceptance. Here we can see how access controls may be subverted and how they can threaten the integrity and protection of the information asset. Secondly, identity theory provides a framework for analyzing how an individual identifies with a role and also with the tasks and activities associated with that role. In this approach to this three-way relationship between an individual, role, and information asset, we use the identity theory as a means of analyzing the negotiation process between an organization and the individual, as they determine which information assets a specific role will be held accountable for. The negotiation process between an organization and individual employees has an impact on how well information assets are protected within an organization. This impact can lead to non-compliance or ineffective identity management policies. Therefore, an understanding of the negotiation process would be helpful for the creation of stronger internal controls for identity management systems (see Dhillon and Chowdhuri, 2013).

Based on these theories, we argue that individuals believe that they each perform a unique and integrated function within their organization because they see things from their own perspective, and furthermore they desire to negotiate their own terms for their accountability. This is a result of an emerging organizational

complexity, which is blurring the lines of the separation of duties for defined roles by requiring individuals to accept more responsibilities. We suggest that management establishes well-define roles and responsibility structures within their organizations in order to reduce the likelihood that unauthorized people will be granted access by individuals on a favor basis. Clearly, strong internal controls are needed for managing user access to sensitive and critical information as a means of protecting information assets.

Conclusion

Firstly, this study contributes to the extensive literature, by filling a gap in the existing literature. This contribution consists of adapting and interpreting Walton and Mckersie's (1965), behavioral theory of labor negotiations to the study of identity management and the protection of information assets. Very little research investigates the negotiation process in the context of identity management. Secondly, at a practical level, it results in a better understanding of the social implications of individuals' social identity, together with the identification of their roles, responsibility and accountability for information assets.

This study suggests that individual users are social players, whose actions are underlined by their conceptions of themselves and of their group. Therefore, in order to understand how and why people respond to and interact with technology in certain ways, we propose that management needs to understand better their identities. We believe that an in-depth examination of the communicative and symbolic activities that underscore identity construction would be able to provide a better understanding of a range of organizational events that management could utilize for making future decisions, an example being the design of more robust internal controls for identity management. This study also suggest that an understanding of identity can produce important insights into the power structures and opposing interests that are often manifested during the negotiation process between technology, individuals and organizations.

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