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# Understanding the Relationship between Business and IT Groups: A Personal Construct Theory Approach

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## ABSTRACT

The relationship between business and information technology (IT) groups in organizations has consistently ranked as an important concern among business and IT managers. As a result, several researchers have investigated the means of improving the business/IT relationship. They focus on behaviors of business and IT groups and attempt to develop change management programs as a vehicle for obtaining desired behaviors from business and IT groups in order to improve the 'relationship'. However research shows that such attempts have a low success rate in attaining an effective 'relationship'. This paper argues that the reason for this is that most researchers tend to focus on behaviors of people without an in-depth understanding of their cognition, which influences those behaviors. Consequently the paper proposes a cognitive approach and explores the application of Personal Construct Theory (PCT) to understand the 'relationship' and means to improve it.

## Keywords

Business/IT relationship, cognition, PCT, construing, elaboration, resistance, change, behavior.

## INTRODUCTION

The relationship between business and information technology (IT) groups in organizations has consistently ranked as an important concern among business and IT managers (Galliers, Merali et al. 1994; Brancheaue, Janz et al. 1996; Subramani, Henderson et al. 1999; McKeen and Smith 2003; Ward and Peppard 2003; Clarke and Doherty 2004). Many researchers argue that the inability to unlock business value from IT investments is, in part, due to the poor relationship between business and IT groups (Henderson and Venkatraman 1993; Sauer and Yetton 1997; McKeen and Smith 2003). As a result, several researchers have investigated the means of improving the 'relationship' (Henderson, Venkatraman et al. 1996; Peppard and Ward 1999; Subramani, Henderson et al. 1999; Peppard 2001). However organizations note low success rates in attaining it (Chan 2002; Ward and Peppard 2003). This paper argues that the reason for this situation is that most researchers tend to focus on behaviors without an in-depth understanding of the way people's cognition influences such behaviors. The term cognition refers here to both cognitive structures (mentally represented constructs and relationships) and cognitive process (whereby those mentally represented constructs are manipulated and used in the decision making process).

Consequently this paper proposes a cognitive approach based on Personal Construct Theory (PCT) originally formulated in clinical psychology by George Kelly (1932; 1955; 1963; 1969) as a theoretical lens to understand the business/IT relationship.

## THE RELATIONSHIP BETWEEN BUSINESS AND IT GROUPS IN ORGANIZATIONS

Willcoxson and Chatham (2004) point out that the early contribution to the discussion of the business/IT relationship tends to place direct blame on the IT groups in organizations arguing that the IT group has apparent disregard for organizational priorities, objectives, and constraints. Such literature appears to present only one side of the relationship and is quick to offer advice on how the IT group should take responsibility toward achieving a productive relationship with the business group placing the responsibility on IT managers and their staff (ibid).

The argument in this early literature is not entirely without truth. But, recent research on this subject suggests that it is better to concentrate on how organizations could involve both the IT group and the business group to manage their differences and potentials rather than focusing on IT deficiency. For example, Peppard and Ward (1999), and Peppard (2001) propose a more organization-focused approach to addressing the issues of the poor relationship between the IT and business groups. Their work appears to provide some guidelines for organizations, attempting to improve the 'relationship'. The frameworks developed in by these studies bring together many issues related to the 'relationship' gap, but the focus is on changes in behaviors of the IT and the business groups. As a result the suggested solutions appear to impose new roles and new tasks upon members and groups in organizations.

However many researchers in organizational studies consider such approaches as not being the most effective way of requesting groups in organizations to perform preferred behaviors. They argue that such situations force new attitudes and behaviors but do not create strong commitment, as imposed change programs fail to realize that learning new behaviors is based on a change in people's cognition (Poole, Gioia et al. 1989; Schein 1992; Leroy 1997; Argyris 1999).

Although the usefulness of understanding people's cognition and especially how cognitive structures and process shape human behavior has received considerable attention in the management literature, it has collected little attention in the literature on business/IT relationship. Consequently the effort taken to study and improve the business/IT relationship has not moved beyond the point of merely imposing change management programs, hence focusing predominately on behaviors.

Consequently, this paper proposes, an alternative approach, the cognitive approach, which assists in appreciating the role of cognitive structures and processes as a basis for understanding the business/IT relationship.

### COGNITIVE APPROACH

A cognitive approach to the study of information systems (IS) in organizations is not new. Brooks (1987) argues that the essence of information systems development is a creative process, enhanced by the cognition of system developers. Orlikowski and Gash (1994) similarly suggest that a cognitive approach in IS research offers a unique lens and new insights into information systems development and delivery (ISDD) processes. They argue that as there are many stakeholders (users, managers, IS professionals) involved in ISDD activities, understanding their cognition in the organization context can lead to more successful information systems outcomes. This position is resounded by a relatively small but growing number of IS researchers (Hunter 1997; Barrett 1999; Davidson 2002; Tan 2002).

For example, Orlikowski and Gash (1994) made a significant contribution to cognitive IS research. Building on this cognitive approach, they develop a concept of technological frames (TFR) as an analytical lens which denotes people's cognition in terms of the assumptions, expectations and knowledge that they use to understand the ISDD activities in organizations. In this conceptual perspective, when two or more stakeholder groups possess different technological frames of a particular IT system, they are considered to be incongruent. They argue that such differences, or incongruence, in the frames of key stakeholder groups imply different ways of knowing and making sense of IT. As these different interpretations are not explicitly discussed or articulated they may result in misaligned expectations and contradictory actions. So they claim that such misaligned expectations and contradictory actions in IT development and use in organizations, may eventually lead to unanticipated organizational consequences such as poor relationship between business and IT groups. Although incongruence is important, purely noting that different stakeholders think differently about IT and that differences can cause problems is not sufficient in addressing IT related issues in organizations. Moreover the concept of TFR does not provide much help in understanding how the incongruence could be reduced (Davidson and Pai 2004).

On the other hand, some IS researchers (Hunter 1997; Lee and Truex 2000; Rugg, Eva et al. 2002; Tan 2003) adopt PCT in their work, claiming that PCT provides a powerful analytical framework to explore the social and cognitive dimensions of ISDD activities. However, these researchers employ PCT as a research technique (e.g., repertory grid, cognitive mapping). Repertory grid and cognitive mapping are methodological extensions of PCT and these researchers seem to be preoccupied with these techniques rather than applying PCT in their research. Kelly's PCT is much more complicated than its methodological extensions so that the application of PCT in IS may generate many challenges. Arguably, however, PCT is a very useful framework for making more visible what lies below the surface of human problems in organizations and also

transcends the common basic error of making a false distinction being practical rather than theoretical (see Cornelius 2003; Robertson 2003).

Although the richness of PCT as a theory has been shown in many areas of social sciences, the application of it to the area of human relationship formation is considerably less. Yet it has immense fertility here also. Adams-Webber (1979) suggests that PCT has the potential to provide a logical foundation for the development of a specific framework for human relationships. However, the value of PCT in the area of relationships lies in the challenge which the theory offers for those who wish to examine its productiveness for new topics of theoretical and practical interest. Even with such challenges PCT offers many possibilities of exploring the subject of relationship (see Duck 1983; 1979; 1994). So the argument at this point is that PCT has much potential to offer in the investigation of the area of business/IT relationships. Consequently this paper proposes to employ PCT as a theoretical lens to understand the business/IT relationship.

### **A BRIEF INTRODUCTION OF KELLY'S PCT**

The philosophical foundation of PCT is constructive alternativism. Constructive alternativism assumes that there is a world out there, which exists and is in continual motion. Each individual creates his own ways of looking at this world. So he constructs his own version of this world. His view of the world may be similar or different to views of others but he assumes that his view represents the true reality. However, constructive alternativism claims that there is a range of alternative ways of constructing reality for the individual. As a result an individual's view of the world is open to question and reconstruction, so that the individual can choose a better view (Dalton and Dunnett 1992).

Kelly (1963) elaborates PCT through eleven corollaries. When considering the use of PCT to understand the business/IT relationship, three of these corollaries (construction corollary, choice corollary, and sociality corollary) are particularly relevant. They are therefore described in detailed.

#### **Construction Corollary**

“A person anticipates events by construing their replication.” (Kelly 1963, p.50)

This corollary implies that an individual constructs his anticipations using his past experience. If these anticipations or predictions work out in practice, for an individual the assumptions behind those predictions will be incorporated into his psychological system. On the other hand, if the assumptions do not work out, re-evaluation of those assumptions will take place. An individual tests and retests these assumptions continuously and finally validates them. These validated assumptions will be stored in the individual's psychological system as “personal constructs”. Kelly refers to personal constructs as “transparent templates”. He claims that an individual places them on the world and that they guide a person's perception and behavior. These personal constructs are not just floating around and unconnected, rather they are connected to each other to form a ‘construct system’. The central notion here is that individuals respond to the same situation in very different ways as they see the events through their own personal constructs.

#### **Choice Corollary**

“A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system.” (Kelly 1963, p72)

People will choose ways of construing that make most sense to them; that is ways that elaborate their construct system. This either occurs by ‘defining’ their construct system (i.e., by confirming their previous experience) or ‘extending’ it (i.e., by being more adventurous and exploring new areas). This process of elaboration improves the usefulness of the construct system (Houston 1998).

#### **Sociality Corollary**

“To the extent that one person construes the construction processes of another, she/he may play a role in the social process involving the other person”. (Kelly 1963, p95)

The sociality corollary implies that if one can understand how another person uses their construct system to interpret their own experience, one can, not only understand the history of another person's behavior, but also make some predictions about how the other person is likely to behave in a given situation (Adams-Webber 2003).

So far the discussion has been concerned with the relationship between two individuals, but the same argument can be applied to groups in organizations. With relation to this, Kelly (1932) addresses the issues of groups and comes up with the idea of a “super-pattern”. He argues that personal constructs of individuals in each group make up the sub-patterns of that

group which fit into the super pattern of the group. Wick (2001) uses a “super-pattern”-like construct to investigate group behavior and calls it the “collective mind”. As Kelly, he claims that “individual minds” (personal constructs in Kelly’s term) play a powerful role in the development of a “collective mind” (super-pattern in Kelly’s term); thus one can only come to understand the notion of collective mind if he first focuses on individual cognitive processes (henceforth the term collective personal constructs will be used to describe super patterns). Consequently many researchers use PCT at the group level (see Dunnett and Llewelyn 1988; Fransella, Jones et al. 1988; Tan, Gallupe et al. 2001; Tan 2002; Robertson 2003).

## **A STUDY OF BUSINESS/IT RELATIONSHIP USING PCT**

PCT does not seem to explicitly articulate what the human relationship is. Kelly himself and his followers appear to show relatively little interest in the subject of relationship. However, Duck (1973; 1979; 1983; 1992; 1993; 1994) makes a series of attempts to investigate the concept of human relationship using PCT and this study heavily depends on his ideas to conceptualize the business/IT relationship.

### **Differences in collective personal constructs**

Several IS researchers recognize that there are significant differences in perceptions and behaviors of the business and IT groups with respect to issues of ISDD activities (Ward and Peppard 1995; Willcoxson and Chatham 2004). Using PCT to study such differences is very rare in IS research. However, Tan, Gallupe et al. (2001) employ PCT to study the ‘relationship’ (Tan et al. use the term ‘social dimension of alignment’ to describe the ‘relationship’) and demonstrate that business and IT executives have different collective personal constructs. Their study however does not explicitly state that business and IT executives have different perceptions about IT related activities due to differences in collective personal construct systems of business and IT executives.

Nevertheless PCT demonstrates that groups who have different collective personal constructs tend to construe the same events differently (Kelly, 1932; 1963). For example, assume that the business and IT groups have very different collective personal constructs related to the role of the business groups in the ISDD process. As a result the business group may want to play a major role in the ISDD process. They may see their role in the past as just agreeing to provide business requirements to the IT group and leaving the main design tasks to the IT group. They may want to (1) establish the need for the system at the planning stage, (2) identify the type of hardware and software systems to meet that need, (3) negotiate with top management to find resources for hardware and software, and (4) play a very active role in system design. They may see this active role as a solution to their dissatisfaction with existing systems and the build-up of a backlog of IT applications awaiting development. On the other hand, the IT group may want the business group to play a lesser role. They may look to the business group to contribute business knowledge and expertise. But they may assume that the business group does not have potential to be actively involved in the design process as the business group does not have knowledge of tools and techniques used in conventional systems development projects. However, if the business group is not given an opportunity to play the role they wanted, they may exhibit passive resistance throughout the ISDD process (e.g., show reluctance to participate in requirement gathering meetings).

Nevertheless such differences shaped by different collective personal construct systems are not necessarily detrimental to the poor relationships, as Kelly (1963) argues that dissimilar groups can develop effective relationships if they are willing to construe each others construction process (see the sociality corollary) as differences can be surfaced and acknowledged during such process of construing.

### **Construing each others construction process**

When applying the sociality corollary in the context of business/IT relationships, one can argue that the business and IT groups can successfully relate to each other if each group can understand the way in which the other group construes the activities in the ISDD process. In other words, if the IT group can accurately and fully construe the construction process of the business group, the IT group will be able understand the point of view of the business group. This process of construing could create a precondition for starting a relationship, as the IT group would be able to predict accurately what the business group will do. Consequently, the IT group can adjust themselves to the behavior of the business group in the context of ISDD. So in our example they may allow the business group to play a slightly bigger role in the ISDD process (e.g., allow the business group to participate in negotiation with top management to find resources for software and hardware). So the process of construing by the IT group could make some progress towards developing a relationship between the two groups.

However, fully construing the construction process of the business group by the IT group may not adequately account for an effective relationship; as this process does not demand the business group to take any attempt at all to construe the construction process of the IT group. In the example used here, the business group may decide to stick to the role they wanted

to play without understanding (i.e., without construing the construction process of the IT group) the point of view of the IT group. So the business group would not be able to understand (a) why the IT group would not like to offer them a bigger role and (b) why the IT group would like to offer them a smaller role. As a result making some progress towards an effective relationship between two groups would be difficult. The argument at this point is that the business/IT groups' ability to take part in meaningful relationships depends on their willingness to construe each other's construction process. Construing should not be a one-way proposition; it should be mutual. Such mutual construing could be achieved if the two groups are willing to elaborate their construct systems (see Duck 1979).

### **Elaboration of construct systems**

The choice corollary shows that the elaboration of construction systems can take place in two forms: extension and definition. In the context of business/IT relationships, extension occurs when one group wishes to discover another group's construct system and subsume some of its parts in the system it currently employs. In other words, the process of extension tends to allow new matters to be considered and leads to the system growing. As a result the groups would be able to construe each other's behaviors more effectively (see Dalton and Dunnett 1992). In our example, the IT group does not resist the participation of the business group in the ISDD process. However, they want the business group to play a limited role although they know that the business group wants to have major role in the ISDD process. If the IT group is willing to extend their construct system, they may allow the business group to have a slightly bigger role. On the other hand the process of definition occurs when one group understands if a particular construct in their system is regarded as valid or useful by another group. In the example, the process of definition occurs when the business group sees that the IT group acknowledges that allowing the business group to be involved in finding resources for software and hardware is a useful activity.

The notion of elaboration of the construct system shows the possibility for explaining some of the features of relationship growth between business and IT groups. Perhaps the development of the relationship is characterized by switching between the two methods of elaboration. So groups start relating by seeking out areas where their two construct systems overlap (and therefore offer one another validation through a process of definition) and proceed, if the relationship looks workable, to explore ways in which they will be stimulated by one another (and therefore will help one another to extend their systems). Subsequently, business and IT groups would be able to develop relationships from a need to elaborate their construct systems, as outlined above; but the course of the development of relationships - their growth of closeness is prescribed by the ways in which this elaboration takes place. The stages of growth in a relationship can then be identified according to the parts of the system that they tend to elaborate (see Duck 1979).

Even so, business/IT groups may not go in for full elaboration of their construction systems as most people do not totally change their construction systems voluntarily. Therefore, major or enforced change may produce unpleasant effects or resistance to change (see Dalton and Dunnett 1992).

### **The resistance to change**

When one group has constructs that are significantly different to the constructs in the construction system of the other group, the groups are less likely to elaborate those constructs. As a result, the groups may find it difficult to construe each other's construction processes. Therefore if business and IT groups are forced to change their construction systems, in order to form closer relationships, they are more likely to exhibit a resistance towards that change. This resistance to change can be understood in terms of Kelly's definitions of *threat*, *fear*, *anxiety* and *hostility*. The business and IT groups would be threatened and feared when their major beliefs about ISDD activities are invalidated (in Kelly's terms *the awareness of an imminent comprehensive change in one's core structure*). They would become anxious when each group is confronted with things that are unknown and therefore not subsumed by their construct system (in Kelly's terms *the awareness that events with which one is confronted lies mostly outside the range of convenience of one's construct system*). Finally they would likely become hostile when they are in a situation in which they have been shown that their perceptions regarding ISDD activities are wrong, yet each group cannot cope with the idea of abandoning their beliefs (in Kelly's terms *the continued effort to extort validation or evidence in favor of the type of social prediction which has already been recognized as a failure*). The reason for this is that each group cannot see any alternative way of viewing the situation and are potentially faced with a sense of turmoil. In this position groups could intimidate each other into behaving in ways that confirm their predictions related to ISDD activities (see Houston 1998).

Unfortunately, much documented prescriptions in the IS literature on the business/IT relationship has paid very little attention to the above issues. This may be the reason why the previous researchers' change management programs and suggested actions could not achieve what they intended to accomplish in the context of business/IT relationship.

In this sense, the above argument highlights that when the degree of dissimilarity of constructs in construct systems of business/IT groups are significantly high, these groups need adequate assistance to 'facilitate' the process of elaboration of their construct systems and construe each other. Note that the word used is 'facilitating'. It is not another change management program to request the business/IT groups how to be or what constructs to keep or discard in order to have a closer relationship. The role of this facilitation is one of assistance, almost that of a catalyst, encouraging the elaboration without imposing anything into that elaboration. The process of elaboration under the facilitation may assist the business/IT groups to re-examine the type of constructs used to interact with each other during the ISDD activities (see Dalton and Dunnett 1992). Such examination would help them understand whether these constructs are appropriate in the ISDD context. As a result the groups would experience that their construct system, which has served them reasonably well in past, is not adequate to understand new events in the ISDD process with sufficient clarity. They may realize that they need to try new constructs - not totally opposite but reasonably different from the old ones they have - and look at events afresh (see Stojnov 2003). Consequently they would be able to reduce the degree of dissimilarity between their construct systems. As a result the business and IT groups would accept each others expectations as they would be able to extend their views to see each other's problems, issues, needs, feelings, emotions, etc. in the ISDD process, not in their own terms but in the other group's terms and eventually cultivate a meaningful relationship.

## CONCLUSION

The previous studies on business/IT relationships have shown that the business and IT groups differ from each other in their behaviors related to ISDD activities. Such studies propose change management programs to create fundamental change in the way the business and IT groups act in the ISDD environment in order to achieve effective 'relationships'. However the paper shows that those programs were not able to accomplish what they promised. This paper suggests that inability of such programs to improve the 'relationship' is in large part due to the fact that they paid little attention to the cognition of business and IT groups. This paper argues that the cognition of business/IT groups is far too critical to ignore in the context of the 'relationship' and proposes to study it through the lens of PCT. Using PCT the paper demonstrates that differences between business and IT groups can be reduced, if they are facilitated to construe each other's behaviors which are related to ISDD activities. The paper also argues that the much needed closer relationship could be achieved through a process of facilitation which helps the business and IT groups to elaborate their construct systems.

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