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Information System Requirement Elicitation: The Role of Humor

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ABSTRACT

The use of humor and its role in business is being increasingly studied and is the subject of a growing body of research. Leaders and organizations are finding that when used correctly, humor can lead to increased communication and group cohesion as well as relieve uncertainty and stress. Within the context of Information System (IS) design, project failure is a major hindrance to overall project success and often, inaccurate project requirements are to blame. While current research indicates that the use of positive forms of humor can be advantageous, little to no research has been done to suggest that IT managers should be using humor, specifically within the context of improving the quality and accuracy of information collected during the requirement gathering process. This paper provides a review of salient literature regarding the use of humor and its relationship to business strategy and suggests some guidelines for IT managers to elicit improved information needed to effectively design technology which meets the needs of the end users and organization.

Keywords

Information Systems, Requirement Elicitation, Humor, Relief Theory, Superiority Theory

INTRODUCTION

Amidst a dynamic and ever-changing IT field, IS project failure is a concerning problem. Liu et al (2012) found that roughly 60% of all defects in IS systems are the result of poor information requirement gathering. Given the communicative nature of this requirement gathering, IT managers should consider employing humor as a communicative strategy in order to elicit more accurate information. Francis (1994) found that humor can bring team members closer together by increasing group positivity. Meyer (1997) noticed that humor increases communication and group cohesions amongst groups. This research suggests that humor has a positive effect on communication and enhances this discussion between group members. While this existing research has provided insight on the importance of humor in leadership and within the organization, to our knowledge existing research has not studied the effects of humor in the context of IT and more specifically during information gathering sessions with IS developers. Increasing complexity and design requirements imply the need for continuously improving communication between IT and end users to design systems which truly meet the needs of those users as well as the organization. Morreall (1991, 2014) found that humor reduces tension during the communicative process. Therefore, it can be argued that use of humor during the requirement elicitation phase will enable better communication between IS developers and users, which in turn will lead to better requirement gathering. Using humor typology (affiliative, self-enhancing, aggressive, and self-defeating) developed by Martin et al. (2003), and the five-question humor research framework provided by Malone (1980): 1. Can humor, serve as a tool to enhance the managerial process? 2. Can humor be used effectively by most managers or should the use of humor be reserved to those who are naturally funny? 3. Under what conditions can humor be used most effectively; under what conditions is humor appropriate? 4. What types of people respond most readily to humor; what types of people are most likely to react negatively? 5. What types of humor are most effective: what types are most likely to produce negative reactions? (p.359-360) [questions directly quoted from Malone 1980], we argue how different types of humor could impact the requirement gathering process.

The paper is organized in the following way. In the next section, we provide an overview of the salient research that has been conducted pertaining to humor in management and related areas. In the following section, we discuss various types of humor and hypotheses related to their usage in requirements gathering. We conclude the paper by discussing the implications of this work.

LITERATURE REVIEW

Table 1 provides an overview of the salient research that has been carried out in management pertaining to humor as well as salient research carried out in the MIS field pertaining to challenges of requirement elicitation. As is evident from the table below, humor has predominantly been studied in management and organizational strategy but not directly in Information Systems. Also, current literature regarding requirements elicitation provides several techniques that have been studied to overcome communication challenges.

Paper (Date)	Type of Study (Empirical/ Conceptual)	Finding
Humor and Management:		
Avolio 1999	Empirical	Study conducted with large Canadian financial institution. The impact of leadership style on individual and unit-level performance is moderated by humor.
Cooper 2005	Conceptual	The study examines employee behavior, and reviews how humor could be used to improve one's personal attractiveness in a workplace environment.
Duncan 1982	Conceptual	The study provides review of literature on what is funny to whom, and also provides guidelines to enable managers to employ suitable humor with the appropriate situation.
Duncan et al. 1990	Conceptual	The paper provides conceptual discussion on the use of humor in work groups with in organizations.
Malone 1980	Conceptual	Study shows that humor can be used to increase productivity.
Requirement Elicitation:		
Paper (Date)	Type of Study (Empirical / Conceptual)	Finding
Byrd et al. 1992	Conceptual	Compares elicitation mode of requirement analysis (RA) and knowledge acquisition (KA) techniques on three dimensions: communication obstacles, technique's locus of control and the nature of the understanding gained from using the technique.
Davis et al. 2006	Conceptual	Discusses the use of Repertory grid technique to overcome communication issues that persist in the requirements elicitation.
Decker et al. 2007	Conceptual	Discusses how Wikis can be used for asynchronous collaborative support to seek active participation for requirement elicitation
Kazman 2005	Conceptual	Proposes the "WinCBAM" framework, extending an architecture design method, called cost benefit analysis method (CBAM) framework to include an explicit requirements negotiation component based on the WinWin methodology.
Rosenkranz et al. 2014	Conceptual	Introduces the concept of brokering situations; by developing a theoretical framework – the boundary interaction framework – that provides an analytical perspective on the dynamics of knowledge sharing in requirements elicitation; and by applying the framework to show that both goal-driven (teleological) and conflict-driven (dialectical) motors of change explain process progress and the changes of brokers as well as boundary objects during the building of shared understanding
Stallinger and Grünbacher (2001)	Conceptual	Presents selected aspects of the modeling and simulation of the EasyWinWin methodology which is based on the WinWin requirements negotiation approach and aims at fostering stakeholder co-operation and involvement.

Table 1. Literature Review

Information Gathering in IS System Development

The increasing complexity of IS Systems has forced IT departments to change the way systems are designed and implemented. One of the key factors in new IS development lies in the gathering of requirements. It is in this stage that IT must hold interviews, conduct surveys, and meet with end users in order to fully understand the requirements for the new system. Poor information gathering is largely responsible for system failure by failing to meet the needs of end-users which results in complications such as increasing cost and delaying projects. So how can this be avoided? Prior research (please refer to Table 1) shows that requirements elicitation process is fraught with poor communication, lack of stakeholder involvement and cooperation, conflict, as well as stress. Several factors may lead to ineffective requirements elicitation including disagreements, incomplete requirements, changing requirements, and misunderstandings among others (Parinyavuttichai and Lin, 2010). These factors are referred to as requirement risk and should be avoided at all costs. To achieve more successful outcomes, end-users should be involved as much as possible though high rates of effective communication.

Humor

Humor has been defined as “any communicative instance which is perceived as humorous” (Romero and Cruthirds 2006; Martineau 1972). To begin addressing humor, it is important to distinguish that not all humor is constructive and beneficial in nature. Wood et al. (2007) found that a large portion of humor is negative and therefore detrimental to individuals and organizations alike. This paper suggests that the humor needed to effectively foster creativity and group cohesiveness is positive in nature, and therefore by definition is positive humor. It follows that when used effectively, positive humor should lead to improved requirement gathering as a result of improved levels of communication and group cohesion.

Research has suggested that there are four types of humor (Martin et al. 2003, Romero and Cruthirds 2006) – affiliative, self-enhancing, aggressive, and self-defeating humor. A considerable body of research has demonstrated that the adaptive (affiliative and self-enhancing) and maladaptive (aggressive and self-defeating) humor styles are related to various other individual traits and outcome measures (Cann and Collette 2014). Martin (2003)’s typology is widely used and adapted in humor research (see Cann and Matson 2014, Romero and Cruthirds 2006).

It should be noted that while individuals may have a general style of preferred humor, they may shift styles at any given moment due to internal or external stimuli. Romeo and Cruthirds (2006) suggest that individuals can utilize different humor styles in different situations. We discuss these four types of humor in detail here and provide our hypotheses based on this.

Affiliative Humor

Considered a positive form of humor, affiliative humor is typically perceived as spontaneous and social in nature. More specifically, “Affiliative humor includes inside jokes, good-natured jokes, and funny stories particular to a group” (Romero and Cruthirds, 2006, pp. 59). When this social style of humor is used, individuals usually feel a strong sense of belonging or connection to the group in which the discussion is taking place. Furthermore, according to Romero and Cruthirds (2006), affiliative humor is typically used to bring people together as it fosters relationship building. Research indicates this style of humor is beneficial particularly in group exercises and should be used often as it promotes a positive work environment and encourages commodity among group members. The research of Vaillant (1977) found that individuals who use affiliative humor are generally perceived as more likeable.

Self-Enhancing Humor

Tangent to affiliative humor, self-enhancing humor is the other form of humor which is highly positive in nature. It is primarily used as a “coping mechanism for dealing with stress, which assists in maintaining a positive perspective” (Romero and Cruthirds, 2006, pp. 59). While affiliative humor is usually employed for group cohesion, self-enhancing humor differs in that it is more personal in nature. Respectively, “The initiator’s intention is to enhance his/her image relative to others in the group or organization” (Romero and Cruthirds, 2006, pp.59). This implies that this type of humor is used less for the benefit of groups and others and is therefore more centered on the individual. This style of humor also provides the user with the ability to remain calm and focused on the problem at hand without experiencing high levels of stress.

Aggressive humor / Self-Aggressive Humor

Not all styles of humor are beneficial to every individual involved. According to De Koning and Weiss (2002), aggressive forms of humor are typically used at the expense of another individual in order to make the user feel as though he or she has a higher rank of status or just to feel better in general. This can include forms of non-playful teasing, sarcasm, and ridicule. It often implies that the user is employing aggressive humor for personal benefit or the benefit of a certain group. Kuiper et al

(2004) found that this type of humor is typically displayed through sarcasm which shows little concern for others. While some become victims of this humor, it may also have positive effects for individuals as well as groups. For example, if a group of individuals feels threatened by another group, they can downplay the threat by criticizing or belittling the other group. But this style of humor can be used for other basic reasons as well. According to Janes and Olsen (2000), aggressive humor is often used in attempts to manipulate others. Generally speaking, this humor is not always beneficial to the organization and should be used with caution.

There are also forms of mild aggressive humor which typically present themselves in the form of teasing. Unlike true aggressive humor, Kahn (1989) suggested that mild aggressive humor is used to avoid conflict and the negative effects of aggressive humor by disagreeing in a playful way. Hence, this form of humor is generally seen as more constructive than negative or victimizing. This form of humor is commonly used when new individuals join a team and existing members “tease” them into conforming into the ideals and social constructs of the group. Martineau (1972) found that senior members of social groups used this form of teasing and behavioral manipulation to shape the behavior of younger group members. Once the desired behavior is elicited, the humor subsides. In the same way, mildly aggressive humor can encourage group conformity. Janes and Olsen (2000) found that when group members see other group members subjected to scrutiny and ridicule, they conform to group norms in order to avoid said ridicule.

Self-Defeating Humor

Though the term self-defeating humor sounds negative, it can be beneficial when used correctly. Martin et al (2003) found that individuals who use self-defeating humor are hoping that they can receive acceptance by ridiculing themselves. Typically this type of humor serves to find a way of reducing status and therefore making the user more relatable to the audience. People in high level positions may find that some self-criticism may assist with gaining the trust of their subordinates. However, self-defeating humor can also be very revealing and may damage the reputation of the individual using it. Typically, those who employ this style of humor do not gain the desired acceptance into groups due to the personal slander they are committing. Furthermore, Romero and Cruthirds (2006) suggest this style of humor is frequently displayed in individuals with low self-esteem.

RESEARCH MODEL

The main challenge within the requirement gathering stage for IS designers is effectively communicating with end-users and other departments (Parinyavuttichai and Lin 2010). However, when done correctly this leads to acquiring the correct requirements for the system and better IT project success rate.

The requirement gathering process is heavily reliant on excellent communication between IT and users. Without this communication and relationship building between groups to determine the correct system requirements, IS development projects are destined to experience setbacks, requirement risk issues, and ultimately, failure. Using the lens of relief and superiority theory of humor (Morreall 2014), we argue that the use of humor can be both beneficial and detrimental to the leaders and employees alike particularly within the IS design process. Prior research shows that leaders and organizations that employ and encourage affiliative and self-enhancing humor experience higher levels of employee morale and improved group cohesion than those who do not (Romero and Cruthirds 2006).

Since affiliative and self-enhancing humor are both considered to be positive forms of humor (Martin et al. 2003), we rely on relief theory to argue that such positive forms of humor would help in overcoming sociocultural inhibitions that are normally present during the requirements elicitation phase and also eliminate stress (Davis et al. 2006, Decker 2007) which could arise due to changes in requirements.

P1: The use of (a) affiliative and (b) self-enhancing humor will lead to improved quality of elicited information during IS requirement gathering.

Since aggressive and self-defeating are both considered to be negative forms of humor (De Koning and Weiss 2002, Romero and Cruthirds 2006), we rely on superiority theory to argue that such predominantly negative forms of humor would only make the situation more stressful and make the users more inhibitive.

P2 - The use of (c) aggressive and (d) self-defeating humor will lead to decreased quality of elicited information during IS requirement gathering.

Figure 1 highlights the relationship of each humor style and its effects on the quality and accuracy of IS requirements. Affiliative and self-enhancing humor styles are shown to have a positive impact of the quality and accuracy of requirements.

Aggressive and self-defeating humor is shown to have a negative relationship with quality and accuracy of IS requirement gathering.

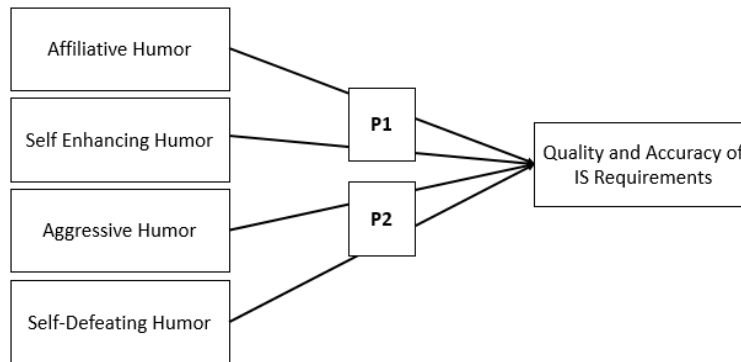


Figure 1: The Research Model

DISCUSSION

Prior research has discussed the importance of information gathering during IS development and in IS project success, but very little research, if any, has discussed how the use of humor can positively impact the IS requirement gathering process. This paper argues that affiliative humor and self-enhancing humor can be powerful tools for leaders and IT employees alike and can facilitate communication with end users. By utilizing affiliative and self-enhancing humor techniques, IS developers can more effectively illicit accurate, improved system requirements which should increase the chance of system effectiveness by improving system quality and contributing to the overall project success. This paper opens the door for discussion of humor in the IT and MIS world and suggests the need for further research in this area of increasing importance. This research provides a new paradigm of integrating “humor” within IT and MIS.

This research has several key contributions. First, it provides a set of instructions pertaining to the use of humor to IT managers who are involved in the process of requirements elicitation. Second, and more importantly, it lays out possible directions for future research in IT project Management and MIS literature by suggesting the application of humor related theories to the problems routinely studied in MIS area – for instance: requirements elicitation, group decision making, repairing user trust for instance in lieu of data breaches and other trust violations, among others. Future research can also look at efficacy of use of humor by male vs. female IS managers and leaders in different situations. For instance, different types of humor are known to work efficiently in different situations, and differently for men and women.

Our research has practical implications as well. Out of all aforementioned types of humor, this paper strongly suggests that the best type of humor for IT managers to use in requirement elicitation phase is affiliative humor. As previously mentioned, “Affiliative humor includes inside jokes, good-natured jokes, and funny stories particular to a group” (Romero and Cruthirds, 2006, pp. 59). This will lead to a more relaxed environment and improved group cohesion, and as a result, it will improve discussion and honesty which should lead to improved IS requirement gathering. This is critical during the IS information gathering stage since the majority of system defects occur as the result of poor requirement gathering. Moreover, managers should be conscious of their humor styles and should employ these positive forms of humor as the situation allows. It is recommended that managers stay away from aggressive and self-defeating humor styles as the negative ramifications of using these styles far outweigh the benefits and are therefore detrimental to the information gathering process.

We believe that humor is much more than a “toy” (Malone 1980, p. 360); our research and the suggested research agenda proposes the use of humor as a tool which could be used to contribute “materially” (Maloney 1980 p. 360) in not only eliciting better requirements, but also in restoring trust in lieu of trust violations and in other MIS settings. “Humor has been the focus of philosophers and scholars for over 2000 years (McGhee 1979)” (Duncan et al. 1990, p.258), yet these works have yet to be integrated in MIS literature. Our work is one step in that direction.

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