

**Revisiting Media Choice:  
A Behavioral Decision-Making Perspective**

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### **Abstract**

How do managers select media for communication and collaboration? Previous research has identified a myriad of contextual factors, individual characteristics, social factors, and the fit between medium characteristics (e.g., media richness) and task requirements as influencing choice of media. A normative implication from the cumulative research base is that managers need to consider a large number of factors in the process of media selection. Yet task contingencies may not allow for the assessment of numerous criteria. Based on a human decision making perspective, this study proposes that task contingencies in the form of complexity, importance, and urgency influence the extent to which individuals actually evaluate various factors for media selection. We utilize data from a survey of managers in a financial organization to test our propositions. As hypothesized, under conditions of high task complexity and/or importance, managers are found to extensively appraise information for media selection. However if the task is urgent, the extent of information evaluation during medium choice is constrained. Further, to the extent that managers' appraisal is limited, their actual medium choice diverges from the optimal choice. The results indicate that a human decision-making view can provide a fresh perspective and enhance our understanding of how managers actually select media for their communication and collaboration activities.

**Keywords:** Media choice, extent of information appraisal, task complexity, task importance, task urgency

## INTRODUCTION

How do managers select media for communication and collaboration? With a heightened emphasis on such activities in contemporary firms and the presence of a variety of technologies for this purpose (Kock 2011), research on the choice of media and the resultant impacts on organizational work continues to be relevant (e.g., Brown et al 2010; de Guinea et al 2011). Existing research has identified myriad factors influencing media choice: (i) media features, such as synchronicity (Dennis et al 2008), fitting task requirements, (ii) contextual factors, such as proximity (Watson-Manheim and Belanger 2007), (iii) individual characteristics, such as self-efficacy (LaRose 2009), and (iv) social and cultural norms experienced by the person making the choice (Lee and Lee 2009). A normative implication of the cumulative research base is that managers should choose their medium by comprehensively considering these numerous factors. Yet, considering the task contingencies under which managers operate, it is unlikely that they will always evaluate information about a large number of criteria to arrive at the optimal medium choice (where optimal choice implies the selection made for most effective task performance based on comprehensive evaluation of information). To the extent that task conditions limit managers' information appraisal during medium choice, their actual media choices are likely to diverge from the optimal choices. Thus a relevant research question is: how do task conditions influence information appraisal for medium selection? Since managers spend as much as 80% of their time on communication and collaboration with important consequences for work performance (Mintzberg 1994, Tengblad 2006), it is essential to understand how information appraisal for medium choice decisions takes place.

The behavioral decision making perspective can throw light on how information is evaluated for medium choice decisions, but has received limited attention in the media choice

literature (Palvia et al 2011). This perspective suggests that most of the time individuals are unlikely to make optimal choices based on comprehensive information evaluation during decision-making. Task conditions can cause people to employ satisficing and boundedly rational models of decision-making that consider limited amounts of information (Simon 1957; Gigerenzer and Goldstein 1996). Of these, task complexity, importance, and urgency are three practically relevant task parameters that are likely to determine the extent to which individuals evaluate information for decision making (Nutt 2011; Payne et al 1993). Therefore to investigate our research question, we use behavioral decision theory to model the effect of task contingencies on the extent of information appraisal for medium choice. We propose that task complexity, importance, and urgency and their interactions are likely to enhance or constrain the extent to which managers evaluate information for medium selection. The model is tested through a survey of managers in a single financial organization to control for organizational variations. The study aims to contribute to the theoretical and practical understanding of how managers make their choices of media for communication and collaboration.

The rest of this paper is organized as follows. The next section provides a brief review of the existing research on media choice and then describes how behavioral decision-theory is relevant for our study. Subsequently, the model hypotheses and research methodology are explained. Finally, we present the data analyses, results, and implications of the study.

## **THEORETICAL FOUNDATION**

### ***Media Choice Literature***

Medium choice and use is a complex human behavior that is influenced by many factors e.g., the nature of the task, personal characteristics of the parties involved, the social system, and the

attributes of the channels (Te'eni 2001). Research in this area began more than 40 years ago (Melcher and Beller 1967) and continues to attract interest (e.g., Kock 2004; Brown et al 2010).

As illustrated in Table 1, various theoretical perspectives that emphasize particular types of criteria influencing medium choice have been proposed. One set of theories focuses on the characteristics of the medium and advocates that communication and collaboration are effective when the characteristics of the medium fit the requirements of the task. The main premise of these theories is that media differ in terms of traits such as social presence (Short et al 1976), richness (Daft and Lengel 1986), and symbolic message (Trevino et al 1987) and that these characteristics determine medium fit for different tasks. Another perspective belonging to this stream is the media synchronicity theory, which attempts to match media synchronicity characteristics with the nature of task goals (Dennis et al 2008). While these theories categorize tasks in various ways to match them to media with attributes that will provide optimal outcomes, there is a lack of consideration of how task contingencies such as importance and urgency can influence the process of medium choice.

< Insert Table 1 about here >

A second set of theoretical approaches is rooted in the social choice perspective and argues that media choice is a social behavior influenced more by the social environment of the user. Theories along this perspective assert that perceptions about the appropriateness of a medium are largely subjective and socially constructed, and that attitudes, comments, and behaviors of co-workers influence a manager's media choice. This stream includes social influence theory (Fulk et al 1990) and the critical mass theory of interactive media (Markus 1990). Although results regarding social influence on medium choice have been mixed (Kraut et al 1998), this view is found to complement the others in our understanding of medium choice (DeLuca et al 2006).

A third set of perspectives proposes that the characteristics of individuals influence their media choices (LaRose 2009). For example, Carlson and Zmud (1999) found that as individuals gain experience with a medium, message, or with their co-workers, they are more likely to utilize a lean medium, even though its characteristics (e.g., media richness) do not fit the task. A fourth perspective contends that a variety of contextual factors could impact the media choice. For instance, accessibility of the medium (Sivunen and Valo 2006) and proximity of co-workers (Watson-Manheim and Belanger 2007) are found to influence the selection of media.

Finally, a number of studies in this area (e.g., Schachaf 2008; Trevino et al 2000) have considered the influence of combinations of factors from different perspectives in determining medium choice and use. However, though such a variety of antecedents of medium choice have been proposed, it is not clear whether all these factors would simultaneously be considered by managers in their media choice decisions. Considering the circumstances in which managers act (Tengblad 2006), it does not seem realistic to expect that they will appraise all or most of these criteria every time they choose a medium. Inadequate information appraisal during medium selection could lead to a non-optimal medium choice, where the optimal medium is the one that maximizes task effectiveness based on comprehensive evaluation of information.

In this regard, it is important to recognize that a primary goal of managerial media use is organizational task performance. Managers use media in order to gather needed information, test their understanding about the task with others, and to inform and persuade others about their decisions on specific tasks (Mintzberg 1994; Tengblad 2006). Therefore, the nature of the task is likely to be a critical context within which managers make choices about the medium for task-related communication and collaboration. Although some studies (Rice and Shook 1988; Sivunen and Valo 2006) offer explanations of how actual contextual conditions limit medium

choice, they tend to focus more on situational constraints such as medium access and recipient proximity as criteria for medium selection. Hence there is limited research on and understanding of the influence of task contingencies on decision making for medium choice. The human decision-making perspective provides a lens to explain such influences during medium choice.

### ***Human Decision-Making Perspective***

Medium choice is essentially a human choice behavior about which medium to select in the context of a specific task at hand. Behavioral theories of human decision-making identify two different strategies i.e., compensatory and non-compensatory (Rothrock and Yin 2008; Svenson 1979). With compensatory strategies, individuals comprehensively appraise all the needed information, judge the relative importance of different information cues, and deliberately arrive at a decision choice. Accordingly if they use this strategy, managers are expected to evaluate all the factors relevant for their medium choice decision, examine the relative tradeoffs, and choose the appropriate medium after a careful deliberation.

On the other hand, with non-compensatory strategies, individuals will process less than comprehensive amounts of information. Non-compensatory strategies are characterized by conflict-avoidance and do not allow tradeoffs (Rothrock and Yin 2008; Hogarth 1987). A positive evaluation on one attribute cannot compensate for a negative evaluation on another. Thus, trade-offs may not be made explicitly when individuals place greater emphasis on some salient attributes rather than an alternative's overall worth. In this strategy, the amount of information appraised is considerably less than for the compensatory strategy. Examples of this strategy are the 'satisficing' (Simon 1957) and 'elimination-by-aspects' heuristics (Tversky 1972). With a non-compensatory strategy while making a medium choice decision, managers might consider only some criteria and make their selection guided by a few dominant cues (e.g.,

medium experience). One of the key differences between employing the two strategies is the extent of information appraisal in the process of media selection. With compensatory strategies, managers are likely to be comprehensive in their information evaluation, but not with non-compensatory strategies.

The choice of compensatory versus non-compensatory decision strategy is influenced by factors such as complexity and importance of the task, time and/or resource constraints, decision maker's knowledge level and ability for the task (Payne et al 1993; Rieskamp and Otto 2006). With our study's focus on task contingencies, we consider three practically relevant task variables that are enacted daily in organizations i.e., task importance, urgency, and complexity<sup>1</sup>, to determine their impact on the extent of information appraisal during media selection. Task importance describes how significant the completion of a specific task is to the individual (Xu et al 2006) and is indicative of the fact that effective individuals assign priority and resources to tasks of higher importance (Covey 1990). When the task completion has greater significance for the individual, this is likely to imply more extensive information appraisal for it. On the other hand, urgency indicates that the manager experiences time pressures for task completion. An urgent task might induce less extensive information appraisal behavior because the managers' evaluation of information is guided by expediency (Kraut et al 1998; Palvia et al 2011). Task complexity reflects the level of uncertainty (lack of information) and equivocality (multiple interpretations of information) experienced by the manager in understanding the nature of the task and how to accomplish it successfully (Daft and Lengel 1986; Sheer and Chen 2004).

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<sup>1</sup> While a number of task attributes have been identified (e.g., Zigurs and Buckland 1998, Palvia et al 2011), the three task variables studied in this paper are suggested as important for the choice of decision making strategy (Payne et al 1993) and are practically relevant for managerial work.



More importantly, managerial tasks are simultaneously characterized by their importance, urgency, and complexity. Therefore, the interactions between these variables are likely to determine the extent of information appraisal for medium choice. Thus, our study investigates the main and interaction effects of these variables.

### **MODEL AND HYPOTHESES**

Our research model (see Figure 1) relates three task characteristics (importance, urgency, and complexity) to the dependent variable, extent of information appraisal for medium selection. The extent of information appraisal for medium selection is studied because it can explain whether managers may actually select their optimal medium. If managers do not perform a comprehensive evaluation, then their non-compensatory strategy can result in the choice of a medium different from the optimal one. Therefore, a focus on the extent of information appraisal for medium selection should provide insights into the real bases of managerial medium choice.

< Insert Figure 1 about here >

Managers are likely to consider the importance of the task when appraising information in order to determine medium choice. The importance or significance of the task is determined both by the magnitudes of the outcomes involved, e.g., impacts for the business unit or the organization, as well as the breadth of the decision's consequences for the decision maker's life, e.g., the making of a decision may be important for future career promotions and for self-esteem (Beach and Mitchell 1978). Therefore, an important task has consequences whose magnitude and breadth are significant for the decision maker (Xu et al 2006). The decision process for important tasks is likely to be more comprehensive, systematic, analytical, and it might take more time and effort (Beach and Mitchell 1978; Hagafors and Brehmer 1983). Such tasks are likely to involve extensive information appraisal, including about the appropriate medium. Since the medium used

in the task affects task performance (e.g., Kurtzberg et al 2005, Loewenstein et al 2005), greater task importance implies more comprehensive attention to choice of the medium. In other words, with greater task importance, a compensatory strategy is likely to be employed, and managers are more likely to extensively appraise information for medium selection.

*H1: Task importance is positively related to extent of information appraisal for medium selection*

At the same time, task complexity is also likely to affect the extent of information appraisal for medium selection. Complex tasks are high in uncertainty and equivocality (Daft et al 1987; Sheer and Chen 2004). For example, getting information for researching an unknown topic can be considered as a high complexity task since there is a lack of advance information or different ways by which to approach the topic. Task complexity enhances the requirement for information processing (Campbell 1988). Therefore, a high complexity task is likely to warrant extensive information appraisal in order to resolve the uncertainty and equivocality. A compensatory strategy allowing for trade-offs between evaluation criteria for medium choice is likely to be employed for a complex task.

*H2: Task complexity is positively related to extent of information appraisal for medium selection*

Task complexity and importance are likely to reinforce each other in their effects on information appraisal for medium selection. A complex task is likely to elicit more extensive information appraisal when it is important. For instance, when medium choice is required to research an unknown topic for an important customer, extensive information appraisal may take place. For such tasks a compensatory strategy, which allows for more thorough evaluation of different criteria for medium choice is likely to be deployed. Thus we hypothesize,

*H3: Task importance and complexity reinforce each other in their positive effect on extent of information appraisal for medium selection.*

Task urgency also impacts the choice of compensatory versus non-compensatory decision-making strategy (Edland and Svenson 1993). When particular organizational tasks are governed by tight deadlines and managers face significant time pressures to complete them, they experience constraints on how extensively they can process information (de Dreu 2003) e.g., evaluate alternative media use. Therefore, for such tasks they are more likely to choose a non-compensatory strategy, which involves limited information appraisal.

*H4: Task urgency is negatively related to extent of information appraisal for medium selection*

Task urgency is likely to moderate the effect of task importance on the extent of information appraisal for medium selection. Even if the task is salient, time pressures would not permit an extensive information appraisal, as may be warranted by the task (de Dreu 2003). For instance, when a manager wants sales figure to be communicated before an important meeting, information appraisal may be less extensive when the task is more time critical. The limited time will less likely allow the use of a compensatory strategy, which evaluates medium choice thoroughly, even though the task is important. Hence we hypothesize,

*H5: Task urgency reduces the positive effect of task importance on extent of information appraisal for medium selection.*

Further, task urgency should moderate the effect of task complexity on extent of information appraisal for medium selection. Even though a complex task warrants extensive information appraisal, the lack of time may not allow for such extensive appraisal (de Dreu 2003). For example, when a manager wants to communicate information to a colleague on a complicated

technical matter, extensive information appraisal for medium choice may not be possible if the task is done under high time pressure. The limited time available is less likely to allow for use of a compensatory strategy, which evaluates all medium choice alternatives in terms of multiple criteria. Therefore we hypothesize,

*H6: Task urgency reduces the positive effect of task complexity on extent of information appraisal for medium selection.*

Finally, all three characteristics of the communication task may interact with each other in their impact on extent of information appraisal for medium selection. While task importance and complexity are likely to reinforce each other in their positive effects on extent of information appraisal, task urgency is likely to reduce the joint positive effect of importance and complexity on the dependent variable. For example, a task for researching an unknown topic for an important customer under a slack timeframe will more likely lead to a compensatory strategy for medium choice than under time pressure. We expect the three variables (task urgency, complexity, and importance) to interact in their influence on the extent of information appraisal. Hence we hypothesize,

*H7: Task urgency will reduce the joint positive effect of task complexity and importance on extent of information appraisal for medium selection.*

## **RESEARCH METHODOLOGY**

This study makes use of a survey to collect data and test the proposed hypotheses. Data were gathered within a single large organization in order to control for organizational variations (Hinds and Kiesler 1995) that might influence media choice. Since the focus of this study is to ascertain impacts of task attributes on information appraisal for medium choice and the unit of analysis is a task, a study within a single large organization is considered appropriate. Apart

from the questionnaire survey, other data sources included pre and post survey interviews with the company managers, observation of management meetings and managers' daily activities, inspection of e-mail and group calendar records, and information systems documentation.

### ***Research Site and Subjects***

PICO, a large financial services company, was selected for our study for several reasons. First, its operations are highly computerized and integrated, with most tasks recorded in the information systems. This allowed for better selection of realistic tasks for our study. Other than software like Lotus Notes and SAP Financial, PICO has custom-built information systems, including a bill-collection system, enforcement system, short- and under-payment detection system, management decision support system, automated voice response system, social security schemes system for housing, health, and retirement. Most of the customer service and business operations are automated. Second, all the operations and employees of PICO are co-located in one multi-storied building. This allowed us to control for differences in social and cultural norms as compared to having multiple geographically dispersed locations of the firm. Managers considerably utilized the common media, i.e., face-to-face meetings, e-mail, memo, and phone, and were asked to make their medium choices with respect to these media in our study.

The study covered all 65 managers working in PICO (see Table 2). An initial sample of 4 managers was asked to pre-test and validate our survey questionnaire. The remaining 61 managers were asked to respond to the actual survey for which all except 1 manager responded. After the analysis was completed, 6 managers were interviewed to allow for better interpretation of our findings. All subjects were collocated within the organization's premises.

< Insert Table 2 about here >

### ***Operationalization***

Consistent with some of the prior research on media choice (e.g., Markus 1994; Palvia et al 2011), we utilized a scenario-based approach, where we examined managerial media choice under different task scenarios. A scenario-based approach is useful for manipulating task conditions as is desired in our study. As illustrated in Table 3, we created *eight different task scenarios* to describe managerial tasks of varying levels of *importance, complexity, and urgency* (0=low, 1=high). These tasks were adapted from prior research (Daft et al 1987) or from the well-documented information systems at PICO, which provided a realistic source of managerial task information for the design of our questionnaire to elicit relevant responses. The relevance of the tasks in PICO's context was confirmed by interviews with managers during the pretest. The values of task importance, complexity, and urgency perceived by the respondents for the eight different tasks were verified through manipulation check in the survey.

< Insert Table 3 about here >

For each of these tasks, each respondent was asked to indicate how extensively they would evaluate information for their medium choice out of the four available media. The *extent of information appraisal* was measured in a dichotomous manner as follows:

- |                 |   |
|-----------------|---|
| High extent (1) | I will do an extensive evaluation of the media. My choice of the medium will be one that enables me to perform the task <u>most effectively and efficiently</u> . |
| Low extent (0)  | I will <u>not</u> do an extensive evaluation of the media. My choice of the medium will be one that is just <u>acceptable</u> .                                   |

These statements capture the extent of information appraisal by tapping into the use of compensatory or non-compensatory strategies (underlined words for emphasis). Controls in the form of manager characteristics (gender, age, rank, experience, oral skills, written skills, and IT

skills) were included in the analysis to observe whether they impacted extent of information appraisal.

In addition, we included two items to establish the motivation for the study. These items were used to validate the dependent variable i.e., extent of information appraisal for medium selection. First, respondents were presented with a list of ten factors identified in previous research as influencing medium selection (see Table 1). These factors include availability, speed, medium richness, task requirements, other's choice of medium, other's perception of medium usefulness, other's perception of symbolic meaning of medium, individual's medium use competence, medium reach, and effort to use the medium. Respondents were presented with the task scenarios and asked to indicate the factors that they would use in evaluating the choice of the medium for each of those tasks. *The number of factors indicated* was expected to correlate with the extent of information appraisal.

Second, another item was incorporated into the study to establish whether managers indeed choose media different from their optimal channels under specific task contingencies. For each task scenario, respondents were asked to indicate which would be *the optimal and the actual media* they would chose out of the four media under the particular task conditions. We expected deviation between optimal and actual medium choice when extensive information appraisal was not performed.

## **DATA ANALYSIS AND RESULTS**

The three independent variables for the study i.e., task importance, complexity, and urgency, were manipulated through the eight task scenarios (see Table 3). Manipulation check was done to test whether the task manipulations had been understood correctly by the respondents. The mean value of the extent of information appraisal was 0.67 (standard deviation=0.47), indicating

that there was sufficient variance in the dependant variable. Further, out of the ten criteria presented to the respondents to select for their media choice decisions, an average of 5.05 factors were identified (standard deviation = 2.91), indicating that there is substantial variation in how many factors managers at PICO would consider in making their media choice decisions.

Table 4 displays the correlations between task characteristics and the extent of information appraisal (EIA). As evident, task importance (I) and complexity (C) display a significant positive correlation, whereas task urgency (U) exhibits a significant negative correlation to extent of information appraisal for medium selection. The number of factors appraised and deviation of ideal and actual medium are significantly correlated with the extent of information appraisal, providing validation for the dependent variable. Further, the correlations between the interaction terms (except CxU) and the dependant variable are consistent with the hypothesized effects.

Since the dependent variable is binary in nature, logistic regression (Hosmer and Lemeshow 2000) was utilized for hypothesis testing. As necessitated by the logistic regression procedure we tested for possible multi-collinearity among predictors. After standardization of predictors as is prescribed for testing interaction terms (Aiken and West 1991), multi-collinearity problems were not found in the data.

< Insert Table 4 about here >

The results of model testing are shown in Table 5. The model chi-square is 225.45 (df = 14, sig = 0.00). The Cox & Snell Rsquare (0.38) and Nagelkerke Rsquare (0.52) indicate substantial explanatory power of the model. The percentage of the dependent variable cases correctly classified by the regression is 82.7%. The Wald estimates indicate the importance of the contribution of each variable in the model while Exp (B) refers to the Odds ratio. The standard



error (below 5) for each variable indicates that multi-collinearity problem does not exist (Hosmer and Lemeshow 2000).

< Insert Table 5 about here >

Table 5 indicates that the main effects related to task importance, complexity, and urgency are significant (H1, H2, and H4 are supported). Also, the hypothesized interaction between task importance and complexity was found to be significant (H3 is supported). Similarly, the interaction between task importance and urgency was negatively significant (H5 was supported). However, no support was found for the hypothesized interaction between task complexity and urgency (H6 not supported). Most significantly, the three-way interaction between task complexity, importance, and urgency was found to be significant (H7 is supported). As illustrated in Figure 2, respondents would perform extensive information appraisal for medium selection under conditions of high importance and complexity. However, for higher task urgency, the extent of information appraisal would be lower compared to that for lower task urgency. In addition, we included control variables in the model in the form of managerial rank, gender, age, job experience, oral skills, written skills, and IT skills of the respondents. None of these variables were found to influence the dependent variable.

< Insert Figure 2 about here >

Further, our data analysis indicates that managers did not appraise all the ten factors identified by prior research for every medium choice decision. In fact, merely 7.5% of the respondent decisions involved appraisal of all ten factors. We found that the number of factors appraised was significantly correlated with the extent of information appraisal (coefficient=0.44,  $p < 0.01$ , see Table 4). This finding indicates that the extent of information appraisal relates to how many

factors managers actually consider in making their media choices and validates the dependent variable of our model.

Finally, since the premise of this study is that managers' actual media choices deviate from their optimal choices under task constraints, an additional test was conducted to validate this assumption at PICO. The data collected shows that managers' actual choice of medium corresponds to the optimal medium only 51% of the time. Further, the number of times managers' actual choices are different from their optimal choices is significant (McNemar test,  $\chi^2=175.01$ ,  $p<0.001$ ). As hypothesized, the deviation of optimal and actual medium choice is negatively correlated with the extent of information appraisal for medium selection (coefficient=-0.47,  $p<0.01$ , see Table 4).

## **DISCUSSION AND IMPLICATIONS**

The findings of the study indicate that the explanatory power of the model is satisfactory with 82.7% correct classification of the dependent variable and Rsquare estimates of 0.38 and 0.52. Also, all except one of the seven model hypotheses are supported. Specifically, the interaction effect of task urgency and complexity on extent of information appraisal for medium choice is not significant. This result implies that task urgency does not reduce the positive effect of task complexity on extent of information appraisal. This could be because a complex task requires greater extent of information appraisal irrespective of the task urgency. Various practical suggestions can be derived from the findings of the study.

### ***Practical Implications***

As hypothesized, task importance and complexity are jointly positively related to the extent of information appraisal. As also hypothesized, urgency reduces the effects of importance and

jointly of important and complexity on extent of information appraisal. These results suggest that managers should be given sufficient time and resources to appraise information for medium choice when the task is important or both important and complex. Otherwise inadequate appraisal may lead to non-optimal choice of medium that may adversely impact task outcomes, which are of greater consequence for important tasks. When important or both important and complex tasks are to be performed under high time pressure, organizations can look towards providing extra assistance or resources to managers for information gathering about the various criteria and their appraisal such that more compensatory strategies may be adopted for medium choice. Alternatively task schedules may need to be adjusted to provide sufficient time for information appraisal during medium choice in such conditions.

Complementary to the above suggestion, managers should be made aware of how task contingencies may influence their information appraisal for medium choice. Once aware of the constraints on information appraisal and the consequences for medium choice, managers may be able to modify their decision processes to ensure that more compensatory strategies are employed for tasks that are important or both important and complex even under time pressure. This could potentially be achieved by reprioritizing or rescheduling their portfolio of tasks at the particular point of time.

### ***Theoretical Contributions***

The choices of media are important managerial activities in organizations. Though a large volume of existing research has examined what factors influence media choice, the role of the manager as a decision-maker during medium choice has received limited attention. Therefore the main theoretical contribution of this study is in applying a behavioral decision-making perspective to the phenomenon of medium choice. Second, this research draws upon behavioral

decision-making theory to explain the effects of task contingencies on decision-making for medium choice. Specifically it proposes and tests the effects of three practically relevant task variables (importance, complexity, and urgency) and their interactions on the process of medium choice.

Third, this study also contributes by highlighting the extent of information appraisal as a key explanatory variable in the decision making process for medium choice. Consistent with our theoretical conceptualization, task variables affect the extent of information appraisal for medium choice, which in turn is significantly correlated with the number of factors evaluated for medium choice and the compromise of optimal medium choice. When extent of information appraisal is high, more criteria are appraised, and medium choice is more likely to be optimal. Fourth, in terms of methodology, task-scenarios that are realistic yet manipulate the task conditions were designed by borrowing from tasks in the target organization as well as the previous literature and validating them with the respondents. Overall the conceptualization of medium choice as a human decision-making behavior can help to improve our understanding of the medium choice process as well as provide impetus for further application of the behavioral decision making perspective in the context of medium choice.

### ***Limitations and Future Work***

While investigating managers' medium choice behavior within one organization has the advantage of controlling for the effects of organizational variations, generalizing the results of such a study would require careful consideration of different organizational contexts. Future research can conduct the study in other organizations with varying size, structure, and IT

deployment to investigate how task parameters may influence the process of medium selection in those settings. Also the model can be tested for distributed organizational contexts. While this study used binary single-item measures of the task characteristics in different task scenarios, future work can alternatively use multi-item and continuous or Likert measures of model variables to allow for multivariate analysis techniques.

This study suggests several avenues for future research. Studies can further apply the human decision-making perspective to medium choice by attempting to assess concepts such as decision strategy and nature of information appraisal or employ other human choice theories such as effort accuracy trade-off (Payne et al 1993) to explain medium choice. Also, future research can explore the effects of other antecedents such as decision-maker characteristics and assess outcomes such as perceived success rate of medium utilization. To enhance our understanding, the specific factors appraised for particular task conditions can be investigated. It would also be useful to study how particular optimal media are substituted by alternative media under different task constraints.

## **CONCLUSION**

This study employed a human decision-making perspective to add to the understanding of managerial medium selection. This perspective suggests that depending on task conditions, managers may not evaluate all relevant criteria for medium selection and result in non-optimal media choices. Specifically, our study showed that task importance, complexity, and urgency interact in influencing and constraining the extent of information appraisal for medium choice. The results are relevant since these task attributes are critically enacted in organizations all the time yet have received inadequate research attention.

As expected, the number of criteria appraised correlated with the extent of information appraisal for medium choice. Also the finding that optimal medium choice is compromised when extent of information appraisal is low i.e., when task importance and complexity are low or urgency is high, supports the idea that satisficing behavior is common in medium choice as in human decision-making in general. Further, for most task conditions, managers appraised a combination of medium, individual, social and contextual factors. This suggests that the debate on whether rational or social theory is more accurate in predicting medium choice may not yield useful results.

Overall, this study indicates that a human decision-making perspective can be useful to better understand medium choice behavior. Human decision-making in general and medium choice in particular are complex behaviors that cannot be explained by either rational or normative influences alone. Different combinations of criteria are appraised according to different strategies of decision-making in medium choice behavior. With the increasing use of new media for communication and collaboration, future research and practice in this area could benefit from building on the human decision-making perspective.

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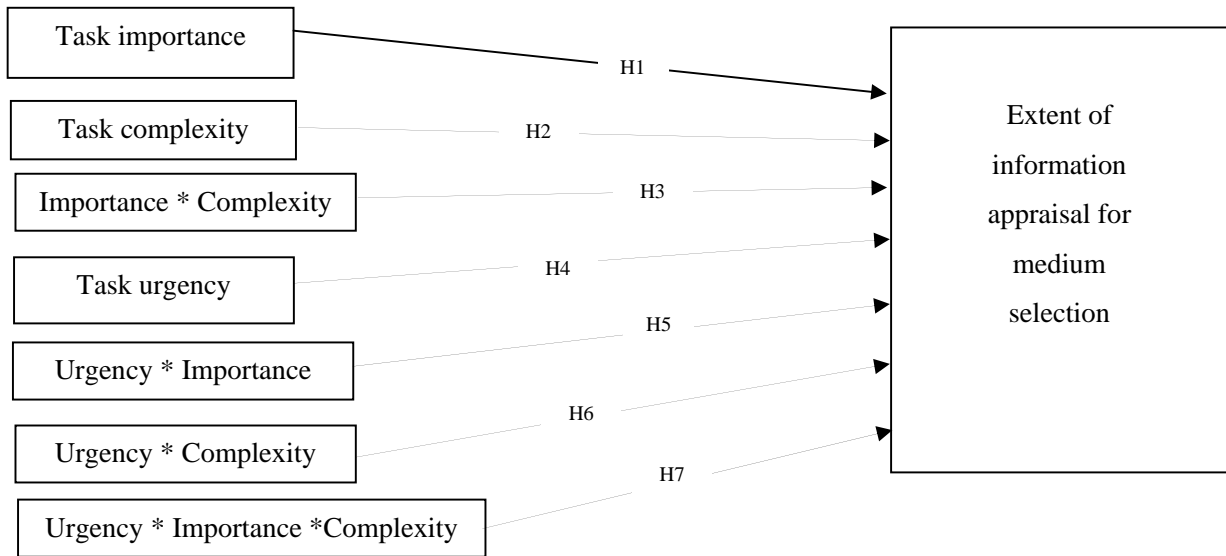
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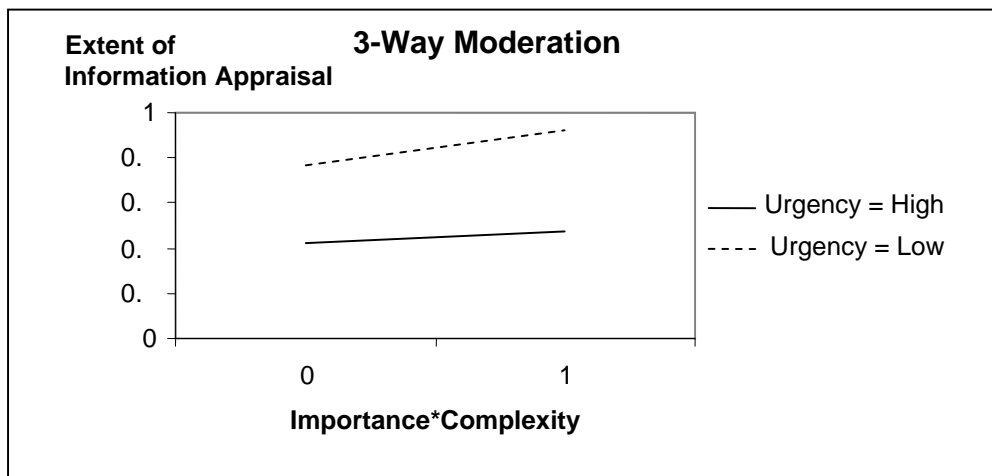


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**Figure 1. Research Model**



**Figure 2. 3-Way Moderation Effect**

<b>Perspectives and Factors</b>	<b>Example Studies</b>
<b>Medium Characteristics:</b> Social Presence Medium Richness (immediacy of feedback, multiplicity of cues, language variety, personalization) Media Naturalness Medium Symbolism Medium Synchronicity (immediacy of feedback, parallelism, symbol variety, rehearsability, and reprocessability)	Short et al. (1976), Otondo et al (2008) Daft et al. (1987), Kishi (2008)  Kock (2004) Trevino et al. (1987), Otondo et al (2008) Dennis and Valacich (1999), Dennis et al (2008)
<b>Social Factors:</b> Social Influence Critical Mass of Users / Reach	Fulk et al. (1990), Brown et al (2010) Markus (1990)
<b>Individual Features:</b> Characteristics of Users e.g. self-efficacy Experience with medium, message, communication partner	Hiltz and Johnson (1990), La Rose (2009) Carlson and Zmud (1999), Brown et al (2010)
<b>Contextual Determinants:</b> Medium Accessibility (availability, reliability, speed)  Recipient Availability Organizational factors	Rice and Shook (1988), Sivunen and Valo (2006) Straub and Karahanna (1998) Zmud et al (1990), Hinds and Kiesler (1995)

**Table 1. Perspectives and Factors in Media Choice**

<b>Questionnaire development interview and Pre-test</b>	4 managers
<b>Actual Survey</b>	61 managers surveyed, 60 responded (98.5%)
<b>Job rank</b>	18 (30%) senior managers, 42 (70%) managers
<b>Gender</b>	24 (40%) male, 36 (60%) female
<b>Age</b>	Majority (73.4%) of respondents are in the age group 30-49 years
<b>Minimum number of years of management experience</b>	6 years for senior managers and 3 years for managers
<b>Post-Survey Interview</b>	6 managers

**Table 2. Profiles of Respondents**

<b>Task</b>	<b>Importance (I)</b>	<b>Complexity (C)</b>	<b>Urgency (U)</b>
To inform another manager of the period you will be on leave in future	0	0	0
To inform another manager of the changes made to a procedure under time pressure	0	0	1
To get an explanation from another manager about a complicated technical matter in which you have little formal training or experience	0	1	0
-- as above, under time pressure --	0	1	1
To give another manager a set of five cost figures for a key client	1	0	0
-- as above, under time pressure ---	1	0	1
To discuss with another manager ways to handle a nasty but key customer who has threatened to make complaints to the press about the company	1	1	0
To seek another manager's assistance to purchase a complex piece of equipment you require badly for some critical operations	1	1	1

**Table 3. Tasks for testing research model**

<b>Correlation</b>	<b>Extent of information appraisal (EIA)</b>
<b>Importance (I)</b>	0.24**
<b>Complexity (C)</b>	0.15**
<b>Urgency (U)</b>	-0.45**
<b>IxC</b>	0.22**
<b>IxU</b>	-0.14**
<b>CxU</b>	-0.07
<b>IxUxC</b>	-0.28**
<b>Number of factors (N)</b>	0.44**
<b>Deviation of ideal and actual medium</b>	-0.47**

**Table 4. Correlations with Key Variables**

\*\* Correlation is significant at the 0.01 level (2-tailed)

<b>Variable</b>	<b>B</b>	<b>Standard error</b>	<b>Wald</b>	<b>Sig.</b>	<b>Exp(B)</b>	<b>Hypothesis</b>
<b>Constant</b>	0.72	1.55	0.21	0.64	2.04	NA
<b>Importance (I)</b>	0.79	0.16	25.44	0.00	0.45	H1 supported
<b>Complexity (C)</b>	0.52	0.16	10.82	0.00	0.60	H2 supported
<b>Urgency (U)</b>	-1.02	0.16	41.74	0.00	2.78	H4 supported
<b>IxC</b>	0.62	0.16	15.43	0.00	1.86	H3 supported
<b>IxU</b>	-0.38	0.16	5.70	0.02	1.46	H5 supported
<b>CxU</b>	-0.20	0.16	1.62	0.20	1.22	H6 not supported
<b>IxUxC</b>	-0.82	0.16	26.66	0.00	0.44	H7 supported

**Table 5. Hypotheses Testing Results**