Research Proposal about Perceived Richness of Media and Its Choice in Organizations

Cristian Cortes Parraguez

Industrial Civil Engineer, Arturo Prat University, Chile.
Master in Marketing, distribution and consumption, University of Barcelona, Spain.
Certificate in advanced studies in doctorate business administration and management, University of Cataluña, Spain.
Doctor candidate, University of Cataluña, Spain.

Abstract
This paper presents the state of the art as more than a simple research technique. It is a quest for new senses, which goes beyond the descriptive level of data to establish new analysis relationships within the categories of the object of study in different research papers, and propose new research and formation approaches. For that purpose, a new concept approach to state of the art, its origins, and its definition are suggested. Furthermore, it is strongly suggested that alternative research methods include three essential elements. It is advisable to advance in the theoretical and methodological fields of the state of the art, as a proposal to get a critical insight into the methodological strategies of the object of study which promote involvement, self-criticism and reflection within educational communities.

Keywords: Organizational Communication, Information richness, Media richness

1. Introduction

Although organizational communication is one of the central pillars of any organization and is the conduit through which knowledge is transmitted and also ignorance, being able to understand the internal communication of organizations is a fascinating study that hosts varied lines of research. Our research will focus on the organizational media and their binding theories, as is the case of the theory of wealth of means (Daft and Lengel, 1984, 1986) that integrates the concepts of ambiguity and uncertainty, developed by Weick, (1979) and Galbraith, (1973) respectively. The central hypothesis of media wealth theory (TRM) is to achieve communication efficiency; equalizing the requirement of the task of communication and the capacity of the communication medium, where for very ambiguous and complex tasks, rich media (face to face and video conference) are necessary and for less ambiguous and routine tasks, low means are necessary in wealth (phone, email, written notes)

Over the years the theory of wealth means (Daft and Lengel, 1984, 1986) remains an important pillar in research, but now their approach has suffered criticism losing strength their hypotheses and arguments because the tasks used in the Studies have been considered that they do not have the level of ambiguity necessary to be classified as ambiguous tasks. Also say that the theory has focused on the media option without considering the use of media, ie how managers should use media and not how managers really chose media. As a result of this, more complete theories that integrate the contributions of the TRM have emerged, such as the theory of channel expansion (Carlson and Zmud, 1999), which consists in developing perceptions of wealth for a given channel. The theory broadens the knowledge and concepts studied until then and tells us that the selection of media is determined by the influence of social or influence of perceptions, and from here four experiences that influence the selection of media are observed: experience

with the means of communication, experience with the organizational context, experience with the partner and experience with the subject. Although the theory has been demonstrated empirically, it does not include the type of communication task. Another recent theory is the theory of synchronous media (Dennis, Valacich and Morris, 1998) which proposes that synchronous communication (real-time communication) is one that is established between two or more people simultaneously in the same time and the same place, where the main characteristic that defines it is the coincidence in time (Munzer, 2009).

The theory also includes two processes that are important for improving understanding: the transport process, which involves carrying large amounts of raw information, and the convergence process, which focuses on transmitting high levels of information abstraction and processing small volumes of information. information. Investigations of synchronous media have included the type of task in their investigations, but they have not been demonstrated empirically.

Our study will consist of a complete review of the state of the art of literature, with the intention of identifying future lines of research and serve as a guide for manuscripts, essays and theses.

2. Review of Literature

2.1.-Theories in decision-making in the media

How do managers acquire information when it comes to decision-making processes? ¿Are the sources and means of communication adequate in the different stages of the process? ¿Can the acquisition of information improve the efficiency of decision-making?

The answers to these questions are hard to find in the literature. The investigations of the selection of sources and means have not been considered the dynamic and temporal aspects of the acquisition of information. These responses are important for understanding and responding to the needs of the information process and decision making of managers.

Currently, managers face the task of making important decisions, in increasingly complex and turbulent environments. Researchers have developed information processes and decision-making models for organizations. O'Reilly, Chatman and Anderson (1987) state that empirical research is the basis for understanding communication models and seems to reflect on two perspectives:

-The communication, the acquisition and the flow of information in organizations.

 -The decision making and the use of information in organizations.

O'Reilly, Chatman and Anderson (1987), argued that communication researchers have not considered the way in which decision makers use the information acquired. On the other hand, they indicated that decision-making researchers have limited their studies to the use of signals, options and judgments without understanding the process of information acquisition, which provides a more complete understanding of the organizational information process.

The information process occurs within the context of managerial work characterized by fragmented and interrelated activities (Mintzberg, 1973). The gathering, transmission and use of information within the activities related to decision making are critical aspects to understand management work (Snyder and Glueck, 1980).

Connolly (1977) not only supported this approach but also argued that decision-making is not a set of independent events, but an interactive process in which the interrelationships between decisions and communication activities are the central focus of understanding the process of information in organizations.

The importance of information today is such that we have come to consider the moment in which we live as the information age conceptualize it as a set of knowledge capable of being communicated and oriented to the decision making that determines the behavior of the same. That is why research emerges based on the study of man as a subject capable of making decisions and solving problems in the company. It highlights the rational and intellectual aspects of behavior in the organization.

2.1.1.- Characteristics of the media

The means are those mechanisms selected to transmit information to the decision maker, for example: meetings, telephones, notes, memorandums, mails, and others. The telephone is used when urgency is required (Steinfield and Fulk, 1986, Trevino, Lengel and Daft, 1990). Telephone and mail are also the most common means when communicating parties are physically dispersed (Steinfield and Fulk, 1986). Managers select media for their ability to reduce uncertainty and ambiguity (Daft and Lengel 1984).

Other investigations of media characteristics put media in order along a continuum based on "social presence." Research by Short, Williams and Christie (1978) suggests that media characteristics, such as personal sociability and sensitivity affect the degree to which communicators are perceived and low media in social presence are useful to provide information, but not to perform negotiation tasks, which require means with a higher social presence (for example: interaction of CYH and face to face).

These suggestions on the characteristics of the media are based on three aspects (Fulk, Steinfeld, Schimtz and Power, 1987). First, the media have objective characteristics that are invariant despite the user and the context of use. Second, any variation in aspects related to the objectives of tasks, such as ambiguity or the need for social presence, is perceived as inherent to users. Third, the individual attitude and behaviors are seen as responses to the inherent aspects of communications media. Thus, with the perspective of media characteristics, it is assumed that the selection of media and use is objectively rational.

Recent research that includes new media such as mediated communication (CMC) shows emotional characteristics that involve media with low social presence and wealth of information. For example, the CMC has been used in negotiation and conflict situations.

Rice (1987) found that 30 percent of the electronic message content of medical professionals was used to express emotions. Fulk et al. (1987) suggested the integration of social information process theory with the perspective of media characteristics to explain conflicts apparently related to media selection behavior.

Thus, the selection of media can occur under conditions of objective reality, but it can also be subject to less objective social influences.

On the other hand, Trevino, Lengel and Dalf, (1987) suggested a theory of social influence to increase the perspective of media characteristics, which argued that the framework of structural symbolic interactionism was applied to the study of communication behavior in organizations. This framework is based on the concept that the members of an organization create a dynamic system of sense shared by their interactions. The framework suggests that managers' behavior towards the media is a function of both symbol creation and symbol communication.

Both the social information process and the structural symbolic interactionism approaches highlight the need to increase the rational model. Both approaches are tilted by objective assumptions typical of the media features perspective. The approach of structural symbolic interactionism emphasizes the dynamic aspects of the communication process.

2.2.-Media Richness Theory

The media richness is defined as the ability of the media to process rich information; it is a rational process that strives to achieve a coincidence between the task of communication and the capacity of a means of communication.

Where the media differ in their ability to communicate messages and signals (Mariko Kishi 2008). However, we cannot forget that the central hypothesis of the Media Richness Theory is the communication efficiency, which is related to the demand of the task, the capacity of the environment, the ability to develop the shared sense and overcome different frames of reference. Communication efficiency depends on the characteristics of the communication and the capacity of the receiver, that is, the ability to communicate nonverbal signals such as: Voice tones, facial expressions, body language and dress.

All these characteristics give us information about the status of the issuer and, for example, its credibility in the message (Robert Otondo, James R Van Scotter, David G. Allen c, Prashant Palvia 2008).

Therefore, the capacity of a medium can be understood as rapid reception, the handling of multiple signals and the establishment of personal focus. Therefore, Media Richness Theory consists of a variety of signals that communicate both information and other elements that help the receiver solve ambiguity and uncertainty.

Research has established that the demands of the information process and the capacity of the media are essential for organizational efficiency and therefore they tried to understand the requirements of the information process from the point of view of the ambiguity proposed by Weick and from the point of view of view of the reduction of uncertainty proposed by Galbraith. Both proposals are the basis for deepening media theory and future research. In the following chapters we will delve into the concepts of ambiguity and uncertainty.

Generally, the level of richness is higher in oral media than in written media, in other words, synchronous media (same times) are more than rich than asynchronous media.

The authors of the MRT conclude that in order to reduce ambiguity and uncertainty, rich means are needed, where uncertainty consists of the difference between the quantity of information required for a task and the amount of information it has. In this way the reduction of uncertainty occurs when the means that are available and allow to deal with a large amount of data. For example: Meetings and personal contact facilitate the reduction of ambiguity, and computer-assisted information systems facilitate the reduction of uncertainty (Mariko Kishi 2008).

Weick (1979), argue that organizational interpretation is a critical element that distinguishes human organizations from other systems. They also indicate the needs of the information process and the type of medium changes the organizational interpretation.

For this reason, it is suggested that the media option is related to the organizational level. Means that cannot communicate important social signals have been linked to higher levels of conflict between communication participants.

The media transits the social presence of communicators, that is, humanity, sociability and personalization. They have also been used to study asynchronous communication to create or obtain personal feelings and emotions that give the message a personal approach that enhances the efficiency of communication by increasing the importance of the message and the participation of the recipient.

Research has made it possible to identify which means are most appropriate for processing rich information, for example, e-mail is a low medium in richness used at the operational level, there are many managers who do not like to use it. But its use has advantages, because it includes factors related to contextual constraints (distance between communication partners and the number of message recipients). Research has tried to explain the use of media through social factors and found that the use of a medium is not always determined by the richness of the medium of communication, but by group norms, supervisor attitudes, collective rules, social tool, co-worker, behaviors, relationship between sender and receiver, experience and social symbolic meaning.

Kishi´s investigation (2008) explains the relationship between the interpretation of the environment and the use of rich media and even electronic media. His hypothesis is that "the use of media in organizations will be related to the likelihood of using rich media if there is an assumption that the external environment is not analysable", (Mariko Kishi 2008).

At the business level, managers prefer rich media if their environment cannot be analyzed. Therefore, organizations that assume that their environments are non-analyzable prefer traditional media.

More recent research carried out by O. Boyinbode, O. Agbonifo & A. Ogundare, (2017), in their study "Supporting Mobile Learning with WhatsApp based on Media Richness", focuses on the proliferation of mobile devices, which has been become a learning paradigm.

Its objective was the perceived richness of several message delivery methods in mobile learning environments (m-learning).

This study evaluates the richness of the media with respect to the timeliness of the content, the richness of content, the accuracy of the content and the adaptability of the content in WhatsApp, email, SMS and Twitter. The ANOVA analysis performed showed:

• SMS has a better performance than WhatsApp, email and Twitter currently content; This implies that the SMS may be more appropriate to deliver information in real time, such as notifying or remembering some time-sensitive issues.

• WhatsApp has a better performance than email, SMS and Twitter in the richness of content and therefore can be applied in the delivery of information that is rich in images and videos.

• WhatsApp has a better performance than email, SMS and Twitter in the accuracy of the content and the adaptability of the content.

The study suggests that developers and designers of an m-learning environment could adopt WhatsApp as an appropriate means of delivering information to support corresponding learning activities in a learning environment. In this study he discovered that students preferred WhatsApp to be used to support learning due to multimedia support and prompt delivery.

The use of SMS to support learning was not efficient due to its character limit, the abbreviations that are sometimes used make it lose the learning objective and also have a high cost compared to WhatsApp.

For email, some students rarely check their emails; This tends to slow the virtual interaction between teachers and students.

Based on the result of the evaluation, the students' preferences for the media that best support mobile learning are the following: 65% for WhatsApp, 25% for email and 10% for Twitter.

However, most students agreed that using WhatsApp in learning is much more convenient and can provide a rich content presentation that includes various types of media, such as text, image, audio and video, and also supports file attachments like pdf, doc, txt, ppt and xls. WhatsApp is also rich in content adaptability and content accuracy.

These results showed that the designer of an m-learning environment could adopt WhatsApp as the appropriate means of delivering information to support the corresponding learning activities in mobile learning. In other words, they could adopt WhatsApp to support several mobile front-end devices to access and present learning content, because WhatsApp has a richness of superior content, accuracy and adaptation.

Richness is defined as the potential capacity to carry information, where each medium differs in: (1) reaction capacity, (2) communication channels, (3) source (4) human language (Bodensteiner, 1970 Holland, Stead and Leibrack, 1976).

Media Richness Theory at the beginning was a predictive model where its demands for information process were: uncertainty, reduction of ambiguity and communication channels. Initial investigations were essential for organizational efficiency (Daft and Lengel, 1987). Over time, this model was understood as a descriptive and explanatory theory applicable at the beginning to traditional means of organizational communication such as face-to-face meetings, telephone conversations, inter-office notes and printed reports.

Over time, new contributions have been made and this theory has been extended to new means of communication such as videoconferencing and e-mail, with which the new verifiable hypotheses tell us how individuals perceive and select means.

Although the theory is not completely complete, because it does not include circumstantial factors that could influence behavior (Markus, 1987) and social factors (Fulk, 1987), that is why Trevino (1987) extended the

theory beyond concerns of ambiguity and reduction of uncertainty and added two categories: circumstantial coercions (time and place) and symbolic considerations (Fulk et al., 1987). Giving way to the symbolic Interactionism that is presented as a theoretical approach for the understanding of the processes of election of the means during the directive communications.

Daft and Lengel (1984) propose a hierarchy of information wealth where information transmitted via face-to-face communication is the richest form of the process, because it provides a more immediate reaction. The understanding can be shared, interpretations can be corrected which allows the observation of multiple signals, body language, facial expression, and tone of voice. The phone is less rich: the ability to react is fast, and visual signals are not available. Like correspondences and documents, although in these the immediate reaction is slow

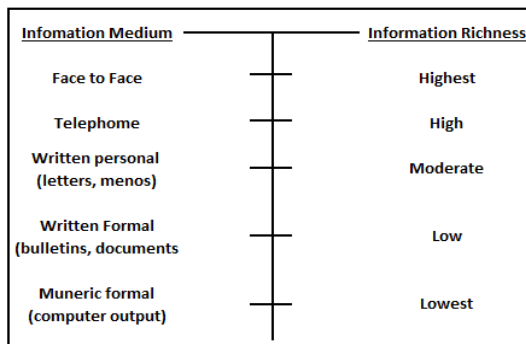| Infomation Medium	Information Richness
Face to Face	Highest
Telephome	High
Written personal (letters, menos)	Moderate
Written Formal (bulletins, documents	Low
Muneric formal (computer output)	Lowest

Figure 1: Richness of means and means of communication. (Daft and Lengel 1984)

Continuing with the contributions on the subject, these were made in the decision-making process proposing that perceptions and media options arise when people are in a social structure and in contact with the media. (Jones and Saunders, 1989). On the other hand, Markus (1987) interprets information of the Richness media theory as the process in which managers rationally try to use the characteristics of the media at their disposal and according to the demands of their communication tasks to achieve personal and organizational efficiency.

Information Richness	Medium	Feedback	Channel	Source	Language
High	Face to Face	Immdiate	Visual, Audio	Personal	Body, Natural
	Telephone	Fast	Audio	Personal	Natural
	Written personal	Slow	Limited Visual	Personal	Natural
	Written formal	Very Slow	Limited Visual	Impersonal	Natural
Low	Numeric formal	Very Slow	Limited Visual	Impersonal	Numeric

Figure 2: Characteristics of communication media based on their wealth. (Daft and Lengel 1984).

2.2.1- Organizational information process model

The organizational information model consists in analyzing the different types of information processed and received by the directors, since they face situations that may be simple or complex. In simple situations tend to be mechanical, routine, predictable and well understood. This means that managers can be objective and solve the problem. In complex situations, managers spend time analyzing the problem and looking for information outside of normal procedures. Therefore, rich media are necessary to deal with information about complex organizational issues and low-richness media are appropriate for simple topics.

In an investigation it was observed that the directors have contacts inside and outside the organization and spend more than 80% of their time communicating (Mintzbert, 1973). For this reason, information models are so important, which allow individuals working under high uncertainty to use rich means to transfer information (Holland, Stead and Leibrack, 1976).
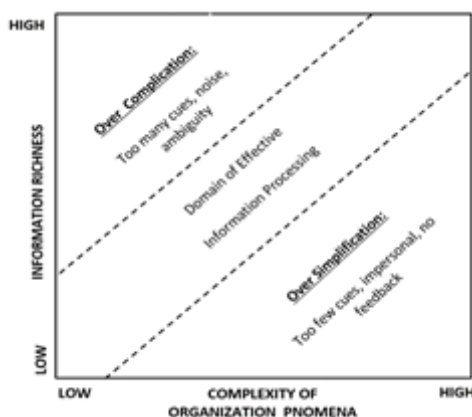

Figure 3: Information processing model. (Galbraith 1973)

A study by Blandin and Brow (1977) observed the search behavior of managers (external, internal and informal sources) and behaviors related to uncertainty.

His conclusion was that when the level of uncertainty increases, managers rely more on external and informal sources to obtain more information. Therefore, the richness and quantity of information increase with the perceived uncertainty.

In general, the management information model supports the positive relationship between the richness of the environment and the complexity of the task. The question we ask ourselves is: ¿Why do organizations process information? The answer that is most often given in the literature is that organizations process information to reduce uncertainty. As we have already advanced in the previous pages. This line of reasoning began when Galbraith (1973) integrated the work of Burns and Stalker (1961), Woodward (1965), in terms of information processing.

Galbraith explained the variations observed in the organizational form based on the amount of information needed to reduce the uncertainty related to the task and thus reach an acceptable level of interpretation. Galbraith (1973), (1977) proposed that specific structural characteristics and behaviors would be associated with information requirements, and this relationship has been supported by a line of research and theorization. Studies by Tushman (1978), (1979), Van de Ven and Ferry (1979), Daft and Macintosh (1981), and Randolph (1978) support a positive relationship between the variety of the task and the amount of information processed. within the work units. Van de Ven, Delbecq, and Koenig (1976) discovered that departmental communication increased when the interdependence among participants increased. Several other studies have found that either the quantity or nature of information processing is related to the uncertainty of the task (Meissner 1969, Gaston 1972, Bavelas 1950, Leavitt 1951, Becker and Baloff, 1969). Why do organizations process information? Organizational literature also suggests a second, more tentative response: reduce conceptual ambiguity. This answer is based on the argument of Weick (1979) that the

reduction of ambiguity is a basic reason for the organization. Ambiguity seems to be similar to uncertainty, but distorted. Ambiguity is a messy and confusing field. Within organizations, information has several interpretations. New data can be confusing, and may even increase uncertainty. New data may not solve anything when the ambiguity is high.

The managers will discuss the issues, and finally they will take a solution. Managers reduce ambiguity by defining or creating a response, rather than learning the response of additional data collection (Weick 1979).

2.2.3.- Conceptual ambiguity

Ambiguity means the existence of multiple and contrary interpretations of an organizational situation (Weick 1979, Daft and Macintosh 1981). A high ambiguity means confusion and lack of understanding. Ambiguity means that it is not feasible to ask a question yes - no. Participants are not sure what questions to ask, and if the questions are raised, the situation is ill-defined to the point where a clear response will not be communicative (March and Olson 1976).

Two forces the existence of two complementary forces is proposed in the organizations that influence the processing of information. A force is defined as uncertainty and is reflected in the absence of answers to questions; the other force is defined as the conceptual ambiguity, which comes from the confusion of how the disordered and paradoxical world of organizational decision-making is seen. The two forces are analogous to a dimensional information space (Marschak and Radner 1972, Baligh and Burton 1981). Uncertainty is the measure of the ignorance of the organization of a value for a variable in space. Conceptual ambiguity is a measure of the organization's ignorance of whether a variable exists in space. When the uncertainty is low, the organization has data that answers questions about the variables in space. When the ambiguity is low, the organization has defined what questions to define the variables in the space. Each force has a value to explain the behavior of information processing, and each force leads to different behavioral outcomes. Ambiguity leads to the exchange of opinions among managers to define problems and to resolve conflicts through the promulgation of a shared interpretation that can direct future activities. Uncertainty leads to the acquisition of objective information about the world to answer specific questions.

The two causes of information processing are combined in a single frame in Figure 4.

High	1. **High Equivocality, Low Uncertainty** Occasional ambiguous, unclear events, managers define questions, develop common grammar, gather opinions.	2. **High Equivocality, High Uncertainty** Many ambiguous, unclear events, managers define questions, also seek answers, gather objective data and exchange opinions.
EQUIVOCALITY	3. **Low Equivocality, Low Uncertainty** Clear, well-defined situation, managers need few answers, gather routine objective data.	4. **Low Equivocality, High Uncertainty** Many, well-defined problems, managers ask many questions, seek explicit answers, gather new, quantitative data.
Low	Low — UNCERTAINTY — High	

Figure 4: Hypothetical framework of ambiguity and uncertainty in information requirements.
(Marschak and Radner 1972, Baligh and Burton 1981).

The horizontal axis represents the organizational uncertainty under conditions of high uncertainty, the organization acquires data to answer a variety of objective questions to solve known problems. The vertical axis represents ambiguity.

In conditions of high ambiguity, managers exchange opinions to clarify ambiguities, define problems, and reach an agreement. As a framework for analysis and discussion, ambiguity and uncertainty are treated as

independent constructions in Figure 4 although they are undoubtedly related in the real world. High levels of ambiguity may require new data, as well as clarification and agreement. The circumstances that demand new data may also generate some need for further interpretation and definition. However, as independent constructions the two dimensions in Figure 4 provide theoretical categories that can help explain both the quantity and the way information is processed in organizations.

2.3.- Channel Expansion Theory

Channel Expansion Theory is called a variety of theoretical perspectives that address the use and perceptions of the media. These perspectives influence: social presence, media richness, dual capacity model and social information processes, and refer to factors that influence media choices in organizational frameworks.

Channel Expansion Theory identifies certain experiences, in order to know how an individual develops perceptions of richness for a given channel. (Carlson and Zmud, 1999), for this it is important to understand the process of channel selection under social influence or influence of perceptions.

The channel experience has been measured in: (1) terms of years of use (Fulk, 1993) and (2) in the number of messages sent (Rice and Love, 1987). That is, the more a channel is used, the greater its experience, this will lead to higher richness perceptions. For its part, Richness media Theory (Daft and Lengel, 1984-1986, Daft, 1987) describes the ability of the channel to bring rich information, and also proposes that the richer the information, the more its capacity to reduce ambiguity.

The richness of media refers, not only to the relative capabilities of the channels to communicate messages, but also to the capabilities of these messages to provide rich information.

The messages should be communicated in channels with sufficient and appropriate media richness capabilities.

Channel Expansion Theory has identified four types of experiences:

- Experience with the channel
- Experience with the message theme
- Experience with the organizational context
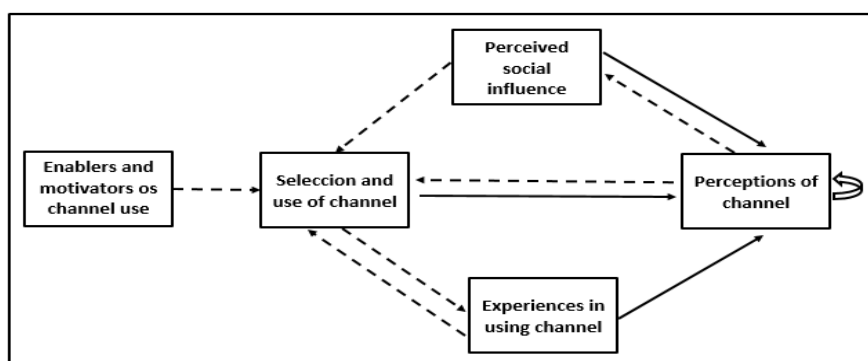- The experience of communications with co-participants

Figure 5: Conceptual model of media expansion. Carlson and Zmud (1999)

Figure 5 shows a model of perceptions of communication channels proposed by Carlson and Zmud (1999). Carlson and Zmud´s research study (1999) entitled "Channel expansion theory and the experiential nature of media richness perceptions" stands out for its two hypotheses that are important in analysis on the channel; Hypothesis 1: The knowledge that an individual builds with his or her experience on a communication channel is positively related to the individual's richness perception of the channel and

Hypothesis 2: The knowledge experiences of an individual with a communication partner will be positively related to the perception that the individual has of the richness of the channels used in communication.

Therefore, when individuals develop experience in a subject on which they communicate, they can develop a knowledge bank for that topic and enable them to codify messages with richer meanings between communication partners or a jargon that reinforces the understanding shared.

However, channel use does not necessarily produce experiences that build knowledge, in other words, an individual must actively learn the use of the channel and development of relevant knowledge banks. For this reason, channel expansion theory suggests that experiences are important to the extent that individuals develop a knowledge bank. Thus, Carlson and Zmud (1999) suggest that perceptions of richness can vary in two ways:

- The perceptions of richness for the specific communication channel can be dynamic within individuals, changing their knowledge banks and that of social influence.
- Individuals may simultaneously have different richness perceptions for the same channel, according to circumstantial contexts.

2.4 Theory of social influence

Studies of social influence propose that in addition to the objective characteristics of the media, the selection of these media should be influenced by the subjective perceptions of users or work groups (Fulk et al., 1990, Schimitz and Fulk, 1991). It is thought that the choice of means should be made in four factors: (1) received means, (2) characteristics of the task, (3) attitudes towards the use of media and (4) individual differences and social information (Fulk et.al, 1990, Steinfield, Schmitz and Power 1987).

The theory of social influence predicts the variation of perceptions and the use of communication technologies in the social processes that occur within the organization.

According to this theory, the perceptions of managers and the use of means come from social processes. The model is formally simple and involves only two dimensions:

- Dissocial ambiguity.
- Group coordination

It is established that, when ambiguity is high, the greatest number of people is printed. On the contrary, the use of media is interactive, users confirm more in each other (Bairj Donabedian, 2006). Both the theory of media wealth and the theory of social influence portray the choice of media as a product of the active process of information. Explanations of the richness of the media rationally determine the use of media in the function of message complexity (Lendel and Daft, 1988).

On the contrary, social influence is proposed as in the processes of choice are less rational, in other words are identified as users of media as processors of social information. It is proposed that their perceptions are based on what other work groups believe or say (Fulk et al, 1987). The model of social influence in addition to the use of technologies is identical to social psychological processes and this would explain the behaviors towards technologies within social groups. (Fulk, 1990). The above in the psychological processes in the theory of learning (Bandura, 1986) and the theory of social influence (Pfeffer, 1991).

Classical theories about social influence, based on interpersonal attraction or interdependence among group members, suggest that face-to-face interaction favors social influence (Deutsch & Gerard, 1955; Latané, 1981).

Therefore, based on this influence, it is expected that the visual anonymity and physical isolation characteristic of computer-mediated communication will diminish the social influence since they reduce the attraction to the group.

Reid, et al. (1997) elaborate an observation measure of the influence process based on Kaplan and Miller (1987). These authors differentiate two styles of influence: normative (which occurs when group members express specific preferences or reflect values and norms) and informative (if group members refer to facts or make inferences from the information available in the task they have to perform).

From the approaches the SIDE model is developed, Reid et al. (1997) which affirms that the style of normative influence will be the preferred mode of influence in the groups that work in conditions of computer-mediated communication (CMC) due to the visual anonymity that involves the use of this medium during the group interaction. This hypothesis has been tested by comparing the groups that work in CMC contexts with those that do face to face (Reid et al., 1997, Zornoza et al., 2005).

However, in the study of social influence processes it is important to consider the effects of other forms of anonymity and physical isolation.

Video conferencing (VC) is a means of communication that allows visual identification of group members, unlike CMC, but keeps them physically isolated. In this study we analyze the processes of social influence considering two communication modalities: Videoconference (VC) and computer mediated communication (CMO). For this, a measure of influence developed from the analysis of the content of the group discussion is used and two categories are differentiated: the style of normative influence and the informative one. To the extent that CV allows visual identification of group members while CMC keeps them in anonymity, it is expected that in the groups that work in the CMC condition, the normative style will dominate, to a greater extent. that in the groups that work through VC will be given to a greater extent the style of informative influence.

2.5- Model for acquiring information for the decision-making process

The conceptual elements used to explore the structure of information acquisition during the decision-making process are seen in Figure N°6. A general theoretical model that relates information flow characteristics with a decision making process is presented dynamic. The model consists of three main components: decisional process, information acquisition and contextual factor.
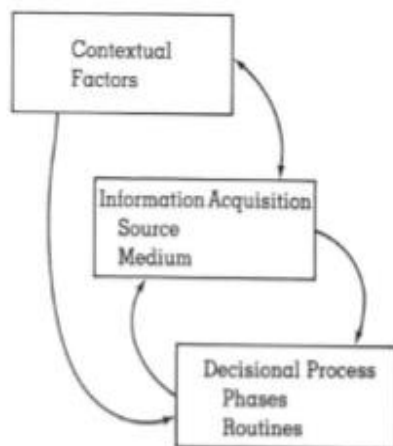

Figure N°6. Model of information acquisition for the decision-making process.

The decisional component reflects an integration of the unstructured decision model and deals with the concept of a garbage can. The result is a decision-making process that flows through three main phases: identification, development and selection. These phases consist of seven routines related to the decision: recognition, diagnosis, search, protection, design, evaluation and authorization option (Mintzberg 1976). The ordered representation of phases belies the chaotic nature of true organizational decision making. The

recognition of trash bin concepts in this process highlights the delays, problems and setbacks of routines that occur during the decision-making process.

The information acquisition component focuses on the role of information sources and means that channel information to the manager. The sources are identified as internal or external. The media vary over a continuum in the wealth of the CYH to the written medium (Daft & Lengel, 1984).

The contextual component: focuses on several contextual factors that directly affect the selection of source and medium.

The decision arrival time the number of decisions that the manager works simultaneously Time pressures the perceived importance of the decision by the organization or manager

The information environment of the organization Interaction models established Value assumptions Problem characteristics

In table Nº1 we can visualize the components of the model, its primary structure and the substructures or elements.

Model Component	Primary Structure	Substructure (Elements)		
Contextual		Decision arrival time Number of simultaneous decisions Perceived importance Organization's information environment Established interaction patterns	Value premises Time pressures Problem characteristics	
Information Acquisition	Source	Internal	External	
	Medium	Face-to-face, scheduled Face-to-face, unscheduled Telephone	Electronic (E-mail, computer conferencing) Addressed document Unaddressed document	
Decisional	Phases	Identification	Development	Selection
	Routines	Recognition Diagnosis	Design Search	Evaluation/Choice Screen Authorization

Due to the dynamic and interpersonal nature of the decision-making process, interaction models influence the context for the acquisition of information. The interaction models established are considered by selecting sources of information (Poole, Seibold, & McPhee, 1985). People who act in the context of a social structure recognize each other and influence expectations of the other's behavior. Behavior is a process formed by repeated interactions (Stryker 1983)

2.5.1- Group decision making

The groups generate more complete information and knowledge. By adding resources from different individuals, groups contribute more to the decision process. They offer an increased diversity of points of view. This represents a greater opportunity to consider more methods and alternatives. The evidence indicates that a group will always outperform the best individual. In this way the groups generate high quality decisions. Finally, the groups entail a much greater acceptance of a solution. Many decisions fail after the final option is taken because people do not accept the solution. Group members who participate in decision making are likely to enthusiastically support the decision and encourage others to accept it.

Group decisions have their disadvantages. They consume time. Typically, more time is required to arrive at a group solution than it would take if a single individual decided for himself. In the groups, there are pressures to enter into conformity. The desire of the members of the group to be accepted and considered as an asset for the team favors the overcoming of any open disagreement.

Most group decision making studies so far have focused on group processes and structures developed during the meeting in which a decision was made. The focus has not been on the background of the meeting or the decision-making process. The model assumes recognition of events that lead to the group meeting. The technologies used as support systems for group decisions can improve efficiency and efficiency during the meeting (Huber, 1984). However, the intelligence systems used by members before the group meeting can also be important in making group decisions.

2.5.2- The direction of the decision process

A more careful understanding of the temporal and interdependent aspects of decision making may enhance the use of management approaches in certain organizational decisions. Huber (1984) argued that formal approaches to process management are motivated by a need to reduce decision delays and ensure the participation of a wider variety of experts. He suggested that tactics and decisions can be viewed more and more as projects. Finally, this model could be applied to help manage decision projects, because it provides a focus of activities (a) involved in the decision-making process, (b) sources that could be more effective for the process and (c)) the precedence and interdependence of activities necessary to program them (Huber, 1984, Huber and McDaniel, 1986).

2.6- Theory of social presence

The theory of social presence (Short, Williams, and Christie, 1976, Williams, 1977). Social perception is understood as the perception of those who interact in communication. From this theoretical perspective, there are means that are low in social presence and others that are high. For example, the electronic bulletin is among the media that are considered low in social presence. On the other hand, teleconferences are considered as means of high social presence. Where communication is the one that will determine which is the most appropriate means to achieve effective communication. Communication technology researchers suggest, for example, that the directors of an organization should prefer rich media in social presence when dealing with non-routine situations that involve high degrees of ambiguity.

Figure Nº7. Social presence theory.

2.7- Theory of the symbolism of the medium

Symbolic Interactionism (Herbert Blumer in 1938) is a clear manifestation of trying to consider communication, first of all, as social interaction. The approaches are developed in the mid-twentieth century, and until the early 80s According to Herbert Blumer, who coined the term symbolic interactionism in 1938, its main premises are:

1. People act on the objects of their world and interact with other people from the meanings that objects and people have for them. That is, from the symbols. The symbol also allows us to transcend the scope of sensory stimulation and the immediate, expand the perception of the environment, increase the ability to solve problems and facilitate imagination and fantasy. 2. Meanings are the product of social interaction, mainly communication, which becomes essential, both in the constitution of the individual and in (and due to) the social production of meaning. The sign is the material object that triggers the meaning, and the meaning, the social indicator that intervenes in the construction of the behavior.

3. People select, organize, reproduce and transform meanings in interpretive processes according to their expectations and purposes.

2.8- Theory of Situational Factors

Situational factors explore the central principle of media wealth theory (Rice 1992). Thus, there are certain factors that will mark the relationship between the communicators, the message and the situational context and that are essential to understand the message:

Internal situational factors belonging to the world of interlocutors, which will condition the nature of the statement: culture, ideology and beliefs (political, moral, religious), affects, moods, needs, are motivations of the interlocutors that influence their performance and will mark decisively the intention of the message and its interpretation. These motivations will make the sender, in addition to the mere informative content, pretend to produce effects on the receiver: to persuade him, to reassure him, to frighten him, to please him, to irritate him, to disturb him, to ask him, to advise him; what forces him to know the world of the interlocutor and his possible reactions, to develop a communicative strategy adapted to his intention and to the motivations of the receiver. The internal world of the interlocutors and the knowledge that they have of each other, will condition the choice of subject, the use of treatment and courtesy formulas, the intonation, the level of the language used, the extension of the statement, the distances.

External situational factors, such as time and space in which communication takes place, environmental circumstances, the social world to which the interlocutors belong and their affective, kinship, work or academic relationships, will also mark the communicative relationship and will influence the content and the form of the statement.

Situational determinants can influence the choice of media. Individual behavior in organizations is often restricted or facilitated by contextual factors and previously agreed symbols. The choice behavior of the media can be restricted by distance, convenience, structure, role expectations, or time pressure. Other situational determinants can expand a manager's options. For example, the availability of an electronic mail system and access to the system can be considered as situational facilitators. Without access to the system, the choice of email will be out of options. Steinfield (1986) found that access to the system was a significant predictor of use related to the task of email. Other research has identified two variables of situational determinants: geographic dispersion and work pressure (Steinfield and Fulk, 1986). Over the years, communication technology has become more powerful and sophisticated. Distances seem to collapse when managers communicate across continents by telephone, teleconference and email. Many organizations are geographically dispersed, making it difficult for managers to use face-to-face communication. In addition, management work is done under the pressure of time. Steinfield and Fulk (1986) found that geographic distance and time pressure influenced the choice of media considerably. For example, managers who acted under pressure of time most likely used the telephone without taking into account the relative ambiguity in their homework situation. In addition, those who were geographically distant from their communication partners showed an increased tendency to use e-mail, again despite conceptual ambiguity in task situations. Message content played a less important role when situational constraints were high.

2.9- Theory of critical mass

Oliver, Marwell, and Teixeira (1985) developed the theory of critical mass is defined as "a small segment of the population that chooses to make large contributions to collective action, while most do little or nothing" The theory seeks to predict the probability, scope and effectiveness of collective action in pursuit of a public good. The critical mass also suggests that universal access will be favored by the heterogeneity of resources and interests. The critical mass of the media suggests proposals about the likelihood and degree of dissemination of media use within communities. These proposals are derived in part from the interactive properties of media that do not share with the rest of the technological innovations. First, the use of interactive media by the members of a community generates a public good that is independent of the efforts of the individuals who produce it. Once the universal access has been achieved, users can obtain some benefits that were not possible when the medium allows access only to a subset of community members. The theory of critical mass also indicates that media options should be within the context of organizations (Simon, 1976; Elster, 1983) and must be universally accessible. In other words, the media must: (1) give access to each member of the organization and (2) require that each member be able to use the base medium and be able to respond. It is added that to achieve universal access, it is necessary that each of the members consent to the use of the medium. At present, both information wealth theorists and managers can take for granted telephone and interoffice mail, as secure means of universal access in communication within the organization. If the above is not fulfilled, it could happen, which in the beginning happened with email, even though many organizations opted for its use, the large part of employees did not use it, as it is a recent means, which is why many Managers were unable to select this medium, even though they themselves used it and to think that it was the most appropriate medium for the task. The theory of critical mass holds that "the scope of universal access to a medium is problematic" (Markus, 1987, 1990). Before this affirmation arises the question of how the telephone and the mail of interoficina reached the social sensitivity. The answer was found in a different theoretical tradition, which grouped several theories of social definition, which emphasized the emergent properties and the social determinants of behavior. Within this new theory we find: the structuring theory (Barley, 1986, De Sanctis, Poole, Orlikowski, 1991, Poole and De Sanctis, 1992), the social construction of technology (Bijker, Hughes and Pinch, 1987) and the theory of institutionalization (Zucker, 1977, 1987, Goodman, Bazerman and Conlon, 1980, Award, 1985, Scott, 1987, Kling and Iacono, 1989, Attewell, 1989).

2.10- The theory of compensatory adaptation

The theory of compensatory adaptation (CAT) is based on the idea that human brains are designed for face-to-face, because this was the only means of communication between human beings thousands of years ago (Kock, 2007). The result is that new forms of communication, such as telephone, email, instant messaging and video conferencing, have limitations in the transmission of a message effectively. Kock's compensatory adaptation theory is created on the evolutionary basis to argue that communicators can adapt to the limitations of the media they use. The principle of "Naturality of means" identifies face-to-face communication as the most natural means of communication and states that the use of less natural means will provoke a cognitive effort and an increased ambiguity, as well as diminish the physiological alert, that is when less natural means are used, users adapt to these limitations and as a result, they are not yet able to generate communication results that are equivalent to those found in face-to-face interaction. Other theories such as the theory of social presence (JA Short, E. Williams, B. Christie, 1976), the Theory of wealth of the media (Daft and Lengel, 1986) and the theory of adaptive structuring (DeSanctis and Poole, 1994) have recognized that mediated forms of communication not only hinder the way people communicate, but can also serve as catalysts for changes in the way people communicate (Kock, Lynn, and Dow, 2006).

2.11- Satisfaction models and channel option

According to E. Katz et al. (1974), satisfaction depends on the content of the medium, exposure to the media and the social context. Katz observed different models of satisfaction of needs associated with the media and interpersonal channels. Later in 1977, Lometti conducted his research on channel differentiation based on satisfaction, identified three media groups: (1) print media (magazines, books and newspapers), (2) electronic media (TV and radio) and (3) interpersonal channels

Dobos (1992) managed to prove the framework of satisfactions and the choice of several communication channels in a social context. The observed relationship between channel differences in satisfaction and channel preferences confirms an expectation of important social information process theory, that the choice of means is directed, in part, by subjective evaluations of media performance. In contrast to the approach of media attributes, selective manufacturing seems to be influenced by organizational perceptions of communication functions served by various channels. In practice, media options in organizations are often strategic. Fulk, Steinfield, Schmitz and Power (1987) elaborated a social information process model in which media attitudes and choice are formed by social information, as well as by structural characteristics. The satisfaction of communication is a central concept in the research of organizational communication (Falcione, Sussman and Herdman, 1987). Several studies (Bair, 1989, Rice and Bair, 1984, Rice and Williams, 1984, Steinfield, 1986, Williams, Phillips and Lum, 1985) suggest the importance of considering user needs and their media option satisfactions in organizational context. The application of satisfaction models and choice of media channels in organizations requires the identification of satisfactions related to the relevant content (Blumler, 1985, Rice and Williams, 1984, Williams et al., 1985). Several scholars (Danowski, 1980, Farace, Monge and Russell, 1977, Stohl and Williams et al., 1985) argue that communication in an organizational context has three basic functions: production, maintenance and innovation or adaptation. Where the production will be the information provided by the organizations in the different tasks, maintenance refers to the development and relationships and the promotion and integration of teamwork, adaptation communication or innovation generates new ideas to improve products and services and facilitates the Adaptation to change (Katz and Kahn, 1978) and has consequences for both individuals and for the task.

2.12- Synchronous media theory

The asynchronous term is associated to a communication that is established between two or more people in a deferred way in time, and that uses mediators such as: electronic mail, distribution lists, electronic forums, file transfer, etc. For its part, synchronous communication (real-time communication) is one that is established between two or more people simultaneously in the same time and place, where the main characteristic that defines it is the coincidence in time. You can find several lines of research based on the use of synchronous media in organizational communication.

Munzer (2009) developed an investigation whose objective was the description of the tasks and the description of the environment and the effects that these had on the organizational communication. Most researchers agree that homework and media should be "stationed" for team results (Baltes, Dickson, Sherman, Bauer and LaGanke 2002, McGrath and Berdahl 1998, McGrath and Hollingshead 1994, Straus and McGrath 1994). The theory of wealth of means (Daft and Lengel, 1984, 1986) and its extension have explicitly expressed this interaction by mapping task dimensions or task types to communication environments that differ in their wealth of means. The means that can support synchronization to a greater or lesser degree have two processes in common; (1) the transportation process and (2) the convergence process. When both processes are related the interpretation of group task is often characterized by its success. There are variables that could interfere in the interaction between the task and the environment. Dennis and Valacich have defined synchronization as the degree to which the members of a group have a shared focus. The characteristics of parallelism, the urgency of reaction and responsibility are relevant for questions of information production and integration of information in the tasks to be carried out. This study supports the

assumption of Herring (1999) that the urgency of reaction plays an important role in the organization, since it facilitates mutual understanding (Clark and Brennan, 1991).

Dennis and Valacich identified five features of media that can influence the effectiveness of communication and the information process:

Urgency of reaction: Which refers to the degree to which a medium allows immediate response.

Variety of symbols: Refers to the number of ways that a medium allows information to be encoded for communication and comprises the multiplicity of signals and variety of language.

Parallelism: It is attributed to the number of simultaneous conversations that can occur with efficiency.

Rehearsability: The degree to which a medium allows the message sender to rehearse or fine-tune the message before sending, with which it is sought to ensure that the intended meaning is expressed exactly, without extraneous information.

Reprocessability: The degree to which a message can be reexamined or addressed within the communication event.
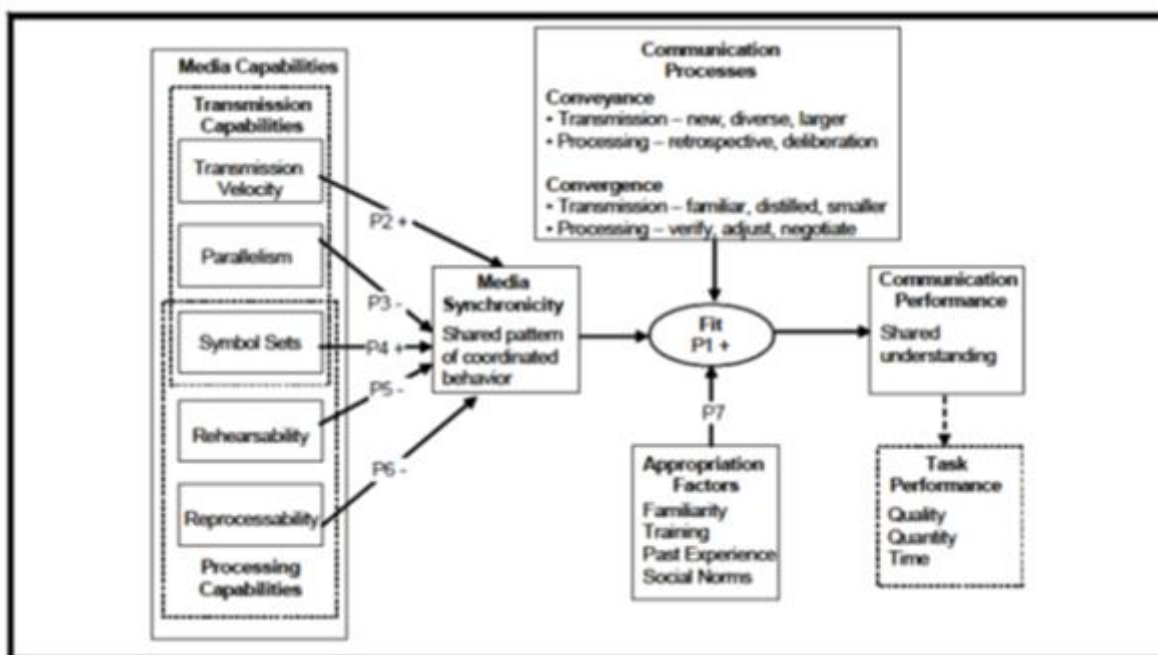

Figure Nº8. Synchronous media theory

Media Richness Dimension	Face-to-Face	Telephone	Written Memo	Voice Mail
Feedback	High	Medium	Low	Low
Symbol Variety	Low-High	Low-High	Low-High	Low-Medium
Concurrency	Medium	Low	High	Low
Persistence	Low-Medium	Low-Medium	High	Medium
Rehearsability	Low	Low	High	Medium
Media Richness Dimension	Video Conference	Electronic Mail	Electronic Phone[1]	Group Support Systems[2]
Feedback	Medium-High	Low-Medium	Medium	Low-Medium
Symbol Variety	Low-High	Low-High	Low-High	Low-High
Concurrency	Low	Medium	High	High
Persistence	Low	High	Low	High
Rehearsability	Low	High	Low	High

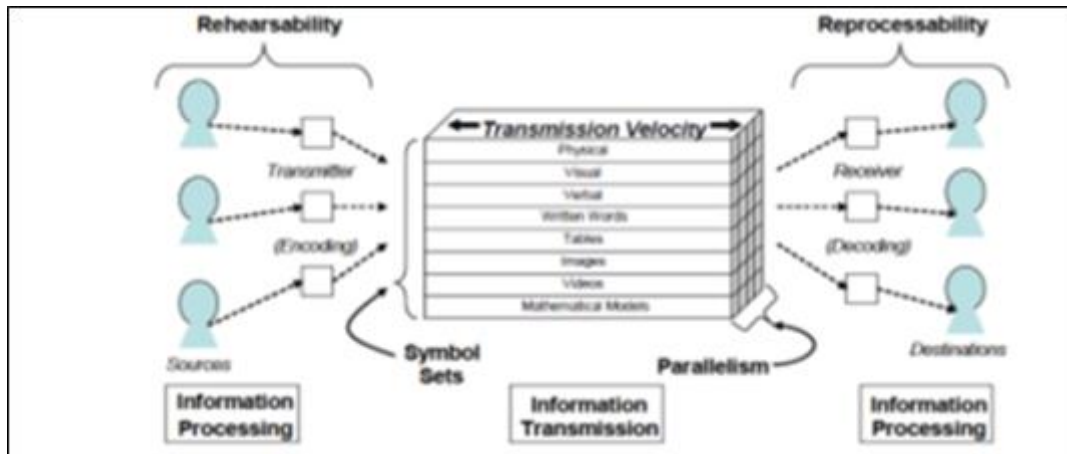Table N°2: Relative trait salience of selected media

Figure Nº8. Communitacion system and media capabilities

2.13- Cognitive model for decision making in media

At present there are several technologies to help people choose media, but technology can affect the way we communicate and also what we communicate. Communications research focuses on how we can make a communication more effective by changing the medium and attributes of the message. In this sense, a model of organizational communication has been developed that includes the following aspects: action, relationship and option (O'Reilly and Pondy 1979, Weick 1979) This communication model forms an integrated system that incorporates three factors:

Inputs of the communication process (task, distance between the receiver and sender, values and communication rules) Cognitive and affective process of communication (strategies, form the message and means by which it is transmitted) The impact of the action and relationship (mutual understanding and relationship between sender and receiver)

People have different communication goals and therefore decide to use different means for different purposes or make media adaptations to given situations. Hence, these three factors give rise to multiple communication strategies whose function is to reduce the complexity of communication and help to identify communication objectives that are related to different types of actions. Within the communication process, a relevant concept to understand organizational communication is the complexity of communication (Rasmussen 1986) that can be classified into:

Cognitive complexity: it consists in the intensity of information among communicators (inter-dependence). The intensity (Straus and Mcgrath 1994) and the multiplicity of views (Boland et al., 1994) increase the probability of misunderstanding the message. In addition, the incompatibility between the representation and the use of information consists in that the information must be translated before being used. (Barber 1988) Dynamic complexity: It means that the distance of the communication process depends on time constraints, confused and deficient reaction. Which could increase the likelihood of misunderstanding the message. Affective complexity: It refers to the factthat communication distance is sensitive to attitudes or changes of disposition towards the communication partner, such as distrust and affective interruptions (Salazar 1995).
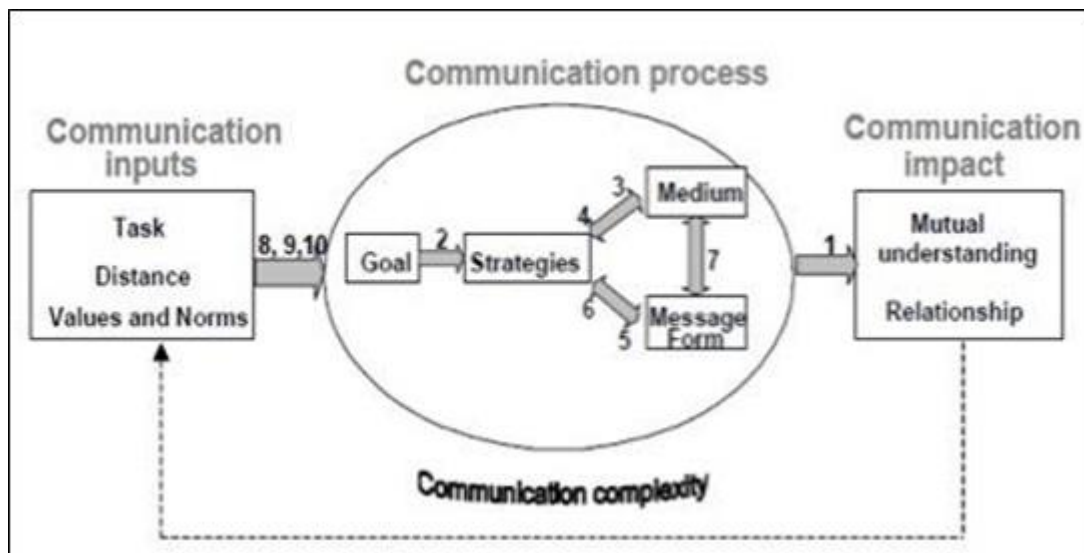
Figure Nº9. Affective-cognitive model

3.- Conclusion and future lines of research

The present study proposes a conceptual model that develops a series of propositions, with the objective of allowing it to have an updated and complete state, that will help and guide future scientific investigations.

- First: It allows us to validate the empirical studies of the wealth theory of the media (Daft and Lengel, 1984). How it has been seen in the review of the literature The TRM has not received the full support. Subsequent investigations have been useful in its approach, in the definition of the task of ambiguity, in which it has been applied to traditional media. Therefore, with our project. This allows us to know the first hand. It is also said that the theory has focused on the choice of means of use for the use of media, that is, as managers to use media and not how managers actually chose media.

- Second: Over the years more modern research has conducted studies that include another look at the selection and use of media, one of them is the theory of channel expansion, although theory tells us that the use of media will be based on the experiences that build knowledge. The empirical investigations of Carlson and Zmud, (1999), we have found that the cars have not included the type of task at the time of performing the communicative act. That said, our study suggests a new line of research based on the constructs of the channel expansion theory and will include the types of tasks.

- Third: In order to expand the knowledge of the area it is suggested to include a third theory that is the theory of synchronous media (Dennis, Fuller and Valacich, 2008). This theory has been developed on the basis of the TRM and where two types of tasks are included (transport and convergence). The hypotheses formulated by the theory of synchronous media have not been demonstrated empirically and this is where a new line of research can be opened, so that it can be used in future research with sufficient empirical support.

Another line of open research is the classification of media use by Suh (1990), which indicates that there are two types of tasks: negotiation tasks and intellectual tasks, which have not been considered in any study and have not been empirically demonstrated.

Finally, we suggest that future lines of research should go towards applications in other countries and cultures and include experience with the result and how to measure the positive results of communication, as well as include conflict tasks.

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