MEDIA SELECTION FOR THE ANNOUNCEMENT OF CHILDBIRTH- THE SOCIAL CAPITAL ASPECT

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Abstract

This paper investigates the choice of media systems to use for the announcement of childbirth in relation to media perception theories. We focus on the usage of different social networks theories combined in a new method. The research reported here examines both geographical and social distances and their reflections on media choice theories. We concentrate on the outcomes of media selection as the outgrowth of the subjects' social capital at the announcement of childbirth and their impact on media selection.
The study was conducted among patients in three hospitals in the Haifa district, Israel as well as in social media at large. The study population consisted of families who gave single child birth since 1/2012, with no medical complications to the newborn or the mother. Target and snowball sampling were used.
Data was collected by use of both print and online questionnaires. 153 responses were received and tested for similarities between the different sampling methods. Data was analyzed by use of descriptive statistics and a Spearman test for the prediction theories. We conclude that the subjects' social capital can be associated with certain characteristics and propose theoretical implications for new media perception.

Keywords: Selection, media, Israel, childbirth, social capital, information

1 INTRODUCTION

The start of the 21th century has been characterized, among other things, by an abundance of media selection options. In comparison with earlier decades, many more options for dyad connections now exist. In the first and second decades of the 21st century, rapid changes occurred in many aspects of the communication field, and in turn, affected our behavior, choices, and the availability of media system usage.

This study looks at the information transfer preferences of parents after the birth of their child: the first announcements of the newborn's birth. Do the grandparents receive the first phone call? Does Facebook play a crucial rule? How do the Israeli parents select from the abundance of media options to announce their child's birth? What influences their particular preferences? And how do they benefit in terms of social capital from the birth announcement?

The media selection needs more academic research and have strong marketing influence. The former theories regarding media selection has not been updated recently, are mostly organization oriented, hence, not much consideration for the social environment has been made, and were not tested with several important characteristics, some included in this research (social distance, system usage, geographical distance).

This research aims to be a small step regarding the understanding of modern media selection and tries to apply a case study on the two basic theories. Moreover, this research looks upon three additional characteristics and tries to evaluate them in regarding of future intention for expanding the theories.

The focus of this article will be the Social capital as the outcome of the media selection at the announcement of childbirth and the optimal selection of media as derived from the conclusions.

2 STATEMENT OF THE PROBLEM

An evaluation of eight (8) modern media systems was done according to MRT and CET in order to grade the media systems by different criteria.

Tests for correlations between geographical and social distance and the grading of the media systems was done in order to find whether those variables should be included in the theories.

The usage of the system in practice was equalized with the theories in order to learn if they correlate with the test case results as being shown by this study.

The social capital of the subjects was looked upon in order to understand the outgrowth of the social capital as a result of the childbirth announcement in relation to the media selection in practice.

3 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to better understand media selection in general and specifically at the announcement of childbirth. Specific objectives of the research are to:

1. To grade eight (8) information media systems according to media perception theories.
2. To find if geographical and social distances are forecasted by MRT and CET.
3. To determine whether CET or MRT corresponds with the system usage in practice in this research's test case.
4. To better understand the outcomes and outgrowth of social capital in regards to the childbirth announcement.

4 RESEARCH QUESTIONS

The research questions that guided this study were as follows:

1. How will the traditional and modern information transfer media be graded according to MRT and CET?

2. Is there a correlation between the grading of the media according to CET/MRT and the subject's geographical and social distances?

3. Is there a correlation between the grading of the media according to CET/MRT and the subject's usage of the systems at the announcement of childbirth?

4. Is there a correlation between media usage and social distance and geographical distance?

5. Is there a pattern to understand from regarding the social capital of the subjects?

5 LITERATURE REVIEW

5.1 Media Perception Theories

The media richness theory was first developed by Daft and Lengel [1] for the American navy as a model for choosing the optimal media for information transfer. Media Richness Theory (MRT) has been applied to numerous studies in order to understand how the different types of media oriented interactions impact the performance of various types of tasks.

Four main characteristics define the richness of a media system according to MRT. The first is the system's ability to transfer multiple communicative cues (E.g. facial expressions and voice intonations). The second is the medium's characteristics of synchronous communication. The third and fourth are the system's support of language variety and the personalization of messages.

In the context of equivocal tasks, MRT makes two main predictions: The first is that users of effective communication system will choose the richest possible media available to them. The second prediction of MRT is that, when the choice of media is constrained, the use of a lower graded communication system will lead to a corresponding degradation in the quality of the task results. However, there is a substantial amount of empirical evidence that shows that individuals often choose lean systems to conduct equivocal team tasks, and that the use of lean systems often leads to the same or even better outcomes than if richer media systems were used [2]; [3]; [4]; [5]; [6]; [7]; [8]; [9]; [10]; [11]. In other words, MRT has essentially been falsified multiple times.

In order to explain choices that do not correspond with MRT, the Channel Expansion Theory (CET) was developed [12], which focuses on the user's former varied experience in order to explain and predict his or her preferences concerning information system selection. The experiential factors perceived by the CET were the user's experience with: (a) the channel; (b) the message topic; (c) the organizational context; and (d) the communication partner. The theory suggests that users will tend to use the most familiar media system and will be able to extend systems that are graded by MRT as being leaner into richer channels of communication.

Both MRT and CET have been used in relation to optimal organizational information transfer media preferences. However, in this study, the society is the environment, and therefore the characteristics were adapted to some extent.

5.2 Network Ties, Social Distance and Social Capital

In social network theory, social relationships are represented in a network as nodes and ties. The nodes are the individual actors within the networks, and the ties are the relationships between the actors. A social network is a map of all of the relevant ties between the nodes being studied. There are many research areas in which social network analysis can be helpful, among which are epidemiology, criminology, demography, and many others. This research will focus on the social aspect of network analysis.

In Fisher and Florian’s study [13] three scales (macro, mesa and micro) of sociological ties were defined. In this study, we focus on the micro level of social ties or, as is sometimes called, the ego network, which is simply a social network

considered from the viewpoint of a particular agent (ego) in that network.

Before publishing the weak ties theory, Granovetter submitted his doctorate research [14] on the subject "Changing Jobs: Channels of Mobility Information in a Suburban Community." In this research, he defined a clear way to categorize ties in terms of their strength. Tie strength was measured in terms of how often the subjects saw the contacted person during a specific period. An adaptation of Granovetter's model was used in this research in the study tool (the questionnaire) in order to facilitate our characterization of the relations between the subject and the addressee, in terms of measuring the social distance.

Granovetter [15] also focused on the importance of weak ties. Weak ties function as the crucial bridge between any two densely knit clumps of close actors. Thus, actors with no weak ties will be bound and restricted from information and data from other parts of the network; they have no connection with them. Krackhardt [16] criticized the weak ties theory, stating that emotion, which is the basis for the measurement of strong or weak ties, is a subjective criterion and therefore cannot be used effectively as a measure of the difference in the ties between the actors. He also commented that in critical and uncertain times, the actors tend to rely on their strong ties and therefore emphasize their importance. Due to the fact that childbirth is a critical an uncertain time, this research will glance at Krackhardt assumption in order to check weather its criticism applies in the case of childbirth.

The theory of weak ties is further supported by the important bonding-bridging distinction developed by Gittell and Vidal [17]. The bonding-bridging distinction serves to discriminate between different kinds of social capital and the extent of their impact in terms of cooperation and inclusion.

Woolcock [18] has provided an additional definition of the different kinds of ties that bind individuals within a network. They are:

• Bonding social capital: networks include ties that connect people to others who are akin to them, such as family, friends, and neighbors, in similar situations. These close ties provide a sense of identity, affiliation, shared purpose, support, and information.

• Bridging social capital refers to ties that connect people to others who are somewhat distant. These distant ties can span professional boundaries and facilitate access to new ideas, information, and knowledge.

• Linking social capital networks refers to vertical ties with people who are unlike us and in dissimilar situations or institutions, or in positions of authority. These ties allow some people to broker useful resources (such as information) across a range of networks and others to leverage new resources from more distant networks into their existing network.

Other researchers have measured the network itself as the sum of it ties [19] or as the number of users [20] both without taking into consideration the different ties and their strength.

Another theory used for the measurement of the social distance and the strength of ties concerns the frequency of the interaction between the subject and the object [21].

In sociological studies, it is common to use the term "sociological distance" to describe the distance between different groups in society.

There are three different aspects for measuring sociological distance:

Affective social distance

One of the broad perceptions of social distance focuses on affectivity. According to this perception, social distance is related to emotional distance, and therefore to how much affection group members feel for members of another group. Amori Bogardus based the “Bogardus social distance scale" on this subjective/emotional attitude.

Normative social distance

The second attitude perceives social distance as a normative category. The normative social distance relates to the normative and accepted assumptions in the society that come into effect in a conscious manner regarding who should be regarded as an "insider" and who as an "outsider." In fact, these norms differ between "us" and "them." In contrast to affective social distance, normative social distance is not subjective.

Interactive social distance

The third perception of social distance focuses on the amount and urgency of the interaction between two groups. The main idea behind this term is that the more group members interact, the closer they are socially. The idea is close to the theory of networks, where the frequency and strength of the ties between the two groups are used to measure the social strength between them.

In this research we used the normative and, to some extent- the interactive social distance measures as they are more easily measureable then the affective social distance.

George Simmel [22] conducted many studies on the existence of a human and the part played by social connections to ease his solitude and he tried to categorize the grades of distance between the actors. Moreno [23] studied interpersonal relations more closely and offered visualization graphs of decisions or preferences among groups (sociograms) in order to study the relations and social distance between different actors.

Numerous social distance scales were devised between 1925 and 1996. All were of the same type as Bogardus' scale but with slight variations in the items used to designate the ranks [24]. However, an examination of these scales shows that they are not sufficiently refined for the micro level.

Putnam [25] has measured the social distance in a set of questions which he used in his study of the behavior of the subject in everyday life regarding his or her connection to the addressee.

Although some researches have looked into the subject's behavior under the influence of substantial events [26]; [27]; [28]; [29]), not enough was done in the research of the micro level and his or hers ties in the network. Also, not enough was done in terms of personal events and the subject's behavior as a consequence in the terms of network ties.

6. METHOD AND DESCRIPTIVE STATISTICS

6.1 Stages of Preparations

After an initial questionnaire was built, a pilot study was conducted with seven participants. An analysis and overview of the questionnaire and the different scales was conducted resulting in changes being made to the questionnaire in order to improve the measurement of the requested characteristics.

Three hospitals were approached for partnering in this study and three sub Helsinki committees (for non-medical experiments) discussed the research in order to grant access to the patients.

One sub-Helsinki committee required that a question be omitted from the questionnaire ("What was the Apgar score of the baby after the birth?") due to the closeness of the requested data to medical information. Another committee demanded that another question be omitted ("Was the labor hard?"), but after negotiations it was retained. The subjects' consent to participate in the study was granted a leave, and minor changes were made to the questionnaire (e.g. bolder statement, order of the opening sentence etc.).

The final proposal was submitted to the departmental MA committee and was approved for research.

The questionnaires were then delivered through two deferent sampling methods: through the hospital departments and through the social web, resulting in almost equal quantity from each.

The following figure monitors the different stages of the research:

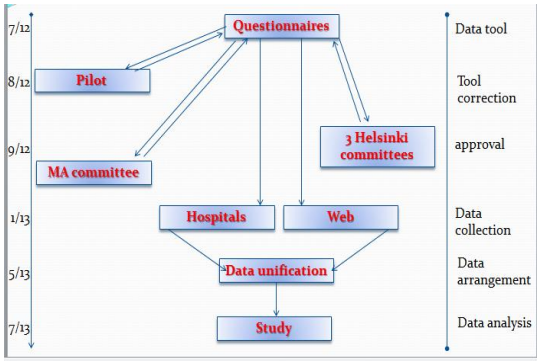

Figure 1: Flowing chart of the research's stages

6.2 Descriptive Statistics

In this research, 153 subjects participated. Six questionnaires were eliminated, and thus 147 questionnaires were included in the research. 46.9% of the questionnaires were gathered through Google Docs through social web methods whereas 53.1% were collected through the hospitals.

The data unification table below can be used both for the similarity of the data gathered from the different sampling methods and for the descriptive statistics overview as well:

Table 1: Data unification and descriptive statistics.

Characteristics	1-75 (web)	76-154 (hospitals)
Father's age (average)	38.52	38.13
Mother's age (average)	35.60	35.68
Total number of parents (average)	3.68	3.60
Total number of grandparents (average)	1.73	1.79
Time labor (average)	660.31 (min.)	656.62 (min.)
Years married (average)*	6.27	5.26
Total number of children (average)	2.34	2.08
Total number of siblings (average)	6.37	5.67
operating network (percentages)		
cellular	52.38%	59.72%
Wi-Fi	15.87%	13.89%
both	28.57%	23.61%
none	3.17%	2.78%
Had contact before labor (percentages)		
yes	58.21%	62.34%
no	41.79%	37.66%
Are you healthy (percentages)		
both	95.16%	94.52%
just mother		
just Father	4.84%	2.74%
none		2.74%

The following figures show the progress through interactions regarding geographical and social distances:

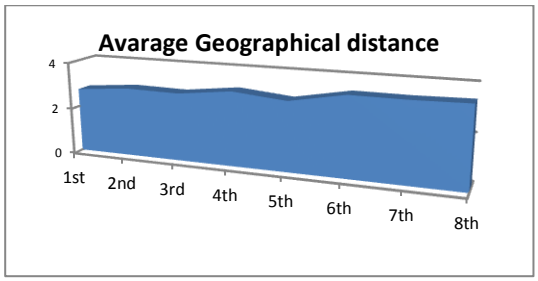

Figure 2: The average geographical distance per interaction.

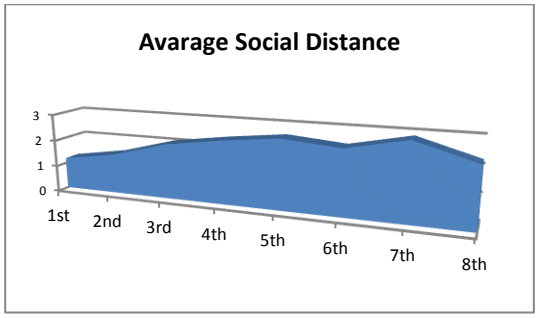

Figure 3: The average social distance per interaction.

It is evident, from figures 2 and 3 that, the geographical distance fluctuate minimally as the interactions progress through later announcements, but, the opposite can be said about the social distance per interaction which rises steadily showing that as later interaction we examine- the farer the subject is from the addressee of the message.

7. ANALYSIS AND DISCUSSION

7.1 Media Grading

7.1.1 MRT Grading of Media

The first stage of the research was to grade the information transfer media systems according to the two media perception theories.

After review of the different characteristics of the media systems according to former researches the following grading was made, as shown in figure 4:

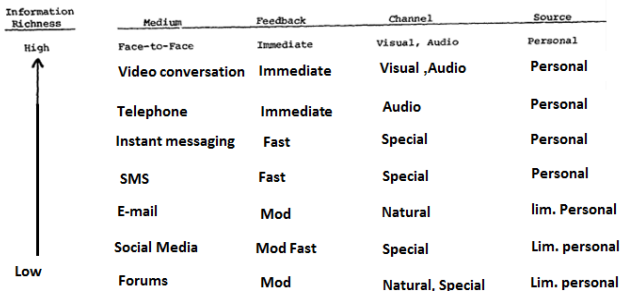

Figure 4: the grading of the media systems according to MRT

Regarding feedback time, the moderate (Mod.) value is generally given to systems which provide an option to respond at an immediate level, but as an add-on option alone, as compared to the video conference or telephone conversation media that compels the subject to respond immediately, as well as the F2F medium.

F2F interaction scores highest on all MRT characteristics. It can carry multiple communication cues, it is synchronous, it supports natural and body languages, and the messages can be very personalized. Thus, it is ranked as highest according to MRT.

The full analysis of the other media systems according to MRT could be found in the complete research.

7.1.2 Normative Groups

This research uses the normative social group's order as the tool for grading media in the social environment, thus, a calculation was done to order the social normative groups. In the questionnaire, the subject was asked to grade his social connections' frequency using different media systems with all the five different social normative groups. Each answer was calculated into a score, starting from "Every day" (five points) to "Never" (one point). The sum of every group's score valued the overall grading of the different social groups in the normative aspect.

The percentages of the frequency of the subjects' common interactions divided into groups were used to evaluate and grade the groups according to the normative social distance theory, as shown in table 2:

Table 2: Frequency of media selection in accordance to normative social distance: percentages.

Frequency	Close family	Distant family	Close friends	Distant friends	Acquaintances
Every day (5)	25.4%	0.0%	8.8%	0.0%	2.1%
Several times a week (4)	16.0%	4.2%	17.3%	1.8%	2.0%
At least once a week (3)	10.2%	6.9%	17.6%	6.1%	4.3%
Less than once a week (2)	19.2%	43.8%	23.6%	48.8%	37.5%
Never (1)	29.0%	44.3%	31.7%	42.9%	54.1%
	99.8%	99.2%	99%	99.6%	100 %
Total	**289**	**169.4**	**244.9**	**166**	**160.5**

From the table above we learn that in this research's population, the normative order of groups, from closest to the most far is: 1-close family, 2-close friends, 3-distant family, 4-distant friends and 5-acquaintances.

7.1.3 CET Grading of Media

The media grading according to CET characteristics was calculated for the four different criteria as follows (each criteria holds equal value):

(1) The user's experience with the channel.

This characteristic consists of the subject's former usage of the systems, as addressed in the questionnaire. The scale of the answers ranged from "Every day" usage (5 points) to "Never" (1 point). Each user was given a grade in each medium for his former experience with the medium as well as calculation for the total grading of the systems according to CET.

(2) The user's experience with the message topic.

Having a former experience with an announcement of childbirth was counted for former experience with the message topic. Each former announcement done by a specific medium scored one point. Each subject was given a grade in each medium for his former experience with the

topic as well as calculation for the total grading of the media systems.

(3) The user's experience in the context of the organization.

This characteristic grades experience with each medium in the context of the organization. In this study, society replaces the organization as the environment, and therefore the normative social distance, as was calculated before, counts for the experience of the subject with the "organization".

The former experience of the subject with the medium, multiplied by the five normative social group score (5 for close family, 1 for acquaintances) graded the different media for each user regarding his experience with the society, as well as calculation for the total grading of the media.

(4) The user's experience with the communication partner.

This characteristic consists of two different grades:

a. In each interaction, the subject was asked regarding the frequency of his F2F meetings with the addressee of the message. The responses were given different grades, starting from "at least once a day" (5 points) to "less than once a year" (1 point), which were calculated for each medium for each user.

b. In every interaction, the subject was asked to relate the addressee of the message to a social group, resulting in values from "close family" (5 points) to "acquaintances" (1 point).

Multiplying "a" with "b" gave the final result for the experience with the communication partner for each medium and for each user, as well as calculated for the total grading of media systems.

In the following Table, the final grading of the media systems according to CET is being shown:

Table 3: Media system's grading according to CET

Medium	N	X	*SD*
Phone	144	1.79	0.71
SMS	143	1.98	1.03
F2F	143	2.83	1.27
Inst. Ms.	135	4.37	1.80
E-Mail	138	4.51	1.56
SN	137	5.25	1.80
Forum	134	5.39	1.63
Video	139	5.85	1.24

7.2 Social Capital

In this research, several different analyses were used to determine the outcomes of the examined birth announcements in terms of social capital and to try and associate the outgrowth with different characteristics.

The first analysis was based on the answer to the question "is the person with whom you made this contact generally in contact with another person to whom you made the birth announcement?". The second analysis was based on the distribution of the subjects' interactions divided into normative groups. The third analysis will examine the sending of a picture with the announcement and the fourth will look at the media selection itself.

The answer to the question in the first analysis teaches us whether the subject interacts more with his stronger ties or weaker ties. The following table shows the results in percentages per interaction:

Table 4: Percentages of the different kind of ties per interaction.

Interaction	Strong ties	Weak ties	Doesn't know
1	80.3	13.4	6.3
2	72.9	17.8	9.3
3	73.8	21.4	4.8
4	56.4	25.5	18.2
5	57.1	28.6	14.3
6	42.3	30.8	26.9
7	35.3	41.2	23.5
8	52.6	15.8	31.8
Total	68.1	20.4	11.5

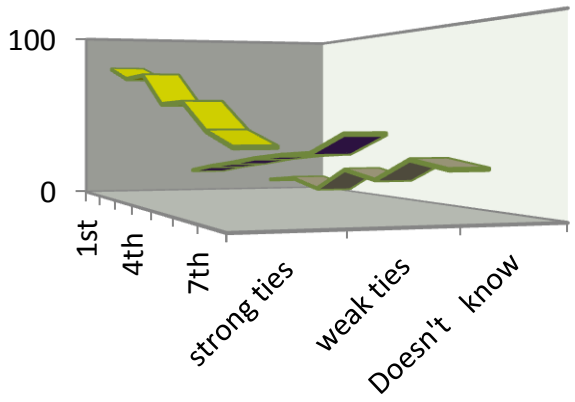

Figure 5: Percentages of the different kind of ties per interaction.

It is clear, from table 4 and figure 5, that the more interactions the subjects have, the lower the percentages of the strong ties gets and the higher the percentages of weak ties rises. We estimate the first change in the ties' significance to occur around the 4th interaction and the second change- around the 6th interaction. The rate of the change is very much linear. It can also be learned that the more far the interaction is from the first announcement- the more it is unclear to the subject whether his or hers connections are strong or weak, hence, less knowledge the subject have about the structure of his own network.

As in Woodcock theory (1998) - we divided the five normative groups into three categories: bonding ties (close family and close friends-the two closest groups for this research population), bridging ties (distant family and distant friends-3rd and 4th in terms of social closeness) and linking ties (acquaintances-5th group and the most distant).

The second analysis, as shown in figure 6, shows the distribution of the interactions per normative group:

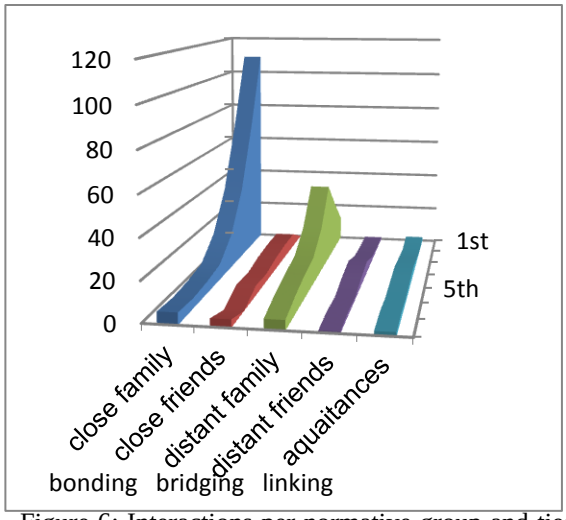

Figure 6: Interactions per normative group and ties category (Woolcock).

It is clear from the figure above that, in the first interactions after the birth the subject pays more attention to his bonding ties. Second in line are his bridging ties and last- his linking ties. But, as we progress through the interactions we learn that the bridging ties becomes more significant than the bonding ties in terms of quantity.

It can be explained that the first interactions the subject makes are the "must have" connections that he cannot overlook, but then progresses to the "pro-choice" connections from which the subjects get the best rewards in terms of social capital.

Another predictive finding was the sending of a picture with the announcement of childbirth. It was evident in this study that since the 4th interaction a change in the media selection is in effect, and figure 7 strongly support our findings as we can see a very similar behavior regarding the picture sending behavior of the subjects:

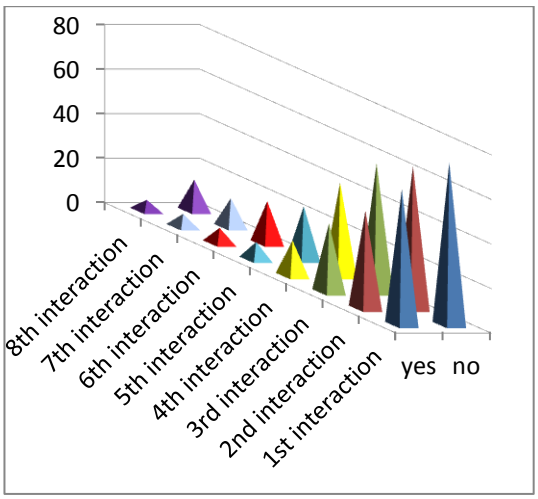

Figure 7: Sending of a picture with the announcement of childbirth per interaction.

It is evident, from figure 7 that, in the first 3 interactions the delta between sending a picture with the announcement of childbirth and not sending a picture was minimal. But, as we keep on to the 4th interaction and forth we see the gap between the sending of a picture and not sending- widen drastically and not sending a picture with the announcement of childbirth becomes much more dominant then before the 4th interaction.

In addition to the findings so far, a look at the initiator of the contact might be of interest. Therefore, an analysis based on the identity of the initiator was conducted, based on the data received from the questionnaires, and can be seen in figure 8:

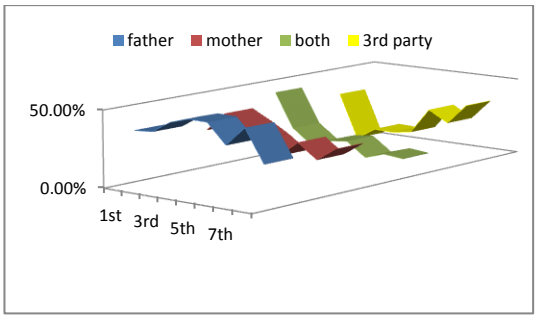

Figure 8: The initiator of the interactions per interaction.

As in previous analysis, we can detect a clear change in pattern behavior around the 4th interaction and in the context of the initiator it is clear that the identity of the initiator of the contact changes to a third party person. Less significant but nonetheless important is the slow decree of the father's sole initiation towards the 4th interaction and the slow rise in the mother initiation- either solemnly or together with her husband.

In figure 9, embracing the understandings we came to learn so far, a view at the distribution of media selection per interaction will guide us which media will be of optimal use in terms of social capital:

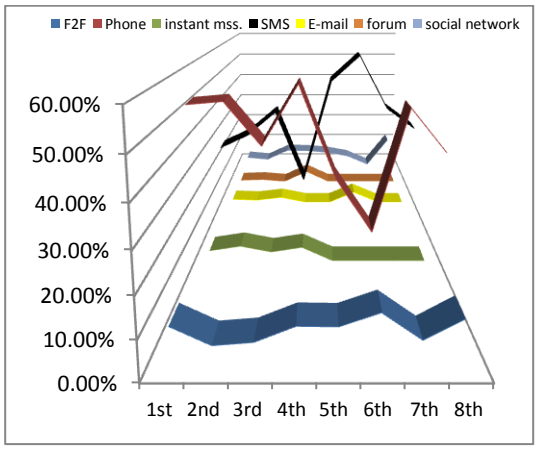

Figure 9: Media selection per interaction- percentages.

For a clearer view, the video medium was dropped from figure 9 due to insufficient data.

Although we can see from the figure above, that phone and SMS media acts as the most dominant systems along the announcements, at the 4th interaction, in which we learned that the weight of the bridging ties surpass the weight of the bonding ties, it is also evident that F2F, SN and E-mail media raise significantly in percentages of selected media by the subject.

8. CONCLUSIONS

It is evident from the different data analysis that certain changes occur while the subject interacts and announce the childbirth. The sending of a picture with the announcement, the strong-weak ties analysis, the bonding-bridging-linking theory- all points at the same distribution of interactions: until the 4th, between the 4th and the 6th , and after the 6th .

It is understandable that the subject usually tend to contact at first the addressees that expect to be

notified the - hence the low outgrow in social capital and the use of mostly phone conversations and SMS, but once the subject deals with those connections, the time for more rewarding connections in term of social capital have arrived, resulting in farer normative groups being reached, and the use of a more diverse media systems.

8. FUTURE RESEARCH

The moment of childbirth is in no doubt one of the "top 5" emotional challenges a human experience. This stress must affect our decision making, even if in a subconscious way, and therefore, there is no doubt that research using other scenarios that test media selection is required. Moreover, there may be a cultural difference in the normative groups' perception, in the emotional behavior resulting in different grading of the media systems and in other variables. A multinational study is required in order to understand national differences in media selection.

The media perception theories- dealing with mostly organizational context did not make changes of media selection recommendations based on the changes in the addressee of the messages or changes in the outcomes of social capital. Therefore- a future social media selection theory must include the phenomenon shown in this study that no single media selection is optimal but a change in the selection depends on the changes of addressee, connections and the normative attribute.

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