Channel Choice Determinants; An exploration of the factors that determine the choice of a service channel in citizen initiated contacts

Willem Pieterson
University of Twente, Research Program
Governments and ICT
Building Cubicus, P.O. Box 217,

7500AE Enschede, The Netherlands
+31 53 489 24 18

w.pieterson@utwente.nl

Jan van Dijk
University of Twente, Research Program
Governments and ICT
Building Cubicus, P.O. Box 217,

7500AE Enschede, The Netherlands
+31 53 489 32 86

jan.vandijk@utwente.nl

ABSTRACT

Citizens have various service channels at their disposal to interact with governmental agencies. In this paper we explore citizens' motives to choose a certain channel in a certain situation. We conducted a qualitative study to accumulate the most important behavioral determinants. Six groups of determinants were found; *habit, channel characteristics, task characteristics, situational constraints, experiences* and *personal characteristics*. People appear to generally follow two lines of decision making when choosing channels, the first is based on habits. When task complexity and ambiguity increase, people start reasoning and follow the second line; channel choice based on a thorough elaboration between task and channel characteristics.

Keywords

Service channels, multi-channeling, channel choice, citizen initiated contacts, e-government.

1. INTRODUCTION

At the end of the 1990's, the Internet seemed to be the service channel of the future. In various scientific publications, the high expectations of the Internet to radically change public service delivery were articulated. Borins [11] formulated the enthusiasm as follows: "The internet may well be an ideal medium for many public sector transactions". Also in governmental programs, the enthusiasm about the Internet was mentioned. In the United States, for example, the National Performance Review, encouraged governments to employ Internet in order to improve service levels, cut red tape and make access to governments more easy [25].

However, a number of recent studies [for an overview see: 49] have indicated that in various countries the use of the internet lags behind and that the use of the traditional service channels (telephone, face-to-face) remains high. Further, it has become clear that citizens use the different channels for different purposes [37]. These findings call for a deeper understanding of what citizens drive to choose a service channel in a given situation. A proper design and positioning of service channels based on the behavior of citizens will most likely result in greater

satisfaction and might lower the costs of service delivery. At present, little knowledge exists about the motives that citizens have to choose a certain channel in a certain situation. Journals in this field have paid practically no attention to this topic, only the Journal of E-Government [38] and the Journal of Public Administration Research and Theory [47] have both published one article in recent years. Conferences, such as EGOV, HICCS and DG.O haven't addressed the issue in detail either. In the DG.O proceedings, one poster has been published in 2004 about the topic[41].

This paper tries to fill in this existing gap, first by reviewing some of the literature on media and channel choice from the different lines of thought, further more this article reports a qualitative study that was conducted to explore those factors that determine channel choice in citizen-government interactions. The paper starts with a short review of the existing literature on the topic of channel choice. The second part describes the empirical study we conducted. In the final part of the article we draw some conclusions and discuss our findings.

2. RESEARCH ON CHANNEL CHOICE

Although the choice and use of service channels seems to be an important factor in service channel management, for example in 'multi-channeling' [37], it is noticeable that "Most of the existing research in public administration has not combined the citizen-initiated contact and e-government literatures" [38, p. 28]. Citizen initiated contacts have been a field of study in public administration, but most of the studies in this field date from before the introduction of the internet as a service channel [e.g. 26, 27, 46, 54].

Research on this topic in the era of e-Government is scarce. Reddick [39] has examined citizen interactions with e-government, but thereby, he focuses only on the use of the Internet and pays no attention to the traditional channels and to the motives to choose a certain channel. Thomas and Streib [47] also studied citizen initiated contacts in the era of e-government. Although their quantitative study focuses primarily on the Internet, they test some hypotheses that are important for channel choice. The relevant findings of their study are that citizens use

Websites for specific purposes (search information), meaning that the type of task at hand may be a determinant of channel choice, as well as the personal characteristics of the Web site visitor. Web site users tend to have higher incomes, be higher educated, younger and white colored.

The most relevant study in the field of e-Government is the study of Reddick [38]. He compared differences in citizen-initiated contacts with government using phones and Websites. As in Thomas and Streib [42], Reddick found the task at hand to be an important factor in channel choice; when people have a problem, they actually contact government by phone. For information and transactions citizens choose the web. Similarly, Reddick also found support for the influence of personal characteristics. Furthermore, Reddick found evidence for the influence of *trust* (the more trust, the more people prefer the phone) and *having a satisfactory experience* (more important for web than phone) on channel choice. Schellong and Mans[41] surveyed German citizens and found the use situation in terms of *time*, the *age* of the respondent and the *emotional form* of the respondents to be factors influencing channel preference.

Although from the studies above a number of determinants (personality, task characteristics, organizational trust and fun) can be distinguished. It is unlikely that these factors are all the determinants of channel choice. The number of total contacts via service channels has increased at most governmental organizations [49], indicating that many people use multiple channels in one service delivery process. How is this finding to be explained? No explanation for this finding can be formulated based on the existing literature on channel choice and although the research field of e-Government sheds some light on the possible determinants of channel choice, studies in this field are scarce and no full blown picture can be drawn.

Other disciplines have also studied how and why people select service channels or communication media. For example, in communication science, Media Richness Theory (MRT) [16] is a well known theory that describes different characteristics of media and tasks and the supposed fit between the two. MRT states that media differ in 'richness', based on their capacities to provide immediate feedback, language variety, personalization and multiple channels or cues. According to the theory (in this respect) face-to-face contact is the richest, followed by the telephone, e-mail and websites. The theory states further that different tasks require different media in order for communication to be most effective. Equivocal tasks require rich media, whereas uncertain media require lean or poor media. Although the theory provides a good framework for assessing differences between media and tasks, it has been criticized for being too rationalistic and too simplistic [19, 48, 52]. Two theories that expand the field of media richness by not only taking the objective characteristics of media into account, are the Social Influence Model [24] (stressing the importance of social factors) and Channel Expansion Theory [13] (emphasizing the importance of the perceived characteristics of media). However, no studies exist that incorporate the elements of the various

theories [52], so no conclusions can be drawn about the separate influences of the different factors, as well as the interactions between the different determinants.

In marketing, many researchers have tried to find the answer why people choose a certain channel for aspects like 'customer service' or information search, but mostly for shopping. Since the burst of the internet bubble multi-channeling has gained attention in the field of marketing, because: *Predictions that nimble, virtual sellers will replace inefficient brick-and-mortar retailers are fading as analysts realize that markets of the future will contain a mix of channels* [6 p. 13]. Although this field is predominated by shopping, we may find some useful insights in this field, especially when it comes to service marketing. Berman [9] has suggested that different types of goods require different channels of sale. He suggests that perishable goods require short channels (short in terms of time and effort) and non-perishable goods require long channels. Further, he suggests that high value goods should be sold via direct channels, whereas low-value goods are to be sold via the indirect channels. Tauber [45] and Barczak *et al.* [7], for example argue to take into account the motivation for behavior, and more of those factors exist. Black et al. [10] review a large body of literature covering factors that might influence channel choice, mainly on the field of financial services. Among the factors they discuss are: perceived risk, propensity, convenience, transaction costs, ease of use, preference for dealing with a real person, concerns about safety and risk, complexity, trust and flexibility.

Alba *et al.* [4] discuss interactivity as a factor, they conceptualize it as "a continuous construct capturing the quality of two way communication" (p. 38). Interactivity in this case has two dimensions, response time and response contingency. Response contingency in this situation refers to the degree in which "the response by one party is a function of the response made by another party" [4, p. 38]. Morrison and Roberts [34], finally, studied the determinants of consumers' consideration for new channels of delivery of banking services. The model they present is based on consumers' preference for the banking service, the preferences for the distribution method, and the perceived fit between the distribution method and the banking services. Bateson [8] studied customers' preferences for different channels. He found out that certain customers prefer personal channels and other customers prefer electronic channels, given the same cost and location Lee [30] discusses demographic differences between adopters and non-adopters of new ICT involved methods of service delivery, such as ATM's and electronic banking. He notes that the adopters are younger, more affluent, more likely to be married and homeowners (p. 241).

The studies from the field of marketing discussed here are just the top of the iceberg, in no other field than marketing has channel choice received so much attention, although this is relative. The consumer behavior literature has addressed the issue of channel choice but often as a more peripheral topic [10]. The factors listed above are among the most discussed factors, but the list of possible factors is endless. No studies exits than

incorporate all those factors and even more important, as Black et al. [10] note, "…the existing literature on consumer choice has yet to explain how such a variety of factors may affect the consumers decision making process" (p. 164), meaning that about the exact influence of the factors, let alone the interaction between the factors, no knowledge whatsoever exists

The area of human-computer interaction has also discussed the topic of channel choice, especially on the topic of information search behavior. Traditionally, research into information seeking regards information seeking from a systems perspective, and sees information users as passive, situation-independent receivers of objective information [20]. In different models of information seeking behavior [23, 32], the selection of an information channel is an important phase and some studies have been conducted that focus specifically on the choice process. Especially the rise of networked media, such as the Internet, has given a new impulse to the research of how and why people search for information via what channels. From all networked media, in particular e-mail and the World Wide Web have attracted an increasing number of information seekers both in job-related and nonwork contexts [40]. Given the fact that people have more and more channels at their disposal, the question of how people prioritize information sources is gaining importance [40]. Different studies in this field have yielded different factors of importance. Choo, Detlor and Turnbull [15] determined the influence of perceived accessibility and quality of information sources and channels. Savolainen and Kari added to this; peoples general values about information carriers, actual experiences, the views of relevant peers, situational demands of information seeking (like a shortage of free time), perceived competence (skills in searching and knowledge of the sources) and the characteristics of the task or problem at hand

Finally, related to human-computer interaction is the field of adoption of technology. Technology Acceptance Model (TAM), first introduced by Davis [18] is specifically designed for modelling user acceptance of information systems. TAM has been widely applied in various research of information systems use [see: 31] it has however been widely applied for IT in a broader sense and there is a large number of studies that support the technology acceptance model (e.g. [3, 17, 44, 51]). TAM posits that two particular beliefs, *perceived usefulness* and *perceived ease of use* are of primary relevance for computer acceptance behaviours. Perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organisational context. Perceived ease of use refers to the degree to which the prospective user expects the target system to be free of effort [17]. Black et al. [10] found, in a channel choice context that the ease of use of a channel was relevant for using a channel for financial services. Although this leads to the expectation that the factors from the technology acceptance model are relevant form the channel choice decision in the context of government-citizen interaction, we have no evidence, about this relationship.

The literature described in this section is far from complete (completeness was no aim though) and the list of *possible* determinants of channel choice that we can derive from other research fields is possibly endless, as the discussion of only the fields of communication, marketing and human-computer interaction shows. Further more, we have very little proof of the interdependence of the different factors. It is highly unlikely that single determinants stand on their own. Allen [5] discovered in his study about the choice of information sources that effort was the most important determinant of channel choice; people tend to choose the most convenient, easy accessible channel (also to refer to as the principle of least effort [53]). Swanson [43] drew the same conclusion, but added that this effort is a situational determinant. Choo [14] further investigated this thought and found that when the situation (problem) gets more ambiguous, the influence of the principle of least effort declines and people start considering less accessible information sources. In sum, Reddick [38] rightly argues that more qualitative research is needed to get a full understanding of citizen-initiated contacts.

3. AN EXPLORATION OF CHANNEL CHOICE DETERMINANTS

From the analysis of existing research in the field of e-Government and related, relevant, fields, we can draw two major conclusions. First, we lack understanding of what factors are relevant in the e-Government context. Second, we don't know how the different factors interact. Although the relationships between the determinants is just as important as the factors itself, we decided to first explore the possible factors of this decision making process in the context of governmental services. The main question we tried to answer in this study is:

What factors exist that determine the choice of a channel by a citizen for consultation or conversation purposes with governmental organizations?

In this study we limit ourselves to consultation and conversation for two reasons. First, these are the modes in which citizens take the initiative for the interaction and second, in these modes citizens have a choice option for a certain channel, as opposed to other interaction modes, such as allocution, where the organization is the initiator and controller of the channel [22].

3.1 Methodology and data collection

Interviews are a good way to elicit unanticipated information and to enable great depth and meaning of communication experiences to be explored and recorded [28]. Especially *exploratory* single interviews are suited to generate issues. However, single interviews may lack the dynamic that group interviews have; "Groups are not just a convenient way to accumulate the individual knowledge of their members. They give rise synergistically to insights and solutions that would not come about without them" [12 p. 40]

The main advantage that group interviews have is that, through the discussion among its group members, they are well suited to

generate a multitude of issues. However, because of the group interaction, insights in individual motivations for behavior may lack depth. This depth is one of the main advantages of single interviews, they enable the interviewer to specifically ask about individual behavioral aspects and the reasons to behave in specific situations. To take benefit of the advantages of both group and single interviews, we decided to combine both group interviews as well as single interviews in this research. The topics we addressed were the same in both the focus groups and the single interviews and included:

- The service channels used in general
- Experiences with channels
- The use of certain channels for certain purposes
- The reasons to choose a certain channel in a certain situation

We used a semi-open interview approach. We did have a set of questions formulated around the topics mentioned above, but we let the interviewees talk freely, allowing them to generate issues themselves. Examples of actual questions included in the interview scheme were:

- What channels do you use in general to interact with governmental organizations?
- What channel did you choose the last time and why this channel?
- How satisfied were you with the last contact and why were you satisfied/dissatisfied?
- Have your experiences influence the ways you perceive service channels?

A number between three and six groups is considered enough to reach theoretical saturation and focus groups typically have 7-10 respondents [29, 42], to match with these rules of thumb, we conducted a total number of 5 group interviews, each having 7-9 respondents. This is a similar number compared to the study of Black et al. [10], who used 6 groups. Patricio *et al.*[35] used the same research approach as we do in this study. They conducted four group interviews with 5 participants each, as well as 14 single interviews. We conducted 18 single interviews in this research.

Respondents were all adults, since people over eighteen years of age have more contacts with governmental organizations and we only wanted to include those people who have contact with governmental organizations. Since the elderly typically lag behind when it comes to internet usage [21], we specifically wanted to include people over 65 years of age. Respondents were partly selected from Dutch research panels and partly via a random sample from the Dutch population used in another study [50]. The youngest respondent was 18 years of age; the eldest was 82 years of age. We had a slight overrepresentation of the elderly and higher educated, but every category was represented with multiple respondents.

The group interviews took place at various locations throughout the Netherlands, to overcome a geographical sampling bias. The interviews were partly held at the homes of the respondents and the office of a research agency. This did not lead to a difference in answers. The single interviews lasted approximately 45 minutes and the focus groups two hours. All single interviews were tape (audio) recorded, we video-recorded the group interviews.

3.2 Data analysis

Data were analyzed in a number of steps. First, the interviews were transcribed in full length. Although this is a time consuming and labor intensive process, it enhanced the sense-making process of the research material and the familiarity with it[1]. Second, a long list of factors determining channel choice was made. Hereby, we used the inductive analysis approach; this means that the patterns, themes, and categories of analysis come from the data: they emerge out of the data rather than being imposed on them prior to data collection and analysis [36]. We did this by selecting those parts from the interviews in which people used signal words indicating that they were talking about the choice and use of channels (e.g. "I chose…", "I did…", "Reason for this was…", "Because of…").

Third, the long list was shortened through a sorting process to identify common themes. This was done by the researchers themselves. Because different ways of looking to the same set of data can lead to important insights [36], we decided to overcome this researcher bias by organizing a group discussion with several researchers to check our analysis. In this discussion, we (again) shortened the long list of factors to identify the underlying themes (analytical triangulation). Through this discussion we established the final set of categories. This process of clustering the data into groups was aided with computer software; we used mindmapping software to group the data and to label the determinants[2].

4. RESULTS

The following paragraphs outline the most important findings of the qualitative study, grouped by theme. We present the overview of the determinants of channel choice we found in (mainly the group) interviews. We illustrate the findings with quotations from the interviews. Six main categories of factors were found to influence the choice of a service channel; *Habit*, *Channel Characteristics*, *Task Characteristics*, *Situational Constraints*, *Experience* and *Personal Characteristics*.

---

[1] These materials are available in Dutch, please send inquiries to the first author.

[2] Specifically, we used a software program called 'freemind', which is available as open source software. The maps we created are also available (in Dutch) for research purposes. For information please contact the first author.

Each of these categories will be discussed in detail in the next sections. Quotations from the interviews are used to illustrate the findings. Each single quotation or interview excerpt is written in italics and between brackets. Further more, the source (which group or single interview) is given.

Habit

Habit is one of the main determinants of channel choice. Many people just use different channels because they have used them often and because they are satisfied. Some people have the habit of using the internet as a primary channel:

[*I always primarily check the site (group 1)*]

Others explain that they instantly choose the phone:

[*I just always use the telephone, I see a number and start calling (group 1)*]

[*Respondent: Most of the time, I first use the telephone, before searching the Internet. I am a man that grabs the phone instantly, call now!*

Interviewer: And why do you start with using the phone?

R: I am used to doing so, since old times, also because of my working experiences (single 3)]

And some people indicate a strong preference for the front desk:

[*I: And do you have the preference of going there in every situation?*

R. Yes, I prefer the personal conversation (single 4)]

The examples above from the single interviews clarify how and why people have strong habits in their channel choice behavior, these are based on experiences with channel usage and on the perceived characteristics of the service channels. No respondent indicated to have the habit to write a letter. This finding is restricted to the internet and the telephone. Further, it was indicated that some people have standard routines in the follow up of the channels they choose and use, meaning that when people have a problem, they choose a channel to solve this problem, if this channel fails in solving the problem, they choose another:

[*First the Internet, than the telephone, the first step is the internet, the second is the telephone (group 3)*]

This routine correlates with the perceived accessibility or ease of use of the channels. People often use terms like *easy* and *ease of use*, to indicate why they habitually choose the same channel in most situations:

[*The phone is just easy, it's free, and I get an answer* (group 3)]

[*The internet is easily accessible, I go to the computer and that's it* (group 3)]

Due to time and cost aspects people try to be as efficient as possible in their matching, meaning that people often are willing to invest as little effort as possible in the matching process. Often resulting in a predefined set of routines regarding what task is suited for what medium:

[*I only use the internet to find the telephone number, the contact itself I prefer to have personal (group 4)*]

Channel characteristics

Speed is one of the most mentioned channel characteristics in the study. Speed however may imply two things as becomes apparent from the interviews. In the first place, speed may imply the time needed to get in contact with the organization via a service channel, a factor we label *contact speed*:

[*The Internet is fast, you can access it from your own home (group 5)*]

Waiting lines on the telephone and the distance towards offices to visit front desks are mentioned as negative aspects of these channels towards the contact speed. On the other hand, we can distinguish a factor we name *feedback speed*, this is the speed of getting the needed information when you already have contact. The internet may be accessible in terms of browsing to a certain governmental website or for example Google. It may take quite some time to find the answer you are looking for:

[*Searching sites often take a lot of time, often more than phoning (group 5)*]

Ease of use also is a multiple cited factor, as we mentioned before. *Ease of use* is often associated with the Internet, based on its contact speed. The influence of this factor is smaller among the elderly. *Personalization* is the next channel characteristic; this is associated with the telephone and face-to-face contact. This factor is important in two respects. First of all, personal contact is being perceived as important because (given the multiple channels (e.g. audio, video, body language) used) information is better understood. The importance of this type increases as task complexity and ambiguity increase. Second,

people may prefer personal contact because they enjoy the fact of talking to a real person, in stead of a 'dead' machine.

The *accountability* and *tangibility*, finally, also are channel characteristics that may influence channel choice. Information from the internet has a low accountability, as opposed to printed and (personally) signed paper:

[R: *I would, if an governmental organizations offers me information via the internet, it may be put on the internet and I me be able to print ts. But, I repeat to say, what is the value of such a paper? Whereas, when it has been sent to me by mail, with a header above it and the name of some gentlemen, that gives a lot of value to it (single 1)*]

Task Characteristics

We found two task characteristics to be of importance. The first is the *complexity* of the task, which can be seen as the number of interrelated steps in a task. The more steps or aspects in a single task, the more complex the situation gets. The perceived complexity affects what channels people use, in most cases people prefer the more personal channels for complex problems:

[*If I have a complex problem, then I make an appointment and I just go to there (single 17)*]

[*For complicated matters, I go to the front desk, because it is undoable via the phone (group 3)*]

However, a key benefit of the Internet is that it offers great functionality in structuring information, to a larger extend that for example the telephone can handle. Therefore, the Internet was also named as a channel to deal with complex tasks, especially when it comes to the processing of lots of information. The second task characteristic is the *ambiguity* of the task, which can be seen as the degree to which multiple interpretations of a task exist. Ambiguity often leads to 'not knowing what the problem is and how to solve it':

[*Sometimes, you spend quite some time searching {the Internet}, which is inconvenient, especially if you're not sure what is going on and what you are looking for (group 4)*]

This ambiguity often manifests itself when people have to interpret whether information is relevant for them. If people doubt whether information is relevant or correct, they will not succeed via the phone:

[*The phone allows you to keep asking questions and to clarify your situation (group 5)*]

[*The site can only help you when 'it fits', if you have an exceptional situation, the site can't help you (group 4)*]

Situational Constraints

Various situational factors are of importance. First is the *availability* of service channels. This is not an intrinsic characteristic of service channels, but is due to for example organizational choices towards the availability of channels:

[*I can't phone them on Saturdays, because they're closed, so then I am forced to use the internet (group 1)*]

[*0800* {note: this indicates a cost-free number} *number is an advantage, this makes you phone easier (group 1)*]

Furthermore, the availability may be dependent on simple things, such as the weather conditions:

[*When the weather is bad, I am more eager to use it {the computer}. Then I will try more things (single 5)*]

Second are the *emotions* people may experience when they encounter a problem:

[*When I am angry, I pick up the phone and phone them...(group 4)*]

[*I see the phone as a means to take revenge when they do something stupid, then I would like their systems to collapse (group 2)*]

Availability simply pushes people to use the available channels and the emotions make people to act blindly, as the quotations already indicate.

Whereas *habit* indicates that people may choose a channel independent from the task characteristics, *efficiency* indicates that people do spend some time elaborating on matching a task with a service channel. This has to do with the effort people have to invest in using a channel:

[*I: As you told me, the town hall is close by. What do you see as "close by"?*

R: Well, it is seven kilometers.

I: Seven kilometers. And you told me in fact that when you have a question, you take your bicycle or your car and go there.

R: Yes, because you do your shopping and your errands there too. Things were different a few years ago. Back then, we lived in another municipality and than it was fifteen kilometers away, that changes the situation (single 4)]

[*I always use the phone while I am driving, because then I have the time to make phone calls (group 2)*]

[*My computer is located upstairs, it's much easier to pick the phone which is located in the living room (single 5)*]

Whereas for some respondents and in some situations the efficiency is important in choosing a channel, the effectiveness is an argument for others and in other circumstances. Especially when the importance of solving the problem or the task is important, people start reasoning and choose an effective channel, often inspired by needs of *uncertainty reduction, need for closure,* or the *importance of the consequences* their behavior has:

[*I: And why the front desk? You say, when I need information, I use both {telephone and front desk}, but to arrange something, I use the front desk. Why?*

R: Well, it is like I am more certain. Like I know for sure I arranged something (single 6)]

[*I would feel the need to visit them, that is more safe. You have a clear focal point. I have had many problems and than I want to talk to someone who really knows (group 2)*]

Experiences

Experiences are a factor that mainly determines how people perceive the channels and tasks and they influence the habits people have:

[*R: If you've been their a few times {online}, it gets easier to find the information (single 8)*]

[*They helped me very well on the phone, so, now I always use the phone*]

Positive experiences enhance the change on habitual behavior and furthermore, experience enhances the possibilities channels offer and the skills people have in using them.

Personal characteristics

Demographics are important variables, especially when it comes to using computers. Especially *age* and *education* are important

demographics in internet usage. These demographics are strongly correlated to the *access* to computers. The elderly often claim to be too old to learn how to work with computers, as our study also reveals:

[*I. Could you explain me why you never use a computer?*

R. Well, in fact I feel too old fort hat, but also too incompetent. I just want to say, my children and grand children all have these things and they work and play with it, but no, I won't start with it anymore, as to speak. (single 2)]

Further more, as the quotations previously mentioned (on efficiency) make clear, *geography* is a key variable. Where people live affects the channel availability, which affects channel choice. Finally, *personality* affects channel choice. Different people may have different channel preferences. Whereas one respondent indicated that he preferred the internet, because he liked the fact to comfortable search for information anonymous without having to talk to others, another respondent stated that he loved to have personal contact because of the fact that he likes to talk to other people. What makes the personal characteristics important, is the finding that the personal characteristics affect nearly every other determinant. Who you are affects how you perceive channels, how you perceive tasks, how rational you are in your decision making

5. CONCLUSIONS AND DISCUSSION

Citizen initiated channel choice is a complex subject. The review of the literature suggested an overload of factors that may influence the choice process. In our study we found six groups of factors, which we believe are the most important determinants of channel choice. The factors appear to differ in importance, although we need empirical testing through quantitative research to test this proposition. *Habit* is one of the most important drivers of channel choice.

This finding is in line with McQuail's [33] who argues that media behavior often is a result of habit, as well as circumstances, change and emotions (which we labeled the *situational constraints*). Habit means in this respect that behavior is not guided by elaborate decision processes, but by automated processes [2]. This habit results in choosing the more accessible channels in terms of *contact* and *feedback speed* and *ease of use*. The idea that habit enables people to operate in a "mindless, automatic fashion" [1, p. 53], corresponds with the 'principle of least effort', we discussed previously in this paper.

However, when problems and/or tasks become more complex and ambiguous, the influence of habit declines and people are willing to put more effort in the decision making process. People often indicate to 'always use the phone or the internet', but when confronted with vague and/or complex problems, they are

suddenly willing to consider going to the front desk or writing a letter. The willingness to go to the front desk also is strongly moderated by the distance towards this channel, a situational constraint. This leads to the idea that people generally can choose, or follow two types of decision making processes when it comes to channel choice. The first type of decision making is based on habit, with in fact no effort in the process whatsoever. The second type is a process of elaboration on task and medium fit, where dependent on task and channel perceptions, as well as the situation constraints people decide which channel to use.

Habit and the perceptions of task and channel characteristics are strongly influenced by previous experiences. Carlson and Zmud [13] already argued that the communicative strengths of a channel increase with experience and Aarts *et al.* [2] argued that a frequently performed behavior habituates. Furthermore, the channel choice behavior, the habits people develop and the perceptions they have towards channels and tasks are guided by the *personal characteristics* of the individual. Age and education for example correlate strongly with access to technology [21], which influences the set of available channels.

Although exploratory, the findings of this study are of importance for researchers on the field of e-Government. Behavioral determinants such as habit are no new theoretical concepts, however, for this field of research they are. Furthermore, our research has identified those concepts from other fields of research that are of importance for e-Government research. The topic of channel choice and usage has always been a more peripheral topic in e-Government research and no specific theories and/or models have been designed to fit the needs of the specific public sector context. Our study may serve as a starting point in building such theory when it comes to citizen initiated contacts.

Although it was not this study's objective to gain insight in the relations between the concepts, the study did create some insights in how different determinants are related and how perceptions may differ from factual situations. We do need, however, more research to statistically test the relations between the various concepts. Furthermore, we should develop a model that shows the relations between the theoretical concepts and the entire channel choice process.

Our study has a number of limitations. Because of it's qualitative nature, it is not possible to generalize the findings. We need qualitative testing of our findings to determine the weight and significance of each factor. Another limitation is the fact that we only studied the situation in one country (the Netherlands), therefore differences between countries, such as the state of the art in e-government and cultural differences remain unresearched. Next, we had an (slight) overrepresentation of men, elderly and higher educated in our sample. Through quantitative testing we need to determine whether our findings apply to the entire population.

6. ACKNOWLEDGMENTS

7. REFERENCES

1. Aarts, H. and Dijksterhuis, A. Habits as Knowledge Structures: Automaticity in Goal-Directed Behavior. *Journal of Personality and Social Psychology*, *78* (1). 53-63.
2. Aarts, H., Verplanken, B. and Knippenber, A.v. Predicting behavior from actions in the past: repeated decision making or a matter of habit? *Journal of Applied Social Psychology*, *28* (15). 1355-1374.
3. Adams, D.A., Nelson, R.P. and Todd, P.A. Perceived usefulness, ease of use, and usage of information technology: a replication. *MIS Quarterly*, *16* (2). 227-247.
4. Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R. and Wood, S. Interactive Home Shopping: Consumer, Retailer and Manufacturer Incentives to Participate in Electronic Marketplaces. *Journal of Marketing*, *61*. 38-53.
5. Allen, T.J. *Managing the Flow of Technology: Technology Transfer and the Dissemination of Technological Information within the R&D Organization.* MIT Press, Cambridge, Massachusetts, 1977.
6. Balasubramanian, S., Raghunathan, R. and Mahajan, V. Consumers in a multichannel environment: Product Utility, Process Utility and Channel Choice. *Journal of Interactive Marketing*, *19* (2). 12-30.
7. Barczak, G., Scholder-Ellen, P. and Pilling, B.K. Developing typologies of consumer use of technologically based banking services. *Journal of Business Research*, *38*. 131-139.
8. Bateson, J.E. Self-service consumer: an exploratory study. *Journal of Retailing*, *61* (3). 49-77.
9. Berman, B. *Marketing Channels*. Wiley & Sons, New York, 1996.
10. Black, N.J., Lockett, A., Ennew, C., Winklhofer, H. and McKechnie, S. Modelling consumer choice of distribution channels: an illustration from financial services. *International Journal of Bank Marketing*, *20* (4). 161-173.
11. Borins, S. On the frontiers of electronic governance: a report on the United States and Canada. *International review of administrative sciences*, *68*. 199-211.
12. Brown, J.S., Collins, A. and Duguird, D. Situated Cognition and the Culture of Learning. *Educational Researcher*, *18* (1). 32-42.
13. Carlson, J.R. and Zmud, R.W. Channel Expansion Theory: A dynamic view of media and information richness perceptions. *Academy of Management Best Papers Proceedings 1994*. 280-284.
14. Choo, C.W. *The Knowing Organization: How Organizations Use Information to construct Meaning, Create Knowledge, and Make Decisions*. Oxford University Press, New York, 1998.

15. Choo, C.W., Detlor, B. and Turnbull, D. *Web work. Information seeking and knowledge work on the World Wide Web*. Kluwer, Dordrecht, 2000.

16. Daft, R.L. and Lengel, R.H. Organizational Information Requirements, Media Richness and Structural Design. *Management Science*, *32* (5). 554-571.

17. Davis, F.D. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13* (3). 318.

18. Davis, F.D. A Technology Acceptance Model for Empirically Testing New End User Information Systems: Theory and Results, Sloan School of Management, Massachusetts, 1986.

19. Dennis, A.R. and Kinney, S.T. Testing Media Richness Theory in the New Media: The effects of Cues, Feedback, and Task Equivocality. *Information Systems Research*, *9* (3). 256-274.

20. Dervin, B. and Nilan, M. Information Needs and Uses. in Williams, M.E. ed. *Annual review of information science and technology*, Knowledge Industry Publications, White Plains, NY, 1986, 3-33.

21. Dijk, J.A.G.M., van *The Deepening Divide, inequility in the information society*. Thousand Oaks, London, 2005.

22. Ebbers, W., Pieterson, W. and Noordman, H. Rethinking Service and Channel Strategies after the Hype. in Makolm, J. and Orthofer eds. *ETaxation State & Perspectives*, Trauner Druck, Linz, 2007.

23. Ellis, D. A Behavioural Model for Information Retrieval System Design. *Journal of Information Science*, *15* (4/5). 237-247.

24. Fulk, J., Schmitz, J. and Steinfeld, C.W. A Social Influence model of technology use. in Fulk, J. and Steinfeld, C.W. eds. *Organizations and Communication technology*, Sage Publications, Newbury Park / London / New Delhi, 1990.

25. Gore, A. Businesslike Government *National Performance Review*, National Performance Review, Washington, DC, 1997.

26. Hirlinger, M.W. Citizen-Initiated Contacting of Loval Government Officials: A Multivariate Explanation. *Journal of Politics*, *54* (2). 553-564.

27. Jones, B.D., Greenberg, S.R., Kaufman, C. and Drew, J. Bureaucratic Response to Citizen-Initiated Contacts: Environmental Enforcement in Detroit. *American Political Science Review*, *71* (1). 148-165.

28. King, N. The Qualitative Research Interview. in Cassell, C. and Symon, G. eds. *Qualitative Methods in Organizational Research. A Practical Guide*, Sage Publications, London, 1994.

29. Krueger, R.A. *Focus Groups: A Practical Guide for Applied Research*. Sage Publications, Newbury Park, 1990.

30. Lee, J. A Key to Marketing Financial Services: The Right Mix of Products, Services, Channels and Customers. *Journal of Services Marketing*, *16* (3). 238-258.

31. Legris, P., Ingham, J. and Collerette, P. Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, *40*. 191-204.

32. Marchionini, G. Information Seeking in Electronic Environments. in Long, J. ed. *Cambridge Series on Human-Computer Interaction*, Cambridge University Press, Cambridge, UK, 1995.

33. McQuail, D. With more hindsight: conceptual problems and some ways forward for media use research. *Communications: The European Journal of Communication Research*, *26* (4). 337-350.

34. Morrison, P.D. and Roberts, J.H. Matching Electronic Distribution Channels to Product Characteristics: The Role of Congruence in Consideration Set Formation. *Journal of Business Research*, *41*. 223-229.

35. Patricio, L., Fisk, R.P. and Falcao e Cunha, J. Improving Satisfaction with Bank Service Offerings: Measuring the Contribution of each Delivery Channel. *Managing Service Quality*, *13* (6). 471-482.

36. Patton, M.Q. *Qualitative evaluation and research methods*. Sage Publications, Newbury Park, 1990.

37. Pieterson, W. and van Dijk, J. Governmental Service Channel Positioning. Gronlund, A., Scholl, H.J., Andersen, K.V. and Wimmer, M.A. eds. *Communication Proceedings of the Fifth International EGOV Conference 2006*, Trauner Druck, Krakow, Poland, 2006.

38. Reddick, C.G. Citizen-Initiated Contacts with Government Comparing Phones and Websites. *Journal of E-Government*, *2* (1). 27-53.

39. Reddick, C.G. Citizen Interaction with E-government: From the Streets to Servers. *Government Information Quarterly*, *22*. 38-57.

40. Savolainen, R. and Kari, J. Placing the Internet in information source horizons. A study of information seeking by Internet users in the context of self-development. *Library & Information Science Research*, *26*. 415-433.

41. Schellong, A. and Mans, D. Citizens preferences towards one-stop government *The 2004 annual national conference on Digital Government research*, ACM International Conference Proceeding Series, Seattle, WA, 2004.

42. Strauss, A.L. and Corbin, J. *Basics of Qualitative Research: Grounded Theory Methods and Procedures*. Sage Publications, Newbury Park, 1990.

43. Swanson, E.B. Information Channel Disposition and Use. *Decision Sciences*, *18* (1). 131-145.

44. Szjana, B. Empirical Evaluation of the Revised Technology Acceptance Model. *Management Science*, *41* (1). 85-92.

45. Tauber, E.M. Why do people shop? *Journal of Marketing*, *36* (October). 46-59.

46. Thomas, J.C. Citizen-initiated Contacts with Governmental Agencies: A Test of Three Theories. *American Journal of Political Science*, *26* (3). 504-522.

47. Thomas, J.C. and Streib, G. The New Face of Government: Citizen-Initiated Contacts in the Era of E-Government. *Journal of Public Administration Research and Theory*, *13* (1). 83-102.

48. Trevino, L.K., Webster, J. and Stein, E.W. Making Connections: Complementary Influences on Communication Media Choices, Attitudes, and Use. *Organization Science*, *11* (2). 163-182.

49. van Deursen, A. and Pieterson, W., The Internet as a service channel in the Public Sector. in *ICA Conference*, (Dresden, Germany, 2006).

50. Van Dijk, J., Hanenburg, M. and Pieterson, W. Gebruik van Nederlandse Elektronische Overheidsdiensten in 2006 (Use

of Dutch Electronic Government Services in 2006), University of Twente, Enschede, 2006.

51. Venkatesh, V. and Davis, F.D. A Model of The Antecedents of Perceived Ease of Use: Development and Test. *Decision Sciences*, *27* (3). 451-481.

52. Webster, J. and Trevino, L.K. Rational and social theories as complementary explanations of communication media choices: two policy-capturing studies. *Academy of Managament Journal*, *38* (6). 1544-1572.

53. Zipf, G.K. *Human behavior and the Principle of Least Effort: An Introduction to Human Ecology*. Addison-Wesley, Cambridge, Massachusetts, 1949.

54. Zuckerman, A.S. and West, D.M. The Political Bases of Citizen Contacting: A Cross-National Analysis. *The American Political Science Review*, *79* (1). 117-131.