

# Warm Experts in the age of Mandatory e-Government: Interaction Among Danish Single Parents Regarding Online Application for Public Benefits

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**Abstract:** Citizens' adoption of e-government channels has been the focus of both academic studies and public policy for over a decade. Current efforts seek to reduce citizens' interaction with caseworkers through traditional channels in favor of increased use of e-government self-service channels. To increase adoption rates and reduce the costs of public administration, the Danish e-government strategy has made e-government self-service channels mandatory thereby attempting to turn citizens into their own caseworkers. The channel choice branch of e-government studies how citizens and businesses choose interaction channels in a public service encounter. Until now, studies of citizens' channel choice have taken place at the level of the individual and ignored the influence of group processes. Moreover, although the importance of digital literacy has been widely recognized in relation to citizen channel choice and e-government adoption, citizens' knowledge of public administration and administrative processes has received less attention. To cover this gap, we conducted a qualitative study of how citizen-to-citizen interaction influences channel choice in public service encounters, and how citizens share advice for seeking public benefits. The study entailed five focus group discussions and nine follow-up individual semi-structured interviews with Danish single parents who receive public benefits. We employ domestication theory and the concept of 'the warm expert' to inform our analysis. Our findings show that the interaction and advice sharing among citizens extends beyond the choice of channels and also covers how the selected channels are used and evaluated. In addition to helping each other with how to use e-government self-service channels, citizens also share practices for negotiating with public authorities. This negotiation requires the use of traditional channels and concerns areas such as increasing the likelihood of being granted benefits and ways of getting around the mandatory requirement for e-government self-service channels. Based on our findings we present contributions to the channel choice field and offer suggestions for how to expand and update a previous channel choice process model.

**Keywords:** channel choice, citizen-to-citizen interaction, domestication theory, e-government, multichannel, public benefits, single parents, warm experts

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## 1. Introduction

The digitization of the public sector impacts both administrative processes within government, and government-to-citizen interaction (Bertot & Jaeger, 2008; Chadwick & May, 2003). Citizens' increased use of self-service e-government channels is regarded as critical to achieving economic savings in public administration (Kernaghan, 2013; Reddick & Anthopoulos, 2014). In Denmark, e-government channels (websites, digital post, online self-service applications) have been made mandatory for multiple public services to lower the costs of public administration.

The channel choice (CC) branch of e-government studies citizens' and businesses choice of communication channels in public service encounters (Madsen & Kræmmergaard, 2015; Pieterse, 2010). Most CC studies are conducted at the level of the individual citizen. Field experiments and case studies have shown how public authorities can influence citizens' CC through marketing efforts and by improving communication surrounding a service encounter (Madsen & Kræmmergaard, n.d.; Teerling & Pieterse, 2011; van de Wijngaert, Pieterse, & Teerling, 2011). However, there are few studies investigating whether, or how, citizen channel choice, use and evaluation can be influenced by other external parties besides public authorities.

According to domestication theory 'people construct their own technological practices, but in interaction with other people's practices' (Sørensen, 2004). In line with this theory, Bakardjieva (2005) has developed the term 'warm expert' to explain how people learn to use information and communication technology (ICT) from someone in their personal network. We contribute to the CC literature, by applying domestication theory and

the concept of ‘the warm expert’ in a study of how citizen-to-citizen interaction influence online public service encounters. The research question guiding our study is:

- How does citizen-to-citizen interaction influence channel choice, use and evaluation for government-to-citizen interaction?

Our study revolves around single parents’ interaction with the new public authority Udbetaling Danmark (Payments Denmark) (UDK) regarding family and housing benefits. Family benefits is an umbrella term for multiple benefits for parents with children under the age of 18. Single parents can receive additional benefits if they are not living with other adults under ‘marriage-like conditions’. Housing benefits are rent-supplements to citizens with low household incomes. Some single parents are eligible for additional economic benefits, which are administered by other authorities. Citizens are required to find information and apply for benefits on the public web-portal borger.dk (The Danish Government, Danish Regions, & Local Government Denmark, 2011). Following the digitization strategy, traditional letters from public authorities have been replaced by digital post, a system much like e-mail. Digital post is accessible via borger.dk and the privately run e-Boks. All of these services require the citizen to login using NemID (EasyID), a digital identification system.

This paper is structured as follows: We first present the CC field, and the gaps we seek to cover. Section three presents domestication theory and the concept of ‘the warm-expert’, the theoretical lens guiding our study. Section four presents the methodology for the empirical study. Sections five and six present and discuss the findings, and implications for research and practice. The final section contains concluding remarks, limitations and suggestions for future studies.

## 2. Channel choice literature

Madsen and Kræmmergaard (2015) conducted a literature review of the CC field analyzing 36 papers published from 2005 – 2014, and divide these into two groups; papers which focus on CC at the level of the individual citizen, and those who focus on multichannel management (MCM) at the organizational level. Statistical modeling, especially in the shape of variance models, is the most common method in CC studies. These studies focus on how factors such as channel characteristics, task and personal characteristics, situational constraints, and satisfaction with previous encounters influence CC and the resultant satisfaction with the encounter (Pieterse & Ebbers, 2008; Pieterse, Teerling, & Ebbers, 2008; Reddick, Abdelsalam, & Elkadi, 2012; Reddick & Anthopoulos, 2014; Reddick & Turner, 2012; Reddick, 2010). Results from CC studies show that citizens prefer to use the Internet to look up information, but prefer traditional channels such as the telephone or face-to-face to solve problems (Madsen & Kræmmergaard, 2015). Although social influence has been found to impact the adoption of technology (Fulk, Schmitz, & Steinfeld, 1990; Venkatesh, Morris, Davis, & Davis, 2003), there are no studies of citizen CC at the group level.

Teerling and Pieterse (Teerling & Pieterse, 2011) present an alternative to the variance models by studying individual’s CC behavior through a process model, which is presented in Figure 1. The model is reprinted with the permission of both authors and publishers.

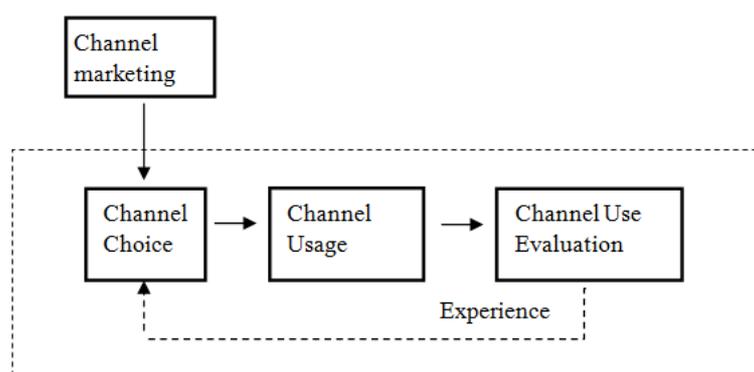


Figure 1: Citizen multichannel behavior

According to the model, citizen multichannel behavior can be divided into three steps; channel choice, use and evaluation. When citizens are faced with a task involving public authorities they begin by choosing a channel among those that are available. They proceed to use this channel, but may switch to, or include, traditional channels in the interaction if problems arise. Citizens then evaluate the channels used and the overall service encounter and it becomes part of their experience. In this way their experience can also impact future CC. If people have had a bad experience with a certain channel, they are less likely to choose this channel again.

Finally, the model shows that an external force, in the case of a government agency, can influence CC through marketing efforts.

Although the model describes the choice and use of an individual channel, the authors highlight that actual use can entail simultaneous use of multiple channels (Teerling & Pieterse, 2011). The model differs from previous CC studies by acknowledging that CC is not just the result of an individual's cognitive processes, but can also be influenced by external parties. Moreover, it regards CC as a process, which extends beyond the point where a channel is chosen and includes the use of the channel, and evaluation of the interaction afterwards. The model developed by Teerling and Pieterse resembles the expectancy-value models from the Uses and Gratifications tradition in media science (McQuail, 1994; Palmgreen & Rayburn, 1985), which propose that people choose media to obtain certain perceived gratifications, and the evaluation of their media experiences feed back into future choices. Teerling and Pieterse's model differs from the expectancy-value model, however, in that it does not include people's beliefs as a factor which might influence CC.

Teerling and Pieterse (2011) identify four instruments a government agency can employ to increase citizens' choice of e-government channels; communication, legislation, economical incentives, and the quality of the web service itself. Through a mixed method study they measure how citizens perceive these instruments. They find that *'the combination of well-designed web services and communication regarding these possibilities seems to be the strongest combination that influences citizen multichannel behavior.'* (Teerling & Pieterse, 2011, p. 179).

The process model is supported by empirical studies. Teerling and Pieterse (2010) conducted an experiment which showed that a letter could be used to guide citizens online. Madsen and Kræmmergaard (n.d.) present a case study of how a public authority experienced increased use of an online self-service application, and a large reduction in calls, after re-designing an online application and improving the surrounding communication.

However, Teerling and Pieterse do not examine if and how other external parties can influence CC. Nor do they study the influence of external parties on channel use and evaluation, which occurs after a channel has been chosen. By including other citizens as influential external partners, we wish to address these gaps and expand the existing knowledge about CC. To do this we conducted an empirical study, which examines how citizens influence each other's CC and interaction with public authorities. Having presented the gaps we seek to cover, we now turn to our theoretical lens; Domestication theory and the concept of 'the warm expert'.

#### 1. Theoretical lens: Domestication theory and 'the warm expert'

Domestication theory was developed by British and Scandinavian researchers in the 1990's by combining elements from anthropology and consumption studies with Science and Technology Studies (STS) and reception analysis (Berker, Hartmann, Punie, & Ward, 2005; Haddon, 2011). Domestication theory has mainly been used to study the processes whereby people reject or make media technologies their own by adapting and integrating them into the routines of everyday life. Domestication scholars reject traditional adoption models for being technologically deterministic assuming not only that technologies will be adopted according to pre-defined patterns, but also that people's actual use will occur the way designers or producers intended. Drawing upon the related concepts of 'configuring the user' (Woolgar, 1990) and 'scripts' (Akrich & Latour, 1992) from STS, domestication scholars acknowledge that technologies are designed to be used in certain manners (Bakardjieva, 2005; Liste & Sørensen, 2015). However, inspired by reception analysis, domestication scholars claim that technologies are also open to interpretation by its users (Bakardjieva, 2005; Haddon, 2011; Lie & Sørensen, 1996; Sørensen, 2004).

Domestication scholars argue that people are not passive receivers but active subjects whose backgrounds, habits, and values influence how they perceive and use technology. Rather than focusing on the impact of technologies, domestication scholars are concerned with the practical and symbolic value people assign to technology, and how these values are expressed and exchanged through use, display, and conversation. In this way domestication scholars have extended the transformation of technology from something only occurring in the design stage to also taking place after the point of adoption, and by end users as well as designers.

The adoption of new technology, social processes, and the sharing of skills and practices are all brought together in Bakardjieva's concept of 'the warm expert' (Bakardjieva, 2005). Bakardjieva draws upon the domestication framework in her study of how immigrants in Canada learn to use information technology (IT),

such as computers and the Internet. She found that her participants were often introduced to IT via personal contacts, whom she refers to as “warm experts”.

*“The warm expert is an Internet/computer technology expert in the professional sense or simply in a relative sense compared with the less knowledgeable other. The two characteristic features of the warm expert are that he or she possesses knowledge and a skill gained in the System world of technology and can operate in this world but, at the same time, is immediately accessible in the user’s lifeworld as a fellow-man/woman. The warm expert mediates between the technological universal and concrete situation, needs and background of the novice user with whom he is in a close personal relationship.” (Bakardjieva, 2005, p.95).*

The warm experts are characterized by their accessibility, their skills, and finally their knowledge of the novice, which allows them to explain how IT works in a manner that makes sense to the novice. Although Bakardjieva focuses on the warm experts’ IT skills, other studies show that citizens’ lack of knowledge of the specific public service in question and bureaucracy in general also affects CC and can hinder the use of e-government channels (Bertot & Jaeger, 2008; Grönlund, Hatakka, & Ask, 2007; Skaarup, 2012). Therefore we will supplement with an examination of citizens’ ‘administrative literacy’, defined by Grönlund et al. (2007) as *“the ability to navigate bureaucracy, which includes having a good idea of how society’s institutions work, the terminology involved and hence being better able to know where to go to find the forms, procedures, contact information etc. necessary, and indeed understand the information once found and being able to act upon it”* (Grönlund et al., 2007, p. 217).

Thus, CC studies have found that the type of problems citizens have influence their CC and subsequent interactions with a public authority. Domestication scholars argue that people share practices regarding technology use through everyday interactions and discussions. Bakardjieva shows how people get help from others in their close personal network, and that these helpers offer identification and possess specific skills. To operationalize our theoretical lens and answer our research question of *how citizen-to-citizen interaction influences channel choice, use and evaluation for government-to-citizen interaction* we start by asking three sub-questions. These questions relate to Teerling and Pieterse’s model and previous CC studies, but we seek to answer them through a qualitative study informed by domestication theory and the concept of ‘the warm expert’.

- What are the main problems encountered by single parents in relation to public benefits, and what channels are used to solve them? [Channel choice]
- How do single parents get help to interact with public authorities? [Channel use]
- How do single parents share their evaluations of public service encounters? [Channel evaluation]

Our theoretical lens, domestication theory, emphasize that technologies should be studied in the natural contexts where they are used. Domestication scholars seek insight into people’s understanding and evaluation of technology, and therefore primarily rely on qualitative methods and observations with several participants. We follow this tradition as it allows us to study people’s practices, the underlying values informing them, and the social processes whereby these values and practices are shared and shaped. Having presented our theoretical lens, we now turn to how the empirical studies were conducted.

### **3. Methodology**

To answer our research question, we first conducted five focus group discussions with 28 single parents. These were followed by nine individual semi-structured interviews. A recruitment company was used to find participants for the study from two Danish municipalities. To maintain their anonymity all participants have been given aliases in the published material. Appendix A presents the focus group composition.

The focus group discussions were conducted in April and May 2013. The purpose was to simulate social processes surrounding channel choice, use and evaluation occurring in everyday life. Unlike group interviews, where the interviewer repeatedly asks the same questions to multiple participants, focus group discussions allow the researchers to study social interaction whereby a group create and discuss their perception of a particular phenomenon (Krueger, 1994). Although focus group discussions take place in artificial settings, they are useful to facilitate discussions and explore people’s views and practices, and are frequently used within domestication studies (Bertel, 2013; Ling & Thrane, 2001). To stimulate discussion and interaction among the participants we employed a series of activity oriented questions and exercises (Colucci, 2007). As moderators

we deliberately stayed in the background and intervened only to ask follow-up questions (Krueger, 1994). Thereby the participants themselves would bring up topics that mattered to them in their own words.

The follow up interviews took place 6-12 months after the focus group discussions. Nine participants were selected from among the focus group discussants. We included participants who had either mentioned being warm experts themselves, or getting help from warm experts. Further, we included both participants that had been single for a long time, and those that had only recently become single to cover various levels of experience with the family benefit system.

The interviews were conducted as semi-structured interviews following a script which was adapted for each participant (Kvale, 1994). They were carried out in the homes of the participants, as this gave access to contextual information related to their interaction with UDK. After the interviews the participants were asked to solve tasks related to borger.dk and the benefits they received, while the interviewer observed and took notes. The purpose of these observations was to gain first hand access to the participants' practices for public service encounters.

The focus group discussions were recorded on videotape, while the follow-up interviews were recorded with an MP3 recorder. Immediately after each session the moderators took notes of the most striking findings. We initially paid special attention to the parts of the focus group discussions where the participants discussed problems, shared information and practices, and mentioned warm experts to find participants for the follow-up interviews.

The data from the focus group discussions, follow-up interviews and observations were transcribed and imported into Atlas.ti for analysis. The transcriptions were first coded using selective coding following Strauss & Corbin (1998), related to the three sub-questions. We applied color coding to group the key concepts related to our questions such as problems, channels, evaluations of the encounter, and warm experts. We then grouped these concepts into a table to get an overview of the relationship between them (Dahler-Larsen, 2008). For the participants in the follow-up interviews we also created documents with their biographies, their evaluation of public authorities, and their preferred channels. This aided our analysis of the relationship between participants' values and their CC, and in structuring our findings according to the three questions.

## **4. Findings**

Next we present our findings according to the three sub-questions previously asked concerning channel choice, use and evaluation.

### **4.1 What are the main problems encountered by single parents in relation to public benefits, and what channels are used to solve them?**

The problems encountered by the participants in the focus groups concerning their interaction with public authorities take place at two different stages; when they are applying for benefits, and when they are receiving benefits.

Getting an overview of benefit eligibility is difficult according to our participants. UDK administers several benefits areas, which are handled individually by different sections and have individual websites at the portal borger.dk. Some single parents are eligible for additional benefits, administered by other authorities, which also have their own websites. Thus, the information is presented from an administrative point-of-view according to benefit area rather than the citizen's point-of-view and life-situation, e.g. getting a divorce. This represents a catch-22, as single parents need to know the official names of the benefits before they can search for them on the official portal. As a consequence, some participants had spent considerable time trying to find out which benefits they were eligible for, before they could apply for them. Here lies another frequently mentioned problem, namely understanding the bureaucratic and legal terms used by public authorities. This lack of administrative literacy created many problems for the participants. Thus, the ability to translate information is an important part of the help offered. It is directly in line with Bakardjieva's concept of the warm expert, who she describes as mediating between the system world and the life-world of the novice. This mediation contains two aspects – understanding public authorities' information, and translating it to the single parent, and informing them of what this means to them, and what they have to do. The easiest way to get an overview of benefit eligibility is to talk to another single parent. Belinda has been a single parent for more than a decade and has worked within the public administration. She has extensive experience in dealing with public

authorities due to an accident, which left her with a disability as a child. From her professional background and personal experiences she has gained skills that makes her able to help her sister and others following their divorces.

*Belinda: "After many years of marriage she [sister] becomes single and needs to find out, what am I eligible for, because she'd never received anything except the regular check [basic child benefit]. So she called me, what do I do, and where do I do it? And then I told her, well you have to apply for reduction in childcare, increased and extra family benefits, and you need to look into whether you can get housing benefit. And then she started [applying], and ended up asking, where do I do this and where do I do that?"*

The example illustrates the importance of Belinda's personal experience with the benefits in question. She is able to provide help regarding not only benefit eligibility, but also for how and where to apply. Her help cuts across the individual benefit areas and authorities, and covers the entire situation from the single parents' point-of-view. This also entails suggesting which channels to use when applying for specific benefits:

*Belinda: "And here [UDK website] you can see the different [benefits] they can apply for, including housing benefits. And I would clearly recommend that they call, because I remember you have to fill out all this information, which I cannot find on the rent papers."*

According to our participants, most problems occurring while one is receiving benefits revolve around changes to the benefit tariff and payment frequency, due to one's children becoming older or changes in one's income. Our participants did not receive any information concerning the reasons for the changes, which caused many to call either friends or the authorities.

The participants in our focus groups have different strategies for dealing with these problems. Some contact public authorities directly through traditional channels. Others use search engines and third party websites to look for answers. Search engines are popular, as they allow people to use their own search phrases, and offer suggestions in case of misspellings. Third party websites offering legal advice or support groups for single parents provide answers and questions written by other single parents. One participant noted how such information is easier to understand, and more credible, because it is written by fellow citizens in similar situations.

In line with Bakardjieva's notion of the warm expert our participants frequently mention getting help from or helping family members (children, siblings, and fathers), colleagues, neighbors, friends and former partners. They are people with whom the single parents have a relationship, and often someone they know well and regularly meet. The warm experts mentioned by our participants all have ICT access and skills. However, this applies to most single parents and most of our participants as well. ICT skills can be regarded as prerequisites, which let one carry out online tasks related such as using a search engine to find information, browse websites, and successfully conduct transactions via self-service applications. However, for someone to successfully apply for public benefits they need administrative literacy as well.

#### **4.2 How do single parents get help to interact with public authorities?**

We found considerable variation in how the help was offered; from a quick phone call to a friend or sharing information by chance during a social encounter, to fixed arrangements with the expressed purpose of finding and applying for benefits. These fixed arrangements often occur in settings where the interlocutors are together, either face-to-face or on the telephone. The help offered extends beyond applying for benefits, and also covers other ICT-related and economic issues. In line with previous domestication studies of single parents, they also extend to other areas such as looking after children or fixing things around the household (Bakardjieva, 2005; Haddon & Silverstone, 1994; Russo Lemur, 2006).

During one of the focus group discussions we witnessed how practices for interacting with public authorities was shared first hand. One participant, Anne, became aware that she should have filled out an online-form to re-affirm that she was still single. The other participants quickly helped her out.

*Anne: "I'm thinking is there anything I should have printed from my computer and signed?"  
[Looks at the other participants]*

*Elizabeth: "No there isn't. You used to get it by mail. But you don't anymore, now you have to use the computer. (...) But this one went to the computer, you have to sign it. (...) . It's in your e-Boks [a website which stores digital post].(...) My e-Boks sends an e-mail to my personal mail-address*

whenever there is a new post in e-Boks. (...) And that's where the single's declaration is, you need to sign it."

Suzanna: [Interrupts] "Do you have web-banking?"

Anne: "Yes I do, but I don't use it."

Suzanna: "You can go through web-banking to your e-Boks, that's the easiest way of doing it. (...) You need to get a friend to come visit."

Anne: "Well my oldest boy, he also knows how to do those things."

Dorte: "(...) I'm also a complete illiterate with the computer but there are just some things you have to do when you have kids (...). But if you're totally lost you can go to the local municipality. And you can get guidance there. I tried to fill out this declaration as well, but my computer wasn't set up to receive it, so I had to go there and they helped me."

Anne: "I'll do it tomorrow, I'll go tomorrow." [Laughs].

Glen: "What I do, during those kind of troubles, with something to fill out, I have repeatedly kind of exploited, acted a bit stupid in front of those at the municipality and said 'Can you please do this for me? (...) I can't receive it, my computer is down.'"

The other participants inform Anne what channels to use, how to use them, and why it is important. They provide tips for saving time and offers suggestions of people she can turn to for help. Dorte provides empathy and a means of identification, by letting Anne know that she's not the only one who has experienced having problems with the declaration. Glen shares a way of tricking the caseworkers and getting around the mandatory requirement. His example shows that citizens' actual interaction with public authorities can be opposite to the government's intention, and how citizen-to-citizen interaction, whereby such practices are shared, does not always serve the government's interests or increase the e-government adoption rates.

### 5.3 How do single parents share their evaluations of public service encounters?

We found that participants' evaluations of other organizations sometimes carried over to their perception of UDK as well. We found an interesting connection between our participants' perception of public authorities and the strategies and channels they employed in public service encounters. Their evaluation and strategies were often shared and exemplified in personal stories and anecdotes. Broadly speaking, the participants who use traditional channels would be more likely to indicate that the benefit system is subjective. They argue that they can influence caseworkers by charming them and negotiating. Whether such negotiation actually works is heavily contested among the participants. Participants who prefer e-government channels disagree, and argue that the system is regulated and has fixed tariffs.

Some participants provided examples of how they got different answers depending on which case-worker they spoke to, and how they had to negotiate with case workers to get information about benefit eligibility or to be granted benefits. This belief informed both their channel choice and use, as negotiation requires telephone or face-to-face contact with a human partner. During the focus group discussion Linda repeatedly referred to the subjectivity of the benefit system.

Linda: "I absolutely do not take no for an answer."

Louise: "Why not?"

Linda: "Because I know, if she [caseworker] says yes [to a request for a benefit] she'll get more paperwork, and they're on a schedule, so it's easier for her to say 'No Linda, you can't have that'."

During the follow-up interviews, Linda went into more detail with this aspect, and mentioned how it influenced her channel choice, as well as the nature of the interaction.

INT: "The second aspect (...) is the likelihood that you'll be granted these benefits."

Linda: "Yes, definitely, I still believe in that. (...) I see myself as friendly, groomed and all that. And I know how to communicate. So I'll get further if I show up in person at the counter, right? And I think it's like that in many situations, right? (...) if I say, 'Oh that's a nice bracelet you're wearing', then I can charm her, and she'll think I'm nice and say 'Of course you can get that Linda'."

Similarly, Belinda would mention how her neighbors would call her as an expert, because they got different answers from different caseworkers.

*Belinda: "Many of the rules are open to interpretation. I've seen that in relation to my disability, according to one caseworker I could get this and that, and when they were replaced with a new one, then all of a sudden I couldn't get it. And I was like, but it's the same disability, and I'm still enlisted at the same education, well I couldn't. (...) So there's no doubt that it depends on how they interpret the legislation within the area, because you'll notice if you read it, that it is quite vague, right?"*

Belinda's example demonstrates how warm experts, due to their experiences with the specific benefits and with public authorities in general, can help challenge the caseworkers' decisions. Here, as with the mandatory requirement for e-government channels, we note that citizens interpret the rules regarding public benefits and share their interpretation with each other. In the same way as the previous example, this interpretation is not necessarily in line with the public authorities' intention.

Having presented our findings of how citizen-to-citizen interaction can influence CC use and evaluation the next section discusses these findings in relations to previous CC studies.

## **5. Discussion**

In the following we discuss our findings by taking Teerling and Pieterse's conceptual model as a point of departure. This section is divided into sections which discuss each step of the model; channel choice, use and evaluation. Then we discuss areas where our results differ from previous studies, and offer suggestions to update the conceptual model according to our findings. As these suggestions are the result of a single qualitative study, they should be regarded as preliminary until they are confirmed by further studies.

There is a five-year interval between our empirical study and the study conducted by Teerling & Pieterse's (2011), and e-government channels are mandatory in Denmark. However, the studies also share several similarities. They revolve around public service encounters regarding public benefits for parents. Additionally the Netherlands and Denmark are relatively similar in terms of citizens' high levels of trust in public authorities, Internet access and use of e-government services (Marozzi, 2014; Statistics Denmark, 2014). In spite of the differences, we still believe the studies can be compared at the conceptual level.

### **5.1 Channel choice**

Like Teerling & Pieterse we find that communication influences CC. However, we find that the external source of the communication can be fellow citizens, as well as a government organization. Thus our results suggest, that CC is not just the result of a cognitive process in the individual citizen, but also of a social process whereby citizens share information. Further, we find that CC is not only influenced indirectly by an individual's perception of what others do, and how one thinks they will react to one's choice, but also directly through social interaction, such as people helping each other interact with public authorities.

We found considerable differences in the level of trust people place in information from external sources. Some participants prefer the information they receive from other citizens, as it is easier to understand and identify with fellow citizens than public authorities. Some also distrust caseworkers and believe that there are other reasons than legal behind benefit processing. This is a contested issue, some participants distrust caseworkers, while others clearly state that they fully trust public authorities and prefer their advice, especially in comparison to advice from online strangers. Either way, our findings suggest that a person's beliefs also influence their CC and their response to external forces.

### **5.2 Channel use**

Although Pieterse and Teerling's model includes both CC and use at the conceptual level, they do not distinguish between these aspects in their study. They focus on how public authorities can influence citizen's CC, not the way the channels are used.

By conducting a study at the group level rather than the individual level, we find that the practices shared not only concern which channels to use, but also *how* channels should be used, and *why* they should be used in certain manners. The results suggest that social influence is more than just a factor, which leads to lower or higher adoption rates, but also affects how the actual use occurs. Inspired by domestication studies, we found practices that do not follow the intentions in the digitization strategy. On the contrary, some practices relate to how citizens can charm caseworkers to spend more time on their cases, increase the likelihood of being

granted benefits, or getting around the mandatory requirement for e-government channels. Through citizen-to-citizen interactions, people share and shape their interpretation of not only technologies, but also public policies. It is important to note people’s interpretation of e-government policies and technologies is not necessarily in line with public authorities’ intentions, and citizen-to-citizen interaction may reduce the adoption of certain technologies.

### 5.3 Channel evaluation

Finally, we found that other people can influence the evaluation and perception, not only of channels, but, more importantly, also of the public authorities and the task in question. In the focus group discussions participants shared perceptions of public authorities and their experiences in communicating with them through various channels. Other people’s practices, especially if coming from someone in one’s personal network, can have a significant influence on one’s own perception of public authorities, and public service encounters.

We find that discussion concerning channel practices in public service encounters is related to how one regards public authorities, as subjective or objective, the task in question, and the available channels. In line with previous studies on social influence we found that such evaluations are often shared through the use of stories and anecdotes (Schmitz & Fulk, 1991).

### 5.4 An expanded process model for channel choice, use and evaluation

Returning to Teerling & Pieterse’s process model, we find that citizen-to-citizen interaction occurs in all three steps of the public service encounter. Thus we suggest that the process model can be expanded by including co-citizens who may influence each of these steps.

We also find that public service encounters do not start at the point of channel choice. Rather an event, either in one’s life, or one generated by the public service system, generates a need to interact with public authorities to solve a task. Determining what this task is, and how to solve it, happens before a channel is chosen. Once the task has been determined, it influences both channel choice and use. This task awareness is often created through citizen-to-citizen interaction, either in person or on third party channels. We therefore suggest that another step in the model called ‘Task awareness’ can be inserted.

Finally, we repeatedly found that our participants perception of public authorities influence how they interact. This suggests, that it is not only one’s prior experience with a public service encounter, that influence future encounters, but also the underlying belief that one has in public authorities. Therefore we also suggest that citizens’ perception of public authorities is added to the model.

Figure 2 presents our suggestions for how to extend the process model to include citizen multichannel practices. This includes citizen-to-citizen interaction, task awareness, and perception of public authorities. The original model’s elements are formatted in bold to distinguish it from our additions. Although our findings are generally in line with previous domestication studies, the suggested extensions are based on a single study as mentioned earlier. Thus, more research using quantitative methods is needed to validate the extension of the model.

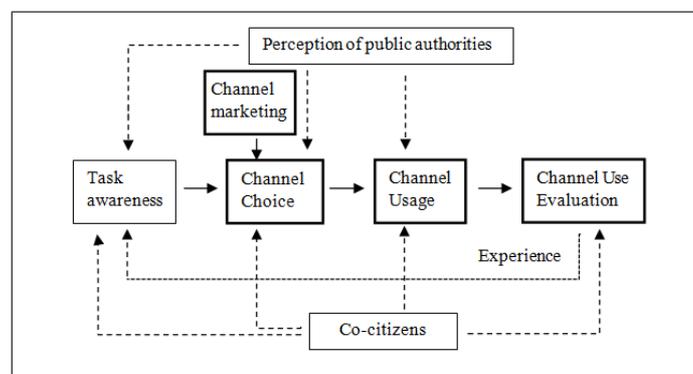


Figure 2: Suggestions for expanding the CC process model.

## 6. Conclusion

We set out to study how citizen-to-citizen interaction influences channel choice, use and evaluation for government-to-citizen interaction, and have done so by conducting focus group discussions followed by individual interviews and observations. By applying qualitative methods, we have gained insight into how citizens share their practices and the underlying perceptions informing these practices. Our study offers several contributions to the e-government and channel choice literature.

Unlike previous studies, which have focused on individual citizens' CC in voluntary settings, we studied actual use among groups of citizens in a mandatory setting. Applying domestication theory as our theoretical lens, we demonstrate that citizens are not only informed by public authorities, but also by each other. Our results suggest, that channel choice, use and evaluation are not just the result of cognitive processes within an individual but also social processes between citizens. Digital literacy is not the only requirement to use e-government self-service channels; administrative literacy and knowledge of the benefits in question are also important. Although citizens may want to use e-government channels, their situation might not fit to the system's requirements, or they may not know what to do. Having a friend or relative explain this, perhaps from personal experience, is of great help.

We also found that citizen-to-citizen interaction is not necessarily in line with the intentions of public authorities, for instance by sharing ways of getting around the mandatory requirement. This finding follows from our application of a social constructionist framework, domestication theory. The understanding that people do not always do as they are told, but also make technologies and policies their own is something which we believe both e-government scholars and practitioners should take into consideration. Our study suggests, that citizens' perceptions of public authorities also influence the channels they choose in public service encounters. These perceptions are shared through personal stories and anecdotes along with practices for how to negotiate with caseworkers. Government organizations who wish to utilize social networking services should consider this first.

We chose to study citizen-to-citizen interaction through direct methods of observation. Thus we have not conducted in-depth studies of citizen interaction on third party websites. However, our results indicate that such interaction is important, and influences people's perception of public authorities and public service encounters. One important limitation of our study is that all of the participants are between the age of 36 and 51, and the majority are women. Moreover, among the 28 participants only one had a non-Danish background. Had we conducted our study with elderly citizens for instance, digital literacy might have received more attention. If we had done a study among immigrants, language would likely be an important factor.

Future studies can examine how people's perception of authorities are shared and shaped online. One topic, which would be particularly timely for such an analysis, is how people share their perceptions and practices related to mandatory e-government. Another suggestion is to repeat the study, but conduct it among different population groups; young people, the elderly, or non-native citizens for instance. As we have applied qualitative research methods we cannot quantify or test the impact of citizen-to-citizen interaction, nor can we validate the suggested extensions to the process model. Scholars who wish to do so, should apply quantitative methods and/or conduct field experiments.

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**Appendix A. Focus group composition and participants**

Alias	Age	Gender	Occupation
Focus Group 1. Copenhagen, April 23 <sup>rd</sup> 2013.			
Monica	42	F	Nurse
Maja	36	F	Student
Tina	42	F	Office clerk (unemployed)
Lis	42	F	Self-employed
Lene	41	F	Student
Tanja	41	F	Actor
Sten	47	M	Carpenter (unemployed)
Focus Group 2 Copenhagen, April 30 <sup>th</sup> 2013			
Ulla	45	F	Psychologist
Louise	42	F	Student, hairdresser
Hanna	38	F	Student, graphic designer
Linda	39	F	Janitor (unemployed)
Focus Group 3 Copenhagen, May 2 <sup>nd</sup> 2013			
Susan	42	F	Office clerk
Belinda	40	F	Office clerk
Tine	41	F	IT project coordinator
Maria	46	F	Head stewardess
Gitte	41	F	Director
Focus Group 4 Vordingborg, May 22 <sup>nd</sup> 2013			
Dorte	50	F	Pedagogue
Glen	42	M	Painter
Anne	43	F	Pre-school teacher
Elizabeth	50	F	Childminder
Susanna	43	F	Accountant
Tom	45	M	Canteen manager
Focus Group 5 Vordingborg, May 23 <sup>rd</sup> 2013			
Laila	51	F	Janitor
Sanne	45	F	Head nurse
Janni	45	F	Office clerk
Marianne	38	F	Student, factory worker
Ditte	37	F	Childminder (unemployed)
Kim	47	M	Civil servant