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The efficiency of freedom: Single parents' domestication of mandatory e-government channels

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ABSTRACT

The Danish e-government strategy aims to increase the efficiency of public sector administration by making e-government channels mandatory for citizens by 2015. Although Danish citizens have adopted e-government channels to interact with public authorities, many also keep using traditional channels. Previous studies have analyzed citizens' channel choice in non-mandatory settings, and mostly surrounding a single isolated channel. To cover these gaps we present a mixed method study of citizens' actual use of e-government channels using domestication theory as our framework. Our findings indicate that e-government and traditional channels are often used simultaneously, and citizens' perceptions and previous histories with public authorities influence channel choice. Further, citizens' existing routines related to third-party non-official channels also influence their interaction with public authorities. Moreover, we find a series of unmet needs which leads to information requests on traditional channels concerning online transactions. Based on the study we offer recommendations to practitioners to increase the use of e-government channels and reduce traffic on traditional channels.

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1. Introduction

The Danish e-government strategy has made government to citizen (G2C) interaction through e-government channels, such as websites and online self-service applications, mandatory by 2015 (The Danish Government, Danish Regions, & Local Government Denmark, 2011). The strategy aims to increase the efficiency of public sector administration by increasing citizens' use of e-government channels and reducing interaction through traditional channels. A new public authority, Udbetaling Danmark (UDK), was established in 2012 to achieve savings in the administration of public benefits through centralization and digitization. Interaction between citizens and UDK primarily takes place through the portal borger.dk (citizen.dk) and digital post, a public e-mail system, which replaces physical letters. The online system NemID handles identification. For personal assistance, citizens can call UDK or turn up at the municipalities' local service centers.

E-government studies have shown that supplying e-government channels does not ensure that citizens adopt them (Coursey & Norris, 2008), and that e-government channels tend to supplement rather than substitute for traditional channels (Pieterse, 2010; Reddick & Anthopoulos, 2014). These findings are similar to recent experiences from Denmark. In spite of having the highest e-government adoption

rate in the EU, and e-government channels becoming mandatory, the Danes still use the telephone and counter turn-ups for G2C interaction (Kommunernes Landsforening, 2014; Statistics Denmark, 2014).

1.1. Purpose and research question

The research questions we seek to answer are:

- How do citizens actually use mandatory e-government channels?
- How can studies of citizens' actual use contribute to improving e-government channels and reduce the need for traditional channels?

By addressing these research questions and studying citizens' actual use of mandatory e-government channels we contribute to the CC field of e-government and fill existing gaps therein. Moreover, we respond to calls for qualitative studies on CC (Pieterse, 2010; Reddick & Anthopoulos, 2014). Finally, we offer specific recommendations based on actual use thereby accommodating criticism of the e-government field (Heeks & Bailur, 2007; Madsen, Berger, & Phythian, 2014).

We conduct a case study applying domestication theory as a theoretical lens. According to domestication theory people are not just passive adopters, but active subjects, who redefine technology to their own needs as they incorporate it into their everyday life (Silverstone & Hirsch, 1992, p. 16). Thus, domestication involves mutual processes, where technology shapes and is shaped by people's practices and

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values. This framework seems fitting for studying the actual use of mandatory technology, and when seeking insight into how and why this use deviates from the official requirements.

Our study revolves around family benefits, which a specific section of UDK manages. 'Family benefits' is an umbrella term for multiple benefits which parents with children under the age of 18 are legally entitled to. All parents are signed up for basic child benefits automatically. Single parents are entitled to special benefits as long as they do not live with other adults under marriage-like conditions. To retain the benefits single parents annually need to inform UDK that they are still single using an online self-service application. Single parents may also be eligible for additional benefits managed by different sections of UDK and other authorities. According to official statistics, Danish single parents have high access to ICTs, and are skilled and frequent users of online services, including e-government (Statistics Denmark, 2014). By focusing on them, we gain insight into a highly competent groups' actual use of e-government services, and post-adoption processes related to e-government. Most e-government adoption and CC studies have taken place in settings where citizens have a free choice of channels, our study takes place in a mandatory setting, which adds to its novelty and contribution.

The next section presents e-government adoption and CC studies and identifies gaps herein. Section three presents domestication theory as the theoretical lens guiding our study while section four presents our methodology. Sections five and six present and discuss results. Finally, section seven presents concluding remarks, limitations and implications for further research.

2. Previous studies of citizens' adoption of e-government channels

In a literature review, Hofmann, Räckers, and Becker (2012) identify two perspectives in studies of citizens' acceptance of e-government services. The first is grounded psychological theories seeking to predict human behavior and applies adoption models such as the Technology Adoption Model (TAM) (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis, & Davis, 2003), while the second is based on Diffusions of Innovations theory (Rogers, 2003). Both perspectives use variance models to test 'independent variables that cause variation in dependent variables' (Webster & Watson, 2002, p. xix). The independent variables known to influence the intention to use a new technology are citizens' perception of the e-government service; especially how easy to use and useful the technology appears to be, demographic variables such as age, gender, and education, facilitating conditions (help offered), and finally social influence (pressure to use the technology). E-government scholars have included additional variables beyond those known from the technology adoption literature. Bélanger and Carter (2008, Carter & Bélanger, 2005) have found that citizens' trust in public authorities also influences the willingness to use e-government channels.

Hofmann et al. (2012) and Madsen et al. (2014) criticize the adoption studies for focusing on citizens' intention to use generic e-government services, rather than their actual use of real services, and of ignoring specificities of the services in question. This limits the researchers' ability to offer practical recommendations. Moreover, the studies limit citizens' actions to either adoption or non-adoption of a single channel. Variation in use, citizens' inventions of new ways of using e-government services, and the interplay that can occur across channels are ignored (Madsen et al., 2014).

CC studies in e-government analyze citizens' and businesses choice of channels for interacting with public authorities. Madsen et al. (2015) conducted a literature review of 36 papers on CC and multichannel management for G2C interaction. Of these, 19 studied CC at the level of the individual citizen, mostly through quantitative methods and statistical modeling of survey data. These studies are informed by TAM, marketing theory, and frameworks from media and communication theory, especially Media Richness Theory (Daft & Lengel, 1986), Channel

Expansion Theory (Carlson & Zmud, 1999), and Uses and Gratifications research (Katz, Blumler, & Gurevitch, 1973). Like the e-government adoption studies, many CC studies use variance models. They test the impact of independent especially channel and task characteristics, demographic variables, and situational constraints on dependent variables; citizens' CC and satisfaction with the service encounter (Reddick, Abdelsalam, & Elkadi, 2012; Reddick & Anthopoulos, 2014; Reddick & Turner, 2012; Reddick, 2010). These studies show that websites are suitable when citizens need to look up information, but telephone or face-to-face conversation, which allow for direct interaction with a caseworker are preferred to handle more complicated problems. Results also indicate that channel characteristics are not fixed properties, but citizens' experiences with channels influence the perception of them and the willingness to use these channels again (Pieterse & Ebbers, 2008; Pieterse, Teerling, & Ebbers, 2008; Teerling & Pieterse, 2011).

By conducting group interviews Pieterse and van Dijk found that citizens are primarily guided by habits, and do not necessarily consider their options until problems arise (Pieterse & van Dijk, 2007). In a later study, Teerling and Pieterse (2010) conducted a field experiment and found that it is possible to change these habits and guide citizens to e-government channels through marketing.

In spite of these valuable contributions, several knowledge and methodological gaps remain. Few studies regard CC as a process, and many are based on analysis of secondary survey data. Such studies do not offer insight into the actual use that occurs after CC. Reddick acknowledges these limitations and calls for focus group discussions for in-depth examinations of how citizens perceive e-government services, channel switching, and CC in relation to mandatory tasks and services (Reddick & Anthopoulos, 2014; Reddick & Turner, 2012; Reddick, 2005). Pieterse and Ebbers (2008) suggest that observations and analysis of phone and desk conversations is used to gain insight, while Pieterse (2010) notes that more knowledge is needed about the actual needs, desires and behavior of citizens and the role emotions play with regards to CC. We will cover these gaps by applying domestication theory, which seeks to understand people's practices from the inside by analyzing the reasons people offer for their actions. This separates domestication theory from the e-government adoption and CC studies, which study these phenomena from the outside and seeks causal explanations through hypotheses testing and statistical modeling (Blaikie, 2012).

3. Theoretical lens: domestication theory

Domestication theory studies the processes that take place after technologies are brought into households (Berker, Hartmann, Punie, & Ward, 2005). It is used to study how people make technology their own by adapting it to their values, interests, and routines. Domestication theory was developed by combining reception analysis and social shaping of technology studies (Haddon, 2007). Domestication theory regards the meaning of technology as a dynamic phenomenon continuously created through social interaction and use in everyday life. According to domestication theory users both shape and are shaped by technology through mutual processes of negotiation between the household members, the technology, and the outside world. Following this framework the actual use or perception of the technology cannot necessarily be anticipated by designers or policymakers. For citizens to use a channel they must first create a set of practices related to it, which must be seen to fit into the citizens' everyday life and routines related to G2C interaction. The framework for analyzing the domestication process consists of four overlapping aspects as shown in Fig. 1 (Silverstone & Hirsch, 1992). *Appropriation* covers the processes of negotiation and consideration whereby the technology is brought into the household and changes from being a generic commodity to an object of significance with a certain purpose for the household members (Haddon, 2011). *Objectification* covers the physical display of the

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