

Citizen Satisfaction:
Political Voice and Cognitive Biases

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PhD Dissertation

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Chapter 1: Introduction

Research in citizen satisfaction has changed enormously over the last decade. The number of research articles using citizen satisfaction is growing and insights into how citizens evaluate public services and form satisfaction are developing quickly (Hjortskov 2016a). The development within the academic community seems to be an answer to the increased use of citizen satisfaction as a performance measure. A recent estimation states that more than 600 citizen surveys were conducted from 2007 to 2009 in US jurisdictions, which represents an increase of 30 percent since a comparable estimate for the year 2000 and an increase of 1000 percent since in 1991 (Miller et al. 2009, p. ix). Likewise, an older review from 1982 showed that 62 pct. of US cities with more than 50,000 inhabitants had used some form of citizen survey (Johnson and Hein 1983).

The increased use of citizen satisfaction as a performance measure of course has many reasons but an important one is its usefulness and near perfect fit with contemporary management theories. Following the “Reinventing Government” debate (Osborne and Gaebler 1992), performance measures have become important tools for public managers. An efficient public manager should, according to this view of management of public organizations, be informed about the organization’s performance, act upon this knowledge and focus on the end-user of the services. Public management largely went from supply-based to more demand-based management thinking.

The era of performance management, as it has been called (Moynihan 2008), needs performance indicators, and citizen satisfaction suits this need perfectly. Citizen satisfaction manages to deliver a user-based performance measure that in theory can be all-encompassing even if the outcome of the public service in question is not easily captured by objective measures of performance. Citizen satisfaction has the potential to capture the often complex performance dimensions of public services that objective measures cannot given the multiple, ambiguous and often conflicting goals in the public sector (Favero and Meier 2013; Morgeson 2014; Rainey 2014; O’Toole and Meier 2015).

Furthermore, in a democratic society, politicians and public managers have a need to assess how different policies and the service quality are perceived among the citizenry, and citizens need to hold incumbents accountable for the policies they implement (Kelly and Swindell 2002a; Boyne et al. 2009). By using citizen satisfaction measures, public managers and politi-

cians not only serve the dominant management theory well, they also appear democratic, transparent, and accountable. These are some of the reasons why public organizations increasingly use citizen satisfaction as a measure of performance.

While the reinventing government and performance management wave seems to have sparked a new research interest in citizen satisfaction, general research in citizen satisfaction is a quite old endeavor (Stagner 1970; e.g., Hatry and Blair 1976; Stipak 1979a; Brown and Coulter 1983; Lyons et al. 1992). Much of this research has relied on satisfaction as an outcome measure and focused on different independent predictors as the theoretically interesting constructs. Some of the research has focused on the democratic aspects of citizen satisfaction. Often inspired by Hirschman's exit, voice and loyalty distinction (1970) this branch of research focuses on responses to dissatisfaction, i.e., exiting the public service if possible, or the possibility of voicing dissatisfaction through legitimate channels (e.g., vote for other politicians, contacting officials, complain, protest) (Lyons et al. 1992; Dowding and John 2012; John 2016).

Recently, however, satisfaction and its antecedents have been studied as theoretical constructs in their own right. This new focus has brought a famed model of the antecedents of satisfaction from the business and marketing sciences into public administration: The Expectation-Disconfirmation Model (EDM) (Van Ryzin 2004). The model has been the predominant model of the antecedents of citizen satisfaction for a decade now (Hjortskov 2016a), and it is not hard to see why. It is simple and intuitive; it seems to work; and it is the most used model in consumer satisfaction research, the research field that primarily has inspired research in citizen satisfaction.

The theory states that satisfaction is primarily influenced by citizens' prior expectations to a service contrasted with their perceptions of the performance delivered. If expectations are disconfirmed by perceived performance, citizens are most likely dissatisfied. If expectations are confirmed, or even exceeded, citizens are most likely satisfied (Oliver 1980a; Van Ryzin 2004). Public administration research has largely confirmed the basic propositions of the model (e.g., Van Ryzin 2004, 2006; Roch and Poister 2006; James 2009; Poister and Thomas 2011; Morgeson 2013).

However, some unanswered questions remain in both the general citizen satisfaction research and the EDM. First, if satisfaction surveys and their results are supposed to be democratic tools capable of increasing feedback from citizens and managers' and politicians' accountability, it is important that these surveys are representative of the citizens. Research in political participation has pointed to the problem of representation for decades (Verba and Nie 1972; Schlozman et al. 2012), but there is not much research on

the representativeness of citizen satisfaction surveys and how to increase participation among low-SES groups.

Second, a core assumption of the EDM is that it is primarily cognitive (Oliver 1993, p.419, 2010, p.177). This basically means that the expectation formation process and the comparison of performance to expectations are conscious, overt activities carried out by the citizens when they evaluate the public services (Oliver 1993, p.419) and that the relationships between the constructs in the model are consistent. However, a growing literature in cognitive and social psychology challenges this presumption (e.g., Kahneman and Frederick 2005; Sherman et al. 2014), and some parts of the EDM as well as some of the empirical results using it seem at odds with the assumption that the model is primarily cognitive.

Third, most applications of the EDM do not consider the repeated evaluations citizens make through a service relationship with a public service. Citizen expectations are thought to be exogenous to previous experiences and satisfaction and thus fixed at a given time point prior to the evaluation of the performance. However, these are rather heroic assumptions since expectations are also thought to take previous encounters with the service into account, that is, exactly the experiences they are supposed to be exogenous of. No research has considered if previous citizen satisfaction can affect current expectations.

Fourth, the concept of citizen expectations is largely unexplored in public administration apart from James' (2011a) and Jacobsen et al.'s (2015) studies. Some studies have been carried out in the marketing and business literatures (e.g., Zeithaml et al. 1993; Teas 1994; Clow et al. 1997; Devlin et al. 2002; Dean 2004; Steward et al. 2010; Meirovich and Little 2013), but fundamental shortcomings still remain. One example is how citizens actually interpret expectations and the questions we ask them (Spreng et al. 1998). If citizen interpretations of expectations are different than what we have so far assumed it will confound the measures of expectations and the interrelationships they theoretically enter into. Another example is whether citizens' personalities affect their interpretations of expectations and their actual expectations.

The dissertation adds to the current literature on citizen satisfaction by examining these four shortcomings, the representativeness of the satisfaction surveys and how to increase it, the assumption of primarily cognitive evaluations by citizens, the repeated evaluations made by citizens, and citizens' interpretations of expectations. The overall research question guiding this endeavor is: *What explains citizens' willingness to voice their satisfaction with public services and how is this satisfaction formed?* The disserta-

tion consists of the present summary report and five papers, which are further described below.

This summary report consists of, and is structured by, summaries of the five papers in the dissertation. The main purpose of the report is to add outlook to the papers in the form of a more general discussion of the theoretical, practical, and methodological implications of the results and to propose a set of testable hypotheses that can guide future research in citizen satisfaction.

The Papers in the Dissertation

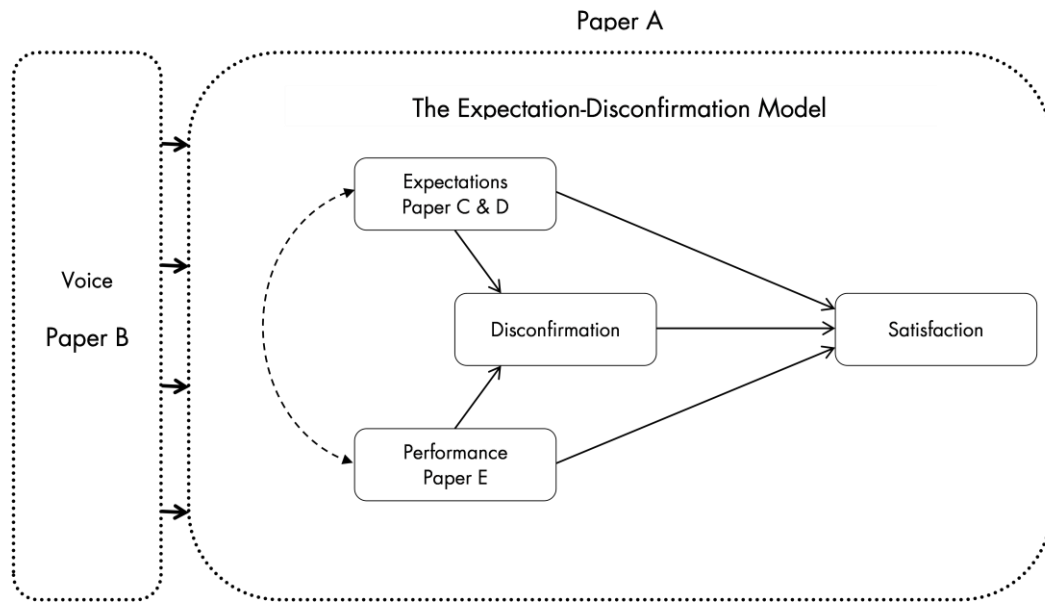
The dissertation consists of the following collection of papers:

- A. Hjortskov, Morten (2016a): ‘The Expectation-Disconfirmation Model of Citizen Satisfaction – A Review’. *Invited for revise and resubmit at Public Administration*
- B. Hjortskov, Morten, Simon Calmar Andersen and Morten Jakobsen (2016): ‘Encouraging Political Voices of Underrepresented Citizens through Coproduction – Evidence from a Randomized Field Trial’. *Working paper*
- C. Hjortskov, Morten (2016b): ‘The Feedback of Satisfaction - How Higher Citizen Satisfaction Can Drive Expectations of Future Service’. *Working paper - submitted*
- D. Hjortskov, Morten (2016c): ‘Interpreting Expectations – Citizens’ Predictive and Normative Expectations and Their Interpretations of Them’. *Working paper*
- E. Andersen, Simon Calmar and Morten Hjortskov (2015) ‘Cognitive Biases in Performance Evaluations’, *Journal of Public Administration Research and Theory*, Online Access

Figure 1.1 places the five papers in the context of the general framework of the EDM, and Table 1.1 provides further details on them. *Paper A* is a review of citizen satisfaction research between 1974 and 2014 with special focus on the EDM and the assumption that citizens engage in primarily cognitive processes when evaluating and expressing satisfaction. Its contribution is both the review of citizen satisfaction research and a proposal to look into dual-process theory and implicit attitudes in order to gain more knowledge about the drivers of the satisfaction response and the EDM. *Paper B*, the “voice”

paper, utilizes a field experiment among parents of bilingual children to investigate if a coproduction intervention is capable of increasing the political voice of these parents, that is, to encourage them to state their satisfaction with the public services to managers and politicians through satisfaction questionnaires.

Figure 1.1: Illustration of the Papers in the Dissertation



Paper C looks into the possible feedback effects of prior satisfaction on current expectations over time using a two-wave satisfaction survey among parents of school children. *Paper D* looks further into the expectation construct and analyzes citizens' interpretations of expectations and how these and actual expectations are explained. The paper specifically looks at the possible influence of personality traits and a maximizing tendency on predictive and normative expectations. Finally, *Paper E* investigates if the EDM is only cognitive by specifically investigating if the citizens' perceived performance is affected by questions about future budgets that should be irrelevant to their specific performance evaluation. The paper further investigates if asking about the performance changes the satisfaction evaluation.

Table 1.1: Overview of the Papers

	Short title	Construct focus	Data	Design	Method	Sample
A	Review	The EDM	Web of Science database	Systematic review	Reading, counting	Stock of citizen satisfaction papers
B	Voice	Citizen voice	Experimental	Field experiment, cluster randomized	LPM and logit regression	Parents of bilingual children in daycare in Aarhus
C	Feedback	Expectations	Observational	Two-wave survey panel	Fixed effects OLS regression	Parents of children in schools in Aarhus
D	Interpretation	Expectations	Experimental, observational	Survey experiment	Cross tabulation, OLS regression	MTurk sample of US citizens
E	Cognitive bias	Perceived performance	Experimental	Survey experiment	Logit regression	Parents of children in schools in Aarhus

The overall contribution of the dissertation is twofold: First, citizen satisfaction is an important channel of feedback to politicians and public managers and a source of accountability between citizens and public organizations. However, like in other political participation modes, some citizens' voices are underrepresented, and they are therefore not heard. The dissertation shows that involving citizens in the coproduction of public services can increase their participation in a governmental satisfaction survey and give them a channel to express a political voice that politicians and public managers would otherwise not hear.

Although the idea has been mentioned in the coproduction literature, this is the first time a coherent theoretical argument has been presented for the beneficial effects of coproduction on political voice. Furthermore, the dissertation, also for the first time, empirically tests the theoretical argument in a field experiment. The results show that coproduction increases political voice through governmental satisfaction surveys but does not seem to increase participation in a local election.

Second, the dissertation contributes by showing that politicians and public managers should be careful when they interpret citizen satisfaction as information about performance. Irrelevant and unconscious influences are lurking when citizens make performance and satisfaction evaluations, and even asking about performance before asking about satisfaction may distort the satisfaction measure. Moreover, the expectation construct often used in citizen satisfaction research may be subject to confounding because it can be influenced by previous satisfaction, which indicates that expectations are not exogenous to satisfaction as often assumed, and it can be confounded by differences in citizens' interpretations of expectations.

These contributions add to Stipak's early reservations about using citizen satisfaction as a performance indicator (1979a). It has been known for some time that people most likely evaluate services by comparing to a standard like the expectations in the EDM. Stipak hints at this fundamental, possible confound in satisfaction evaluations of performance (*ibid.*, p. 49), but it was only with the introduction of the EDM in citizen satisfaction that it was taken seriously in this literature (Van Ryzin 2004). The contributions of this dissertation add further reservations concerning cognitive biases in the satisfaction evaluation (papers *A* and *E*) and concerning the endogenous expectation formation and citizens' interpretation of expectations (papers *C* and *D*).

The two general contributions, citizen satisfaction as an important voicing and accountability instrument and citizen satisfaction as a troublesome indicator of performance, may seem to be in opposition to each other. However, the overall message of this dissertation is that citizen satisfaction is an important participatory channel and a measure that public managers, politicians and researchers alike should take advantage of, but also that we should develop measures of satisfaction, performance and expectations that avoid as many of the potential confounders and cognitive biases as possible. After all, the political participation measure par excellence, voting in democratic elections, also has its biases (Achen and Bartels 2016), but that does not mean that we are abolishing voting as a means of participation. There is a signal from the citizens in the satisfaction evaluations; we need to work towards disentangling it from the noise.

Outline of the Dissertation

The outline of the rest of the dissertation is as follows. Chapter 2 reviews the state of citizen satisfaction research in public administration and presents the general theories of satisfaction and the EDM. This chapter draws on the "review" paper (Paper A). Chapter 3 situates the dissertation in a research context concerning the public-private and the subjective-objective performance evaluation distinctions and concerning interpreting citizen satisfaction as a performance measure. Chapter 4 deals with the citizens' choice to voice their opinions through satisfaction surveys and how we can encourage disadvantaged citizens to do so. Naturally, this chapter builds on the "voice" paper (Paper B) and reflections on the democratic and participatory possibilities and challenges in surveying citizens about the performance of public services.

The next chapters deal with the satisfaction attitude and its antecedents in detail. Chapter 5 looks into the expectation construct. Expectations are a fundamental part of satisfaction and especially the EDM. Chapter 5 draws on

the “feedback” paper (Paper C) and the “interpretation” paper (Paper D) in investigating the expectation construct, and especially the antecedents and interpretations of it. The chapter aims to show that both some of the antecedents of expectations, specifically prior satisfaction, and the citizens’ own interpretations of expectations may confound the expectation construct itself and also the theoretical relationships it enters. Furthermore, the chapter investigates the possible role of personality traits in citizens’ expectation formation.

Chapter 6 brings in attitude theories on dual-processing and cognitive biases to focus on the perceived performance construct, which is conceptualized as a hard, performance-based construct, and its relationship with satisfaction. The chapter uses the results from the “cognitive biases” paper (Paper *E*) to illustrate that cognitive biases might distort perceived performance and therefore also citizens’ link to satisfaction. The results question the cognitive interpretation of the EDM and the coherence-rationality assumption inherent in it.

Chapter 7 uses the insights from the preceding chapters to suggest new research questions for citizen satisfaction with a larger focus on attitude theories and recent consumer satisfaction research. It does so with a starting point in the “review” paper (Paper *A*) and its suggestion to reinterpret the EDM in the light of the MODE model. Finally, Chapter 8 concludes the summary report with a discussion of the contributions, the methodological limitations and the implications of the dissertation.

Chapter 2: Citizen Satisfaction and the Expectation-Disconfirmation Model: A Theoretical Overview

What is satisfaction? According to Oliver (2010), “Everyone knows what [satisfaction] is, until asked to give a definition. Then it seems, nobody knows” (p. 7). It is a mystery, really. The concept seems so clear to most of us, and we handily answer questions about our own satisfaction with everything from street cleanliness to life itself. But when we discuss it more in-depth, it does not fit into the boxes we create to contain it. It is like catching smoke. Satisfaction is a sort of grand, overall evaluation, but little things can affect it substantially. The antecedents of satisfaction seem clear and well defined, but they are just as complex as satisfaction itself. Satisfaction appears to correlate with some objective performance measures, but mostly at the aggregate level. If nothing else, satisfaction makes for an intriguing research endeavor.

There have been many attempts to define what satisfaction is, and one outcome is that satisfaction might be a generic rather than a static concept; it varies with application (Yi 1990; Giese and Cote 2000). However, a number of researchers have offered definitions (Yuksel and Yuksel 2001, p.52), and one is delivered by Oliver himself:

Satisfaction is the consumer’s fulfillment response. It is the judgment that a product/service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or overfulfillment (Oliver 2010, p.8)

This definition implies that satisfaction is a judgment about a fulfillment or non-fulfillment that results in a response. The fulfillment of course needs a standard against which it can be judged in order for it to achieve “under- or overfulfillment”. The service must live up to something in order for the consumer to be satisfied. This comparative standard is typically the consumer’s or citizen’s expectations, but it should be stressed that other comparative standards also work (Oliver 1997, p.68).

Satisfaction *has* been a popular research subject during the last decades. The concept has been used broadly in many fields of research in order to gain insights into what citizens, consumers and people think about various products and services and their relationships, jobs and lives in general (Howard

and Sheth 1969; Locke 1969; Campbell 1981; Yi 1990; Kahneman et al. 1999). Also among public administration and public management scholars has citizen satisfaction¹ been an important subject for many years.

Studies of citizen satisfaction with urban services almost have as long a history as studies of consumer satisfaction (e.g., Stagner 1970; Hatry and Blair 1976; Stipak 1979a; Brown and Coulter 1983; Hero and Durand 1985; Lyons et al. 1992; Kelly 2003; Miller et al. 2009). Research in this tradition typically has a series of performance ratings and citizen characteristics from citizen surveys and tests their direct effects on satisfaction. This approach echoes a similar (classic) approach in consumer satisfaction (Oliver 1997, p.33) and the institutional performance model from education research (Jacobsen et al. 2015).

Some of the key results in this main part of citizen satisfaction, many of which originate from the urban policy literature, are that race, age and income may affect citizen satisfaction with urban services (Durand 1976; Lovrich and Taylor 1976; Brudney and England 1982; McDougall and Bunce 1984) and police (Brown and Coulter 1983). Personal contact with service personnel seems to affect satisfaction positively (Hero and Durand 1985), and political efficacy and attachment to the community are positively connected to satisfaction (Stipak 1979a; Beck et al. 1987). Also, structures at the jurisdictional and political levels seem very important for the creation of satisfaction (Lyons et al. 1992). Perceptual biases have also been noted in the classic public administration literature, albeit with a strong focus on objective versus subjective measures and attribution of blame biases (Stipak 1977, 1979; Parks 1984; Beck et al. 1987; Lyons et al. 1992. See also Chapters 4 and 6), which is relevant for this dissertation.

Another strand of research in citizen satisfaction focuses on dissatisfaction in the Hirschman (1970) and Tiebout (1956) tradition and combines satisfaction research with the exit, voice and loyalty model. One noteworthy set of studies is *The Politics of Dissatisfaction* (Lyons et al. 1992), which focuses on citizen responses to dissatisfaction and develops a new model, the EVLN (exit, voice, loyalty and neglect), which has gained some support (Dowding and John 2012).

However, the interest in citizen satisfaction has been boosted during the last decade. This is partly attributable to the introduction of a specific model of satisfaction: The Expectation-Disconfirmation Model (EDM). Van Ryzin

¹ In this dissertation, *citizen satisfaction* represents satisfaction with public services delivered by public organizations. This is often contrasted with consumer satisfaction, i.e., satisfaction with consumer goods and services delivered by private companies.

introduced the model in the public administration literature in two articles in 2004 and 2006 (Van Ryzin 2004, 2006), and important work has been carried out since (Roch and Poister 2006; James 2009; Poister and Thomas 2011; Morgeson 2013; Van Ryzin 2013).

The use of expectations as a comparative referent to citizens' perceived performance, which is the fundamental argument of the EDM, had only been mentioned as influential in public administration before this introduction (Stipak 1979a, p.49, 1979b, p.424; Brown and Coulter 1983, p.57; Kelly and Swindell 2003, p.94; Van Ryzin 2004). Various subgenres of public administration had been using the model before 2004, specifically in evaluations of the police (e.g., Percy 1980; Brandl and Horvath 1991; Coupe and Griffiths 1999; Reisig and Chandek 2001). However, the introduction of the model to mainstream public administration marked a turning point in the research in citizen satisfaction.

Paper A, Part I: The Expectation-Disconfirmation Model of Citizen Satisfaction: A Review

The first part of the “review” paper reviews the general citizen satisfaction literature 1974-2014 quantitatively and the EDM qualitatively (the second part presents some new thoughts on developing the EDM, which are presented in Chapter 7). The quantitative review was carried out in the Thompson Reuters' Web of Science Core Collection², and covered the “public administration”³ category as well as five extra urban journals⁴ selected because they are not a part of Thomas Reuters' public administration category but have played a large role in citizen satisfaction and public administration in general (e.g., Hero and Durand 1985; Percy 1986; Kelly 2003; Van Ryzin, Muzzio and Immerwahr 2004).

Thomas Reuters' Web of Science includes papers indexed in Science Citation Index Expanded (SCI-Expanded) and Social Sciences Citation Index (SSCI) and the public administration category incorporates resources concerned with the management of public enterprises, implementation of gov-

² www.thompsonreuters.com

³ The description of the public administration category reads: “Public Administration covers resources concerned with the management of public enterprises, implementation of governmental decisions, the relationship between public and private sectors, public finance policy, and state bureaucracy studies”.

⁴ *Urban Affairs Review*, *Urban Studies*, *Urban Affairs Annual Reviews*, *Journal of Urban Affairs* and *Urban Affairs Quarterly*. These journals contributed with 12 satisfaction papers.

ernmental decisions, the relationship between public and private sectors, public finance policy, and state bureaucracy studies. Papers using citizen satisfaction as at least one of the dependent variables were included in the review. The searches were done as topic searches, which include title, abstract and key words⁵ and resulted in 80 citizen satisfaction papers.

The quantitative review finds that the 80 citizen satisfaction papers are distributed quite unevenly over time. From 1974 to the millennium only one or two papers appear each year, some years have zero publications. From the millennium onwards this picture changes drastically to an average of four papers a year. Of the 80 papers, 11 use the EDM in some form, including the ACSI model (e.g., Van Ryzin, Muzzio, Immerwahr, et al. 2004; Morgeson et al. 2011), all of them published in or after 2004.

The general conclusion of the quantitative review in the “review” paper is that there has been a large increase in the number of citizen satisfaction studies within public administration since the turn of the millennium, and a large part of these studies employ the EDM in some form (Hjortskov 2016a). It is also worth noting that the increased number of publications after the millennium is largely driven by publications in what has been called the “big four” public administration journals: *Journal of Public Administration Research and Theory*, *Public Administration Review*, *Public Administration* and *Journal of Policy Analysis and Management* (Van de Walle and van Delft 2015, p.100).

The qualitative review in the “review” paper concerns the EDM, which seems to have influenced the interest in citizen satisfaction. The next section draws on this part in describing the model.

The Expectation-Disconfirmation Model of Citizen Satisfaction

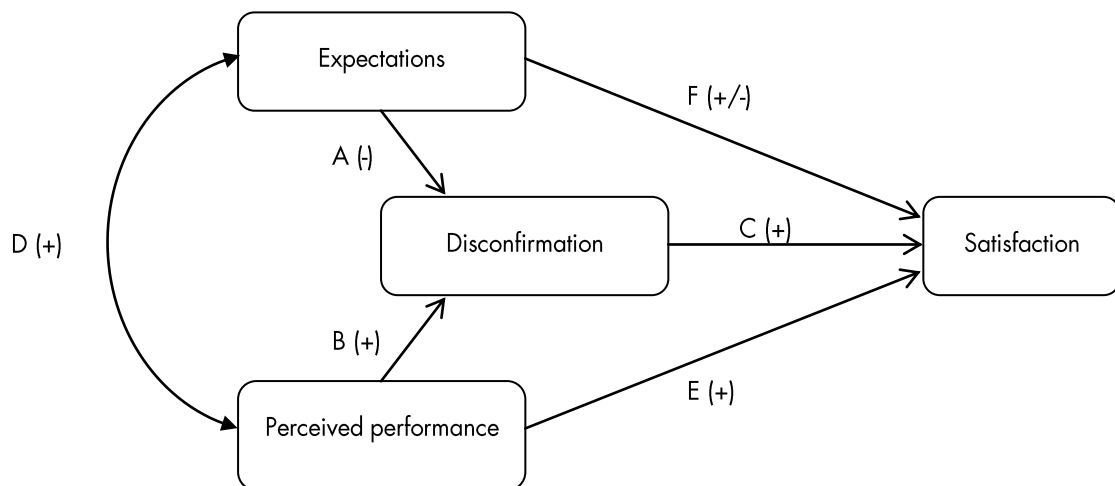
The Expectation-Disconfirmation model (EDM) was developed by a number of researchers in business and communication sciences in the late 1960s and the 1970s (Cardozo 1965; Engel et al. 1968, pp.512–515; Howard and Sheth 1969, pp.145–150; Ilgen 1971; Anderson 1973; Olson and Dover 1976; Hunt 1977a). The model builds on the general discrepancy theory about how individuals make judgments about performance, which has been used in many fields of research and has many different applications (Oliver 2010, pp.96–97). In welfare economics, for example, aspiration levels have been consid-

⁵ Search strings were (“*” is a wildcard): “satisf*”, “satisf* & citizen”, “citizens & feedback”, “citizen & survey, citizen & perceptions”, “citizen & evaluations”, “subjective & objective & measure”. The “satisf*” search was only done in titles

ered important standards or reference points for satisfaction judgments (Simon 1974).

The EDM focuses on the important role of citizen expectations in satisfaction formation. These expectations create “a frame of reference about which one makes a comparative judgment” (Oliver 1980a, p.480). The Model is illustrated in Figure 2.1. The basic idea of the EDM is that the contrast between an individual’s prior expectations to a service and their perceived performance of that product or service is the antecedent of the satisfaction judgment. This process results in the disconfirmation construct (links A and B, Figure 2.1). If the perceived performance is lower than the prior expectations the individual is disappointed and most likely dissatisfied. If the perceived performance is the same⁶ or even higher than the expectations the individual is most likely satisfied. Hence, the theory links disconfirmed expectations to the subsequent satisfaction judgment in the way that satisfaction increases as the performance/expectation ratio increases (see Figure 2.1, link C) (Olson and Dover 1976; Hunt 1977a, 1977b; Oliver 1980a, 2010).

Figure 2.1: The Expectation-Disconfirmation Theory



Note: Adopted from Van Ryzin (2013)

In more simple terms, the EDM basically says that citizens’ satisfaction with a particular service may differ considerably depending on prior expectations. For example, some public schools have a composition of parents with very high expectations to the schools’ service levels, whereas some schools have parents with low expectations. Although both kinds of schools may be per-

⁶ In the event of confirmation, or zero disconfirmation, the literature is not entirely clear about the consequences for the satisfaction judgment (Oliver 1981, p.35, 2010, p.101).

forming equally well, the schools where parents have high expectations will probably have lower satisfaction than the other schools. Instead of being an absolute performance measure, satisfaction becomes a relative one, and expectations may represent an important confounder in citizen satisfaction if they are not taken into account (Van Ryzin 2013).

The version of the EDM depicted in Figure 2.1 is sometimes denoted the "Full expectancy disconfirmation with performance model" (Oliver 2010, p.126). In a very influential article from 1980 Oliver laid out the basic theory of the EDM (1980a). Following early job satisfaction theory (Ilgen 1971) it takes its starting point in adaptation-level theory (Helson 1948, 1964) which is not a satisfaction theory per se but fits the idea of bringing prior expectations in as a comparison standard. Prior *expectations* are thought to consist of prior experiences with a service, the context of the service including branding and other communications about the service, and individual characteristics including perceptual distortion (Oliver 1980a, p.461). Other frequently mentioned antecedents are word-of-mouth and the media. In the context of the EDM, expectations are often thought of as predictive, that is, it is the citizens' prediction or anticipation of how the service "will" be (as opposed to how it "should" be as is the case in normative expectations, see Chapter 5) (Van Ryzin 2004). The experienced performance of a service is compared to the adapted standard (prior expectations) and the resulting discrepancy (disconfirmation) forms the satisfaction evaluation (Oliver 1980a, p.461).

It is not given that expectations are the adapted standard in the EDM. Other comparative referents can just as well be the standard (Iacobucci et al. 1994), for example goals set by public managers in a performance management regime (Andersen and Hjortskov 2015), ideals (Swan and Trawick 1980) or desires (Niedrich et al. 2005). Moreover, taking time into account might also create several comparison standards or anchors within the model. For example, it seems evident that citizen expectations are updated over time in a Bayesian sense where the prior expectation level creates an anchor that is updated with new information from sources such as experiences with the service or word-of-mouth. In this way, prior expectations might create an adaptation-level within the expectations construct in the model (this argument is further developed in Chapter 5 and Paper C). In theory, this might also be the case with the other constructs in the model (Oliver 1980a, pp.461–462).

The *disconfirmation* construct is created from the process of comparing prior expectations with perceived performance (link A and B) and it is thought to influence satisfaction heavily (link C) (Van Ryzin 2004). The disconfirmation of expectations can be negative, zero or positive. Again, when

prior expectations are confirmed (zero) or exceeded (positive) the satisfaction is expected to be higher, whereas it is expected to be lower when prior expectations are higher than the perceived performance (Oliver 2010, pp.100–101). Somewhat confusingly, the term “disconfirmation” is described as having a positive association with satisfaction, although it is when the citizens’ prior expectations are confirmed or exceeded (not *disconfirmed*) that satisfaction is expected to be higher.

Often, the disconfirmation construct is measured by the so called subtractive measure where the expectations measure is simply subtracted from the perceived performance measure. The subtractive measure is typically used in public administration research (Hjortskov 2016a) but it does have some drawbacks (Weaver and Brickman 1974; Page and Spreng 2002; Spreng and Page 2003). For example, the construct is not measured directly although some research indicates that disconfirmation may be a discriminant construct, and when the expectation and perceived performance constructs are subtracted, the subtractive measure of disconfirmation also assumes that disconfirmation is a linear function of its antecedents (Spreng and Page 2003).

Another typical measure of disconfirmation also used in the citizen satisfaction literature is perceived disconfirmation, which is based on a direct disconfirmation question (e.g., the service was “Much worse than expected”, “Just as expected”, “Much better than expected”). This measure is considered superior in marketing research because it allows for a disconfirmation effect independently of expectations (Weaver and Brickman 1974; Oliver 1977).

Much research has identified a strong association between the disconfirmation construct and satisfaction (Van Ryzin 2004, 2006; Roch and Poister 2006; James 2009; Poister and Thomas 2011; Morgeson 2013). However, the results of this research can differ greatly depending on how the disconfirmation construct is operationalized (Page and Spreng 2002; Spreng and Page 2003; Van Ryzin 2006).

Perceived performance is the latest addition to the model (LaTour and Peat 1979; Churchill and Surprenant 1982; Tse and Wilton 1988). It is usually operationalized as a subjective rating comprising the various features and facets of the service based on a recent experience (Van Ryzin 2004, p.436). It is normally thought of as a “hard, performance-based judgment” (Oliver 2010, p.177), meaning that a close relationship between perceived and actual performance is assumed. Perceived performance is hence considered to be a cognitive, attribute-based evaluation as opposed to the more affective satisfaction evaluation (Steenkamp 1990; Iacobucci et al. 1994, pp.14–15) (see Chapter 6 and Paper *E*). This does not necessarily imply that perceived performance should correlate with specific objective measures of performance,

since citizens may weigh other performance aspects higher than the one measured. For example, parents may place a large weight on a well-rounded focus at their child's school when asked about the performance, and therefore this perceived performance might not correlate with objective measures of other performance aspects like test-scores (Jacobsen et al. 2015).

Perceived performance is not only theorized to have an indirect effect on satisfaction through the disconfirmation construct (link B), but also a direct effect (link E). In other words, perceived performance can have a tandem effect with, and even substitute, disconfirmation (Oliver and DeSarbo 1988; Bolton and Drew 1991a; Anderson and Sullivan 1993). The direct effect of perceived performance is usually thought of as an effect that is over and above the disconfirmation effect, for example if there is an element of surprise in the performance that is not a part of the expectation dimensions or if different levels of performance have different effects on satisfaction (Hjortskov 2016a).

The inclusion of the perceived performance construct resembles much of the work in citizen satisfaction that investigates the direct effect of both perceived and actual performance on satisfaction (Stipak 1979a; Brown and Coulter 1983; Lyons et al. 1992; Kelly 2003; Charbonneau and Van Ryzin 2012; Favero and Meier 2013). The direct effect of perceived performance is often quite strong in studies of citizen satisfaction, also when disconfirmation effects are taken into account (Van Ryzin 2006, 2013; James 2009; Morgeson 2013).

In consumer satisfaction, one proposed explanation for the strong direct effects of perceived performance on satisfaction in the EDM says that it might depend on whether the evaluated good is durable or non-durable. The contention is that the E link should be stronger with durable goods than non-durable goods, because consumers invest more time and money in durable goods (Day 1977; Churchill and Surprenant 1982). It is not an overstatement to suggest that many public services resemble durable goods since citizens encounter them often and invest both time and money (mainly through taxes) in them. This may place the perceived performance at center stage when citizens state their satisfaction with these services, whereas the prior expectations play a minor role (Bolton and Drew 1991b). Moreover, if self-confidence in evaluating a service is small or if a citizen has no knowledge of the service such that expectations seem doubtful to the citizen, direct performance effects might be expected (Dasu and Rao 1999; Spreng and Page 2001).

However, some criticism of the E link has been raised. Wirtz and Mattila (2001) found that the direct performance effect almost disappeared when the perceived performance variable was replaced by an objective measure of per-

formance that arguably should account for the most important performance attribute (delivery time for a courier service). This indicates that link E at least in some instances may be a measurement artefact.

Link F between expectations and satisfaction is subject to a long-standing debate about two quite different approaches to understanding satisfaction, the assimilation approach and the contrast approach. The *assimilation* approach was originally inspired by Festinger's cognitive dissonance theory (1957) and predicts a positive relationship between expectations and satisfaction in the model (Pieters et al. 1995). The idea is that if the discrepancy between the expectations and the perceived performance is too large it will create mental discomfort for the individual, a cognitive dissonance. The unpleasantness is created because human beings abhor inconsistency, and that is exactly what is created with a large discrepancy (Olshavsky and Miller 1972). Since this is not a pleasant state to be in, the individual will adjust satisfaction in the direction of the preconceived expectations.

Citizens may engage in dissonance reduction because their expectations may be affected by their political views and attitudes towards government and public services in general (Morgeson 2013; Hjortskov 2016c) and therefore they might try cognitively to reduce the distance between their, perhaps rather well-grounded, expectations and their satisfaction, creating a positive correlation between the two constructs that is independent of the disconfirmation of expectations process (Van Ryzin 2004). This process can be likened to the confirmation bias or motivated reasoning (Hamer 2006; Baekgaard and Serritzlew 2016), in which the citizen has already made up his mind about how a certain service should be evaluated without observing the performance.

The other possible explanation for the F link is the *contrast* approach inspired by early communication research (Hovland et al. 1957; Dawes et al. 1972). This theory predicts that citizens shift their satisfaction away from their expectations, creating a negative relationship between the two that is above the disconfirmation effect (Cardozo 1965; Cohen and Goldberg 1970; Oliver and DeSarbo 1988). The contrast effect arises because people have a tendency to exaggerate the distance between their own views and people with opposing views (Dawes et al. 1972). When citizens experience disconfirmation of their expectations, they may magnify the effect on satisfaction over and above the disconfirmation effect itself and rate the performance worse than it actually is (Oliver 2010, p.86). Both the assimilation and contrast relationships have been found in the citizen satisfaction research (Hjortskov 2016a).

Lastly, the D link between the prior expectations and perceived performance is a somewhat less theorized relationship, but it has been found to be

significant several times in the citizen satisfaction literature (Hjortskov 2016a). As Oliver writes:

This convention implies that the actual correlation between these two variables cannot be specified beyond the assumption that a relationship exists. This is so because the expectation-performance relation is idiosyncratic to the stage of consumption in which it is being measured and to the idiosyncrasies of the product or service being investigated (Oliver 2010, p.119).

In other words, this is to a large degree a contextual relationship, at least according to Oliver (see also Van Ryzin 2004, p.436, 2006, p.601). In line with Oliver, the relationship could for example arise if the individual has control of or influence on the performance such that the performance is brought into accordance with prior expectations. One example from public administration is coproduction, where the consumer or citizen is involved in the production of the service (Parks et al. 1981; Jakobsen and Andersen 2011), and therefore perhaps would put effort into the process in the direction of their own prior expectations to the outcome. This could create the positive relationship between the two variables. The adjustment might also be purely perceptual in the sense that a too large discrepancy between prior expectations and perceived performance is unpleasant to the citizen (dissonance) and changes their perceived performance in the direction of the prior expectations like in the assimilation/cognitive dissonance case (Pieters et al. 1995; Oliver 2010, pp.119–120).

Another explanation mentioned by Morgeson (2013, p.292) is that citizens in some service contexts have adjusted their expectations and perceived performance towards each other via many experiences with the same service. This would also create a positive correlation between expectations and perceived performance. A third and more methodological explanation for the D link could be the dynamic view that prior experiences through prior perceived performance affect current perceived performance *and* current expectations. Expectations are believed to be updated over time in a Bayesian manner (see Chapter 5 and Paper C) and they would naturally take prior experiences into account, while prior perceived performance naturally may inform current perceived performance. Taken together this may instill a spurious relationship between current expectations and current perceived performance.

In sum, the EDM has been a very influential model that has been developed in the business and marketing literatures and is still evolving. The model posits that expectations are fundamental for the satisfaction evaluation, and if not taken into account they may confound the performance-satisfaction relationship. Furthermore, the EDM has been used extensively

in citizen satisfaction research the last decade and has been largely confirmed. However, some of the constructs in the model as well as some of the proposed relationships between them need more theoretical and empirical work.

One example is that the temporal nature of the model is rarely taken into account or discussed. Many theories of expectation formation state that they are updated over time (see Chapter 5) but the EDM does not explicitly account for this. Likewise, the model assumes an internal coherence among the constructs, at least in its basic parts (links A, B and C), and a strong relationship between perceived performance and actual performance. These assumptions are quite strong, especially given recent research in cognitive and social psychology (Kahneman and Frederick 2005; Sherman et al. 2014, see Chapter 6). This dissertation therefore looks into these deficiencies and assumptions of the EDM and its constructs. The next chapter starts out by giving a roadmap to the context of the dissertation and its subject.

Chapter 3: Context of the Dissertation: Public- Private and Subjective-Objective

This chapter engages three overall debates in order to situate the contributions of the dissertation within the research context of citizen satisfaction: the differences between public and private management; subjective and objective performance measures; and citizen satisfaction as a performance measure. The aim of the chapter is to show that subjective measures of performance, among them satisfaction, are relevant in the public sector, but also that some of the challenges facing these measures may be different in the public and the private sector. Therefore, research into what drives citizen satisfaction is highly relevant, especially in public administration and public management.

The Differences between Public and Private Management

One debate that often surfaces in the citizen satisfaction literature, although satisfaction measures have been part of public administration all these years, is: Can satisfaction measures be used meaningfully in the public sector? There is no doubt that consumer satisfaction has been used extensively as a management tool in the private sector (Oliver 2010), but does that necessarily mean that it is usable and desirable in the public sector?

The question connects with a broader debate in the public management literature that has followed the reinventing government debate and the new public management paradigm (Hood 1991; Osborne and Gaebler 1992; Hood and Dixon 2015). Do market-based management ideas work in the public sector? The first thing to note is that these management ideas are to a large extent accountability theories with great emphasis on efficient government and public service performance. What is different from the traditional bureaucratic view of public administration and management is not that public managers can secure effectiveness and performance in public programs, which both paradigms believe, but that it should be more citizen- and demand-centered and less rule-centered (Kelly 2005, p.76; Morgeson 2014; For an older take on the citizen-centered view, see Lovrich and Taylor 1976).

As a consequence of the large influence from private sector management tools and the larger focus on external, citizen-centered performance meas-

urement inherent in the reinventing government and new public management paradigms, citizen satisfaction has been used widely in governments around the world (Miller et al. 2009; Morgeson 2014, p.30). But the concern is whether public sector services and surroundings are substantially different from the private sector ones from which many management solutions in the new public management paradigm and much of what we know about satisfaction as a performance measure come.

One fundamental difference between public and private organizations is the often lacking “exit” opportunity, meaning that citizens have extraordinarily high costs if they want to change service provider because they are dissatisfied. Often they can only do so by moving to another municipality, city or maybe even country. Another difference between the two sectors is their fundamental goals. The performance dimensions are more complex and diverse in the public than in the private sector. Goals like equity in service delivery, openness, political responsiveness, fairness and due process are ambiguous and often conflicting (Rainey et al. 1976; Picherack 1987; Rainey 2014, pp.80–81).

Transaction is voluntary in the private sector, but in many cases this is not the case in the public sector. Citizens pay for services they do not consume and receive services they do not demand (the “service” of the police catching a criminal is the obvious case in point). Citizens have a say in services in which they are users, but also in services in which they are not (but perhaps pay for) through elections and other democratic channels (Kelly 2005). Moreover, while private companies want satisfied customers because they are more loyal, spend more time in their shops or on their websites and buy more of their products, public organizations rarely have such motivations. In some public services it would even be considered a bad service if citizens had to stick around for too long (Morgeson 2014, p.34).

Whereas consumer satisfaction in the private sector often represents the ultimate goal for firms, citizen satisfaction is not necessarily the end goal in public organizations, and it may even be viewed as a bad outcome metric in some cases. Whereas consumer satisfaction is almost always important no matter how misconceived, citizen satisfaction is sometimes viewed as ill-informed if the citizen’s experience with the service is limited (Kelly and Swindell 2003). Also, while relatively simple services do exist in the public sector, many of its services are highly specialized and may be difficult to understand for ordinary users, for example healthcare and education. This can make them hard to assess, and it might also be difficult to expect anything before, for example, a complicated operation at the hospital (Newsome and Wright 1999).

These differences make it apparent that citizen evaluations in some instances can be quite different from consumer evaluations and that they can encompass entirely different things. This makes the adoption of theoretical models about satisfaction from the business and marketing literatures, like the EDM, precarious. It also warrants research in how such models work in the public context.

Subjective and Objective Measures of Performance

These concerns about the differences between public and private organizations and the complex and specialized services of the public sector have caused a lot of skepticism towards subjective measures of performance (Brewer 2006; Schachter 2010). The result has been much research on the relationship between objective or administrative measures of performance (e.g., test scores in public schools) and subjective measures of performance. The results of these endeavors are mixed; some find the proposed relationships between objective and subjective performance measures (Licari et al. 2005; Van Ryzin et al. 2008; Gibbons and Silva 2011; Charbonneau and Van Ryzin 2012; Chingos et al. 2012; Favero and Meier 2013; Kisida and Wolf 2015), some do not (Kelling et al. 1974; Stipak 1979a; Brown and Coulter 1983; Kelly and Swindell 2000, 2002b; Kelly 2003).

The assumptions inherent in most of these studies are twofold: 1) if citizen satisfaction is to be used as a performance measure in a performance management regime it should reflect actual performance (Stipak 1979a), and 2) objective/administrative measures reflect actual performance whereas subjective performance measures can only aspire to it. If there is a difference between the two, the subjective measure is wrong (Percy 1986; Kelly 2003; Brewer 2006; Schachter 2010).

The first assumption is perfectly reasonable if public organizations are supposed to react to declining citizen satisfaction and if the public debate about public service performance is supposed to be informed by citizen satisfaction measures. A public organization can have the simple goal of having satisfied (happy) citizens or users, making the overlap between citizen satisfaction and actual performance irrelevant because satisfaction is the best measure of satisfaction, but then the usability of citizen satisfaction as a management tool is limited. As put by Lyons *et al*:

For effective democratic control of government, citizen evaluations must be founded on an accurate appraisal of what the government is actually doing (Lyons et al. 1992, p.118).

The second assumption is more difficult. As mentioned, in private management a consumer is rarely wrong, whereas in public management a citizen may be (Kelly 2005, p.77). Attribution bias, in which citizens attribute service failures to specific public organizations that are in fact not responsible for the particular service, is one perceptual bias that has been mentioned in the public administration literature (Stipak 1979a; Beck et al. 1987; Lyons et al. 1992). If citizens are basing their satisfaction evaluation on attributes that are in fact not a part of the service the survey is intended to cover, then objective measures would be better performance measures. Again, as put by Lyons *et al*:

On one hand, citizens might incorrectly conclude that service quality is inadequate, and, in response to their dissatisfaction, inappropriately punish their local officials. On the other hand, citizens might incorrectly conclude that service quality is adequate, and, in failing to recognize that they should be dissatisfied, reward an official when he or she really is a rascal in need of a timely toss. Either type of error would diminish the prospects for effective democratic government (Lyons et al. 1992, p.116).

Therefore, public managers sometimes discard information from citizen surveys as being unreliable (Kelly 2005, p.78). Another challenge is of course the experience of the citizen evaluating the specific service. If the citizen is not a user of a service, for example a citizen being asked about parks that he does not use, or if the citizen is only a semi-user, for example a citizen being asked about her child's school or her parent's elderly care, the basis for a sound performance evaluation might not be in place (Stipak 1979a; Folz and Lyons 1986). Coupled with the well-known non-attitude tendency, that is, people's tendency to report attitudes on something they know nothing about (Converse 1970; Schuman and Presser 1980), this issue can become worse.

Citizen Satisfaction as a Performance Measure

It seems that the differences between public and private organizations and the management of them are too big to just copy private management tools like consumer satisfaction and use it in public management. However, there may be good reason to consider this option twice. The ability of citizen satisfaction to capture performance on several of the ambiguous goals that are a central part of the public sector is a tempting offer (Charbonneau and Van Ryzin 2012; Favero and Meier 2013; Kisida and Wolf 2015). For example, parent satisfaction may exhibit such traits:

Unlike highly specific measures like student test scores, parent satisfaction presumably incorporates more complete aspects of what we expect schools to

provide, including school safety and the nurturing of character traits (Kisida and Wolf 2015, p.266).

Favero and Meier (2013) offer an instructive way of looking at the possible differences between subjective and objective measures. Using statistical terminology they argue that the latent assumption of the above analyses is *convergent validity* (Campbell and Fiske 1959). That is, the authors of these studies expect that objective and subjective performance measures should have common variation because they should be measures of the same latent concept: performance. In effect, subjective measures have weak convergent validity because there is mixed evidence on the correlation between subjective and objective measures.

On the other hand, Favero and Meier suggest that proponents of subjective measures believe that subjective and objective measures have *discriminant validity*, meaning that they reflect different dimensions or attributes of performance (Favero and Meier 2013, p.404). In other words, parent satisfaction with schools does not have to correlate highly with test scores to credibly reflect actual performance if parents value, for example, a well-rounded focus over academic achievement highly (Jacobsen et al. 2015).

In sum, there are a number of differences between the public and private sector services – among them differences in complexity and their goals. Since there is higher complexity and goal ambiguity in the public sector there is also a need for performance measures that can handle the complexity. Citizen satisfaction may deliver on this promise. There is, however, no doubt that citizen satisfaction should build on actual performance. The evaluation cannot build on dimensions that are irrelevant for the performance of public services, which will be further discussed in Chapter 6, and although public organizations may have a goal of just having satisfied citizens, a complete lack of connection between citizen satisfaction and performance impedes further discussions about changes in public services. Citizen satisfaction should therefore reflect citizen attitudes towards actual performance of the public service. This is especially important in the public sector because the lack of exit possibilities increases the need for the voices of the citizens. This is the topic of the next chapter.

Chapter 4: A Voice of the Citizens? Encouraging Political Voices of Underrepresented Citizens

Chapters 2 and 3 have laid out the general theories of citizen satisfaction, the EDM and the context that constitutes the backbone of this dissertation. This fourth chapter will present the results from the “voice” paper and the theory behind it. The general notion is that citizens answering a citizen satisfaction survey are in fact expressing their political voice, and therefore satisfaction surveys may be seen as an attempt to influence government action and public policy.

Citizen Satisfaction as a Voice of the Citizens

The merits of citizen satisfaction are not only the possible uses as a performance measure. As mentioned, there is a strong argument for citizen satisfaction as a road to accountability. If the accountability focus inherent in the new public management paradigm (Hood 1991) and also in democratic theories (Dahl 1989; Pollitt 2003) is the right focus, citizen surveys in general, and satisfaction surveys in particular, may well be good tools in this regard (Pollitt 1993; Kelly 2005; Morgeson 2014, pp.38–40). Citizens and/or users get the opportunity to rate the services, and the results of the surveys are visible for everyone and may help public managers and politicians make more informed decisions (Behn 2001).

Although there may be large differences in the interactions between consumer and firm and citizen and public service provider, one strand of research argues that satisfaction measures may be more important for public than for private organizations. As mentioned, many public services do not allow the exit option, or at least in many instances exit would be very costly. In the exit-voice-loyalty-neglect framework of citizen satisfaction (EVLN) (Hirschman 1970; Lyons et al. 1992) this leaves the citizen with three options: voice, loyalty or neglect.

Both loyalty and neglect are passive strategies. Loyalty is passively but optimistically waiting for conditions to improve, and neglect is passively and resignedly waiting for conditions to worsen. These are both passive behaviors, or rather non-behaviors, but neglect is said to be destructive while loyalty is said to be constructive (Lyons et al. 1992, p.51).

Voice is a constructive answer to dissatisfaction and can be the residual of, alternative to or substitute for exit (Hirschman 1970). This means that citizen voice can be the constructive, active answer either when exit is not an option or when voice is the more attractive answer. Hirschman defines voice as follows:

Voice is here defined as any attempt at all to change, rather than to escape from, an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to mobilize public opinion (Hirschman 1970, p.30).

It is worth bearing in mind that if exit is totally absent, governments or public organizations have no incentives to listen to the voice of citizens (authoritarian governments spring to mind), and in these cases citizens may well mostly turn to neglect as an answer. Many services in the modern, western public sector do have exit options, albeit usually with some costs (e.g., moving to a new city, children changing school) (Dowding and John 2012, p.10; John 2016).

Voice is therefore often the choice for citizens, but only if they believe that it will be effective or at least a less costly way of changing performance than exit, and therefore worthwhile (Hirschman 1970, p.37). One way to facilitate voice is therefore to make it a less costly investment in the performance of public services (*ibid.*, p. 42), and citizen surveys may be one such initiative to facilitate voice. In fact, it has been argued that public organizations have more use of satisfaction surveys than private organizations. The lack of an exit option and possibly more individuals resigning in neglect create a need for “customer” feedback. Although there is the possibility of voting for somebody else in the next election, the administrative and bureaucratic system also needs feedback from citizens and possibly feedback that is more detailed and directed at problem solving than what is contained in a vote (Morgeson 2014, p.38).

This raises the question if a voice option like a citizen survey can be political participation. Lyons et al. see much of what can be characterized as voice as political participation:

Voice is probably the broadest and most familiar response category. If we conceptualize voice as active and constructive efforts to improve conditions giving rise to dissatisfaction, then much of what traditionally falls under the topic of political participation can be identified as “voice (Lyons et al. 1992, p.55).

The classic political participation literature does not think of political participation as directed at problem solving like Hirschman's framework does (Orbell and Uno 1972, p.475) and typically focusses on the vote as the primary political participation channel. Voting is undeniably a very important channel for exercising political participation but other both institutionalized and uninstitutionalized channels have also been mentioned, such as writing to politicians, campaigning, protesting, writing letters to the editor, boycotting certain products and signing petitions (Verba and Nie 1972; Kaase 1989; Rosenstone and Hansen 1993; Verba et al. 1995; Gillion 2012) and activities that constitute political participation are ever evolving (Norris 2002; Harris and Gillion 2010). Verba et al. define political participation as an:

activity that has the intent or effect of influencing government action – either directly by affecting the making or implementation of public policy or indirectly by influencing the selection of people who make those policies (Verba et al. 1995, p.38)

It is clear from the definition that political participation is more than voting, but also includes activities directed at affecting the making or implementation of public policies. This may easily entail the above mentioned uninstitutionalized and unconventional modes of participation, some of which have been found to be especially important modes of political participation for political and ethnic minorities (Craig and Maggionto 1981; Shingles 1981; Just and Anderson 2014). Although he clearly accepts the vote as the central political institution of modern democracy, Hirschman also points out that it is not good at signaling intensity and diversity of opinion (Hirschman 1982, pp.103–111). Instead Hirschman points to the second category of influence that is also signaled by Verba et al.'s definition: attempting to affect policy directly (*ibid.*, p. 110).

This is where citizen satisfaction surveys may be useful as another unconventional form of participation: Citizen satisfaction surveys are a way to gain knowledge about citizens' preferences. Verba (1996) emphasizes the ability of surveys to be representative, fairly unbiased and information rich:

Surveys are not perfectly representative but offer, nevertheless, a better cross-section of the public than do almost any other means, and certainly they are more representative than any of the modes of citizen activity. Surveys provide us with a relatively unbiased view of the public by combining science and representativeness, indeed, by achieving representativeness through science. They are very like elections in which each individual has an equal voice only better. They get better turnout, since good surveys seek out the participants and do not passively wait for them to come to the polls. They get richer information. The vote says little about the preferences of voters except in the

narrow sense of their choice of candidate. Surveys can probe preferences on many issues (Verba 1996, p.4).

The declared intent of such citizen surveys is exactly to inform the making and implementation of public policy as emphasized in Verba et al.'s definition of political participation (1995, p.38). The surveys have the declared intent to inform policy making and often succeed in doing so, either directly or indirectly through the media (Paletz et al. 1980; Johnson and Hein 1983; Page and Shapiro 1983; Watson et al. 1991; Manza et al. 2002; Druckman and Jacobs 2006; Rasmussen et al. 2014; Hjortskov et al. 2016). For example, the satisfaction surveys that are primarily used in this dissertation are sent to parents with children in school and daycare institutions in the City of Aarhus with a letter that invites them to participate with the following statement:

The parent satisfaction survey is your opportunity to gain influence by stating your opinion and thereby helping to improve your child's institution. The local management team at your child's institution will use your responses to develop the institution (Aarhus Kommune 2011).

Furthermore, citizens may see the act of filling out a citizen survey as political (Brehm 1993, p.69; Couper et al. 1998; Harris-Kojetin and Tucker 1999; Proner 2010).

Paper B: Encouraging Political Voices of Underrepresented Citizens through Coproduction

Although Verba's (1996) view of the representativeness of citizen surveys is encouraging, research shows that the representation in citizen surveys may be less good (Goyder 1987; Groves 2006; Groves and Couper 2012; Massey and Tourangeau 2012). The same challenges as in the classic political participation modes seem to pop up also in citizen surveys despite a limited investment of time and skills. Not all citizens' voices are heard with equal strength in the political chorus (Schlozman et al. 2012). This is a problem not only in terms of democracy and representativeness, but also in terms of efficiency because it gives decision makers a biased picture of the opinions of the full citizenry about the public services (Sharp 1982; Hill and Leighley 1992; Verba et al. 1995). This may be exacerbated if it is exactly the service providers who need the voice of the citizens the most who do not get it (James and Moseley 2014).

The "voice" paper utilizes a field experiment among one of the groups that are typically underrepresented in different types of political participa-

tion: ethnic minorities. The paper investigates a typical political participation measure, voting at a local election, and political voice through satisfaction surveys. The lack of representation among minority parents could perhaps be partly rectified if they are represented in citizen satisfaction surveys and let their voices be heard. But how can we get ethnic minorities to participate more?

Coproduction as a Way to Engage Citizens

The “voice” paper hypothesizes that policy designs engaging citizens in the coproduction of public services will also increase their political voice. Coproduction is basically involving the citizens in the production of the public services. Despite different definitions of the concept, there seems to be agreement on the central idea:

coproduction involves a mixing of the productive efforts of the different actors, or indirectly through independent, yet related efforts (Parks et al. 1981, p.1002)⁷

The primary goal of involving citizens in the production of the public services is to increase the efficiency and quality of the services. Since many inputs to public services are complementary, for example a teacher’s and a student’s input to the student’s education, involving more inputs will be more efficient and increase the quality of the service (Parks et al. 1981; Ostrom 1996). More important to the “voice” paper are the possible democratic spillover effects of coproduction. A few scholars have mentioned the possibility that coproduction enhances citizens’ participation in the political system (Wilson 1981; Levine 1984; Marschall 2004; Cepiku and Giordano 2013), but a strong empirical test of the proposition is still lacking⁸.

In the “voice” paper we argue that coproduction may enhance political voice in four ways. First, citizen coproduction may lead to a policy feedback on the political voice of the citizens. Policy feedback primarily arises as a consequence of sense of proximity and visibility of the service that affect the citizens’ political behavior and attitudes (Soss and Schram 2007). Services that are visible to the citizens also make it evident that the government is the provider. Such services are more prone to affect citizens’ attitudes (Pierson

⁷ See also Pestoff et al. (2012, p.1) and Jakobsen and Andersen (2013, p.705). For an updated conceptual discussion, see Bovaird et al. (2015).

⁸ Whereas theoretical contributions abound in the coproduction literature, empirical work is scarce. However, important research questions are now starting to be addressed experimentally (e.g., Jakobsen 2013; Jakobsen and Andersen 2013; Thomsen and Jakobsen 2015; Riccucci et al. 2016)

1993). Proximity to citizens, meaning that the service is close, familiar and directly affects them, is also hypothesized to affect citizen behavior and attitudes (Soss and Schram 2007). Coproduction programs, where citizens and governments work together to produce the services, naturally bring both proximity and visibility to the citizens.

Second, citizens' knowledge about a service might be increased by engaging in a coproduction initiative. Knowledge is a key driver of political participation (Schlozman et al. 2012, p.19), and knowledge about services delivery, how resources are spent, the administrative system and how citizens benefit from public services provides the citizens with a better platform to express their political voice.

Third, the citizens' motivation for expressing their political voices may be raised as a consequence of a coproduction initiative. Motivation is also a key mechanism for political participation: "Often the catalyst for the expression of political voice is the motivation to do so" (Schlozman et al. 2012, p.18; see also Hahrie Han 2009).

When citizens coproduce they are also given responsibility and, as mentioned, knowledge about the service, and this may enhance their motivation to express their attitudes towards the service and the responsible decision makers.

Last, the citizens' perceptions of the government may be influenced by the coproduction initiative because such perceptions are to a large extent built through direct contact with the service providers and the service provision they encounter (Schneider and Ingram 1993; Soss 1999). When citizens are invited to coproduce public services they learn that their inputs are important and valued and this experience may also lead to more political voice. In a sense, coproduction may strengthen the citizens' political efficacy. In short, the expectation in the "voice" paper is that involving citizens in a coproduction initiative will increase their political voice.

Design and Data

The data in the "voice" paper are obtained from a coproduction field experiment conducted in the City of Aarhus in 2009. One of the challenges in studying coproduction initiatives, feedback and political voice is possible selection and omitted variable bias. As mentioned, citizens who engage in political voice are special. They are, for example, more well-educated (Verba and Nie 1972; Verba et al. 1995). This may very well also be the case with those who engage in coproduction initiatives (Jakobsen 2013). If highly educated citizens have self-selected into both coproduction and political voice, the possible correlation between the two variables can be spurious. The re-

searcher may be able to control for education in a regression and avoid omitted variable bias on this particular variable, but the problem is that there might be a vast amount of variables that should be controlled for. And worse yet, the researcher most likely does not know them all (Blundell and Dias 2009; Morgan and Winship 2014).

An experiment where coproduction is assigned randomly is able to avoid this caveat since education cannot affect the random assignment of the coproduction initiative. Neither can other omitted variables. Therefore, if randomization is used to assign treatment and control group status to citizens, then the two groups should be alike in expectation before the treatment is administered. If there is a difference between the treatment group and the control group in terms of political voice after the assignment, then it must be due to the treatment (Gerber and Green 2012)⁹.

The field experiment in the City of Aarhus was carried out in the context of daycare institutions. The participants were immigrant parents of children learning Danish as their second language. The original experiment aimed at engaging the parents in their children's education and it was successful in doing so (Jakobsen and Andersen 2013). All parents in the experiment were using a full-day daycare service, and the treatments were administered at the daycare center level making it a cluster-randomized experiment.

Two different treatments were administered: 1) A coproduction treatment where suitcases with children's books, games, an informational DVD in several languages on how to read with children and an invitation to engage more actively in the coproduction of their children's education were distributed to the parents. The suitcases were free of charge for the parents and were handed over by the children's own preschool teachers at the daycare center. 2) A treatment targeted at street-level bureaucrats that contained guidance of the preschool teachers by a specialist in Danish proficiency among bilingual children. A third group was a control group with no intervention. In total, there were 881 participants in the study situated in 112 preschools.

All three groups are compared in the analyses in the "voice" paper. The outcome measures of political voice in the paper are twofold: First, an answer to the biannual parent satisfaction survey in the City of Aarhus is taken as a measure of political voice following the above theoretical reasoning of citizen (satisfaction) survey as a possibility for the citizens to state their opin-

⁹ For the same reason experimental research on coproduction is beginning to address important research questions that have existed in the literature for some time. See Jakobsen (2013), Jakobsen and Andersen (2013), Ricucci et al. (2016) and Thomsen and Jakobsen (2015)

ions and preferences to the decision makers. The specific survey was carried out in May 2009, one month after the treatment was administered. Second, the traditional political participation measure of voting at a local election for the city council is used. The specific election was the municipal election in November 2009, seven months after the treatments were administered.

The immigrant parents in the City of Aarhus have been underrepresented in providing feedback to politicians and public managers. Therefore, the feedback that these decision-makers are getting through the citizen satisfaction surveys is not representative. Likewise, many immigrants can vote in local elections without being formal citizens, but have also been underrepresented in this type of political voice. In other words, their opinions about which public services should be delivered, how they should be delivered and what quality they should have are not well represented in the city council of Aarhus.

Lastly, the analyses in the “voice” paper utilize data from a compliance survey that was fielded in January 2010. Since we are interested in the treatment effect of the coproduction treatment on political voice, it is important to take into account that some citizens may not comply with the experimental intervention, that is, they may not coproduce although they receive the coproduction intervention. The compliance survey asked two questions about the coproduction intervention that is used in the “voice” paper.

One question asked if the parents received the suitcase with materials both because the direct delivery of the suitcases was not done by the researchers, but also because remembering the suitcase nine months after the treatment was administered indicates at least some compliance. The other question asked directly about the use of the materials. These compliance measures are used in the analysis via an instrumental variable approach that uses the random allocation of the coproduction treatment as an instrument on these possibly endogenous variables. Since reception and use of the coproduction materials requires being in the treatment group, and the allocation is clustered at daycare institutions minimizing spillover effects, the instrumental approach is considered strong in this case (Angrist 2006; Gerber and Green 2012). 81 pct. of the 251 citizens in the compliance survey report having received the treatment, and 53 pct. report having used the materials once a week or more.

Results

There is a significant effect of the coproduction treatment on the political voice through the citizen satisfaction survey. This intent-to-treat effect shows that parents of immigrant children in the City of Aarhus are 6.7 pct. points

more inclined to voice their opinions through this channel when they have been a part of a coproduction initiative. Looking at the compliers, the effect is a little larger among the citizens who actually received the treatment (11 pct. points) and still larger among those who actually used the materials (16 pct. points). There are, however, no effects on political voice via voting.

The contribution of the “voice” paper is threefold. First, we have made the argument that coproduction, through feedback effects, holds the promise of engaging citizens, not only in the production of public services, but also in political voice. Although the possibility has been noted by others (e.g, Wilson 1981; Levine 1984; Marschall 2004; Cepiku and Giordano 2013), this is the first time that the theoretical argument has been presented in a coherent form. Second, we test the theoretical relationship between coproduction and political voice using a field experiment and two independent behavioral measures of political voice. Theoretical contributions abound in the coproduction literature, but empirical work is scarce. The “voice” paper is a contribution in this respect as well.

Third, the “voice” paper shows that coproduction may enhance the political voices of underrepresented citizens through voicing in governmental citizen surveys. It also indicates that citizens who do not vote are most likely to start voicing through the citizen survey. When policies are designed to include a coproduction initiative, these increases in the political voices of the otherwise underrepresented citizens can be a significant side effect.

Chapter 5: Citizen Expectations

Expectation Theory

Expectations are the central concept in much satisfaction literature; not least in the EDM. However, there is a vast literature on the expectations construct itself. From economics (Muth 1961; Cyert and DeGroot 1974; Lovell 1986) and consumer satisfaction (Oliver and Winer 1987; Johnson et al. 1995) to psychology (Fishbein and Ajzen 1975; Kahneman and Miller 1986) there is a rich literature on the formation of expectations and the theoretical relationships the construct enters into. However, the field of public administration has been a bit reluctant to look into citizens' expectations to public services, with few dedicated studies of expectations (James 2011a; Jacobsen et al. 2014).

This is regrettable since citizen expectations are very important in the relationship between the political system and citizens. Citizen expectations are to a large extent what politicians and public managers are trying to respond to when creating and developing public services, which can be a challenge in the face of an upward trend in normative expectations in most modern societies (Meirovich and Little 2013, p.41). For example, rising income levels and general prosperity in a society may create increasing expectations among the citizenry, which may end up in a "prosperity dilemma" as it was phrased in a report commissioned by the Danish government in 2003 (Velfærdskommissionen 2006). Very high expectations, even in a prosperous society, may be economically unsustainable in the long run (Hjortskov 2016c).

What is more, if the EDM is a fair model of how citizens form their satisfaction evaluation of public services, then the important function of citizen satisfaction as an accountability and performance measure is dependent on how expectations are formed, updated and what effects they have on satisfaction and disconfirmation. Therefore, politicians and public managers should, and to a large extent do, care about citizen expectations, and perhaps even try to manage them (Van Ryzin 2004; James 2011a). Papers C (the "feedback" paper) and D (the "interpretation" paper) therefore deal with the expectations construct from two different angles: Do the antecedents of expectations include prior satisfaction? And how do citizens interpret expectations and the questions we ask about them, and can personality traits help us understand differences in interpretations and expectations?

The Antecedents of Expectations

Thoughts about what expectations consist of have a long history (Muth 1961; Cardozo 1965). In this dissertation, expectations are seen as: “judgments of what individuals or groups think either will or should happen under particular circumstances” (James 2009, p.109). As mentioned in Chapter 2, there are generally two types of expectations in citizen satisfaction: predictive expectations and normative expectations. James’ definition of expectations above draws on both kinds. The next two sections will describe these two fundamental ways of conceiving expectations that permeate most citizen expectations literature.

Predictive Expectations

Predictive¹⁰ expectations are citizens’ prediction or calculation of likelihood that something “will” happen. This view of expectations is rather clean-cut and impersonal: “It is to be thought of as having no affective dimension but as being the result of a sterile, indifferent calculation of probability” (Miller 1977, p.76). Predictive expectations basically draw on the rational expectations literature from economics (Muth 1961; Lovell 1986; Sargent 2008) where they play a large role in predicting consumer behavior, price and decision making via the consumer’s wish to maximize utility. The assumption in the rational expectations paradigm is that consumers take all relevant information into account when forming these expectations and that on average consumer expectations will converge to the relevant economic model (Muth 1961).

This model has been further developed by Cyert and DeGroot (1974) to incorporate a Bayesian updating of expectations, such that the expectation formation process is constantly updated by the experiences of the consumer. In the aggregate, the assumption is that the expectations will equal performance, that is, the consumers are able to predict future performance, because they have interacted with the service on an everyday basis. They can do so because they have learned from their mistakes in predictions and adjusted them closer to the actual performance in a Bayesian manner (Oliver 1989; Johnson and Fornell 1991). It should be clear that such a process theoretically can apply to citizens as well, since they often engage with the same public services numerous times – sometimes throughout a lifetime.

Another popular approach in understanding the process of forming expectations is the adaptive expectations theory (Nerlove 1958). The idea is not

¹⁰ Predictive expectations are sometimes referred to as positive expectations within the citizen satisfaction literature. Both terms are used in this dissertation

much different than the coupling of rational expectations and Bayesian updating, since the individual also in this case is thought to update expectations by averaging prior expectations and the most recent experience with the service. Citizens have an ongoing expectation to the performance of the service that is constantly being updated by the performance and available information.

The difference between the adaptive and rational expectations is that in adaptive expectations, individuals are thought to weigh more recent experiences with the service higher, depending on the adaptiveness of the expectations in question (Johnson et al. 1995). Moreover, adaptive expectations have more similarities with the anchoring and adjustment theory from psychology which, at the individual level, is believed by some to be a better approximation of how people process information (Helson 1964; Tversky and Kahneman 1974). Conversely, rational expectations are typically thought to be a good approximation at the aggregated level (Nerlove 1958; Johnson et al. 1995).

Predictive expectations are often used in the citizen and consumer satisfaction literature as the comparison standard (Oliver 1980a; Van Ryzin 2006; Hjortskov 2016a), perhaps because this literature is inspired by the Expectancy-Value theory (Fishbein and Ajzen 1975). The Expectancy-Value theory uses the concept of beliefs instead of expectations, but these concepts are essentially the same, since the belief statements represent uncertainty about attributes according to the theory (Olson and Dover 1976, 1979). Beliefs are formed by prior experiences and observation (dubbed descriptive beliefs) and previously learned relationships or rules about unobserved relationships (inferential beliefs) and environmental information (informational beliefs) (Fishbein and Ajzen 1975; Oliver and Winer 1987, p.476).

It is clear that predictive expectations also share foundations with the Expectancy-Value theory. This is also true of the EDM, which I will touch upon in Chapter 6. Olson and Dover (1976) suggested the use of the Expectancy-Value theory's belief concept in explaining expectations, and Oliver worked the suggestion into his version of the EDM (1980a, pp.461–462).

Speaking in terms of the antecedents of expectations, rational expectations, adaptive expectations as well as Expectancy-Value theory predict that individuals will use all available and relevant information, especially prior experiences with the service, when forming their predictive expectations. Other antecedents typically mentioned in the satisfaction literatures are word-of-mouth, social referents, the media, public auditors, image, and the public organizations themselves (LaTour and Peat 1979, 1980; Oliver 1980a; Zeithaml et al. 1993; Clow et al. 1997; Van Ryzin 2006; James 2011a).

Normative expectations

In the service quality literature normative expectations are more common than predictive expectations (Boulding et al. 1993, p.8). Prakash used the normative expectations term to describe what the consumer should receive in order to be completely satisfied (1984, p.65). Likewise, Miller's categories of expectations as "ideal" and "wished for" are often counted as normative. Normative expectations are therefore seen as the ideal state of services that should be supplied by the service provider according to the citizen or consumer. Hence, they are also often called "should" expectations (Meirovich and Little 2013). The general idea is that citizens do not merely try to predict how the service will be in a sterile manner as indicated by the Miller quote above, but they ask themselves how the service "should" be based on their needs, wants and desires (Zeithaml et al. 1993).

While the antecedents of normative expectations are believed to contain some of the same influences as the antecedents of the predictive expectations (e.g., word-of-mouth, communications through the media, social referents), normative expectations are more generic and therefore also contain other influences (Steward et al. 2010; Meirovich and Little 2013). Normative expectations are deeply rooted in personal norms and values and harder to change than predictive expectations. They are most likely updated along the way like predictive expectations, but perhaps at a slower pace because they may be regarded as more implicit attitudes (Boulding et al. 1993; Rydell and McConnell 2006; Hjortskov 2016a) (See Chapter 6).

Additionally, personal needs and what Zeithaml et al. (1993) denote enduring service intensifiers may affect normative expectations underlining the implicit and personal nature of these expectations. Enduring service intensifiers are stable factors that lead the individual to a higher sensitivity towards a service. This may for example be a personal service philosophy that can be derived from the individual's own work experience or from other aspects of the personal domain (p. 7). Therefore, personal factors, or personality, most likely affect normative expectations more than predictive expectations (Day 1977, pp.173–175; Devlin et al. 2002, p.124) (see section on Paper D below).

Confounds in the Intersection between Predictive and Normative Expectations

There is, however, not an agreement on how to define the normative expectations construct, and there is even debate about the discriminant validity of the two constructs. Some conceptualizations of expectations mix the two concepts:

Expectations have two components: a probability of occurrence (e.g., the likelihood that a clerk will be available to wait on customers) and an evaluation of the occurrence (e.g., the degree to which the clerk's attention is desirable or undesirable, good or bad, etc.). Both are necessary because it is not clear at all that some attributes (clerks, in our example) are desired by all shoppers (Oliver 1981, p.33).

This conceptualization clearly makes use of both the predictive expectations (probability of occurrence) and normative expectations (evaluation of the occurrence – good/bad). The challenge here is that the prediction may confound the normative evaluation of the desirability if both constructs are not measured in applications (Spreng et al. 1998, p.1). On the other hand, pure normative expectations like the desires, ideals or complete satisfaction like in Prakash's definition (1984, p.65) may not be very informative, since such expectations only would be constrained by what the individual can imagine. These expectations would in theory always be very high and it is hard to imagine that they are the real standard of comparison when satisfaction is formed.

Instead, some sort of reasonableness in what is demanded from the service in the normative expectations is possibly also playing a role. In other words, it is not just about what I as a citizen desire from the service, for example brand new buildings, world-class teachers and free transport and meals at my children's school, but also what I believe can be done within the resources available for the schools. People possibly place at least some weight on what they know about possibilities of what the authorities and politicians can do with the service levels, the promises made by politicians and information on how service levels are in other cities, organizations or institutions. This information is possibly combined with information from previous experience when normative expectations are formed. This idea is perhaps closer to Tse & Wilton's what "ought" to happen (Tse and Wilton 1988, p.205; Boulding et al. 1993, p.9).

These insights have led to a set of alternative normative expectations, for example Zeithaml et al.'s "adequate service level" construct (Zeithaml et al. 1993, p.6). Drawing on Miller's (1977) "minimum tolerable" level of service and the experience-based norms of Cadotte, Woodruff and Jenkins (Woodruff et al. 1983; Cadotte et al. 1987) Zeithaml et al.'s expectations construct takes both desires and the actual possible into account. As explained by Cadotte, Woodruff and Jenkins:

These norms have two important characteristics: (1) they reflect desired performance in meeting needs/wants and (2) they are constrained by the performance consumers believe is possible as indicated by the performance of

known brands. The second characteristic requires elaboration. Though consumers may imagine some abstract ideal performance that a brand should provide, they also have concrete experiences with various real brands and their performance. Because consumers are more likely to think in concrete rather than abstract terms, experience with real brands should set limits on the performance a consumer believes the focal brand should provide (Cadotte et al. 1987, p.306).

It is clear that previous experiences, as in the rational, adaptive and Expectancy-Value theories above, are important here, but also a comparison to the performance of other suppliers. Zeithaml et al.'s alternative or supplementary expectations construct is used in the "interpretation" paper.

Another thing that has become clear through the above description is that expectations may have several standards within them. There is some evidence that this is true (Prakash 1984; Cadotte et al. 1987; Tse and Wilton 1988; Zeithaml et al. 1993; Dean 2004; Laroche et al. 2004). It has even been suggested that normative expectations serve as standards for predictive expectations, because a standard in itself cannot be high or low, it needs to be stable in order to serve as a "yardstick" for the performance evaluation. Instead, having high expectations means having predictive expectations that are close to the normative expectations, while having low expectations means that there is a significant gap between predictive and normative expectations. Normative expectations are therefore seen as the standard or yardstick for the predictive expectations, which may confound the expectation measure if not taken into account (Meirovich and Little 2013, p.44). This may also be supported from a psychological point of view, where it has been found that individuals are able to recruit a number of different representations in parallel, which then are aggregated in order to create a norm or standard (Kahneman and Miller 1986, p.136).

Updating of Expectations and the Exogenous Expectations Assumption

The temporal nature seems deeply ingrained in expectations regardless of which theory is employed. According to the adaptive expectations theory, the Bayesian updating in rational expectations and the Expectancy-Value theory, people are believed to update their expectations along the way, incorporating things that are important to them, notably different experiences with the service in question. This continued updating of course creates methodological challenges, especially when we study the EDM. The model depicts expectations as situated prior to the disconfirmation and satisfaction constructs

and therefore the causal arrows only point away from expectations (except the D link between expectations and perceived performance).

However, if a service is either durable or if it is used numerous times, as would often be the case in the public sector, the expectation theories reviewed above would say that prior experience with the service, that is the prior perceived performance, would affect current expectations. In other words, when we use the EDM in studies of citizen satisfaction with continuous services, various expectation theories would say that the EDM is an endogenous model. Yet, many studies of the EDM assume, explicitly or implicitly, exogenous expectations (Van Ryzin 2004, p.436, 2006, p.600; James 2009, p.113; Morgeson 2013, p.292; Jacobsen et al. 2015, p.833). This of course has to do with the cross-sectional nature of the data utilized to study the EDM, which necessitates the assumption, but it becomes quite strong when used together with theoretical arguments about the updating of expectations.

Indeed, the studies tracking the antecedents of expectations emphasize prior experience with or performance of the service in question. This may have methodological implications in itself. Paper C, the “feedback” paper, further develops this idea and asks if prior satisfaction can also, alongside prior perceived performance, affect current expectations. Again, should such an effect exist, it would constitute a new endogeneity concern in the EDM.

Paper C: The Feedback of Satisfaction

The “feedback” paper investigates if the antecedents of expectations also encompass prior satisfaction with the service. Clow et al. (1997) is, to the best of the author’s knowledge, the only study that incorporates prior satisfaction in its model explaining future consumer expectations. They do not support this inclusion with much theory, but as the above section shows, there is much theory and evidence to support that individuals update their expectations in an adaptive or Bayesian way taking the context and previous experiences with the service into account. This could also potentially be extended to prior satisfaction with the service. Therefore, the “feedback” paper investigates the research question: Does prior satisfaction affect future expectations of citizens?

Such a feedback effect from prior satisfaction on future expectations would be challenging for methodological, practical and theoretical reasons. First, such a relationship would be a challenge to much of the empirical work on the EDM because it would render the expectations endogenous to satisfaction. Since many investigations of the EDM in the citizen satisfaction literature (and in the consumer satisfaction literature) have to assume exoge-

neity of expectations because they are cross-sectional, such a relationship would violate this assumption. This line of reasoning is of course exactly the same as the one presented above concerning prior perceived performance.

Second, the practical challenge is that it might mean that efforts by politicians and public managers to increase citizen satisfaction perhaps succeeds in the short run but may also increase future citizen expectations. All else being equal, including performance, such raised expectations would result in less citizen satisfaction, at least according to the EDM. Third, according to the theories of expectation formation it makes good sense that prior performance can affect future expectations as has also been found in a number of studies (Clow et al. 1997; Devlin et al. 2002; Mitra and Golder 2006; James 2011a). However, it is less intuitive if prior satisfaction can affect future expectations when the perceived performance is held constant. This must be explained by something else than performance, such as a certain “warm” feeling about the service, an emotion or even cognitive biases like dissonance reduction (Oliver and Winer 1987; Oliver 2010).

The possibility that prior satisfaction may affect future expectations has been mentioned in the consumer satisfaction literature, although it mostly is seen as a phenomenon at the aggregated level:

The role of collective expectations in aggregate satisfaction stems from the fact that they reflect prior levels of performance (e.g., quality) and satisfaction delivered by firms and industries. [...] The satisfaction or dissatisfaction experienced will create expectations for similar levels of quality-related satisfaction in the future (Oliver 2010, p.61).

But it has also been theorized to happen at the individual level:

It is not a matter of once one is satisfied, he no longer strives, but rather that satisfaction brings raised expectations such that current performance is no longer satisfactory (Hunt 1977c, p.26).

Therefore the “feedback” paper investigates whether prior satisfaction positively affects future expectations.

Design and Data

The data for the “feedback” paper are three waves of the biannual parent school satisfaction survey carried out in the City of Aarhus in 2011 and 2013. The survey was sent to all parents using the schools, daycare centers, after school programs or youth clubs, but only the school surveys are used for the purpose of the “feedback” paper, mainly because of the larger size of the school population and the multiple years in the same institution in this case

as opposed to for example daycare institutions¹¹. The particularly attractive thing about the data is that it can be connected at the individual level and between years and can be linked to rich administrative register data from Statistics Denmark¹². The satisfaction surveys in the three years have approximately 18,000 respondents and a response rate of 63 and 66 pct. The survey asks for the parents' overall satisfaction, expectations and perceived performance through 5-point Likert items in the two waves.

The design of the study is a two-wave panel design that utilizes both waves of survey data and administrative data from 2011. Linear fixed effects models are used to estimate the effects of prior satisfaction on current expectations while controlling for prior perceived performance. As one of the identification strategies, prior expectations are introduced as a lagged dependent variable in the analyses making it an analysis of covariance (Morgan and Winship 2014, p.374). Furthermore, a set of fixed effects at different levels are used to handle unobserved, time-invariant variables that may affect prior satisfaction, prior perceived performance and current expectations, causing possible endogeneity bias. First, school fixed effects are employed in the main analysis. These may account for such time-invariant influences as an efficient school principal or some of the neighborhood characteristics that in different ways may affect the EDM variables.

Second, class and family fixed effects are used for robustness checks of the main results. These may account for unobserved influences at the class level such as teacher and additional neighborhood effects, since classes in Denmark are generally not formed on the basis of where families live but on a somewhat random basis (Ammermueller and Pischke 2009). The family fixed effects further control for unobserved influences at the class level, for example non-random assignment of teachers to classes, and time-invariant influences at the family-level, like a certain way of upbringing that brings a certain worldview with it that might shine through in both expectation and satisfaction evaluations. The drawback of the family fixed effect is that it requires at least two children in each family (with corresponding answers to both surveys in both years) to work, which is extremely demanding of the data.

A last robustness check utilizes a third year of data from the biannual citizen satisfaction surveys from 2009. While there are no items on expecta-

¹¹ In Aarhus, and Denmark in general, many children attend publicly funded daycare institutions at age 0-6. However, many of these children have to change institution during the six years.

¹² See <http://dst.dk/en/OmDS> for a detailed description of the data and Statistics Denmark

tions or perceived performance in this survey, the overall satisfaction question can be used in a panel model such that satisfaction 2009 is correlated with expectations 2011 and satisfaction 2011 is correlated with expectations 2013. In this way the hypothesis may be tested with an additional year of data, which speaks to concerns regarding specific trends only occurring between 2011 and 2013.

Results

The results across the three different specifications with school, class and family fixed effects are to a large extent comparable. The estimated effect of prior satisfaction on current expectations is between 0.014 and 0.057 points on the 5-point expectations scale when 1 point on the 5-point satisfaction scale is changed. Most of these effects are significant. Including controls and school- and class fixed effects leaves the effect of prior satisfaction on current expectations significant. It is, however, not significant when family fixed effects are used. Generally, the overall conclusion is that there is an effect of prior satisfaction on current expectations, even in most of the extremely restrictive family fixed effects cases, but the effects are only of modest size.

The implications of the “feedback” study are fourfold. First, the theoretical implications of the study are that the EDM in general should be seen as a model that is updated over time and that satisfaction is also part of this updating. Second, there seems to be an effect of prior satisfaction on current expectations while controlling for prior perceived performance. This seems at odds with the cognitive interpretation of the EDM, because the performance, at least in the minds of the citizens, should be controlled away, so the observed effect may be a sort of “warm feeling” of satisfaction that is not caused by performance.

Third, the methodological implications of the “feedback” paper are that expectations can generally not be seen as exogenous to satisfaction and perceived performance. Thus, cross-sectional applications of the EDM should be done with extreme caution. And finally, the practical implication of this paper is that managers and politicians risk raising expectations in the future as well when they succeed in raising satisfaction now. The solution to this is certainly not to stop raising the bar of public services, but perhaps to communicate to citizens what they can expect, also in times of prosperity and satisfaction.

Paper D: Interpreting Expectations

While much work has been done on the antecedents and formation of expectations, much less effort has been devoted to how people actually think about their own expectations. One study, Spreng et al. (1998), deals with the possibility that people may interpret predictive expectations in different ways and also find troubling evidence that it is the case in a student sample. If this is also the case among citizens, and if the questions we ask citizens contribute to the misinterpretations, then there exists another confound in the expectations construct. Paper D, the “interpretation” paper, investigates if citizens interpret expectations differently and if presenting them with the typical questions about predictive and normative expectations often asked in citizen satisfaction surveys are interpreted in the way intended by the researchers or public organizations issuing the survey. Furthermore, it is studied experimentally whether presenting citizens with both a predictive and a normative expectations question at the same time will remedy some of the possible bias.

Lastly, as mentioned above, personality factors have been theorized as important formative factors for normative expectations (Day 1977, pp.173–175; Zeithaml et al. 1993; Devlin et al. 2002, p.124). However, this argument has not been tested empirically. Therefore the “interpretation” paper tests the effect of citizens’ personality traits, as measured by the classic *Big Five* trait taxonomy (John and Srivastava 1999) and by the *Maximizing Tendency Scale* (Schwartz et al. 2002), on their expectations and on their interpretations of these expectations.

Interpretation of Expectations

Spreng et al. (1998) study the interpretations of expectations by letting a pool of 133 students at a large Midwestern University express their interpretations of the expectations questions they were asked in a survey. They are given four choices and an “other” option (see below). Surprisingly, the students distributed themselves almost perfectly between the four choices. Moreover, when this is repeated between the different expectations questions about different products (McDonald’s, Coca-Cola etc.), only 15 pct. report using the same interpretation of expectations to answer all expectations questions (p. 3).

Their second study uses experimental methods in an effort to separate the normative (desires) expectations interpretation from the predictive interpretation and in this way remove some of the bias. The general theory of the study is that some people interpret expectations as normative and some interpret them as predictive, and researchers who only ask one question risk ending up with biased answers from the people interpreting expectations dif-

ferently than intended. An idea to remedy this bias would be to present subjects with both a normative and a predictive expectation question. Spreng et al. manipulate the students' expectations to either a high or a low state and present some students with only the predictive expectations question, or both the predictive *and* the normative question (the juxtaposed condition).

The hypothesis in this study is that the students will become aware of their different interpretations when presented with both questions in the juxtaposed condition, and they will therefore be able to separate normative from positive expectations. Instead of having a predictive measure of expectations that consists of both predictive and normative interpretations, this experiment would instead provide “pure” predictive and normative expectations. This would manifest itself in the traditional measure of predictive expectations, which should be a weighted average of different interpretations of expectations, falling between the normative expectations, which should always be higher than predictive expectations, and the juxtaposed version of predictive expectations, which should be “pure” in terms of interpretations, i.e., without normatively founded answers¹³. This hypothesis is confirmed (*ibid.* p. 4-5).

There seems to be reason to be worried that citizens might also interpret expectations differently. Even normative expectations may be confounded by different interpretations (Teas 1993). Therefore, the first hypothesis in the “interpretation” paper is that citizens will also interpret expectations differently, and that it may be remedied by presenting both a normative and a predictive expectations question at the same time. Study 1 and 2 in the “interpretation” paper address these questions.

Personality Traits and Expectations

As personality traits have been mentioned as antecedents to expectations (Day 1977, pp.173–175; Zeithaml et al. 1993; Devlin et al. 2002, p.124), a first step towards understanding citizen expectations and their interpretations of them would be to investigate which personality traits may explain them and how. The *Big Five* measures are used to study this idea. They consist of five dimensions that should be able to capture most individual differences in personality. Factors that are thought to be stable from very early in life and even may have genetic basis (Gosling et al. 2003; Van Gestel and Van Broeckhoven 2003; Denissen and Penke 2008). The *Big Five* have earlier been found to affect many different outcomes, for example political attitudes and

¹³ Going from low expectations to high expectations, the distribution would be: Predictive (juxtaposed) – Predictive (traditional) – Normative.

political participation (Gerber et al. 2010; Gerber, Huber, Doherty, Dowling, et al. 2011; Ha et al. 2013).

The five factors are extraversion, agreeableness, conscientiousness, emotional stability and openness to new experiences (Goldberg 1990, 1992; Costa Jr and McCrae 1995; John and Srivastava 1999). As described in much greater detail in the paper, not all of the traits are thought to have large influence on citizen expectations and their interpretations of them. Especially citizens high on *conscientiousness* are thought to have higher expectations and interpret expectations as normative, since they are supposed to have a more goal-directed behavior that might spill over to their expectation formation. Likewise, citizens high on *openness* are hypothesized to have higher expectations and interpret expectations as normative, since they are supposed to have a need to enlarge and examine experiences and need things to be innovative and creative. They might transfer these needs to their expectations towards the public services such that they think these services should be equally creative and innovative and not just deliver “the basics”. Citizens high on *agreeableness* may instead be less demanding, since they tend to seek consensus and are modest, altruistic people. This may lead them to lower expectations and not interpret expectations as something they “must” or “should” have.

Furthermore, the personality trait *Maximizing Tendency* is hypothesized to have an influence on how citizens interpret and form expectations. The *Maximizing Tendency Scale* and the ideas behind build on the contention that people who in general do not satisfice (Simon 1956) but instead constantly try to maximize everything in their lives are more unhappy (Schwartz et al. 2002). Maximizers might therefore also expect more from their surroundings as they expect more of themselves.

Design and Data

The data used in the “interpretation” paper are obtained from Amazon’s Mechanical Turk (Mturk), which is an online labor market or crowdsourcing marketplace, where work task such as surveys are offered to “workers”, who are signed up at the webpage and get paid for their efforts. Mturk is essentially just a marketplace connecting employers with employees. Although workers are paid, research suggests that Mturk delivers reliable and valid estimates compared with other convenience samples (Berinsky et al. 2012; Casler et al. 2013; Goodman et al. 2013). 1,591 US citizens were recruited and answered the questions used in the “interpretation” paper for 0.75\$ per survey.

Study 1 asks the citizens about their interpretation of the words “expect” and “expectations” to detect whether the interpretation problem also exists in this particular sample. The response options are: “The characteristics that I feel that I must receive”, “The characteristics I want to receive”, “The characteristics I feel would be minimally adequate”, “The characteristics I believe I will actually receive” and “Other: The characteristics I ... (use your own words to explain your interpretation)”.

Moreover, in the context of public garbage and recycling services, the citizens are asked to interpret a specific expectations question and judge whether they would answer it in a predictive or normative way. The citizens were asked a normative and a predictive question. The typical normative question: “Considering the amount of local taxes and other resources available for local government services, do you think that **garbage and recycling** services provided by your local authority **should** be of excellent quality . . .” (1 = All of the time, 4 = Some of the time, 7 = Never)” and the typical predictive expectations question: “Thinking back a few years—how would you rate your EXPECTATIONS back then of the overall quality of your local government's **garbage and recycling** services?” (1 = My expectations were very low, 4 = My expectations were neither high nor low, 7 = My expectations were very high).

Study 2 replicates Spreng et al.'s (1998) second study in a survey experiment and does so in a public service context. In order to manipulate citizen expectations, a fictive town “Hometown” was invented and two different messages from the city administrator were presented to the citizens; one with the intention of lowering the participants' expectations and one with the intention of raising them. The descriptions were adopted from Van Ryzin's experimental study of the EDM (2013). After the description, citizens were presented with either a normative, a predictive or both expectations questions about the public services in general in the fictitious town of Hometown. The experiment is therefore a 2X3 factorial experiment.

Study 3 correlates the *Big Five* and the *Maximizing Tendency* personality traits with the interpretations of the word “expectations” with the response options from Study 1 and with their answers to the predictive and normative expectations questions about garbage and recycling also from Study 1. The *Big Five* is measured through the TIPI scale (Gosling et al. 2003) and the *Maximizing Tendency* is measured with the scale presented in Weinhardt et al. (2012).

Results

Study 1 shows that citizens also interpret expectations in quite diverse ways. Most interpret them in some version of the normative expectations (“must”, “want”, “minimally adequate”) but many also interpret it as predictive (“will”) expectations. More troubling, 65.6 pct. of the citizens actually interpret the typical expectation question as normative, while 11.9 pct. interpret the typical normative question as predictive. A closer look at these results indicates that citizens who are naturally inclined to interpret expectations as predictive are actually discouraged by the traditional predictive question and a shocking 61.9 pct. answer it as a normative question. It seems that the question itself pushes many citizens, even those who are inclined to think of expectations as predictive, towards a normative interpretation.

In Study 2, the Hometown treatments in the experiment are successful in manipulating citizens’ predictive expectations toward the services in the fictitious city. Furthermore, and as expected in normative expectation theory, normative expectations are not influenced by the treatment. However, it turns out that the predictive expectations are much *higher* when citizens are presented with the normative question (juxtaposed) in the low expectation condition, but there is no difference in the high expectations condition. This indicates that the normative question instead works as a primer of the predictive answers, and that citizens do not use the opportunity to divide their normative and predictive expectations between the two questions. This may very well reflect the fact that many interpret the predictive question used as normative as well as evidenced in Study 1. In other words, including both questions in the same survey does not seem to solve the problem.

In study 3, only the *Maximizing Tendency* and *Extraversion* seem to be able to explain the citizens’ interpretations of expectations. Maximizing citizens are more inclined to interpret expectations as something they “must” receive or something that is “minimally adequate”. Both are in the normative family, but surprisingly the third member of the family, “want”, is not explained by being a maximizer. Instead, citizens high on *Extraversion* are more likely to interpret expectations as a “want”.

As hypothesized, the personality traits do not explain the predictive expectations. This substantiates the theory about predictive expectations and the difference to normative expectations. Even among the citizens interpreting the predictive expectations question as normative, a case where it could be feared that the influence of personality traits would sneak in, there is no effect. However, there are positive effects of *Openness*, *Conscientiousness* and, unexpectedly, *Agreeableness*.

In sum, the “interpretation” paper points to some fundamental problems in the measurement of citizen expectations. Since the citizens apparently interpret expectations and the questions that we ask about them quite differently, there may be a serious confound lurking in much citizen satisfaction research. This is especially true of the predictive expectations question, which many interpret as being normative. It also seems that there is no cure for this bias in asking both questions at the same time. However, the normative question appears to perform a lot better in this regard, even asked alongside the predictive question.

Furthermore, the “interpretation” paper is the first to correlate personality traits with both expectations and interpretations of them. The results are mixed, but in line with the theories of predictive and normative expectations, personality traits only influence normative expectations. Not all correlations have the expected signs, and it is clear that some personality traits are more important than others. The implications are that researchers and managers alike should definitely reconsider the predictive expectations questions, because they appear to be confounded by citizens’ interpretations. Normative expectations seem to be a better alternative because they are more stable and since they are to a large extent what the predictive question measures anyway. It is also worth remembering that citizens possibly need a normative standard in order to form predictive expectations. Normative expectations may even be termed as the primary point of comparison for performance, while predictive expectations may be termed as the secondary point of comparison (Meirovich and Little 2013, p.44), which is in correspondence with the results in the “interpretation” paper.

Chapter 6: Dual Processing and Cognitive Biases in Citizen Satisfaction

Citizen Satisfaction and Attitude Research

One of the classics in the well-being and satisfaction with life literatures is Campbell's *The Sense of Well-Being in America* (1981). In the very beginning of the book, Campbell describes a fundamental assumption:

Our use of these measures is based on the assumption that all the countless experiences people go through from day to day add to these general global feelings of well-being, that these feelings remain relatively constant over extended periods, and that people can describe them with candor and accuracy" (Campbell 1981, p.23).

What is striking about the quote is how strong and all-encompassing the assumption actually is. Not only are people assumed to add and average countless experiences on an everyday basis into the global feeling of well-being, they are also supposed to be able to describe it with candor and accuracy when the researchers see fit. The quote is also typical for much of the well-being research before the 1980s, where largescale surveys with questions like "How satisfied are you with life as a whole these days?" were fielded to tap into the well-being of, especially America's, people.

Since then, such questions, and the assumption quoted above, have been questioned by the hedonic psychology (Kahneman et al. 1999). The relationship between individuals' experiences and objective conditions of their lives and their subjective well-being is very weak, the answers to the questions of well-being barely correlate when asked several times during an interview and, most critically, they are highly influenced by contexts. Disturbingly, people's well-being is more influenced by seemingly small mood changes, for example finding a dime just before the interview or becoming aware of a favorable sport result, than circumstances of life that should be more important (Schwarz et al. 1987; Schwarz and Strack 1999). This research definitely questions whether the results from surveys of well-being directly reflect stable inner states of well-being.

These insights should be important to citizen satisfaction as well. The psychology of attitudes has been prevalent in the consumer and citizen satis-

faction literatures from the beginning, but as in the well-being literature the cognitive aspect of evaluations has taken the front seat most of the time. This implies that consumers and citizens mostly can live up to Campbell's assumptions (Meirovich and Little 2013, p.48). Early on, Olson and Dover (1976) recommended attitudinal theory, especially Fishbein and Ajzen's Expectancy-Value theory, as a key to understanding expectation and satisfaction formation. As mentioned in Chapter 5, this recommendation was taken seriously by Oliver and integrated in his version of the EDM (Oliver 1980a, pp.461–462). The Expectancy-Value theory has been described as deliberative attitudinal theories and as such cognitive (Sanbonmatsu and Fazio 1990; Olson and Fazio 2009; Holland et al. 2012).

A Cognitive Model

The foundation in the cognitive psychology and the Expectancy-Value theory is prevalent in satisfaction research. In the Expectancy-Value theory, beliefs are considered to be the probability that the object under evaluation has a certain attribute. Each associated attribute of the object under evaluation is assessed by the individual, and the outcome of this evaluation is weighed in accordance with the perceived probability (the belief) that the service actually possesses this attribute (Fishbein and Ajzen 1975). These ideas on how individuals evaluate performance are especially evident in evaluating performance and the perceived construct in the EDM, for example in the multi-attribute performance literature, where the individual is thought to evaluate each attribute of a service or a product and subsequently weigh them according to importance (e.g., Scott and Bennett 1971; Westbrook 1981; Garbarino and Johnson 2001).

The EDM itself is also believed to be a cognitive model, meaning that individuals are thought to make overt, deliberate evaluations of the attributes of the services or products. Oliver's important article from 1980 labels the model "Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions" (1980, p. 462). As he points out in another influential article, the classic descriptions of the antecedents of satisfaction like Howard & Sheth (1969), Engel, Kollat & Blackwell (1968), Cardozo (1965), Olshavsky & Miller (1972) and Anderson (1973)

... imply conscious comparisons between a cognitive state prior to an event and a subsequent cognitive state, usually realized after the event is experienced (Oliver 1980b, p.206).

Clearly, individuals are here thought to live up to Campbell's assumptions. It also corresponds with what Keith Hunt concluded in his synthesis of the proceedings of a conference on satisfaction:

One could have a pleasurable experience that caused dissatisfaction because even though pleasurable, it wasn't as pleasurable as it was supposed or expected to be. So satisfaction/dissatisfaction isn't an emotion, it's the evaluation of an emotion, and as such it becomes a quasi-cognitive construct, and we would expect the laws of judgment to affect satisfaction (Hunt 1977c, pp.12–13).

These views are also expressed in the modern version of the EDT:

As generally expressed, the processes outlined in the preceding discussion are thought to be primarily cognitive. The expectation formation process, the comparison of performance to expectations, equity judgments, and causal attributions are mostly conscious, overt activities that consumers may or may not perform (Oliver 1993, p.419).

This is especially underlined in relation to perceived performance, which is conceived as a "hard, performance-based judgment" (Oliver 1997, pp.177–178). Similarly in studies of quality: "Quality judgments, being largely attribute-based, are thought to be primarily cognitive. Quality would appear to be a hard, performance-based judgment" (Oliver 2010, p.177).

Since the late 1980s and early 1990s, consumer satisfaction began to incorporate emotions and different affective states into their satisfaction investigations (e.g., Westbrook 1987; Oliver 1993; Nyer 1997). These later studies have also looked at different cognitive biases (Wirtz and Bateson 1995; Zwick et al. 1995; Lane and Keaveney 2005) (see Chapter 7).

Cracks in the Structure

The move from cognitive assumptions about how individuals make performance evaluations to accept non-cognitive assumptions is only slowly starting to happen in the citizen satisfaction literature and public administration in general. Even though bounded rationality is a large part of the heritage within public administration (Simon 1955, 1979), few studies consider judgmental biases.

Classic studies of citizen satisfaction have to some extent dealt with biases and errors in evaluations. For example, Lyons et al. look at the errors of attributions, that is, citizens attributing blame (or praise) for a certain performance level to government, even though the government is not responsible for the service (Lyons et al. 1992, p.118; see also Beck et al. 1987). Like-

wise, citizens' uninformed attitudes, or non-attitudes, have been a concern in citizen satisfaction (Stipak 1977). Research has shown that individuals are willing to state their attitudes on almost anything, even governmental services or initiatives that do not exist. This is of course a threat to the validity of citizen satisfaction surveys, just like the related social desirability bias, which has also been taken quite seriously in public administration (Kelly and Swindell 2003, p.95).

While these classic studies take some biases into account, they only consider cognitive biases to a limited extent but instead rely more on the Expectancy-Value theory's attribute view (see, e.g., Stipak 1977). However, evidence is surfacing that question the cognitive assumptions in citizen satisfaction. Recent investigations of citizen satisfaction have shown that different question order effects may be prevalent in satisfaction surveys (Van de Walle and Van Ryzin 2011) and that the well-known negativity bias may also work within the EDM (James 2009). Marvel shows that differences in citizens' implicit and unconscious attitudes color their evaluations of public versus private organizations (2016), which is also the takeaway point in an article by Hvidman and Andersen (Hvidman and Andersen 2015).

These cognitive biases are also shown to exist when citizens are presented with performance information (Olsen 2013a; Baekgaard and Serritzlew 2016). In an equivalence framing study, Olsen presented citizens with what should logically be the same performance but with different satisfaction figures (90 satisfaction rate and 10 pct. dissatisfaction rate) and found a significant negative effect on subsequent evaluations of the public service (Olsen 2015). One study even suggests that politicians are exploiting citizen cognitive biases when they set taxation levels (Olsen 2011).

These results indicate that citizens' evaluations of the public service are not as straightforward and "cognitive" as suggested by the EDM and the classic citizen satisfaction studies. The next section introduces an alternative overall theory of how human beings process information and how this may result in cognitive biases in some situations.

Dual Processing

The meta-theory of dual processing offers a simple framework for assessing these apparent inconsistencies in satisfaction judgments. At their simplest, they state that human cognition is made up of two kinds of thinking: one automatic, fast, intuitive and effortless, and one slow, analytic, reflective and effortful (Evans 2003).

The first system is usually termed System 1 and the second System 2, although the terminology is debated (Evans 2008; Evans and Stanovich

2013)¹⁴. The most defining characteristic of System 1 processing is autonomy (Evans and Stanovich 2013). It is not dependent on input from high-level control systems and it does not draw heavily on working memory but acts on its own when triggering stimuli enter the mind. These processes tend to be associative and happen fast and unconsciously without much effort (Kahneman 2011).

Still, System 1 processing can help us carry out very complex assignments if we are adequately trained in doing them. In doing so, we rely on experiential associations that have been learned to automaticity (Evans 2010; Stanovich and Toplak 2012). A skilled musician will be able to sit at the piano and without any special effort or concentration play music that to most people would require immense concentration (and therefore use of System 2 processes). Likewise, parallel parking takes all the concentration I can muster, but a trained parking attendant will be able to do so without any special effort. As such, System 1 processes can be visualized as a kind of grab-bag where both innately specified processing procedures and learned processing procedures occur (Stanovich and Toplak 2012, p.8).

System 2 works through the working memory and is slower and more effortful. The defining feature is cognitive decoupling. This means that whenever we think hypothetically, we should be able to keep apart the hypothetical state from the real world (Leslie 1987; Stanovich 2011; Stanovich and Toplak 2012). For example, when a manager makes a decision he is (hopefully) able to make a distinction between this decision and the (representations of) alternative decisions that he considered. This is cognitively costly and involves System 2 processing. Therefore, System 2 processing enables us to do mental simulation and consequential decision making (Evans 2007a).

Default-Interventionism and Cognitive Biases

How the two systems interact varies with applications, but one interpretation says that the first system (System 1) assesses input instantly and proposes intuitive answers to judgment problems overseen by the second system (Sys-

¹⁴ The system terminology introduced by Keith Stanovich (1999) and lately popularized by Daniel Kahneman (2011) is employed in this dissertation. Stanovich himself abandoned the use of this terminology recently for the older terminology of Type 1 and 2 (Wason and Evans 1974; Stanovich 2011) for fear of signaling that there are literally two distinct cognitive or neural systems, not many (Evans and Stanovich 2013). I use the system terminology because of its ease of presentation and because it is the most well-known of the two, but I emphasize that this does not mean that there are exactly two systems but merely two types of processing (Kahneman and Frederick 2005; Evans 2012a).

tem 2). Most of the time the intuitive answers offered by System 1 are corrected and overridden by System 2 (Gilbert 1989). Usually this work division works out fine and leads to perfectly reasonable decisions and judgments. However, for different reasons, the intuitive judgments by System 1 are sometimes not corrected by System 2 although they should be. This can lead to cognitive biases, which may not only apply to citizens with the sometimes limited experiences with the services, but also to professionals (Tversky and Kahneman 1971; Englich et al. 2006; Kahneman and Klein 2009).

The view of the interactions between System 1 and 2 employed in this dissertation is sometimes termed default-interventionist (Evans 2007b), but is perhaps best known from the heuristics and biases approach (Kahneman and Frederick 2005; Kahneman 2011). The approach assumes that System 1 and System 2 are active at the same time and compete for the control of overt responses. This use of Dual Process theory raises two questions when cognitive biases are encountered: 1) What features of System 1 created the error? And 2) why was the error not detected and corrected by System 2? (Kahneman and Frederick 2005, p.268). In other words, both kinds of processing can err and result in cognitive biases. Evaluation of art pieces is an example where System 2 may result in biased judgments. Research has shown that art buyers are more satisfied if they act on their first intuitive impressions (System 1) than if they take their time (Dijksterhuis and van Olden 2006).

The heuristics and biases approach has identified a number of heuristics that System 1 tends to use, and System 2 often endorses when evaluating inputs, for example the availability and the representativeness heuristics (Tversky and Kahneman 1973, 1974). These can lead to cognitive bias if the heuristic used is too simplistic on some dimension and therefore differs from the target attribute. Whenever the target of an evaluation is more difficult to assess than some related attribute that yields a plausible answer, System 1 tends to rely on and suggest the more assessable heuristic attribute – in other words answering a different and easier question instead of the one posed. If System 2 does not intervene, the result is cognitive bias (Kahneman and Frederick 2005).

Dual Process and the Expectation-Disconfirmation Model: A Rational Model?

The Dual-process and Default-interventionist approaches to information processing and evaluation are a radical departure from the cognitive view applied in the EDM. In a sense, the basic links in the EDM claim a consistent relationship between expectations, performance and satisfaction. A specific level of expectations and performance should result in one level of satisfac-

tion, not multiple. For example, simply asking about performance should not change satisfaction, since the citizens' experiences should be the same whether they are asked about them or not. This form of rationality assumption has been called coherence rationality. It is the "...strict conception that requires the agent's entire system of beliefs and preferences to be internally consistent and immune to effects of framing and context" (Kahneman and Frederick 2005, p.277; see also Kahneman 2000; Shafir and LeBoeuf 2002).

Although some of the links in the EDM introduce less coherence-rational arguments, specifically the links E, F and D, these additions also create a less consistent model. It does not, however, mean that this dissertation views the EDM, and the information processing assumed in it, to be irrational. Instead, the processes in the EDM may be described perhaps not as coherence-rational, but as reasoning-rational, which "only requires an ability to reason correctly about the information at hand without demanding perfect consistency among beliefs that are not simultaneously evoked" (Kahneman and Frederick 2005, p.277). Reasoning rationality is in this way less demanding than the coherence rationality, and the EDM's presumptions about the information processing of human beings may comply with this form of rationality.

The next section describes Paper E, "cognitive bias", where the different parts of the EDM are investigated in a dual-process framework, where these rationality considerations become important.

Paper E: Cognitive Biases in Performance Evaluations

The "cognitive bias" paper examines whether the Dual-process framework can be a more adequate interpretation of the EDM, which the above mentioned "cracks" indicate is not as cognitive as has been claimed. Research has shown that people to a large extent rely on System 1 by drawing on associations from cognitive and affective feelings when evaluating for example their overall well-being (Kahneman et al. 1999; Schwarz and Clore 2007; Greifeneder et al. 2011). Affective feelings include for example moods and emotions that are either positive or negative, and it has been shown that people's mood can have a substantial effect on their overall life satisfaction, even though the present mood is manipulated and should not be decisive for the overall life satisfaction (Schwarz and Clore 1983a). Results from consumer satisfaction have also attributed a substantial part of the satisfaction evaluation to emotions (Westbrook 1987; Mano and Oliver 1993; Oliver 1993; Phillips and Baumgartner 2002).

Cognitive feelings include experiential states that relate to, for example, how easy it is to retrieve information. When citizens have to retrieve information on how they experienced a public service they may retrieve this information under influence of their cognitive feelings. Famously, people have been shown to alter their evaluation of life satisfaction if they were asked about how many dates they have had recently just prior to being asked about their life satisfaction (Strack et al. 1988). Here, System 1 is thought to replace the broader, and more complex, question of life satisfaction with the narrower question about one's romantic life. In other words, people are thought to replace the complicated question with the easier one (Kahneman and Frederick 2005). Even the feeling of ease of retrieval can be attributed with informational value that should instead be attributed to the content of what was retrieved. In other words, things that are easy to remember seem more correct to people than things that are hard to remember (Schwarz et al. 1991; Ruder and Bless 2003).

This research on a related subject, life satisfaction, may well also apply to the EDM of citizen satisfaction. Not only should expectations be taken into account when citizen satisfaction is evaluated, citizens' cognitive and affective feelings may play a role as well. The "cognitive bias" paper is an attempt to test some of these arguments in citizen satisfaction, and although we cannot observe these psychological processes, the experiments used in the paper may show if citizens react to priming and frames and thereby violate the coherence-rationality assumption. Specifically, the experiments in the paper test the link from perceived performance to satisfaction.

Design and Data

Two studies were conducted in a sample of parents of 2,818 school children in the City of Aarhus. Two surveys were administered and they had a response rate of 45.1 pct. and 33.5 pct. respectively. Study 1 is a field experiment that manipulates budget information from the city council to the citizens about the economic situation in Aarhus and the service area of public schools specifically. Again, experiments are of great benefit to research on citizen satisfaction, since many of the relationships and associations between variables, especially within the EDM, may suffer from reverse causality, selection bias or omitted variable bias, which may cause serious bias in the estimates obtained (Angrist and Pischke 2009).

The advantage of using the sample of parents is that they all have actual experiences with the service in question, some even years of experience. These citizens constitute a hard case for manipulating perceptions of performance, since they are likely to have substantial confidence in their evalua-

tions. Also, the citizens are asked to evaluate two different services at two different levels of abstraction within public schools: reading materials (concrete service) and pedagogy applied during child's reading lessons (abstract service). The concrete service should be harder to manipulate since it should be easier to evaluate.

The two budget treatments contained real information on current and future budgets of the service area of children and youth. One treatment contained statements from the politicians in the city council to the citizens about tough economic conditions in the City of Aarhus and that cutbacks would be needed (cutback frame). The other budget treatment contained real information from the politicians about tough economic conditions but that cutbacks were not needed (status quo condition)¹⁵. A control group received no budget frame.

The most important point here is that the information was about current and future performance and not about past performance. Again, this should make the citizens' evaluations less malleable to the budget information, as information about past performance can be relevant to citizens' perceptions of performance (James 2011b), but information on future performance in the form of budget constraints should not change the citizens' personal experiences with performance. Whatever the politicians say about the future, these citizens have experienced a certain level of performance in a service context that is very important to most of them (their children's schools). Moreover, the two specific services they are asked to evaluate are either very concrete and easy to evaluate (reading materials) or more abstract (pedagogy). In sum, the experiment in Study 1 should be a hard test of the malleability of citizens' performance evaluations.

Study 2 is a survey experiment that addresses the possibility that citizens rely more on System 1 when making their satisfaction evaluation. The experiment consists of four treatments, and the first two treatments specifically test whether asking the perceived performance question just before the satisfaction question will alter the satisfaction evaluation. Many citizen satisfaction surveys are structured in such a manner. This experiment tests whether citizens tend to rely on System 1 by answering the easier question in the manner of Strack et al.'s dates test (1988); in other words, whether drawing citizens' attention to performance, as many performance management systems intend to do, will alter citizen satisfaction.

¹⁵ Both statements are real but they are not as schizophrenic as they sound. Instead, they address different levels of the organization. These differences in levels were not visible to the citizens

The second part of the experiment in Study 2 tests the ease of retrieval hypothesis (Schwarz et al. 1991) by asking the citizens to describe either two or six instances where they experienced a high performance at their child's school during the last week. The hypothesis is that citizens will experience the two instances to be easier to remember and therefore conclude that performance is high. This will lead to higher satisfaction. In comparison, most citizens will likely have a hard time remembering six instances of high performance, and since this retrieval is experienced as cumbersome, many will conclude that performance is low.

Results

After having concluded that the basic links in the EDM also work as usual in the sample, Study 1 examines if the citizens' satisfaction evaluations can be affected by the field experiment's primes about current and future budget statements from the politicians in the City of Aarhus. Both in the abstract (pedagogy) and the concrete (reading materials) service cases there are large negative effects of the budget primes on the citizens' experienced performance and satisfaction in comparison with the control group. There are, however, no effects on expectations. The results are basically the same in the cutback and the status quo primes and indicate that the odds of either evaluating the experienced performance as "Always" or "Often" being excellent decrease with a factor of .4-.5¹⁶.

The field experiment in Study 1 was designed to be a hard case on changing citizens' performance and satisfaction evaluations. The citizens were evaluating a service they know very well through everyday use and care deeply about it since it concerns their children, and the information in the treatment should have no influence on their experienced performance, especially in the status quo treatment condition. Still, the experienced performance and satisfaction of the citizens were changed as a consequence of the priming. This is even the case in the concrete service case with the status quo prime, where citizens should be the least likely to let irrelevant information influence their evaluations. Surprisingly, there were no effects of the primes on expectations although this construct should be updated along the way as discussed in Chapter 5. These results bolster the contention that citizens to a large extent rely on System 1 processing when evaluating performance.

¹⁶ Odds ratios. The tests are carried out in logit models with the dependent variable coded as 1 if the citizens answered "Always" or "Often" on a five-point Likert scale, and 0 otherwise. Standard errors were clustered at the family level, since some families may have more children in the sample.

The results from Study 2 corroborate this contention. The first part of the experiment shows that when citizens are presented with the experienced performance question first, they are 86 pct. more likely to be “Satisfied” or “Very Satisfied” than the group that is not asked about performance first¹⁷. This means that just asking about performance, even using the traditional performance question used in many satisfaction surveys, may prime citizens to have higher satisfaction. However, there is no significant difference between citizens’ satisfaction evaluations when they first are asked to recall two or six instances where they experienced an excellent service. This is more surprising and not in accordance with Dual-process theory.

On the other hand, the citizens who were asked to state two or six instances of high performance had the same level of satisfaction as the citizens who were not asked the traditional performance question just before stating their satisfaction. This may indicate that asking the citizens to explicitly describe situations in which performance was high did not result in a System 1 effect as in Strack et al. (1988), but instead that it brought the self-critical operations of System 2 into play (Kahneman and Frederick 2005, p.273). This may happen because the citizens have both the opportunity and motivation to engage in critical System 2 deliberation because of the descriptions (Fazio and Olson 2014; see Chapter 7). This has also been found in related studies, where asking about the current weather, as opposed to the recent number of dates, does not have an effect on well-being (Schwarz and Clore 1983b), and asking people to describe their satisfaction with some specific domain of life reduces the weight of this domain in the subsequent well-being evaluation (Schwarz 1996; Kahneman and Frederick 2005, p.273).

There are several contributions in the “cognitive bias” paper. First, it shows that the EDM has a cognitive foundation and that the basic process described in the model implies a coherence-rational assumption about the citizens’ information processing. Second, it theorizes that the Dual-process framework and insights from the Default-interventionist literatures may be a better interpretation of the results of citizens’ satisfaction evaluations than the presumptions in the classic EDM. Third, it tests these ideas in two studies utilizing experimental methods and it does so in an actual service setting in which citizens are very knowledgeable about the service and care about it, that is, the experiments are employed in a real setting where changing citizens’ attitudes should be hard. The results challenge the internal coherence of the EDM since it seems that citizen weigh irrelevant dimensions when

¹⁷ An odds ratio of 1.864 tested in a logit model with the dependent variable coded as 1 if citizens answered “Satisfied” or “Very satisfied” on a five-point Likert scale, and 0 otherwise.

forming their performance evaluations and since the correlation between performance and satisfaction can change as a result of the changed order of the questions.

The results in the “cognitive bias” paper should not be taken as evidence that citizen satisfaction is useless or that there is no connection between actual performance and citizen satisfaction, but rather that the EDM is not coherence-rational and that dimensions that are not relevant to citizens’ performance evaluations may very well be weighed into these evaluations anyway. As discussed in Chapter 4, citizens’ voice is an important corrective to the political system, especially in the public sector where exit is not always an option. Instead of discarding citizen satisfaction because of these new insights, we should work toward having a better understanding of how citizens evaluate performance and how we should design citizen satisfaction surveys in order to avoid cognitive biases. The next chapter expands on these general implications of the papers in the dissertation and suggests a new research agenda on the basis of them.

Chapter 7: Citizen Satisfaction and the EDM Revisited

The interpretation of citizen satisfaction, and in particular the EDM, is challenged by the contributions in the “cognitive bias” paper. As the paper points out, there is much more to be learned about citizen satisfaction and the EDM when interpreting the theory and the results through the glasses of Dual-process theory. The second part of the “review” paper delivers such an interpretation, which will be discussed in this chapter, and proposes a couple of hypotheses for future research. Furthermore, research on consumer satisfaction has evolved considerably since the development of the EDM, and many things can be learned from some of the exciting developments in this literature. The question is whether these theories will travel to the public sector as well as the EDM has. These developments in consumer satisfaction will be described and their usefulness in public administration and citizen satisfaction will be discussed.

Dual-Process and Attitudinal Research

As mentioned in Chapter 6, attitudinal research from cognitive and social psychology has played a large role in consumer satisfaction where, for example, the Expectancy-Value theory has had a large influence, especially in the development of the EDM (e.g., Olson and Dover 1976; Oliver 1980a). However, Dual-process theory and research on cognitive biases has questioned the assumptions behind Ajzen and Fishbein’s Expectancy-Value theory and especially the later theory of reasoned action (1980). According to the critics, these theories make the strong assumption that people are usually quite rational and always engage in effortful, deliberate and overt thought processes (Ajzen and Fishbein 1980, p.5; Fazio 1990, pp.89–91). While most acknowledge that such System 2 processing is done on a regular basis, it is characterized by considerable cognitive effort, and this effortful processing is not always possible. Therefore, System 1 processing sometimes goes unchecked resulting in cognitive biases.

How System 1 and 2 precisely interact is heavily debated and a full account of this debate is not the aim of this dissertation (see Sherman et al. 2014 for an updated account). The Default-interventionist approach has already been mentioned in Chapter 5 (Kahneman and Frederick 2005). Another

er account of the interplay between System 1 and 2 is the MODE model (Fazio 1990), which introduces two interacting variables, opportunity and motivation, that may decide when people engage in spontaneous System 1 processing and when they engage in deliberate and effortful System 2 processing. The second part of the “review” paper uses this model in a reinterpretation of the relationships in the EDM.

Paper A, Part II: The Expectation-Disconfirmation Model of Citizen Satisfaction – A Review

The “review” paper introduces the MODE¹⁸ model as a way of describing the interplay between System 1 and System 2 processing (Fazio 1990). Here, System 1 processes are termed spontaneous and System 2 are termed deliberative. An attitude is viewed as object-evaluation associations (for example the parents’ evaluations of their child’s school) that are stored in memory and can vary in strength (Fazio 2007). The model states that spontaneous activation of attitudes, as in the overarching Dual-process framework, happens unconsciously and fast as the first thing when an individual encounters a stimulus. These spontaneous activations shape or construe the final evaluation without the necessary awareness of the individual (Olson and Fazio 2009).

However, people may engage in effortful, overt deliberation over the judgmental and behavioral alternatives, that is, System 2 processing. The MODE model states that if System 2 is to intervene further downstream in the process it requires both the opportunity and the motivation to do so. The *opportunity* is a gating mechanism that allows the individual to correct or even override automatically created attitudes. The opportunity to process in a deliberative way is dependent on things like time available to process the information and resources in terms of cognitive capacity, both in general and at the moment of the evaluation (e.g., the level of cognitive strain required for the evaluation task and cognitive depletion, for example in the form of tiredness).

If the opportunity is in place, *motivation* is required for the deliberative processes of System 2 to intervene. Motivation comes in many forms, but things like the desire to answer accurately when asked to evaluate the performance of a public service that you care about (desire for accuracy or fear of invalidity) and a sense of being entrusted to evaluate something important to the community (sense of accountability) could be motivating factors in the citizen satisfaction setting (Fazio 1990; Fazio and Olson 2014).

¹⁸ Motivation and Opportunity as Determinants. See Fazio (1990) for a full account of the model.

In other words, motivation and opportunity are considered to be interacting variables that determine when System 2 processes are allowed to influence the evaluation (or behavior). Only in the presence of both variables is the “bottom-up” process of deliberation assumed to take place (Olson and Fazio 2009).

The EDM in a MODE perspective

The basic argument in the “review” paper is that the EDM, at least its basic parts (link A, B and C), not only assumes internal consistency and a coherence rationality as argued in the “cognitive bias” paper, but also deliberative “bottom-up” processes when citizens evaluate public services. This is an implication of considering the model as “cognitive” (Oliver 1993; Morgan et al. 1996). In the Dual-process perspective, it is assumed in the EDM that citizens engage in System 2 processing. According to the MODE model, this also means that motivation and opportunity must be in place in order for the automatic activation of attitudes not to color the final evaluation too much. It seems clear that these assumptions are warranted in many cases given the success of the EDM in explaining satisfaction. But it also seems that these assumptions are violated in other cases as evidenced in the “cognitive bias” paper and other research that is beginning to emerge within public administration (see Chapter 6).

The argument in the “review” paper is that motivation and opportunity serve as gatekeepers to the cognitive version of the EDM. Only when both motivation and opportunity are in place can there be internal consistency and coherence rationality and the basic disconfirmation link is allowed to work without unconscious, automatic influences. This also means that some of the links in the full EDM perhaps arise because some citizens do not have the opportunity or motivation to engage in the deliberative process of evaluating the service in question.

The “review” paper discusses each of the links F, E and D in the EDM in the light of the MODE model. As the paper discusses in greater detail, each of them may violate the internal consistency of the model and may be consequences of the missing motivation or opportunity. For example, the F link, which in some empirical applications appears to be positive and in others negative, is explained by either cognitive dissonance (assimilation) or contrast theory (see Chapter 2). Apparently, the link can change satisfaction in unspecified ways while performance does not change. If motivation and opportunity had been in place for all citizens, the theoretical prediction would be that citizens deliberate over the different attributes of the public service and meticulously weigh their importance and quality. This is compared to

prior expectations. The resulting disconfirmation construct and its influence on satisfaction should account for all expectation effects. There should be no need for “regret” afterwards in the form of adjusting the satisfaction towards the expectations construct and thereby instilling a positive correlation between the two, because this should already be calculated into the disconfirmation effect (link C).

The basic constructs of the EDM may also be viewed through the MODE model. For example, the expectation construct has many conceptualizations and interpretations, as discussed in Chapter 5. Some of the differences between them, or maybe even some of the unexplainable results, may be due to missing motivation or opportunity. Whereas normative expectations should build on values and norms that may be implicit attitudes (Olson and Fazio 2009), predictive expectations may need extensive deliberation on the spot. If normative expectations are implicit attitudes, they should be harder to change, which is a part of the theory behind them, but also faster and easier to automatically recruit (Rydell and McConnell 2006). This may explain why many interpret expectations and the predictive expectations question as normative as evidenced in the “interpretation” paper. If opportunity or motivation has not been in place, citizens simply recruit their implicit attitudes automatically.

It is important to note that System 2 processes are not necessarily less error prone than System 1 processes. In many instances an evaluation involves a mix of the two, and they often result in the same evaluation (Evans 2012b; Fazio and Olson 2014). In some contexts, System 1 evaluations have even proved more accurate (e.g., the evaluation of art (Dijksterhuis and van Olden 2006)). However, System 2 processes are required to uphold the internal consistency in the EDM, and many public services have complex attributes and operate in unpredictable contexts, which most likely will make System 1 processes more error prone (Kahneman and Klein 2009).

It seems that if satisfaction measures are to be used by public organizations as measures of performance, they should ensure that citizens are both motivated to evaluate the service and have the opportunity to do so. This of course would involve the aforementioned motivating forces of desire for accuracy and sense of accountability that perhaps to some extent can be encouraged by outsiders (i.e., public managers who want an accurate satisfaction evaluation). However, the opportunity part, such as time and cognitive resources, is harder to encourage from the outside, although encouragements to take the time needed to evaluate and a minimum time used for each question in electronic questionnaires could be explored.

Future Research Using Dual-Process Theory and the MODE Model

The introduction of Dual-process theory and the MODE model in the “review” and “cognitive bias” papers calls for new research in the citizen satisfaction literature. Many hypotheses could be proposed within this framework; this section will propose a few of the most obvious.

First and foremost, the general argument in the “review” paper is that the links in the EDM that have been added in order to account for extra variation in the satisfaction variation (D, E and F) should only appear when citizens engage in System 1 processing. If citizens are engaging in System 2 processing and therefore deliberate over the different attributes of the service in question and weigh these attributes according to their relative importance, the basic links in the EDM (A, B, C) should suffice in explaining the variation. After all, the helping links add considerable complexity, which is usually considered a cost in science (Kahneman 2011, p.281).

Motivation and opportunity should, according to the MODE model, determine whether System 1 mostly forms the satisfaction evaluation or if System 2 is activated:

H1: Motivation and opportunity determine whether System 1 or System 2 processing determines the satisfaction evaluation.

Hypothesis 1 is of course the overall implication of the “review” paper from which numerous separate hypotheses can be derived. An interesting question that follows from H1 is whether the additional links in the EDM will be less influential if there is a successful activation of motivation and opportunity. H1 should be addressed via rigorously designed experiments, possibly in the laboratory, since many outside influences might interfere with the relationships in the EDM. In general it is difficult to investigate mediating relationships, even with experiments, but new methods are starting to appear (Green et al. 2010; Imai et al. 2011, 2013; Heckman and Pinto 2013; Wang and Sobel 2013). Some of the previously mentioned ways of motivating (desire for accuracy and accountability) and securing the opportunity that have been found to work in other settings (Fazio and Olson 2014) should be experimentally tested in various citizen satisfaction contexts. This would clearly advance our knowledge on how satisfaction is formed under different conditions, it would add considerable knowledge to the EDM, and it would inform us on how to design citizen surveys that maximize the probability of unbiased satisfaction answers.

Furthermore, the different links of the EDM should be investigated in the light of Dual-processing and the MODE model. The second hypothesis deals

with the E link from perceived performance to satisfaction. As proposed above, this link may only exist when citizens automatically recruit attitudes without the inference of System 2. When they deliberate consciously over the attributes of the service in question, the resulting perceived performance should be compared with prior expectations and the full effect on satisfaction should travel through the disconfirmation construct. One proposition could be that when we observe question order effects between presenting the overall satisfaction question before or after a number of specific questions in citizen satisfaction surveys (Van de Walle and Van Ryzin 2011), it may be the result of motivating to evaluate deliberately. If presenting the citizens with specific questions before the overall satisfaction question motivates to evaluate deliberately, the consequence should be a less strong E link:

H2: Presenting citizens with specific questions about the service before the overall satisfaction question will diminish the E link in the EDM.

Investigating this question will hopefully also result in more knowledge about question-order effects. As discussed by Van de Walle and Van Ryzin (2011), we do not know what “true” satisfaction is. Some have emphasized that since specific questions seem to prime overall satisfaction, we should ask the overall question first (McFarland 1981). But if specific questions motivate citizens to engage in deliberate evaluation it may be a better alternative.

Finally, the specific constructs in the EDM could also be studied in the light of Dual-processing. For example, the satisfaction construct itself, as it was shown in the “cognitive bias” paper, is most likely under influence of cognitive and affective feelings and therefore System 1 processing. It has been shown that asking certain, unrelated questions before the satisfaction evaluation may actually be unrelated to the subsequent satisfaction evaluation instead of priming it (Schwarz and Clore 1983a), like in the “cognitive bias” paper. This may be because such an unrelated question (about the weather in Schwarz and Clore (1983)) motivates deliberate processing because of the surprise it creates. Maybe such a surprise effect can even neutralize the effect found in the “cognitive bias” paper. A natural hypothesis following this line of reasoning is:

H3: Including an unrelated question just before the perceived performance and satisfaction question in a citizen survey will neutralize the priming effect of the perceived performance question.

H3 of course presupposes that opportunity is in place as well. If H3 is true, then the inclusion of the unrelated question will have a debiasing effect, which would be of help when we design citizen surveys.

These three hypotheses show that reinterpreting the EDM in the light of Dual-process theory and the MODE model can spark new research questions that may add significantly to our knowledge about citizen satisfaction and how public managers can design citizen surveys that contain fewer cognitive biases. The next section draws on insights from the business and marketing literatures in order to develop new research questions.

What Can Still Be Learned from Consumer Satisfaction Research?

Citizen satisfaction research has benefited tremendously from consumer satisfaction research. Noteworthy is of course the adoption of the EDM. However, the progress in consumer satisfaction research did not stop after the development of the EDM in the 1960s and 1970s. The EDM continued to evolve, and new psychological insights about human information processing were quickly adopted into consumer satisfaction research. Some of these developments had the same cognitive foundations as the EDM and others started to work with cognitive biases.

However, few of these insights have been incorporated in citizen satisfaction although they might prove fruitful in this literature as well. This section describes some of these additions to consumer satisfaction theory and their applicability to the public sector and develops a set of testable hypotheses.

Comparison level theory. In their critique of the EDM, LaTour and Peat (1979) claimed that too much emphasis was put on external influences on expectations such as advertising and service provider claims. Instead, they wanted to focus on influences that are more local or internal to the individual such as people close to them (e.g., friends, family, neighbors) or previous experiences with the same service through comparison-level theory (Thibaut and Kelley 1959). This extension of the EDM only changes the comparison standard (expectations), or maybe even only the weighting of different dimensions in the comparison standard.

The Comparison Level Theory resembles much work in some areas of the public sector with focus on peer effects and therefore will not be unfamiliar to researchers working with, for example, the education area. Especially social comparison should be of importance when citizens evaluate public services, since many receive services from the same provider in a local area. Also, there are often no or very limited objective means against which citizens can evaluate public services, and therefore the hypothesis must be that they

compare their opinions and expectations with those of others in their surroundings (Festinger 1954, p.118):

H4: When evaluating public services, citizens will to a large extent rely on the opinions of others in their surroundings.

Hypothesis 4 is broad in the sense that it could contain both the formation of expectations, as was the original idea by LaTour and Peat (1979), and the formation of perceived performance and satisfaction itself as has been found in the life satisfaction literature (Emmons and Diener 1985). Such social influences are highly likely to influence satisfaction evaluations directly or indirectly, although the influences do not necessarily bring the satisfaction evaluation closer to the actual performance (Fox and Kahneman 1992). A citizen's perceptions of other citizens' opinions or behavior may very well be biased (Marks and Miller 1987).

Studies of social comparison in the context of evaluating public services could add important knowledge on how citizen satisfaction is formed and reveal if social comparison introduces cognitive biases. Moreover, taking objective performance information into account might also reveal if social comparison or objective performance is the preferred comparison standard (Olsen 2013b).

Equity theory. This theory states that individuals seek a balance or equity in relational exchanges because perceptions of being under- or over-rewarded will lead to distress. An individual will assess own and service providers' inputs and outputs and consider this when forming the satisfaction judgment (Adams 1965; Oliver and Swan 1989). Like comparison-level theory, equity theory changes the focus from the individual in an empty space to the individual situated in a social and political setting, where other individuals and organizations also engage in exchanges with the individual and/or the provider offering the product or service. The individual is assumed to be able to observe these exchanges and judge them in comparison with own exchanges.

This extension of the EDM seems to add more reliance on System 2 processing by the individual since these comparisons between the individual and other agents and organizations will require extensive processing. Just like in the EDM, cognitive biases are not a part of the supposed relationship between expectations, perceived performance and satisfaction in this theory (Oliver 1997, p.178). However, the implication of the results from this dissertation is that the equity judgments may very well be biased. The general hypothesis could be:

H5: The citizen will be less (more) satisfied when other comparable citizens are perceived to be treated better (worse).

Equity is typically mentioned as a goal and a performance measure in public administration (Boyne 2006), and citizens also in general value equality. However, public services often need to be diversified on the basis of the situation of the citizens, and citizen perceptions of these differences, justified or not, may lead to substantial effects on satisfaction. The difference in relation to the social comparison hypotheses above is that although it includes a social comparison, it is a comparison based specifically on the equity of service delivery. Furthermore, there is reason to expect that ambiguousness of the service will moderate the effect, since it is more difficult to compare ambiguous services and be convinced that the neighbor gets more, and that there will be negativity bias or loss aversion, since the perception that the neighbor gets more should have larger effects than if he gets less (Novemsky and Kahneman 2005; Soroka 2014).

Research on this question in citizen satisfaction advances our knowledge about the effects of social comparisons on satisfaction and about citizens' perceptions of equity or lack thereof.

Emotions. Affect in the satisfaction response became a large research field in the consumer satisfaction literature in the early 1990s and emotions have been shown to affect the satisfaction response alongside the EDM (Westbrook 1987; Westbrook and Oliver 1991; Mano and Oliver 1993; Oliver 1993; Morgan et al. 1996; Phillips and Baumgartner 2002). Whereas the emotional aspect of the satisfaction was incorporated relatively fast in the literature, the exact nature and effects of emotions have been a little more unclear. The important thing is that there is considerable evidence of an emotional impact on satisfaction judgments. Furthermore, as expressed by Richard Oliver: "Apparently two mechanisms operate in tandem in consumers' minds, one involving the assessment of functional or comparative outcomes (what the product/service gives me) and one relating to how the product/service influences affect (how the product makes me feel)" (1994, p.20). According to this view, satisfaction evaluation consists of conscious, deliberate and analytic types of mental processing as assumed by the EDM *and* unconscious, affective ones (Morgan et al. 1996). Furthermore, the literature on life satisfaction has found similar effects of feelings (Schwarz et al. 1987; Kehner et al. 1993).

Emotions are usually considered to be handled by System 1 processes (Epstein 1994). However, recent dual-process accounts treat emotions as more complex phenomena and argue that mental processing of emotions can be System 1 when feelings are simple (anger, joy) or System 2 if they are

complex (ambition, pride) (Evans 2012). These insights, combined with the above listed insights from consumer satisfaction could have implications for citizen satisfaction. One hypothesis could be that feelings are allowed to play a more decisive role when the service is more ambiguous to evaluate and the citizen therefore has a less stable impression of the performance of the target:

H6: Feelings play a larger role in citizens' satisfaction judgments when the service outcomes are ambiguous.

Another hypothesis could focus on the fact that politics and feelings are two sides of the same coin. Often, citizens are asked to evaluate services where the performance has a clear connection to political decisions (for example cutbacks or reorganizations) or debates (for example immigration or crime issues that may influence the evaluation of the police services). As shown in the "cognitive bias" paper, cognitive biases might arise from emotions when, for example, a recent politically adopted cutback, which has not yet been implemented, creates anger or disappointment and therefore has a large influence on current satisfaction with the service that has not yet seen any reductions in budgets. One hypothesis would be that the mere mention of politics or politicians could spark dissatisfaction irrespective of the evaluation target:

H7: References to politics and politicians will create less satisfaction.

Citizens may feel that the distance to politicians is large and there are few or no face-to-face interactions with politicians in modern politics. On the other hand, face-to-face encounters with street level bureaucrats, which is much more frequent in most societies, could have the opposite effect, as also hypothesized by social capital literature (Putnam 2000), namely create positive emotions such as happiness and trust resulting in higher satisfaction:

H8: Satisfaction judgments about the service will be more positive when citizens have face-to-face interactions with the professionals delivering the service.

The "cognitive bias" paper relied on evidence of the effects of cognitive and affective feelings. New research should address the scope conditions for such emotional effects (Greifeneder et al. 2011). For example, it has previously been found that people rely more on feelings when they are cognitively deprived, that is, when opportunity is low (Siemer and Reisenzein 1998). This is in accordance with the MODE model's emphasis on opportunity.

Emotions have had a large influence on consumer satisfaction and marketing literatures. There might be different conditions for the effects of emo-

tions and feelings when citizens evaluate public services, but there is a large probability of emotional effects in citizen satisfaction as well, especially given the amount of feelings involved in politics (Hoggett and Thompson 2012). Such feelings may further complicate the interpretation of citizen satisfaction and remove them from actual performance.

Expecting to evaluate. Even the expectation of being asked to evaluate some service before engaging in it can negatively alter the subsequent satisfaction judgment (Simonson and Ofir 2000; Ofir and Simonson 2001; Lane and Keaveney 2005; Ofir et al. 2009). The expecting to evaluate effect is a serious challenge to citizen satisfaction in times of performance information and performance management. The simple hypothesis would be:

H9: The satisfaction judgment will be lower when citizens are expecting to evaluate.

Public organizations often alert citizens before conducting a satisfaction survey. If the expecting to evaluate effect is present, this will actually lead to less satisfaction with the service, although it has no connection to the actual service performance.

Dual-processing, the MODE Model and Cognitive Biases in Citizen Satisfaction Research

Taking cognitive biases and the dual-processing framework into account has large implications for research on citizen satisfaction. The above sections underline the need to take these unconscious influences into account in future research. This is the case for the reinterpretation of the MODE model given in the “review” paper, and it is the case for the theories from consumer satisfaction literature that have been attempted translated into the context of public services.

The big question, which has been touched upon in the above sections, is of course if these cognitive biases can be debiased in any way. There is evidence that it is possible in some instances, which the “cognitive bias” paper also touches upon, but it is not an easy task (Hirt and Markman 1995; Schwarz 1996; Kahneman and Frederick 2005; Fazio and Olson 2014). As it becomes increasingly evident that cognitive biases exist in citizen satisfaction evaluations, the search for solutions becomes much more important. The next chapter will touch upon this important topic.

Chapter 8: Concluding Discussion

This chapter revisits the overall points and contributions from the dissertation and discusses the findings, the methodological approach and limitations in it, the implications for research and the practical use of satisfaction surveys in the public sector. The research question guiding the above endeavors was: *What explains citizens' willingness to voice their satisfaction with public services and how is this satisfaction formed?* There are two parts of this research question. One pertains to the “voice” paper in which voice is seen as the citizens' attempts to change, rather than escape from, the state of affairs of the public services in the manner of Hirschman's definition (1970, p.30). The other pertains to the four other papers about the formation and interpretation of the performance, expectation and satisfaction constructs. In the following these two parts will be discussed.

Contributions and an Overview of Findings

The contribution of this dissertation is twofold:

1. Representativeness: Citizens' voice is an important feedback channel for public organizations, but all citizens' voices are not equally heard. The dissertation shows that it is possible to engage underrepresented citizens in a coproduction initiative and through this constructive interaction between citizens and professionals bring the underrepresented citizens to voice their opinions.

2. Interpretation: It is important to consider the multiple influences on citizens' stated satisfaction before using it as a performance measure. Irrelevant, unconscious influences may distort the citizens' performance and satisfaction, and citizen expectations can be influenced by prior satisfaction, interpretations of expectations and personality traits. This makes the interpretation of citizen satisfaction measures difficult. The dissertation's contributions enable us to start taking the challenges into account in future citizen satisfaction surveys.

Representativeness: Bringing the Underrepresented Citizens to Voice Their Opinions

Citizen satisfaction is used as an accountability and performance measure in public organizations in many countries. The measure has some clear demo-

cratic benefits in terms of general representativeness and a low investment on the part of the citizens (Verba 1996). When citizens choose to voice their opinions instead of exiting or not taking action, the development of public services should be more efficient and quality oriented (Hirschman 1970). The choice to exercise political voice through governmental satisfaction surveys can be seen as an unconventional type of political participation (De Rooij 2012; Just and Anderson 2014). However, research has shown that some citizens are not well represented in the public choir (Verba et al. 1995; Schlozman et al. 2012), not even in citizen surveys (Goyder 1987; Groves and Couper 2012).

In a true democracy, the preferences and opinions of all citizens deserve equal consideration, but underrepresented citizens have proved very hard to engage in political participation and voice, even in a well-established democracy like Denmark (Andersen 2003; Verba 2006). The “voice” paper in this dissertation may point to one solution to the lack of representation: coproduction. Coproduction initiatives can create visibility and proximity of the service in question, knowledge about it and a motivation for citizens to express their political voice. The paper shows that citizens involved in a coproduction initiative, especially those who were most engaged, are more prone to voice their opinions through a governmental satisfaction survey.

The result is encouraging for two reasons. First, it has been increasingly difficult to engage some of the underrepresented groups in politics in western democracies. This is especially true of the group of immigrants that constitute the sample in the “voice” paper, who have a much lower propensity to vote (Bhatti and Hansen 2010; Bhatti et al. 2014) and who in general participate much less in politics both in Denmark and other countries (Eurobarometer 2013a, 2013b). While many projects have tried, few have succeeded in moving this minority group of citizens to voice their opinions and participate more (Wass et al. 2015).

The second reason the results in the “voice” paper are encouraging is that the extra political voice of these immigrant citizens is a side-effect of the treatment. The treatment used in this study is inexpensive, easy to distribute and has been shown to increase the quality of the public service in question (educational outcomes for immigrant children) (Jakobsen and Andersen 2013). This of course raises the question if a treatment whose main objectives are not reached would have the same effect on political voice. The question is relevant for the same reason that this particular study is unique: many projects of this sort do not succeed.

On the one hand, our theoretical argument underlines the importance of citizen responsibility and the motivation it may create, and this motivation may disappear if there are no results of the effort. On the other hand, the

motivation may arise as an effect of feeling responsible and trusted by the professionals to coproduce and this can happen irrespective of the end results. Furthermore, as discussed in Chapter 4, citizens may not see the importance of the performance dimensions that public managers, politicians and researchers stress as important and they may not even be aware that performance effects on those dimensions occurred. For them, it may be irrelevant outcomes or at least not as important outcomes as others. Therefore, the inclusion of citizens in coproducing public services may work although the service itself is seen as unsuccessful by evaluators and decision makers.

This raises general questions about the scope conditions for the coproduction hypothesis. In the “voice” paper, the coproduced service was undeniably something very near and dear to the citizens: their children and the children’s education. Therefore, interesting questions arise about other services and coproduction initiatives. It seems obvious that very small coproduction efforts like bringing the trashcan from the driveway to the street once a week perhaps would not result in much political voice in itself. It has proximity and visibility but will have a hard time increasing motivation and political efficacy in order to inspire political voice. If the coproduction effort is very small or seems politically unimportant, one would think that the effect on the motivation to exercise political voice is not going to be there either. New research on the coproduction-political voice relationship should address the influence of the perceived importance of the coproduced services from the citizens’ point of view and of the citizens’ coproduction efforts.

Another obvious question to address when discussing the “voice” paper is whether the rather low-cost political voice measure is political. Citizens do not have to invest a lot of time and energy in filling out such a governmental satisfaction survey and the citizens were not more inclined to vote in the local election as a consequence of the coproduction initiative. However, unconventional participation modes have been shown to be more important to minority and immigrant groups than conventional participation modes (e.g., voting) (Just and Anderson 2014), and even among these unconventional, low-cost participation modes, the governmental satisfaction surveys investigated in the “voice” paper may be considered a higher investment mode. Just and Andersen see boycotting certain products and signing petitions as political participation as well (2014, p. 943, see also de Rooij (2012)), which both can be seen as very low-cost and low-involvement, as the boycott participation is in essence a decision to do nothing¹⁹.

¹⁹ Of course, deciding not to buy products that you usually buy may have costs such as transport to alternative buying options or changed habits, but for most products there will be alternatives that will almost be perfect substitutes.

Governmental satisfaction surveys, as shown in Chapter 4, inform decision-makers about citizens' opinions and enable them to react to dissatisfaction if need be, and they have the advantage of being an individual, low-cost way of voicing opinions. They also clearly have the "intent or effect of influencing government action" in Verba et al.'s definition of political participation (1995, p.38). Furthermore, many standard participatory activities are collective (e.g., protesting or campaigning) and high-cost, which requires a certain level of integration in the institutions of society, formal and informal, that immigrants do not necessarily have. This may explain their use of the unconventional participation modes, many of which are individual and low-cost. This is also the case for the governmental satisfaction surveys. What is more, de Rooij (2012) mentions that when immigrants have been living in a country for some time, the composition of the political participation may start to assimilate towards the composition of the majority's political participation (though not necessarily with the same absolute levels of participation (Bhatti et al. 2014)).

When we evaluate democratic government, equality in political voice is especially important. In a fair democracy, citizens have equal influence over the government (Verba 2006). The "voice" paper shows that coproduction might bring us a step closer to this ideal, albeit via unconventional paths. This may answer the first part of this dissertations' overall research question: "What explains citizens' willingness to voice their satisfaction with public services [...]".

Interpretation: Citizen Satisfaction and the Expectation-Disconfirmation Model

Citizen satisfaction is increasingly used as a performance measure (Miller et al. 2009), and many public resources are spent on tapping into it. The "review" paper shows that research into citizen satisfaction has never been more popular, and many studies use the EDM. The "cognitive bias", "feedback", "interpretation" and "review" papers in this dissertation all point to potential challenges with using citizen satisfaction as a performance measure and in viewing the EDM as a cognitive model.

First, the "feedback" and the "interpretation" paper find that citizen expectations may be endogenous to satisfaction and confounded by citizens' interpretations of them. Especially the predictive expectations question seems to be misinterpreted. Asking a predictive and a normative question at the same time to solve the interpretation confound merely increases the bias, and it seems that some of the interpretations and the expectations can be explained by citizens' personality traits. The contribution of these two papers is

relevant to both the expectations construct and to the EDM. When the EDM is used to uncover citizen satisfaction, the chosen expectation standard may have a large influence on the results. Not only because of the possible confound of different interpretations of predictive and normative expectations, but also because personality traits seem to shine through when citizens form and express normative expectations, but not predictive expectations. It should be obvious that these differences may result in very different associations between key variables in the EDM.

These results call for a broader discussion of, and further research into, what citizen expectations are and how we measure them. Citizen expectations for the public services are fundamental not only in citizens' evaluations of specific public services but also for their support for, and trust in, government (Morgeson and Petrescu 2011). Only few studies in public administration address citizen expectations (James 2011a; Jacobsen et al. 2015), but considering the importance of what citizens expect from governmental services, how these expectations are confirmed or disconfirmed and how they translate into satisfaction, more research is warranted.

There is a vast amount of theory and many different conceptualizations of expectations (Oliver and Winer 1987). Future research should meticulously compare the different conceptualizations and operationalizations of expectations in order to create consensus within the literature about this difficult construct and its psychometric properties. This should be done both in the field and in the laboratory and it may also be helpful to seek to develop scales consisting of several items, such that the multiple comparison standards may be identified and properly measured. Such a consensus should also take citizen interpretations seriously and make sure that they match what researchers intended with the expectations questions.

Moreover, the public sector delivers a variety of highly diversified services. Citizens may compare identical services received at different levels by other people, for example a neighbor, or an entirely different service received by the citizens themselves. Generally, it should be possible for citizens to juggle multiple comparison standards or mental representations at the same time when forming evaluations (Kahneman and Miller 1986, p.136). New research should address the possibilities of multiple standards used by citizens and how contexts in the public sector influence these standards. Experimental research might seek to manipulate the weight citizens place on different standards, for example by reminding them about the service levels or quality others are receiving. This would tell us more about which standards citizens use when forming their satisfaction evaluations, and if the normative expectations in fact work as standard for the predictive expectations as suggested by Meirovich and Little (2013)?

The “cognitive bias” paper shows that citizens’ performance and satisfaction evaluations are most likely the result of dual processes and therefore also may contain cognitive biases. The paper shows that citizens can be primed to change their performance and satisfaction evaluations with irrelevant information and that asking about performance just before asking about satisfaction primes for a more positive satisfaction evaluation. Finally, to test whether ease of retrieval affects the satisfaction evaluation, citizens are asked to state two or six instances in which they experienced high performance. The ease of retrieval effect is not found, but there is indication that this way of asking about performance does not prime the citizens’ satisfaction evaluations like the traditional perceived performance question does.

The results from the “cognitive bias” paper are a challenge to the cognitive interpretation of the EDM. It challenges both the link between actual performance and perceived performance and the link between perceived performance and satisfaction. Since irrelevant influences have an effect on perceived performance, it is difficult to see it as a “...hard, performance-based judgment” (Oliver 2010, p.177), and since satisfaction is influenced by the mere mention of performance, the internal coherence in the EDM seems violated. The research implications and proposals for further research are described in Chapter 7 and in the second part of the “review” paper, which proposes reinterpreting the EDM in the light of the MODE model.

The general contribution of the “cognitive bias” paper, the second part of the “review” paper and Chapter 7 is to take dual-processing and cognitive biases seriously when theorizing and analyzing citizen satisfaction. The theories and models under the umbrella of Dual process have developed with immense speed over the last two decades and new and exciting research and methods have come along (Sherman et al. 2014). The contribution of this dissertation is to begin to address citizen satisfaction in this light.

Since the “cognitive bias” paper shows that such biases may appear in citizen satisfaction as well, it is not only important to identify when, where and under which conditions these biases occur. It is also of immense importance to seek solutions to them. When can we trust citizen satisfaction to be a close approximation of actual performance, and can we counteract the possible cognitive biases (debias)? As mentioned in Chapter 7, the MODE model predicts that System 2 will step in when opportunity and motivation are in place, and things like the desire for accuracy (Schuette and Fazio 1995), a sense of accountability (Sanbonmatsu and Fazio 1990) and considering an alternative or plausible alternative outcome for an event (Hirt and Markman 1995) could be exploited in the quest to debias citizen satisfaction. These possibilities should be investigated in the context of public services.

The “cognitive bias” paper shows that asking citizens to describe several instances of high performance at least did not change their satisfaction evaluations as compared with not asking any performance questions before the satisfaction question. This may indicate that such a performance measure is a possibility to debias the satisfaction evaluation. Since this type of debiasing has been found to work in other settings (Schwarz 1996; Kahneman and Frederick 2005, p.273), this may be a fruitful path to explore further.

In sum, Chapters 5-7 and the papers “feedback”, “interpretation”, “cognitive bias” and “review” seek to answer the second part of the research question posed in the introductory chapter: “[...] and how is this satisfaction formed?” They address how satisfaction is formed and add knowledge about expectation formation in the EDM, cognitive biases in the satisfaction formation, and the usability of recent attitude research.

Methodological Considerations and Limitations

This section will discuss two overall methodological topics: external and internal validity. The dissertation uses two samples, parents in the City of Aarhus and US citizens who are signed up with Amazon’s Mturk, and a variety of quantitative methods, most prominently field and survey experiments. The strengths and limitations of these approaches in terms of generalizability and identification are discussed.

External Validity

The dissertation has used two general samples of citizens and one database to arrive at its conclusions. The primary case is parents in the Danish City of Aarhus. Three papers, the “feedback”, “cognitive bias” and “voice” papers, use these citizens in different ways. The “feedback” paper uses all parents of school children in Aarhus in the period 2009-2013, while the “cognitive bias” paper uses the subset of parents of school children in 2nd and 3rd grades who participated in the READ project in 2013-2014. The “voice” paper uses immigrant parents of children in daycare institutions that were part of the coproduction experiment.

The City of Aarhus is a diverse municipality with approximately 275,000 inhabitants; 11 pct. are immigrants and 4 pct. are descendants²⁰. Many immigrants are from the neighboring and eastern European countries, but a substantial amount are from Somalia, Turkey, Iran, Iraq, Afghanistan, Lebanon and Vietnam. Some of these immigrants are part of all the three studies

²⁰ Source: Statistics Denmark (<http://www.statistikbanken.dk/10021>). Statistics are for 2014 (quarters 1-4) when the READ project was carried out.

using parents in Aarhus as case, but the composition of the immigrant group is of course especially important to the “voice” paper.

The generalizability of the results in these papers is high concerning other cities in Denmark, although some of them are less diverse than Aarhus. Conditions for schools and daycare institutions may vary between Danish municipalities as they have some leeway in governing these institutions, but the overall (relatively detailed) school and daycare laws are decided nationally. Likewise, the conclusions should travel well to other similar education systems, for example in other Scandinavian countries.

The results and conclusions pertaining to general human evaluations of public services may be widely generalizable. Based on the literature, it seems that many of the general findings have travelled both across sectors (public and private), countries and contexts (e.g., garbage collection, police, street cleanliness and consumer products). However, some research points to differences in expectation formation across countries (Steward et al. 2010), and differences in contexts within cities, for example between schools and elderly care, may influence the feedback of satisfaction for example as discussed above. Another example may be citizens with little experience with the public service in question. For example, parents of children in daycare may be less experienced with receiving educational services, and therefore their expectations are perhaps less influenced by past experiences. This may also carry over to the disconfirmation/ satisfaction relationship.

Generalizability may also be restricted to the area of education and to semi-users in these studies. While the education system is generally considered an important area, where many citizen satisfaction studies have been carried out (e.g., Charbonneau and Van Ryzin 2012; Favero and Meier 2013), the results from this context may not travel to other areas of public service. One reason has to do with the semi-user status of the parents, who receive the service indirectly through their children. The parents might not know as much about the service as a genuine user knows about other services, and therefore their evaluations may be different and open to different influences. However, parents may also pay extra attention to the qualities (or the lack thereof) because of the importance of this particular service and because children most likely do not pick up on bad service and react to it.

The MTurk sample is used in the “interpretation” paper. It consists of US citizens who have signed up for the Amazon Mturk service and have agreed to answer the survey in exchange for \$ 0.75 (the survey took approx. 10 minutes to complete). The questions used for the “interpretation” paper are about garbage and recycling, which should be relatively common, and the hypothetical case of “Hometown”. There has been some debate about Mturk samples, which tend to be more educated, underemployed and liberal than

the rest of the US population (Paolacci and Chandler 2014). However, recent research indicates that estimates from Mturk samples actually may be more reliable than the usual convenience samples (Berinsky et al. 2012; Casler et al. 2013; Goodman et al. 2013).

The generalizability of the parts of the “interpretation” study that rely on descriptive statistics may be lower because of the slightly skewed profile of the participants. Furthermore, the study shows that some personality traits may influence the interpretation of expectations, and these personality traits may also correlate with life circumstances that may be special in the Mturk sample, perhaps creating associations that would otherwise not be there. This is a relevant concern that should be taken seriously. At least, other studies comparing effect sizes obtained from Mturk samples with those obtained with other samples and methods show that the Mturk estimates are not significantly different. In general, a convenience sample like Mturk is a good first test for new hypotheses (Mullinix et al. 2015). The “interpretation” study is also an improvement over the comparable study with students at a university in terms of generalizability (Spreng et al. 1998) and the two studies show comparable results in the descriptive analyses.

Internal Validity

The dissertation uses a variety of quantitative methods in order to arrive at the conclusions presented in this chapter. First and foremost, the dissertation’s use of experimental methods to obtain unbiased estimates of causal relationships lends strength to the conclusions. Experiments offer a gold standard for identifying causal effects without biases arising from unobserved confounders, two-way causation and selection into the treatment. Moreover, the field experiment in the “voice” paper mimics the typical adoption of a new service initiative closely and Hawthorne effects are minimized by letting the professionals deliver the treatments. Likewise, the experiments in the “cognitive bias” paper are carried out among parents of children attending public schools in the City of Aarhus. These are citizens with actual, long-time experiences with a service they most likely care about, and therefore the two experiments in the study offer not only high internal and external validity, but also high ecological validity.

The “feedback” paper and the “interpretation” paper use observational methods, which do not enjoy as high internal validity as the experiments. However, the research questions in these papers do not lend themselves as much to experimental methods. The “feedback” paper’s research question, whether prior satisfaction affects current expectations, requires observations from the same citizen at least at two points in time. At the same time, experi-

ences with the service have to take place prior to the satisfaction formation and time has to pass until the next expectation measurement. While this can be done in the laboratory or in a field experiment (Oliver and Burke 1999), the advantage of the data used in the “feedback” paper is that it is, again, citizens with real performance experiences with an important service, it is a large, representative sample, and there are two years between the data points. The benefits in external and ecological validity are substantial. The use of unique individual survey data linked between several years and the fixed effects used at the school, class and family levels bolster the internal validity of the “feedback” paper.

The “interpretation” paper tests the idea of including both a predictive and a normative expectations question in the same survey experimentally, and therefore this part of the study enjoys high internal validity. The study that correlates personality traits with interpretations and expectations is, however, observational. Since it is difficult, and even unethical, to manipulate personality traits, the investigation in this part of the “interpretation” paper is hard to do in an experimental design. The assumption is that personality traits are causally prior to expectations, which is supported by the stability and biological bases of personality traits (Canli 2008; Gerber, Huber, Doherty and Dowling 2011), and that the relationship is not confounded by any other variable.

This is not to say that there are not limitations in the methods used in this dissertation, even in the experimental ones. Some of the studies rely on single item variables, where multiple items and scales would be preferable. Replications of the studies of this dissertation with better construct validity would be desirable. As mentioned above, the literature is generally weak on measurement and the psychometric properties of constructs like expectations and satisfaction is in need of clarification. Nevertheless, this is also the case for the measures in many governmental satisfaction surveys, and so further research would benefit researchers and practitioners alike.

Implications: The Usefulness of Citizen Satisfaction in Research and Public Management

This dissertation has studied citizen satisfaction from two very different angles: The representativeness and participatory angle and the interpretative angle. While the dissertation has underlined the possibilities of citizen satisfaction surveys being participatory instruments, it has also questioned the use of citizen satisfaction measures as performance measures in the public sector. This may seem counterintuitive at a first glance. However, the overall point is that satisfaction surveys are important participatory instruments,

but politicians and public managers should be careful when they interpret the results, and we should try to construct surveys that are less prone to cognitive biases.

The possible cognitive biases do not necessarily inhibit citizen satisfaction to be used as a measure of political voice. After all, the measures most political scientists refer to when talking about political participation, chief among them voting, may also contain cognitive biases and odd influences (Healy et al. 2010; Rutchick 2010; McClendon 2013; Laustsen 2014; Achen and Bartels 2016)²¹, and these participatory modes have also been found to be heavily affected by personality traits (Gerber, Huber, Doherty and Dowling 2011; Gerber, Huber, Doherty, Dowling, et al. 2011).

Therefore, an implication from the dissertation is that practitioners and researchers may use the response rate to citizen surveys as an indicator of citizens' motivation to voice their opinions and influence government action. Performance in the public sector is many things, among these participation, and therefore participation in governmental surveys may constitute a measure of performance that has so far not been utilized (Boyne 2006; Hvidman 2016). High response rates in governmental surveys are also a sign of a healthy local democracy where citizens dare to voice their opinions and are willing to invest time in doing so.

However, there are some serious challenges in interpreting citizen satisfaction measures, and politicians and public managers should be careful when using the measure as a performance measure. Already in 1979, Stipak had reservations about the link between performance and satisfaction (1979a). His main argument was that there should be a close relationship between performance and satisfaction, which has also been the argument in this dissertation. The assumptions he mentioned besides this general contention were directed at the analyst or practitioner, who in order to analyze citizen satisfaction data in a sensible way must assume that respondents base their responses on the same aspects of service performance, which they perceive fairly accurately, and that most respondents respond monotonically, i.e., express greater satisfaction the higher the perceived performance (Stipak 1979a, p.49).

Stipak does not consider the EDM, but he clearly hints at the importance of taking comparison standards such as expectations into account (Stipak 1979a, p.49, 1979b, p.424). The EDM directs attention to an additional as-

²¹ Examples of odd influences on voting include shark attacks, results from local college football games and whether the polling station is situated in a church or not.

sumption that a practitioner makes when using and analyzing citizen satisfaction data:

1. Citizens have the same level of expectations.

If this assumption is not satisfied (and how would a public manager or practitioner know without a measure of citizen expectations?), expectations should be measured and taken into account when citizen satisfaction is used as a performance measure. If not, expectations are a substantial confounder in the performance-satisfaction relationship as shown in this dissertation and in a substantial amount of both citizen and consumer satisfaction research.

However, the contributions of this dissertation point at extra assumptions on which an analysis of citizen satisfaction data builds. This dissertation can add the following assumption:

2. Most respondents base their evaluation of performance on dimensions that are relevant to the service.

Assumption 2 of course builds on the results from the “cognitive bias” paper and the general thoughts about dual processing and cognitive biases in the EDM from the “review” paper. It resembles Stipak’s assumptions, but there is quite a difference. While the his assumptions states that most citizens base their satisfaction evaluation on the same, fairly accurately perceived, aspects of performance, assumption 2 emphasizes the relevance of the dimensions of performance. Citizens may to a large degree include irrelevant dimensions, e.g., the weather, cognitive or affective feelings, confirmation bias, when evaluating performance and forming their satisfaction. If these dimensions are not accounted for, the practitioner needs to make assumption 2, which this dissertation has shown is strong.

Moreover, if practitioners choose to apply the EDM or in another way use expectations as standards, the dissertation draws attention to two other assumptions practitioners make:

3. Most respondents do not base their expectations on previous satisfaction.

4. Most respondents interpret expectations as intended.

These assumptions of course build on the “feedback” and “interpretation” papers respectively. Assumption 3 is important if there is no longitudinal data available, which will most likely be the case in many governmental satisfaction surveys. The risk is of course endogeneity in the expectations construct. When practitioners take expectations into account, they should bear

in mind that these expectations are endogenous to not only perceived performance, but also to satisfaction. This means that correcting a satisfaction measure for expectations may also correct it for at least some prior satisfaction, which may bias the final result.

Likewise, the practitioner assumes that citizens interpret expectations in a coherent way that matches the practitioner's intentions with the expectations question. In other words, both assumption 3 and 4 point to the dangers of taking expectations into account, while assumption 1 points to the dangers of excluding them. This is why new research on citizen expectations should address the constructs measurement validity as mentioned above.

Although some of the explanations for a certain satisfaction level may be far outside the realm of a public manager, some are not. Constructing better measures of expectations, performance and satisfaction should make it easier to parse the signal from the noise. At least, recent research on citizen satisfaction has shown that when satisfaction is aggregated there is in fact a correlation between objective measures and satisfaction measures (Licari et al. 2005; Van Ryzin et al. 2008; Gibbons and Silva 2011; Charbonneau and Van Ryzin 2012; Chingos et al. 2012; Favero and Meier 2013; Kisida and Wolf 2015). Therefore, citizen satisfaction may still have a role to play in the administration of public organizations.

In general, this dissertation has shown that citizen satisfaction is an important, but also muddy performance measure that is easy to misinterpret. It is a participation channel that, like other channels, may be biased in some respects, but can be used to hear the voices of citizens who are not heard through other channels. However, the satisfaction measures used in practice and research seem to be too sensitive to biases and not sensitive enough to actual performance. The dissertation has uncovered some of these biases and it has proposed some solutions and possible future research avenues. Many more biases may lurk in the shadows when citizens evaluate public services, but so may the solutions. Much work lies ahead.

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English Summary

Citizen satisfaction is increasingly used as a performance measure in public organizations across the western world. It holds the promise of a measure that incorporates the performance of complex public services, with many and ambiguous goals, in one performance measure. Moreover, it delivers input to politicians and public managers directly from the citizens and serves as an instrument of accountability in performance management systems.

This dissertation studies citizen satisfaction as an instrument of political voice and as a performance measure. The overall contribution is twofold: First, it is argued that citizen satisfaction may be seen as political voice and a feedback channel from the citizens to the political and managerial leadership. However, not all citizens' voices are heard in the public choir. The dissertation shows that coproduction, the inclusion of citizens in the production of public services, may engage more citizens in voicing their opinions.

Second, the dissertation offers a new interpretation of the often used Expectation-Disconfirmation Model of satisfaction and uncovers irrelevant and unconscious influences on citizens' performance and satisfaction evaluations. This challenges the model's internal coherency and the satisfaction measure's usability as a performance measure. Furthermore, citizen expectations play a crucial role in the Expectation-Disconfirmation Model as a comparison standard for performance, but as shown in the dissertation they may also be endogenous to prior satisfaction, and citizens interpret them in very different ways and unrelated to what researchers think they are asking about when asking for citizen expectations.

The dissertation draws on theories from public administration, business and communication, and psychology in order to develop new hypotheses and test them via rigorous methods such as field and survey experiments and panel-data analysis. The implications for the practical use of citizen satisfaction in the modern public sector are that it may work as a voicing channel for citizens but that politicians and public managers should be aware of the strong assumptions they rely on when interpreting citizen satisfaction as a performance measure.

Tilfredshedsundersøgelser bliver i stigende grad brugt som et kvalitetsmålingsværktøj i offentlige organisationer verden over. Værktøjet rummer løftet om et mål, der kan indfange kvaliteten af komplekse offentlige tilbud, som har mange og ofte flertydige formål, i et kvalitetsmål. Tilfredshedsundersøgelser leverer også input til politikere og offentlige ledere direkte fra borgerne og fungerer derfor som et instrument til at holde politikerne ansvarlige i performance management systemer.

Denne afhandling undersøger tilfredshedsundersøgelser som et muligt instrument til politisk voice og som et mål på kvalitet i service. Det overordnede bidrag er dobbelt: For det første argumenteres der for, at tilfredshedsundersøgelser i det offentlige kan fungere som et udtryk for politisk voice og som en feedbackkanal fra borgerne til politikere og offentlige ledere. Men ikke alle borgeres stemmer høres lige meget. Afhandlingen viser, at samproduktion (coproduction), dvs. involveringen af borgerne i produktionen af offentlige serviceydelser, kan engagere borgere i at ytre deres holdninger.

For det andet leverer afhandlingen en ny fortolkning af den meget anvendte Expectation-Disconfirmation Model og afdækker irrelevante og ubevidste påvirkninger på borgeres kvalitets- og tilfredshedsevalueringer. Dette udfordrer modellens interne konsistens og brugen af tilfredshedsmålinger som et kvalitetsmål. Ydermere spiller forventninger en primær rolle som sammenligningsstandard i Expectation-Disconfirmation modellen, men som vist i afhandlingen kan forventninger også være endogene i forhold til tidligere tilfredshed, og borgerne fortolker forventninger ganske forskelligt og ikke i overensstemmelse med, hvad forskere tror, de spørger om, når de beder borgerne besvare forventningsspørgsmål.

Afhandlingen trækker på teori fra offentlig forvaltning, business og kommunikationslitteratur samt psykologi i udviklingen af nye hypoteser og tester disse ved hjælp af stærke forskningsdesign som felt- og surveyeksperimenter og panelanalyse. Implikationerne af afhandlingen for den praktiske brug af tilfredshedsundersøgelser i den moderne offentlige sektor er, at de kan fungere som en voice-kanal for borgerne, men at politikere og offentlige ledere skal være opmærksomme på de ganske stærke antagelser, de anlægger, hvis de fortolker tilfredshedsdata som et kvalitetsmål.