The Discreet Charm of Activeness: the vain construction of efficient smart grid users

Abstract

Activeness is a key concept in smart grid visions, but little is known of what this activeness entails. By combing the literature on marketisation/performativity with critical consumption studies, we outline our findings from a case study of a smart grid project in Sweden. Using a mixed method methodology, we critically approach various tensions, doubts and frictions that occur in the process of constructing "activeness". For decades, the design of the Swedish energy system has been guided by assumptions that users base their actions on what is profitable and thus behave as calculative agents, and we found this assumption also acted as a guiding principle in this project. However, we encountered project employees who continuously pondered the appropriateness of configuring the smart grid around an economic cornerstone, and they hesitated when trying to explain how their configuration was aligned with the notion of activeness. By describing their scripted users as "passively active" and "actively active", they seemed to cling to the notion of activeness while simultaneously stretching the actual meaning of this word. We conclude that these ambiguities in the configuration of the smart grid do not contribute to any sense of collective rule or environmentally friendly solutions.

Introduction

Powerful international organisations, governments, local authorities and commercial actors are currently calling for an updated energy system, and advocate the installation of so-called smart grids. Their primary motivation for this transformation is linked to increased amounts of intermittent energy sources, altered user patterns and increased demand for electricity security and quality. In general terms, the basic concept of smart grids entails a radical reshuffling of the energy system towards an allegedly active, calculable, adjustable, (self-)monitored, self-managed, greener, and cost-efficient form of energy consumption. Despite the intense attention directed towards smart grids, it is far from certain what this emerging re-configuration of the energy system will entail (Skjølsvold, Ryghaug, & Berker, 2015; Verbong, Verkade, Verhees, Huijben, & Hoffken, 2016).

Baudrillard (1996) explains that it is not the function of objects that are at the heart of modern consumption but their signifying fabric: "consumption means an activity consisting of the systematic manipulation of signs" (p. 218). While smart grids are inscribed with different signs both within and between countries, certain aspects reoccur in many of the descriptions. One such sign is that the smart grid is a digitally enhanced grid and that smartness is added to the "dumb" grid when it is interlaced with ICTs (Nyborg & Røpke, 2013; Verbong, Beemsterboer,

& Sengers, 2013; Wissner, 2011). In this context, energy users are denoted by their choices as consumers. Paraphrasing Bauman (2007), what is assumed here to be the materialisation of the efficient energy consumer is, in fact, the idealisation (smart as in intelligent) of the material (the grid).

In this sense, smart grids can be conceptualised as a platform that facilitates increased communication and their patrons especially stress the capabilities regarding connecting the demand and supply sides of the energy system (Katzeff, Hasselqvist, Önnevall, & Nyström, 2018). Smart grid stakeholders propose that users should leave their traditional passive role behind as they frequently portray the "active user" as a critical cornerstone of the smart grid (Goulden, Bedwell, Rennick-Egglestone, Rodden, & Spence, 2014; Mah, van der Vleuten, Hills, & Tao, 2012; Vesnic-Alujevic, Breitegger, & Pereira, 2016). This paper problematises the various flexible interpretations of the concept of 'activeness' in the context of a smart grid project in Sweden. Consumers are usually primed by market managers and commercial scriptwriters to play the role of active individuals. Having said that, it is neither clear what role users *can* nor even *want* to play (Verbong et al., 2016). Being active is often associated with positive connotations such as being efficient, driven, smart and well-informed (cf. Bauman, 2007, p. 17). Often, being active is also associated with good health and being proficient in various market choices. But how do these positive associations translate when the "active smart grid user" is being materialised? How does the notion of activeness evolve when being incorporated into an emerging socio-material context?

This article provides critical insight into the construction of the 'active user' and 'activeness' during the configuration of a smart grid project. We will problematise activeness in this case through the concepts of *marketisation* and *performativity* with the assistance of critical approaches to consumption. We will show that the process of creating the individual active smart grid user entails contradictions, doubts and frictions that refer to issues of consumption, politics, and eventually visions of democratic participation. Inspired by Marx, Ranciére (2006) argues that modernity has translated democratic subjectivity into the equal participation in market services. Particularly, we are interested in exploring the processes and devices (e.g. economic, political, and calculative) at work in the construction of the smart grid user as 'active' consumer and citizen. To do this, we investigate how people who have been given the task of creating active smart grid users, address these contradictions. We conceptualise these various actors as scriptwriters since, through the arrangement of material devices, they encourage users to behave in particular ways. This means that technology designers inscribe

ideas of future users into the devices they are designing, and the result of this work can be conceptualized as a script, i.e. a call for users to interact with the device, in other words, the script is a way to 'groom' the users (Akrich, 1992; Hyysalo et al., 2016; Oudshoorn & Pinch, 2003).

Empirically, the article explores a Swedish smart grid demonstration project that was designed to investigate how households could become active users. It analyses how the idea of activeness was negotiated and translated into sociotechnical configurations that made sense within this particular project, and it discusses the various tensions that arose as attempts were made to create this "activation". How do people working to create active electricity users make sense of this ideal? How do they translate this vague idea into a functional configuration? In particular, this paper will explore the tensions, frictions and doubts that arise when a smart grid configuration is assembled within a market-based regime based on economic principles and consumer strategies.

Activeness in a consumer market is the main virtue expected of the participants of a consumer society (Bauman, 2007, p. 78). We will argue that the configuration of this kind of activeness corresponds to individualistic consumer motives/incentives for economic efficiency that are equated with environmental engagement and political activeness. After all, the very growth of consumer narcissism aligned individual satisfaction and collective participation in perfect harmony (Ranciére 2006, p. 21). At the same time, and this becomes apparent when smart grid scriptwriters encourage consumption activeness, the principle and finality of consumption are not only enjoyment or pleasure, but are actually forced upon the individual as something institutionalised (in the case of the smart grid by international organisations, governments, local authorities and commercial actors) and the duty of the citizen (Baudrillard 2017, p. 97). In the following, we will make a short account of relevant previous research on smart grids and the concept of activeness.

Previous thoughts on smart grids and activeness

Because smart grids are defined in different ways, conflicting tendencies of how to design technologies are generated; as a result, different solutions are based on different conceptualisations of users as well as their interests, needs and desires. Skjølsvold and Ryghaug (2015) reporting [on/from] four different Norwegian smart grid demonstration projects illustrate how a smart grid does not comply with the idea of "one model fits all". Rather, they show that a smart grid is a situated technology, i.e. actors involved in the projects have different

ideas about what roles users should have and manifest these ideas in their technology designs. Interpretative flexibility thus characterises many different smart grid projects (Nyborg & Røpke, 2011). This finding is aligned with Christensen et al. (2013) showing that smart grids are interpreted and designed in different ways that often entail contradicting implications. Some argue for active user participation, which generates solutions with continuous information about real-time prices; and others argue for solutions with as little active participation as possible, such as remotely controlled devices. Different actors involved in designing and implementing smart grid configurations thus express different ideas on how smart grids should be designed and what kinds of roles their users should play (Ballo, 2015). Previous studies have also shown contradictions regarding how users should become engaged with smart grid activities; in other words which incentives should be used. Smart grid stakeholders primarily suggest economic incentives (Mah et al., 2012; Verbong et al., 2013), while users recurrently express that they base their engagement on other motives such as the desire to make the energy system more environmentally friendly (Aune, Godbolt, & Sørensen, 2016; Wallsten, 2017).

This paper departs from these contradicting ideas of who the future smart grid user could be and is positioned in a recent stream of articles studying the configuration of a certain form of active user in processes of assembling smart grids. Previous studies in this strand of literature show that electricity users are re-configured in smart grid arrangements to behave as calculative and price-sensitive agents. However, even if the application of this calculative agency succeeds, some users follow other priorities (e.g. energy savings or time) than the one encouraged by the scriptwriters (money saved on flexible consumption) (Pallesen & Jenle, 2018). Grandclément & Nadaï (2018) explore how consumers are "activated" through material elements that evolve as smart homes and meters are designed. They also find three different figures of the consumer that appear in the course of the design work: a behavioural energy saver, a market-offer chooser and an attached consumer.

Skjølsvold, et al., (2018) adopt a co-constructive perspective on user engagement and illustrate how various modes of participation are enacted when households take part in distributed energy transitions. They find that participation is not only about individual choices and technologies, but can rather be perceived as intertwined activities distributed along various collectives (Skjølsvold, et al., 2018). In this article, we contribute to these findings as we explore the unfolding process to create active smart grid users as participants in a smart grid demonstration project. We pay special attention to how project employees make sense of and justify the assemblage that emerges within the project. Before we present the case under study, we will

describe the analytical perspectives and methods on which this paper is based, and subsequently present an account of the political regulations and national context that form the basis for the demonstration project.

A critical theoretical view of activeness

This section conceptualises activeness through the lenses of marketisation and performativity as well as critical approaches to consumption. Concepts from Science and Technology Studies (STS) and Critical Consumption Studies (Critical Theory) are borrowed, as this is seen as a mutually beneficial exchange, partly because Critical Theory needs to renew its critique of technology and partly because STS has broadened its concerns by addressing the rise of technical politics (Feenberg 2017). Combined, they offer a new concept of politics while sharing the same genealogical background: Hegelian Marxism (Söderberg 2017). In other words, our theoretical endeavour here is to explore the politics (both epistemological and ontological) inscribed in constructing the notion of activeness and the multiplicity of the smart grid as a site where performing agencies are active.

On the one hand, activeness is defined by a mathematised and thus calculable process. On the other hand, active environmental choices are delegated to and performed through measurable objects. The imagined active smart grid user is incorporated in new assemblages of not only objects (e.g. electrical vehicles, smart meters), social actors (e.g. aggregators) but also market structures and marketing strategies. Çalışkan and Callon (2010) argue that markets in themselves can be understood as sociotechnical arrangements of various heterogeneous components that are configured to work with one another. They call the process of these components being put together and a new market taking shape "marketisation" (Çalışkan & Callon, 2010). Callon (2007a) describes marketisation as "a combination of material and technical devices, texts, algorithms, rules, and human beings with their various instruments and prostheses" (p.160).

These various elements cannot be separated; for example, operating instructions do not make sense without the presence of a material device, neither is the device useful without the presence of instructions; since the instructions participate in making the device function, they can be understood as a part of the device (Callon, 2007b). We will show that in the constitution of active smart grid users, it is impossible even to separate agency (activeness) from the elements and signs that perform it (artifacts such as meters, gauges as well as ideas about the active user such as rationality). Rational activeness is performed through the detached signs

that are inscribed in measurement objects. We will also show that these objects are inscribed with specific ideas or politics of universal economic behaviour, that is, economic rationality and efficiency (Bauman, 2001; Baudrillard, 2017).

Similarly, politics and the market cannot be separated into two distinct categories; rather politics should be understood as a core component of the market (Callon, 2007a). Currently, the emergence of marketisation-based politics is not based on mere material needs or the desire for social distinction (Jensen & Westenholz, 2004). What is supposed to be the "materialisation of the inner truth of the self is, in fact, the idealisation of the material – objectified – traces of consumer choices" (Bauman, 2007, p. 15). What is important here is the symbolic order embedded in measuring devices rather than use, value, needs and commodity exchange. We are interested in the ideas and signs (such as activeness) that are inscribed in smart meters and gauges. Drawing on Baudrillard then, our analysis will focus on the signs that about in market devices and therefore expose the politics and moral values inscribed in activeness (cf. Smart 2017). The dominant politics of contemporary consumer culture is that of rational choice (Featherstone, 2010). The holy relic of rational activeness, in our case, is performed and/or delegated to standards, models, devices that allow measurements and calculations of smart grid user behaviour. According to Baudrillard (2017):

> "We are speaking of the absurd gymnastics of accounting illusions, of national accounts. Nothing enters into these except factors which are visible and measurable by the criteria of economic rationality, and that indeed is the central principle of the magic" (p. 59).

Accounting gymnastics in terms of calculations, as the main sign of the symbolic order of rational marketisation, is one of the reasons for economists, as scriptwriters, pursuing such an effort to formulate conditions that make actions measurable, and encouraging the establishment of tools that strengthen the conditions required to perform calculations. Or to put it frankly, "Calculativeness couldn't exist without calculating tools" (Callon, 1998, p. 23). In the words of Baudrillard (2017, p. 60): "anything can be used to fuel that myth – even the conversion of objective realities which refute it into figures which confirm it". Callon, Millo and Muniesa, (2007) follow up on this claim, arguing that activities in a market would be impossible to conduct without the presence of certain technical tools, which they choose to call market devices. Paraphrasing Bauman (2007), calculative market devices elevate the user to the noble, flattering and ego-boosting rank of the sovereign subject who makes rational, green, and above all democratic consumer choices. These devices aim at configuring users with a certain

perception of what it means to be economic and rational, democratic and environmentally friendly, and can, for example, be pricing techniques, monitoring instruments or benchmarking procedures (cf. Callon, Millo and Muniesa, 2007). Callon, Millo and Muniesa (2007) assign a large role to these market devices' possibilities for influencing users' perceptions and state that: "The ways in which market devices are tinkered with, adjusted and calibrated affect the ways in which persons and things are translated into calculative and calculable beings" (p. 5). From this, it follows that market devices facilitate the introduction of active individuals who behave in 'economic' and rational ways, and certain actors are equipped with tools that position them with more powers than others.

In line with this claim is Callon's (2007a) argument that different market structures have been established only to serve the purpose of facilitating for those individuals who perform actions that are considered to be rational. Contrary to what many social scientists claim, Callon thus argues that the notion of the rational *homo economicus* really exists because "He is formatted, framed and equipped with prostheses which help him in his calculations and which are, for the most part, produced by economics" (Callon, 1998, p. 51). According to the performativity argument, homo economicus exists because economists configure humans to act according to their theories. Callon (2007a) explores the history of homo economicus and concludes that contemporary market structures favour a new type of this individual. According to Callon, version 1.0 of homo economicus prevailed in the Taylorist world with strict discipline; human actions, interactions and behavioural norms were decided by others. However, this version of homo economicus has changed, and Callon refers to Barry (2001), who argues that nowadays homo economicus is autonomous and active. In contrast to his predecessor, this individual is encouraged to take initiatives, engage in different projects and sovereignly decide on which actions to take. The autonomous, sovereign, and rational subject personifies all virtues that modernity wishes to be praised for: rationality, self-definition, and rugged self-assertion. But what does this kind of sovereignty actually imply?

Individual smart grid users are assigned the task to actively make consumption choices. As Bauman (2007) explains, in the world of consumption, no one is ascribed agency without first being part of the commodification process. Consuming constitutes the ultimate task that lifts the individual out of grey and flat indivisibility and insubstantiality, making him/her stand out from the mass of indistinguishable objects. Activeness in this context implies that individual users are trained by the smart grid scriptwriters to perform the homo economicus role. Importantly, the homo economicus vocation ultimately rests on individual performances (cf.

Bauman, 2007, p. 55). Consumption reflects an active lifestyle that matters for individual social value and self-esteem. The rational and active homo economicus consumer is an epic individual. S/he not only signifies the hero of consumption (the saviour of the economy) but also a safety net for the democratic polity. As Baudrillard (2017) argues "the system needs people as workers (wage labour), as savers (taxes, loans), but increasingly it needs them as consumers" (p. 101). It is the democratic duty of the individual to sustain economic growth through consumption. Growth means affluence, and affluence guarantees democracy (ibid.) The case we will discuss in this paper constitutes an example of the signifying process of firmly matching the identity between the individual *homo economicus* and the democratic consumer (Ranciére, 2006). We will investigate and conceptualise if and how visions of the active consumers/user in the context of a Swedish smart grid demonstration project aspired to contribute to a sense of democratic collective rule. This is also a story about how democracy has been reduced to active consumption. In the following, we will discuss the methodological tenets of this paper.

Method

This paper builds on a case-study of a Swedish smart grid demonstration project. We choose this kind of approach since it enables in-depth explorations of how a particular phenomenon evolves over time, and since it is especially appropriate for studies that search for answers regarding who and what are given priority in a certain situation (George & Bennett, 2005). In total, 19 interviews were conducted with 14 people who worked with the project. These employees had various roles within the project such as project leaders both for the overall project and subprojects, CEO of the local energy company, executive for the electricity grid, the local electricity company's representative in the project board, a technical specialist, persons working with marketing, an energy adviser, a person responsible for the project's tariffs and the electricity sales force. The first interviews were conducted in the project's early phases, and the second set of interviews took place halfway through the project's household recruitment phase. All interviews were digitally recorded and transcribed. In addition to the interviews, the article is also based on written information about the demonstration project, such as information folders, a pre-study report, the final report, the project's own website, the funding approval and status reports. Finally, we also base this article on onsite visits and participant observations.

One of the authors attended two full-day fairs in which the project participated with promoting and recruiting objectives, as well as eight information meetings, to which households who had showed an interest in the project had been invited. All these events allowed the attending author to be observant of the issues the project employees discussed among themselves, what they found difficult to explain to households, and their own doubts and concerns about the project. These observations served the purpose of solidifying findings and enabling comparison between previously gathered material and observations made in the field (cf. Creswell & Miller, 2000). The gathered material was then coded. Coding was a way for us to break apart the material, analytically rearrange it and then bring fragments together into new themes; they were "tools to think with" (Coffey & Atkinson, 1996, p. 32). The data was partly coded as a continuous process, i.e. how the smart grid emerged within the project over time, and it was partly analysed using separable codes for how the employees made sense of the configuration established within the project. However, we wish to stress that the analysis was not solely deskwork performed in the later stages of this project. Already in the initial fieldwork, we tried to identify central problems and speculate about what could be relevant to investigate (cf. Berner, 2007). The analysis has thus been an ongoing process throughout the work of following how the smart grid emerged within this demonstration project. What follows is a short description of the political and economic context in which the concept of activeness was conceived and developed.

The Swedish energy system: a market based regime for "activeness"

At this point, it is useful to introduce the national context for the demonstration project under study. The Swedish energy system is market based since a reform took place in 1996 when the previous state monopoly was abandoned in favour of a "liberalised" electricity market structure. This reform was not necessarily introduced as a means of handling a dysfunctional system, but rather based on ideological grounds rooted in neoliberalism and primarily designed by energy economists (Högselius & Kaijser, 2007, p. 138; 2010). One of the most significant moral justifications for free market reforms is that the pursuit of individual profit also provides the best mechanism for accommodating the collective good (Bauman 2013, p. 3). Correspondingly, this reform had a very symbolic meaning for electricity users, in the sense that they were no longer described as being forced into passivity and ignorance, but were rather expected to behave as responsible customers who express their ideas of what is desirable through their market choices (Summerton, 2004). In other words, the "liberalisation" of the Swedish energy system anticipated "active" energy consumers from its very outset.

"Liberalisation" of former public utilities has been the universal game plan and even in Sweden, the last two decades constitute the implementation of free market logics as a no-choice and an obligatory canon of universal behaviour (cf. Bauman 2001). This is almost a metaphysical and sacralised process, and since it is based on illusions, the whole process seems to correlate with the central principle of Baudrillard's "magic" referred to previously (cf. Baudrillard 2017). Accordingly in this case, the process of assembling and qualifying actions, organisations, behaviours or devices as being 'economic', also known as economisation (Çalışkan & Callon, 2009), was enabled through the establishment of various reforms, standards, measures, devices, rules and regulations. As we discussed in the theoretical section, one particular form of economisation is played out when new markets are established, a process that Çalışkan and Callon (2010) define as marketisation. This process entails the arrangement of various sociotechnical elements with the intention of making them perform together as a coherent and functional arrangement.

A crucial step in the economisation and marketisation of the Swedish energy system occurred when the Nordic electricity trade market, Nord Pool, opened during the same year the market was "liberalised". This change was followed by another essential alteration when the Swedish energy market was divided into four bidding areas offering different electricity prices (Swedish Energy Markets Inspectorate, 2014). This arrangement was, besides providing information on where the grid needs enforcements, established as a means of ensuring the flow of electricity between countries and thereby contributing to the creation of a unified European electricity market with free mobility for services and goods (Wangel, 2015).

Another reform highly central from a smart grid perspective occurred in 2009 when a new metering regulation specified that grid owners had to measure their customers' electricity consumption on at least a monthly basis. Every possible measurement is positive in a market regime because it allows the calculation, construction and definition of objectively useful goods and responsible/active consuming behaviours (Baudrillard 2017, p. 59). To meet this legal requirement, almost all grid owners decided to install more advanced equipment than was required; as a result, most Swedish households have meters that can register hourly consumption and handle two-way communication, characteristics that qualify these devices as smart meters (Swedish Coordination Council for Smart Grid, 2013).

Smart meters enable rigorous measurements of electricity consumption and transmit signals between electricity users, utility companies and grid owners. They can be conceptualised as

market devices (Callon, Millo, & Muniesa, 2007) that inscribe a free market sign by strengthening the enactment of electricity as a calculative commodity and as an objectively defined sign of individualist consuming performance (which primarily may be satisfying, green, efficient, costly, irresponsible). In 2012, the Swedish government strengthened the role of these devices and further enhanced the market logics and economically driven principles that still guide the Swedish energy system. Through a new reform, electricity users were able to demand that their electricity consumption be measured on an hourly basis, a change that the responsible ministry justified by declaring that it enabled "electricity consumers' increased ability to strengthen their position on the electricity market and reduce their electricity costs.[…] It should to a larger extent than today be possible to affect one's electricity costs by being an active electricity customer" (Government Office of Sweden, 2011, p.8).

This argumentation strengthens Callon's claim that market structures are established to facilitate actions considered to be economic, and those who have the tools and abilities to succeed with their calculations are more likely to succeed than others (Callon, 1998, 2007a). The rational and active smart grid user is a real creature born in a calculable and economised landscape. His/Her actions and choices cannot only be measured, they are also a derivative of the calculative devices that measure his/her behaviour. He/She is the result of a process of configuration that mobilises material and metrological actors in the configuration of the smart grid.

Thus, drawing on these conceptualisations, the Swedish electricity user has been trained to act as a calculative agent who makes informed and rational decisions on what is the most economically advantageous choice and adjusts his/her consumption according to price signals. The economically sound, informed and active electricity user has acted as an ideal among Swedish energy authorities and policymakers. We should not disregard the essential contribution of this ideal in the performance of the Swedish electricity market for decades. In the following, we critically describe the conception and implementation of this ideal.

Economic motives behind a Swedish smart grid implementation

Economic principles are also highly prevalent in Swedish smart grid stakeholders' arguments concerning why and how the energy system should transform into a "smarter" version. The smart grid becomes part of the economic growth discourse, that is, a tacit presumption commonly accepted as 'obvious' that anticipates that "economic growth is the only way to handle the challenges and possibly resolve all and any problems that human cohabitation is

bound to generate" (Bauman, 2013, p. 31). The first major official step towards a Swedish smart grid was made when the Swedish government assembled a group to compose an action plan for how smart grids should be implemented at a national level – the Swedish Coordination Council for Smart Grid. This group of 15 actors included representatives from authorities, organisations, industries and various research centres, all of whom held top positions such as managing directors, executives, senior advisers or professors, and all were assigned by the Swedish government (Swedish Coordination Council for Smart Grid, 2013). Furthermore, the council was connected to a group of experts especially assigned from the government offices, and a number of reference groups consisting of more than 70 stakeholders (Swedish Coordination Council for Smart Grid, 2013). This heterogeneous group of stakeholders, who we choose to call Swedish smart grid stakeholders, speak with one voice in their reports on how to facilitate a Swedish smart grid implementation.

Previous scholars have found that different types of stakeholders propose different ideals of how to activate users and what roles users should have in the smart grid (e.g. see Ballo, 2015; Christensen et al. 2013; Nyborg & Røpke, 2011, Skjølsvold & Ryghaug, 2015). It would come as no surprise if similar findings also were revealed in the Swedish case, but for this article we have settled on presenting the argumentation that Swedish smart grid stakeholders could agree upon in their reports to the Swedish government.

Swedish smart grid stakeholders legitimise a smart grid with reference to its potential to facilitate the combination of a greener society with economic growth. Along these lines, their arguments carry the baseline assumption that the security and quality of the electricity supply will be jeopardised or even threatened when intermittent energy sources are introduced into the electricity system. One possible solution to such challenges is to enforce the grid so that it can operate even under these changed circumstances; however, smart grid advocates repeatedly describe this option as unnecessarily costly, simply that such investments "to a certain extent can be suppressed or postponed using smart grid technologies" (Swedish Coordination Council for Smart Grid, 2014, p. 62). As Baudrillard (2017) notes, environmental nuisances stemming from mass production (growth) are addressed by a "homeopathic treatment of growth by growth" (p. 57). The smart grid scriptwriters go one step further and argue that even economic and production nuisances stemming from intermittent energy sources can be addressed by the mythical implementation of growth technologies. We will return to this subject later.

Swedish smart grid advocates further entrench the connection between smart grids and economic growth through references to smart grids as an emerging market. For example by expressing that Sweden has excellent preconditions "for smart grids to become a successful growth business" (Swedish Coordination Council for Smart Grid, 2014, p. 204). This claim is further strengthened through international references, such as arguments that Sweden "is at the forefront" (Swedish Coordination Council for Smart Grid, 2014, p. 31) compared with other countries, that Sweden can disseminate products and services internationally, and "thereby also show the rest of the world" (Swedish Coordination Council for Smart Grid, 2014, p. 286) how smart grids should be built.

Overall, these associations emphasise the ways in which Sweden should strive to become a potent competitor in smart grid technologies and services in international markets (cf. Ballo, 2015). In other words, even the case of the smart grid is built on the general myth that modern societies cannot conceive of a future other than in terms of more economic growth. Economic growth implies prosperity, and prosperity solidifies democracy (Baudrillard, 2017). Economic growth here refers to the production and reconfiguration of an objectively calculable and self-managed energy system based on rational and informed consumption choices.

As already mentioned, Swedish smart grid stakeholders suggest that electricity users need to take on a more active role to suit this new arrangement of the energy system, which corresponds to previous research in other EU countries (cf. Geelen, Reinders, & Keyson, 2013; Verbong et al., 2013; Vesnic-Alujevic et al., 2016). In Swedish discussions, activeness is partly formulated as a request, simply that "[...] a passive customer base is a direct hindrance to development and growth. All consumers need to be active participants in the energy system [...] (Larsson & Ståhl, 2011, p. 16), and partly as an opportunity since "customers want to be active participants" (Swedish Coordination Council for Smart Grid, 2013, p. 36). The idea of activeness thus involves ambiguities: it is a demand or a desired possibility. Activeness also entails a more active participation in the human cohabitation through informed and rational consumption choices. This reminds us that what counts in the modern democratic polity is the "firmly fixed identity between democratic man and individual consumer" (Ranciére, 2006, p. 23). In this context, the smart grid not only stands for greener growth but also for democratising consumption.

In addition to economic growth, Swedish smart grid advocates suggest that the primary role for users in smart grids is as flexibility providers who change their electricity usage to suit the

needs of the grid, i.e. increasing electricity usage when there is excess electricity and reducing electricity usage during peak periods. They push for a number of changes to be implemented in order for users to widely accept and engage with flexible consumption. These changes involve the introduction of entities with the task of encouraging the perception of electricity as an economised entity that will guide smart grid users to perform as economically minded individuals who adjust their consumption according to prices. The smart grid user embodies the ideal of the *homo economicus* performing rational and green choices as well as a participatory consumption model. Swedish smart grid advocates thus emphasise economic gains as the main motivator for users to shift their consumption in time (cf. Mah et al., 2012; Verbong et al., 2013).

A frequently mentioned suggestion of an entity with the role of encouraging such engagements is the fluctuating electricity tariff, which is based on the assumption that "as long as the customer is charged on a standard profile curve, there is no economic incentive for consumer flexibility" (Swedish Coordination Council for Smart Grid, 2013, p. 135). Instead, the advocates argue for new price models that "give customers economic incentives for load shifts" (Swedish Coordination Council for Smart Grid, 2013, p. 48). As a means of further spurring economically driven flexible consumption, they also suggest the installation of devices that are directly connected to the electricity prices recommended by the Nordic power markets' epicentre, the Nord Pool Spot (Swedish Coordination Council for Smart Grid, 2014, p. 119).

The underlying assumption in this argument is that the energy market will increase its reach as the market enters the smart grid users' homes, and will coordinate their devices based on price fluctuations. According to such a scenario, the prices automatically determine when devices should be turned on or off. The Swedish smart grid advocates' suggestions for what the future energy system should look like rely on entangled relationships between devices, tariffs and humans that, within an economic framing, strengthen the role and reach of the market as well as the individuals (or at least the sense of it) participating in the configuration of the sociotechnical system of the smart grid. These kinds of solutions are inscribed with images of allegedly fully informed and rational users who are aware of every single appliance in their home as an energy-consuming device, and who are knowledgeable enough to interpret and use this information in order to make economically sound and informed decisions about their electricity consumption (cf. Strengers, 2013, p. 36).

Having introduced the national context for the demonstration project under study, we will move on to analyse how the smart grid emerged within the project and how the project employees made sense of the configuration.

Making the smart grid operational

Smart Grid Gotland was the name of a four-year demonstration project conducted on the Swedish island of Gotland by a consortium of stakeholders from the Swedish energy sector. The project was anchored in the European 20/20/20 targets, and its starting point was the argument that the future energy system is most likely to contain large amounts of electricity production from intermittent energy sources such as wind turbines and solar cells. Rather than reinforcing the grid to cope with such a situation, the idea was to explore how the current grid could be modernised using improved control and monitoring systems as well as a more active demand side (GEAB, Vattenfall, ABB, & KTH, 2011; Swedish Energy Agency, 2012). Following Beck (1992) and Bauman (2001), the process of modernisation is synonymous with the proliferation of the individual. In the modern project, we are bound to seek "biographic solutions to systemic contradictions" (Bauman, 2001, p. 106). The smart grid translates the modernisation of the energy system into calculable and rational energy consumption at individual level. Individual consumption is measured through the installation of appliances inscribed with market logics in each household, which in their turn dictate cost efficient and green consumption choices. Flexibility is a key concept here.

More concretely, this task was within the overall demonstration project performed in subprojects that contributed different pieces in the process of assembling a functional smart grid. The subproject that attended to users' role in the smart grid was denoted Smart Customer Gotland, and had the objective to assess the possibilities for flexible consumption. This focus was motivated by the intention to reduce the overall pressure on the Gotlandic distribution grid, to help ensure that periods with high loads near the grid's maximum capacity would be fewer and shorter, enabling an increase of intermittent energy production on Gotland (Svalstedt & Löf, 2017). The goal was explicitly articulated as an ambition to "achieve better understanding of customers' behaviour, interest and acceptance of active participation" (ibid. p. 1).

The notion of activeness was thus central in the project, but as this article will show, it resulted in various doubts and tensions when put in practice. In this case, flexible consumption also implies flexible interpretations of the notion of activeness. When the project was under way, activeness was closely associated with economic motives, a correlation that was clearly visible

in the objective on which the Swedish Energy Agency based its financing of the project. Such formulations positioned electricity users as calculative market agents:

> Provide opportunities for end customers to reduce their costs by actively participating in the electricity market at the same time as the system costs are reduced (Swedish Energy Agency, 2012, p. 6).

In this sense, activeness refers to an individualistic sensitivity towards price volatility. In other words, participation in the configuration of the sociotechnical environment (the energy system) is reduced to apolitical consumption choices of the indifferent consumers of commodities (electricity) (Ranciére 2006). There are two levels of marketisation here. On the one hand, activeness/participation is translated into a mathematised and thus calculable process. On the other hand, an active and conscious political choice (environmentalism) is delegated to non-ideological consumption (green capitalism). The smart grid embodies the ideology of (green) democratic consumerism, that is, the transformation of "formerly natural goods and values into commodities for economic profit" (Smart 2017, p. 7) and citizen subjects into apolitical consumers.

The economisation/marketisation process does not end there. In this project, the economic interests included a commercial component. For example, this was also shown in the Swedish Energy Agency's financing decision as it declared that the project should develop commercially viable products, a rationale that was motivated by the fact that the Swedish export industry would benefit if Swedish companies could develop products suitable for a future energy system (Swedish Energy Agency, 2012). The commercial focus is also reflected in the project's ambition to encourage users to *shift* their consumption in time rather than *reduce* consumption, an objective that also aligned with the economic interests of the project stakeholders:

> With both a grid owner and an electricity seller in the house, I would say that reduced energy use directly contradicts our goals. We'd rather see that more electricity is used. (Interview, Project employee 1)

The initial objective of Smart Customer Gotland was to include various kinds of electricity users, and the project was launched with ambitions to enrol 2,000 households and 30 commercial electricity users for their smart grid configuration (Swedish Energy Agency, 2012). Ultimately, only slightly more than 260 households took part in the project while commercial electricity users were completely excluded. Smart Customer Gotland thus ended up with a configuration in which households were the sole providers of flexibility; however, the

exclusion process continued within this group, and as we will show, the project eventually established a configuration targeting rather specific electricity users.

Filtering out flexibility providers

To begin with, the project had to identify what kinds of households to target as potential flexibility providers, a process in which various options were excluded. This process was guided by the commercial interests of those in charge of the project and their visions of a future energy system but also by local conditions, technical functionalities and the funding approval. For example, households that engaged with flexible consumption by making use of self-produced electricity – so-called "prosumers" – were not included in the project. This decision reflected partly that studies on prosumers were beyond the scope of the project due to inadequate funding for such research. Nevertheless, it also seems that the exclusion of prosumers was also driven by other motives. The project leader of Smart Grid Gotland indicated the interests of those in charge of the project as a reason to exclude prosumers, and claimed that this project was "a grid-owner project" (Interview, Project leader, Smart Grid Gotland). This formulation illustrates the hierarchy of different interests in the project. From his perspective, the project had the objective "to handle the boom [of solar panels] expected to happen in the near future" rather than the objective to steer development in such a direction (Interview, Project leader, Smart Grid Gotland).

Therefore, the project defined no formalised ambition to enhance the role of prosumers. On the contrary, the project leader for Smart Grid Gotland argued that a widespread inclusion of prosumers would complicate the overview and governance of the grid: "If Kamprad [the owner of IKEA] started selling solar cells, then [...] we would lose all control" (Interview, Project leader, Smart Grid Gotland). It is also possible that this reluctance was influenced by the fact that prosumers, as electricity producers, depend less on utility companies; prosumers even endanger the future status and role of utility companies in the energy system as an obligatory passage point. Prosumers generate a flatter and more spread-out power structure of the energy system since they challenge today's predominantly hierarchical structure. Again, there is broad flexibility in the interpretation of activeness. Activeness in the sense of prosumer engagement was not encouraged by the grid owners. In fact, it appeared that activeness is ideal as long as it does not challenge the economic revenues, interests or positions of the main players.

As the project developed, Smart Customer Gotland set out to target all households on Gotland that had the local utility company as a distribution and electricity provider, and lived in a private

detached house with a yearly electricity consumption of more than 8 MWh. The project also decided to target households with specific devices they found to be suitable for flexibility consumption (direct or waterborne electric heating, electric floor heating, hot water boilers and heat pumps). This setup meant that all households that did not meet these requirements were excluded from the project, which illustrates how the project selected very particular households in its ambition to create activeness. Suddenly, the concept of the active customer becomes very limited. Only those who consumed relatively large amounts of electricity i.e. not the most environmentally friendly consumers, those who fulfil the technical criteria and fit the quantitative calculations of the project were included.

After deciding what kinds of households to target as flexibility providers, the next step involved determining how to enable their consumption to shift in time. We have identified three different ways in which Smart Customer Gotland tried to encourage flexible consumption; through remote control, through enhanced information and through economic incentives. In the following, we analyse the impact of the three means on the project's original target, which was to configure active electricity users. We describe how the process of assembling an operational smart grid within an economic framing guided by commercial motives also resulted in various doubts, tensions and frictions among the people working on the project.

Creating activeness through remote control

After deciding on which devices to target as flexibility providers, the next step involved decisions on how to enable their consumption to shift in time. In the early stages of the project, Smart Customer Gotland chose between two alternatives: either households should be in charge of adjusting their own consumption in accordance with fluctuating prices, or the project should handle consumption adjustments through remote control. The question of whether utility companies or users themselves should manage consumption is also reflected in previous smart grid studies that present this as one of the core issues of flexible consumption (Christensen et al., 2013; Nyborg & Røpke, 2011). Technologies based on such automatic solutions can be conceptualised as taking over actions "underneath the nose of a happily ignorant user", thus making the active involvement of users less important (Throndsen, 2017, p. 289). In this way, automatic solutions are connected to ideas of passiveness. Home automation technologies are intended to run invisibly and silently in the background of everyday practices. However, these devices also play an ambiguous role since assigning control to automatic solutions is part of blurring the borders of who or what is in control (Strengers, 2013, chap. 7).

Similar tensions are also found among the stakeholders involved in Smart Customer Gotland who primarily justified automatic solutions based on remote control by pointing out that the alternative would be too cumbersome for the users, or that it was difficult to motivate people to engage in something they did not find particularly intriguing. The remote-controlled configuration was thus based on the logic that in order to convince people, "you have to make it so easy for them that they do not have to bother at all" (Interview, Project leader, Smart Customer Gotland). In fact, the management of the devices was designed to bypass the users unnoticed, "We basically shall not go in and influence their lives; we shall operate without being noticed" (Interview, Project employee 2). This logic seems to have guided the design behind the remote control: the configuration was not intended to interfere with people's lives in any way; the assumption was that people should be able to continue just as before without any degradation in comfort while simultaneously contributing to the benefits of the smart grid.

From a wider perspective, the interactions of humans with consumption objects tend to be the building block of configuring a consumer society. In this particular nexus of subject-object relations, of humans and nonhumans, a broad process of marketisation and economisation has coloured human relationships. In a consumer society, as we also saw in the case of the smart grid, the Cartesian Subject is not only cast into an ocean of commodified Objects but it is also faced with the task of *actively* handling them: "moving, appropriating, using, discarding" (Bauman 2007, p. 12). This handling is supposed to be inscribed with the virtues and signs of modernity (rationality, autonomy, self-management, self-definition and so on) that happily lead both to the fulfilment of the individual subject and the collective equilibrium of economic growth and affluence. Irrespective of whether this is promotional hype or a conscious liberal nocturnal emission, what really happens is that consumers at some point are "cut away from and placed outside the universe of their prospective objects of consumption" (ibid.). There are many reasons for that. Our informants here describe their motivation for this separation as lack of interest on the part of the consumers or simply because they do not want the smart grid self-management to disturb the normality and comfort of the users. The active users then become part of the commodification, and their behaviour is remotely handled by experts.

However, the fact that the configuration established within this project relied on remotely controlled devices generated tensions that were particularly turbulent because this configuration was chosen based on a belief that people did not wish to be active. This viewpoint was formulated in terms such as "if everything is automatic, the customer does not need to be active" (Interview, Project employee 3). In fact, one line of argument was that the project's

configuration encouraged "*a so-called* active customer who actually in practice is a rather passive customer" (Interview, Project employee 3). This reasoning implies that "active" was just a promotional word and had no real part to play in the project; in fact, it suggests that the smart grid established by the project enabled passiveness.

Regardless of this, through different arguments, the persons working on Smart Customer Gotland still clung to the notion of activeness. One way this concept was sustained was through claims that "you've already been active in that you have signed up" (Interview, Project employee 4). Another way the project employees explained that automation still generated activeness was by diverting attention away from the individual and towards the sociomaterial configuration of households. In this way, they could argue that activeness does not necessarily demand or generate active humans, but rather active households that include artefacts, practices, humans, technologies and so forth. Some project employees even introduced a new name for this kind of activeness implied by the statement that "the customer herself, in everyday life, does not need to be as active, but can be a little *passively active*." (Interview, Project employee 5). This way of reasoning is also prevalent in other studies showing examples of how smart grid projects can start off with ambitions of active user participation whereas in practice these ambitions are impeded by a view of users as incompetent or unaware (Skjølsvold & Lindkvist, 2015).

By introducing the concept of "passively active", project employees could rationalise that the remote control was aligned with the ideal of activeness. This constitutes a dual delegation. On the one hand, the sovereignty of the Subject (the active user, the active consumer, the consuming citizen) is configured and sustained through her freedom of consuming choice. Yet at the end of the day, the freedom of a consumer's choice is delegated to remote automatic devices and experts through the metaphor of the active household. Paraphrasing Ranciére (2006), "originally delegation was the exact contrary of activeness […] passive activeness might appear in this context as a pleonasm, but it was initially an oxymoron" (p. 53). This perspective illustrates the influence that the free market logic intrinsic to the national smart grid implementation had on the project; the project participants seemed to be obligated to follow these notions, even though doing so meant they must move away from the actual meaning of "activeness". In this context, far from being the form of life of the collective dedicated to their mutual pleasure, consumption is a process of individualisation, the process of enlarging passive activeness. In other words, passive activeness does not refer to an engaging and conscious collective effort to protect the environment but an individualised process of

delegating activeness to the smart grid. The passively active smart grid consumer need do no more than simply sign up.

The description of these "passively active" users aligns strongly with the logic of "involvement made easy", which suggests that when environmental participation is enacted as 'doable', people are configured as generally uninterested in engaging with environmental issues in ways that influence their everyday lives. This logic codifies participation in environmental issues with the least possible effort, cost and disruption, with the aim that everyday practices should become environmentally friendly without demanding or resulting in any change in the state of the things, settings or things involved: the shift is simply a "change of a no change" (Marres, 2012, p. 79). In that sense, the script that was built into the remote control dictated to users that they did not need to bother about when devices in their homes used electricity, or how much was used; they could leave this matter for the technology to handle. However, this logic contrasted with that of other entities that were part of the sociomaterial configuration established within the project. These entities encouraged people to enhance their engagement in electricity consumption. In the consumer society, the hero of consumption is an obedient user who signifies her/his activeness by exchanging passive delegation through remote control for social comfort, time and affluence.

Creating activeness through enhanced information

The smart grid configuration established within Smart Customer Gotland not only provided solutions for remote control, it also consisted of entities with the task of collecting, compiling and presenting information on the households' electricity consumption. Users were presented with an overview of how much electricity the devices in their homes used, when they used it and on what. These technologies were inscribed with a very different notion of users than the ideas that were inscribed in the remote control; here, the assumption was that users were technology-minded individuals who interpreted facts through figures and numbers, who engaged with technologies as a means of receiving detailed information and who wanted to enhance their knowledge of electricity consumption. Once again, this version of the smart grid script performed the fully informed rational user.

People working on Smart Customer Gotland expressed various ideas about what this configuration implied. Some argued that the information provided to users would enhance their knowledge and help them keep track of their overall consumption. Other expectations were that the information would generate behavioural changes; for example, that "we will not cook

our slow-cooked beef tenderloin that needs to be in the oven for 12 hours on that particular day [with high electricity prices]" (Interview, Project employee 2). In this way, the project employees expected the users to act as economically rational individuals and alter their everyday routines based on price fluctuations.

The project employees frequently connected this configuration with activeness of a different kind than the one enabled by the remote control. In these argumentations, activeness was connected to enhanced awareness: "being aware of the situation makes you more active" (Interview, Project employee 2). However, other lines of argumentation implied that, "you have to be active to increase your understanding of energy-related issues" (Interview, Project employee 6). This viewpoint reversed the argument; rather than enabling activeness, the smart grid configuration made it possible for those who are active to learn more. Some expressed anticipation that detailed information on electricity consumption could result in householders taking energy efficiency measures. One employee even introduced the notion of the "*actively active customer*" (Interview, Project employee 3) to denote an individual who personally engages in reducing electricity consumption, by installing extra loft insulation etc. Other employees connected this kind of activeness with an increased tolerance for a lower indoor temperature, if reduced electricity consumption results.

After all, the consumerist culture implies a constant pressure to be someone else (Bauman, 2007, p. 101). This way of defining activeness bears some traces of Marres' (2012) logic of "the more invested, the more engaged" – which is her denotation for environmental engagements that people perform in ways that amplify their investments for living in an environmentally friendly way. However, environmental incentives were not exclusively in focus.

Creating activeness through economic incentives

Based on the established project objective, fluctuating electricity prices became the primary script used to encourage flexible consumption. However, this configuration generated tensions and doubts among the project employees. Some hesitations related to questions of whether enrolled users would actually reduce their electricity expenses. This line of argumentation was grounded e.g. on the difficulty of accurately assessing the relationship between flexible consumption and electricity expenses since these are also influenced by parameters beyond the project's control. Another argument was that fluctuating prices also imply periods with high

prices, in other words: “if you do not play your cards correctly, then you can, of course, get a more expensive bill” (Interview, Project employee 7).

Other tensions related to doubts of whether prices actually constituted the best way to convince users to shift their consumption in time. This line of argumentation was articulated in the form that high prices might generate decreased consumption etc., but that it is unlikely that a low price would trigger increased consumption “[What am I expected to do] turn on the hairdryer?” (Interview, Project leader, Smart Grid Gotland). Another type of hesitation related to the logic of using prices as motivators for electricity engagements. For example, scepticism was expressed through the argument that electricity must be extremely expensive in order for users to care; however, such a scenario is unlikely as “then we have removed the advantage we have up here in the Nordic countries, with cheap and reliable access to the electricity that made our industries strong” (Interview, Project employee 1).

Another doubt about fluctuating prices as a central component in a future smart grid configuration was grounded on classical demand-and-supply curves that, in practice, cause price differences to average out over time “So if everyone else is doing it, then I do not need to bother (Interview, Project leader, Smart Grid Gotland). Despite these doubts, some project employees still considered economic incentives to be an appropriate way of making users interested in flexible consumption in the future. These anticipations were based on faith in a future where more intermittent electricity production will generate greater price fluctuations, making flexible consumption more profitable. However, the question of *when* this would happen was referred to as “the so-called million-dollar question that no one knows the answer to” (Interview, Project employee 3).

The project employees thus articulated various hesitations and doubts in relation to the economic script on which they had based their configuration. These doubts concerned whether the configuration would be able to deliver economic savings, whether users would actually be seduced by such motives and whether this was an appropriate representation of the future energy system. It becomes evident that we are reaching a point where the dynamic of price volatility, even for a micro-scale project such as the smart grid in this case, is becoming circular and generating only wheel-spin. The economic incentive of price flexibility is exhausting itself through its own reproduction. The only objective result, then, is the cancerous growth of calculating devices (cf. Baudrillard, 2017, p. 58). Even flexibility and metrics generate promotional hype, with no promise of actually impacting on or activating the behaviour of the

user towards green(er) consumption. The calculability inscribed in the smart grid constitutes a fetish that self-fulfils the reputation of the active user.

Conclusions

The concept of *activeness* becomes a subject of severe interpretative contradictions in the context of the smart grid demonstration project under investigation here. Activeness is defined and performed in a context of undisputed growth discourse. In that sense, perpetual growth is the only way to achieve social prosperity (Bauman, 2013). Given this axiom, our informants, people tasked with implementing the smart grid, and performing smart grid active users, ascribe calculating devices, such as smart meters, with prerogative measurable standards. Following the logic of the free market economy, what can be measured provides the energy system with accurate and objective definitions and simulations of energy consumption. Consequently, energy consumption becomes a calculative commodity, and a script of individualist consuming activeness evolves. This technocratic view of active energy consumption is accompanied by assumptions about the rational nature of individual choices of fully informed energy consumers. This paper sheds light on the tensions that arise during the application of such logics in a Swedish smart grid demonstration project. As the project unfolded, various overflows (Callon, 1998) continuously occurred that did not fit into the present framing applied to the definition of an active consumer.

As we saw, the smart grid user is a creature inscribed with the ideal of the *homo economicus* that performs active, rational and/or green choices. The installation of calculating devices provides energy consumers with mental training in active consumption and environmental consciousness, mediated through meters and statistics. Activeness here refers to two levels of economisation/marketisation. On the one hand, activeness is defined by a mathematised and thus calculable process. On the other hand, active environmental choices are delegated to green consumption. In that sense, the impassioned biographies of heroes of active citizenship are giving way to biographies of heroes of consumption, the great exemplary lives of self-made individuals, savers, green consumers, and colonisers of the environmental market (cf. Baudrillard, 2017). Thus the hero in our case is not the active democratic citizen dedicated to collectively enlarging the public sphere but a rational and active *homo economicus* individual who not only signifies the hero of consumption (the saviour of the economy) but also a safety net for democratic polity.

Therefore, we could argue that instead of rejecting the ideal of activeness, our informants held onto the notion but stretched its meaning, adjusting it to the principles of modern consumerist capitalism: rationality, robust autonomy, capacity for self-definition and rugged self-assertion (Bauman, 2007). Our material has shown that in a society of active consumers, no one can become active without his or her behaviour turning into a calculated commodity first, and no one can keep his or her activeness secure without perpetually delegating authority to metrological devices, translating political choices into green consumerist behaviour, and not posing a threat to the economic revenues or position of the main players.

We argue that the ambition of the scriptwriters is to turn the smart grid into a catalyst for democratising consumption. In this sense, the findings of this paper are aligned with previous studies that recognise the need to articulate smart grids as a public problem (Schick & Winthereik, 2013). Goulden et al. (2014) also follow such a conceptualisation, arguing that engaging people in their role as energy citizens, rather than as electricity consumers, is crucial for achieving the full potential of smart grids. Throndsen and Ryghaug (2015) add that after decades of free market logics and promises of empowerment made by stakeholders favouring deregulation initiatives, electricity users feel undermined and let down, a situation that now reduces their possibilities to enrol electricity users for smart grid initiatives. We add to these findings by also showing that the dystopic ambition to create active smart grid citizens through market-based and economically motivated framings is essentially controversial.

Our empirical investigation also showed that visions of active consumption constitute a process of individualisation, a process that intensifies passive activeness and does not contribute to any sense of collective rule. The scripts and signs of activeness identified in the visions and articulations of the people who configured the design and implementation of Smart Customer Gotland and discussed in this paper contribute to the massive programme of 'democratic individualism', i.e. a system based on personalisation of activeness entirely subjugated to market imperatives and metered rationality to replace democratic principles and equality standards (cf. Ranciére, 2006). This is the democracy of calculative devices or as Baudrillard (2017) puts it "the democratic principle is transferred from a real equality of capacities, of responsibilities, of social chances and of happiness to an equality before the Object and other manifest signs of social success and happiness" (p. 70). This is our critical contribution to the discourse regarding the notion of activeness in the framework of configuring the smart grid.

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