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UBER AND THE SWEDISH TAXI MARKET: A DISCOURSE ANALYSIS

Research paper

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Abstract

Digital platforms have emerged as a new, innovative and powerful way of organizing business. One area where digital platforms have disrupted traditional business models and organizational forms is the taxi business, with Uber as the most well-known example. As in many countries, the entrance of Uber has come to shake the Swedish taxi industry. In this paper, we analyze how Uber interact with institutional forces in the Swedish taxi market. We do this by the means of a discourse analysis. The analysis concludes that the digital artefacts and conceptual universe of Uber needs to be merged with the Swedish Taxi discourse for Uber to get foothold within the same. The challenge for Uber then becomes to be successfully incorporated, made meaningful and understood as a natural part of an already existing discursive system. Consequently, digital platforms do appear in various discursive systems as contenders and competitors to already established actors.

Keywords: Discourse Theory, Discourse, Digital Materiality, Generativity

1 Introduction

Digital platforms have emerged as a new, innovative and powerful way of organizing business (Cusumano et al., 2019; MacAfee and Brynjolfsson, 2017). The transformational power of platforms is partly reflected in lowered transaction costs, strong network effects and market expansion (Parker et al., 2016). Characteristics which is manifested through the notion of *platformization*; i.e. the drive towards the platform as a dominant infrastructural and economic model (Helmond, 2015). In global markets, a few platforms tend to gain dominating market positions in their field (Constantinides et al., 2018; Srnicek, 2017; Zuboff, 2015). Facilitating temporary access to privately owned resources, sharing economy platforms erode profits of incumbents in mature industries as they target profitable customer segments and challenge market leader's position (Constantiou et al., 2017). These incumbents may not be able to defend their position due to path dependencies, organizational rigidities and regulatory barriers; aspects which impede them to respond in a timely and appropriate fashion. One area where digital platforms have disrupted traditional business models and organizational forms is the taxi business, with Uber as the most well-known example. Uber presents themselves as a pure technological firm, acting as a mediator between drivers and riders. This has been challenged in many countries, where Uber is rather defined as a transportation company.

As in many countries, the entrance of Uber has come to shake the Swedish taxi industry. Customers in the Swedish taxi market has historically perceived taxi as an expensive transportation alternative. Hence, taxi appear as a luxury, mostly being used by business travelers and tourists. This has opened up the market to actors who could cut prices, and by that appear as affordable options. Uber offers a cheap and easy approach to transportation. Through a platform-based business-model, they challenge the basic premises for many actors: the taxi firms, taxi drivers, and societal institutions. Consequently, many of these actors mobilize resistance; e.g. the Taxi business association, public authorities, and trade unions. This setting qualifies the taxi business as an excellent case to inquire into the perplexity and challenges digital platforms brings to incumbent firms and institutions. In this paper, we analyze how Uber interact with institutional forces in the Swedish taxi market. We do this by the means of a discourse

analysis. The research question which guides us through the analysis is: *How does digital platforms interplay with institutional forces in the shaping of new organizational forms and work practices?*

The paper is structured as follows. Next section positions the paper within the field of digital platforms. Thereafter, we introduce the theoretical foundations of the study: discourse theory and materiality. The following section offers an overview of the research method. We then present the discourse analysis of the interplay between the Uber platform and institutional forces operating on the Swedish taxi market. Finally, we provide a conclusion highlighting contributions to the field.

2 Digital Platforms

The notion of digital platform has emerged as a concrete, yet ambiguous focal point for the discourse on digitalization (Gillespie, 2010). Concrete in the sense that various aspects of the functionality and characteristics of platforms have been described in literature; on the other hand, the very nature of digital platforms is ambiguous, and floats between being a piece of software, a firm and a multi sided market (cf. Constantinides et al., 2018; de Reuver et al., 2018; Sutherland and Jarrahi, 2018). Many different categorizations of platforms have been proposed, and several different streams of research can be identified. One stream is focusing on business models and strategies related to multisided markets (e.g. Gawer, 2014; McIntyre and Srinivasan, 2017). A closely related stream is focusing on architectural aspects, and how these play out in relation to governance issues (e.g. Constantinides et al., 2018). A key issue here is how to monetize on the increased value creation that comes with architectural openness and high generativity (Zittrain, 2008), but also challenges traditional means of control. Another stream of platform research is related to the emerging field of software studies, comprised by e.g. communication studies, media studies, app studies, platform studies (e.g. Helmond, 2015; Gillespie, 2014; Plantin et al., 2018; van Dijck and Poell, 2013).

Two types of platforms of specific interest to this inquiry are lean platforms and innovation platforms (Srnicsek, 2017; de Reuver et al., 2018; Cusumano et al., 2019). They create value in different ways; as lean intermediaries, facilitating efficient transactions between parties, or by providing building blocks, that can be used by third party developers to innovate and develop services. The core of *lean platforms* is the ability to transform work into an algorithmic logic of well-defined tasks (Neyland, 2015), and monitor vast amount of user generated data. This data is to a large extent automatically generated, but also consists of ratings provided by one or several sides of the platform's user base. At the core of the *innovation platform* is high generative capacity which enables the platform to provide capabilities for innovating further among its users (Zittrain, 2008), and thereby being open ended and perpetually in the making (Kallinikos et al., 2013). The materiality of digital technology – its intrinsic characteristics (Dourish, 2017; Ekbja, 2009; Kallinikos et al., 2013) – affords various ways to affect and shape organizational forms, work practices and business models (Nambisan et al., 2019). E.g. lean and innovative digital platforms are designed and engineered to suit different needs, and thereby give rise to different connotations and use. However, how the material aspects are employed is formed within the discursive field surrounding platforms; how different actors understand and talk about them (Kallinikos, 2002). Further, the notion of 'platform' embodies a political dimension in its positive connotations as something to build on (Gillespie, 2010), but notions as gig-economy and platform capitalism points to a more problematic situation (Srnicsek, 2017).

In this paper, we analyze how digital platforms, and more specifically Uber, interact with institutional forces in the Swedish taxi market, in the shaping of new organizational forms and work practices. We do this by the means of a discourse analysis in the discourse theoretical tradition (Jørgensen and Philips 2002; Laclau and Mouffe, 2001). We analyze how actors try to make sense of a digital platform, how they cope with its disruptive power and how it affects incumbent firms as well as the taxi market as a whole. In presenting different views, understandings and interpretations in discourse we can expose similarities as well as dissimilarities – how actors perceive the appearance of a digital platform and how they make use of it as a tool for organizing and making business. The discourse analysis is based on documents from different stakeholders, e.g. policy documents from firms, industrial associations, trade unions, public authorities and courts, alongside with popular press.

3 Theoretical Framework: Discourse Theory

Most commonly discourse is associated with linguistics and specific, predominant verbal exchanges within a particular social field, e.g. "public discourse", "professional discourse", or "religious discourse". But when performing a discourse analysis, it is important to take the notion of *discourse* seriously and be specific in how it is understood and used. There exist a wide variety of approaches in how the concept of discourse has been presented and utilized (cf. Jørgensen and Philips, 2002). In this paper we align to the perspective on discourse as put forward by Laclau and Mouffe's (2001) in their seminal work *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*, and then further developed by others (cf. Howarth, 2007; Howarth, 2005; Åkerström Andersen, 2003; Carpentier, 2017; Nabers, 2015). Laclau and Mouffe's (2001) discourse theory is grounded in a macro-textual approach to the concept of discourse (Carpentier, 2017). Unlike micro-textual approaches, where focus is targeted more specifically to the use of language and text, a macro-textual perspective on discourse pays attention to meanings and representation embedded in text and not so much how language itself is employed. Within this tradition, a broader definition of 'text' is employed than is more commonly used; how text can be understood as a materialization of systems of meaning. A discourse hereby presents 'reality' in a certain way, and thus shaping what is considered true or false, relevant or irrelevant, and thereby limits alternative ways in which a topic could be defined and understood (Howarth and Stavrakakis, 2000; Laclau and Mouffe, 2001). One of the underlying assumptions of discourse theory is that discourses are social and political constructions which establishes systems of relationships between objects and practices, and thus provides positions with which social agents can recognize. Subsequently, a political project aims to weave together different strands of discourse in order to be able to control a certain field of meaning (Torfing, 2005; Howarth and Stavrakakis, 2000).

In their thinking on discourse, Laclau and Mouffe (2001) stresses the incompleteness of society; there is no single underlying principle constituting a society (Nabers, 2015). Hence, there is no objective 'truth'. This is a very important premise since this prescribes a view of the world where "neither absolute fixity nor absolute non-fixity is possible (Laclau and Mouffe, 2001, p. 97). Nevertheless, discourses emerge and *appear* as fixed systems of meanings, yet they are never sutured and thereby always vulnerable to shocks from the outside (Carpentier, 2017). Another vital theoretical underpinning is that Laclau and Mouffe (2001) recognize material objects to exist independently of language and thought. At the same time, they understand that 'reality' gains meaning only through discourse. "Any physical constraint has to be endowed with meaning by discourse for human beings to be able to act on it [...]" (Nabers, 2015, p. 105-106). Given this attitude to discourse, an existing material phenomenon (such as an earthquake) can be rendered meaningful within a variety of discourses (e.g. theological discourse: 'act of God'; geological: 'natural phenomena'; popular: 'climate change'; Bridgman and Wilmott, 2006). This stance points to the importance of understanding how objects and artefacts are constructed and made comprehensible within different discursive systems. Hence, in the discourse theoretical tradition discourses arise as attempts to construct systems of meaning; systems which is always exposed to attack from the outside. Discourses hereby represents an unstable, yet presupposedly natural and self-evident way of social production of meaning (Marttila, 2015). Herewith, discourse – as understood in the discourse theoretical tradition – implies a performative as well as a structural dimension: "Action is fundamental to discourse, and so is the social structure in which action takes place" (Nabers, 2015, p. 60).

Given that discourses are perceived as systems of meaning, one of the primary focus and central aim of analysis within the discourse theoretical tradition is to uncover and analyze how meaning then is represented, fixed, and sometimes disputed. Further, to investigate how discourses constitutes knowledge and 'reality', and where discourses function side by side or where antagonism is out in the open. This is accomplished through the employment and use of different concepts and logics of discourse theory. In this analysis we make use of the concepts of *sedimentation*, *dislocation* and *antagonism*. (Laclau and Mouffe, 2001; Howarth, 2007; Howarth, 2005; Jørgensen and Philips, 2002; Nabers, 2015; Åkerström Andersen, 2003). When social practices – articulated in certain discourses – appears so natural that there seem to be no alternative to how things work, they appear as *sedimented*. Hence, sedimented discourses develops to be attributed an almost objective presence and materializes as institutionalized structures (Bridgman and Wilmott, 2006; Nabers 2015). When a discourse is

confronted by events it cannot integrate into the current system of meaning, the discourse becomes *dislocated*. The notion of dislocation is therefore to be perceived as a structural failure. Accordingly, dislocation appear as a transformational force and leads to the questioning of earlier logics and assumptions, where actors have to open up to alternative models of thought (Nabers 2015; Torfing 2005; Howarth and Stavrakakis 2000). Discourses are intrinsically political unities with a dormant property of *antagonism*. When antagonism occurs, the identity of discourse is no longer fixed, but disputed. During the antagonistic phase different actors, which represent certain ways of speaking and thinking about the world, struggle for domination and to become the normative discourse defining social order (Jørgensen and Philips, 2002).

Through notions such as ‘sedimentation’ and ‘dislocation’, discourse theory is armed with tools to somewhat address and handle the longstanding debate on the relation between discourse and materiality, their nature and ontological status (Putnam, 2014). However, we believe the framework can be strengthened when it comes to how to theoretically and analytically approach the material. Accordingly, we intend to advance our positions on the material both as phenomena of discourse (institutions), as of the world (objects, artefacts).

3.1 Discourse and Materiality

One criticism of discourse theory has been that its emphasis on a social-constructivist ontology and epistemology, has failed to account for non-discursive aspects of organizations. Viewing materiality and discourse as empirically distinct, but mutually implicated, helps to avoid privileging one pole over the other (Putnam, 2014). In line with Laclau and Moufée (2001) we recognize material objects to exist independently of language and thought; but at the same time, they understand that this extra discursive reality gains meaning only through discourse. Given this attitude to discourse, an existing material phenomenon is rendered meaningful within discourse. Accordingly, one must understand that within discourse theory, *materialization* and *materiality* must be analysed and understood both as phenomena of discourse (institutions) itself, as of the ‘world’ (digital artefacts).

Apart from other types of discourse theories – i.e. CDA (cf. Jørgensen and Philips, 2002) which do not see discourse as an all-encompassing explanation of society – discourse theory acknowledge that everything can be explained through discourse. This doesn’t mean that discourse theory discards the notion of ‘structure’. On the contrary, one of the strengths of this tradition as an analytical tool is to understand and explain structure; within discourse theory, a discourse free of conflict over a long period of time becomes sedimented, a taken-for-granted ‘reality’ which is socially constructed, but appear as an objective truth for those residing within such a discursive system. As actors come to accept shared definitions of what is going on, institutionalization occurs (Nabers, 2015). The included practices and processes transform into *discursive materiality* (Marttila, 2015; Carpentier, 2017) and over time becomes perceived as institutions. Institutions thereby solidify in discourse and appear as important actors in the process of meaning making. "Discourses are generating, anchoring, and dissolving these institutions and, in this sense, are highly material. In this view, the sedimentation of discourses becomes existential of the social" (Nabers, 2015, p. 60).

In their writing on the ambivalent ontology of digital artifacts Kallinikos and colleagues (2013, p.357) touches upon the transformative nature of digital technology, and that this characteristic stems from their ‘intentional incompleteness’; that digital artifacts “does not foreclose the range of tasks and operational links an artifact can or might accommodate”. A characteristic which can bear of both positive and negative consequences; positive in the sense that this is the breeding ground for generativity to happen (Zittrain, 2008) which in turn give rises to unprecedented possibilities of (digital) innovation (Yoo et al. 2010); negative in the sense that this reduces the control of the artifact as such (Zittrain, 2008; Schneier, 2018). Here, the thoughts of Kallinikos and colleagues (2013) on the unstable and volatile nature of digital technology links well with the discourse theoretical concept off *dislocation*. Dislocation carry with itself a transformational force which leads to that earlier logics and assumptions are questioned; "it thereby calls into question the prevailing distributive regime of places and functions as a whole" (Sumic, 2004, p. 186). Given digital technologies nature of being perpetually in the making, one recognizes the strong dislocating power buried within them.

Digital technology is often presented as a flexible technology related to the abstract world of logic and software. It is put forward as a "*technology without matter*, a conceptual scheme or frame in which a number of cognitive relations and procedures are laid out and ordered in ways that make possible their machine execution"(Kallinikos, 2012, p. 77; italics in original). Accordingly, digital technology – more than any other previous technology – opens up for considerably possibilities of arrangements and re-arrangement (Yoo et al. 2010; Zittrain, 2008). Nevertheless, it is important to point out that these seemingly endless possibilities occurring in the realm of the digital doesn't mean that it is free from solidified representations. Representations which arises as artifacts with specific properties – materialities – that constrain or enable certain types of use: e.g. algorithms, word processors, network protocols, and databases (Doursih, 2017; Leonardi, 2010). Therefore, when discussing *digital materiality*, we talk about how certain forms and functions of information – shaped in a specific manner and solidified over a longer period of time – precludes some things while enabling others (Dourish, 2017; Kallinikos, 2012).

One important reflection that Kallinikos (2012, p. 80-81) makes, and in a way emphasizes the value of discourse theory as tool for analyzing the complex relationship between 'the social' and 'the digital' is that: "[S]oftware makes the semiotic medium of the sign the fundamental, universal, and pervasive "stuff" of social life [...] [Where a] serious implication is the profusion of sign tokens of every kind and the impressive expansion of a complex and, crucially, steadily accruing techno-cognitive net spun by data items and the cognitive patterns (knowledge or information) underlying them." Kallinikos (2002) further stress the importance of being able to historically investigate and understand how technological change has framed and constructed human agency, and also how such changes emerge through the mind of actors trying to break free from the order of things (cf. Bazerman, 1998; 1999). In line with this reasoning technological development can be understood as a circular practice operating within the realm of current beliefs and norms, where digital materialities of existing artefacts enables or constrains further development (Leonardi, 2011). This perspective on digital technology and its working in the world marries nicely with the philosophical assumptions which underpins discourse theory. Discourse theory pays attention to both continuity and discontinuity – and thereby focus on the interplay between discursive path-shaping and discursive path-dependency (Torfing 2005). Accordingly, it is appropriate to use in analytical situations of digital transformation where institutions and incumbents have taken-for-granted knowledge (products of discourse), such as established routines, ways of working, behaviors and attitudes towards phenomena in their surroundings (sedimented discourses), and one wants to try to understand how new factors may have shaken about their reality (dislocation).

4 Method

Given that digital platforms nowadays float across different markets, acting as focal actors in one ecosystem but a more peripheral one in another, they can acquire different meanings within various discursive systems. By taking this relative approach we acknowledge that in order to understand how Uber is affecting the Swedish taxi market we must understand how they appear within the existing 'Swedish taxi discourse', but also how Uber perceive and present themselves as a technological company. To just study Uber as a disruptive taxi company with an app and a match-making platform, misses out on how Uber perceive itself and thereby the possibility to understand their possible broader impact on the wider social fabric; one might fail to notice the technological development that takes place under the conceptual and linguistic rigidity, and thereby fall victim to technological black boxing. In our discourse theoretical analysis, we remedy this by partly inquire into the *Swedish Taxi discourse*, as well as inquire into the *Uber engineering discourse*. In so doing we follow the development of the respective discourses, their view on technology and how it has been made meaningful and communicated over time. By designing our research this way, we were able to investigate how Uber has merged into to the Swedish Taxi discourse, and how a new discursive regime has start to emerge. Hence, the notion of 'discourse' in this paper signals a theoretical as well as an analytical approach. An analytic approach divided into two stages. First, we engaged in the process of identifying, and selecting relevant material to build a robust corpus of data. Then, we turned to the analysis where we used the concepts of discourse theory to make sense of the empirical data.

Data were collected from a variety of sources: We identified foundational accounts of the ‘Swedish Taxi discourse’; e.g. governmental investigations which handled proposals for legislative changes as the taxi industry developed over time, the governmental proposition on a *new category of taxi* along with blog posts, reports and articles from the Swedish Taxi Association. With regards to the ‘Uber engineering discourse’ we chose *The Uber Engineering blog* as our primary data source. The blog holds information on the technological artefacts and undertakings which Uber design, develop and implement.

Sources	Translation (when needed)
Ordning på taximarknaden – var god dröj (1993)	Order in the taxi market
Taxi och samåkning – i dag, i morgon och i övermorgon (SOU 2016:86)	Taxi and carpooling - today, tomorrow and the day after tomorrow
Ekonomisk brottslighet inom taxinäringen (SOU 2004:102)	Economic crime in the taxi industry
Kundvänligare taxi (SOU 1999:00)	Customer-friendlier taxi
Trafikutskottets betänkande: om avreglering av yrkestrafiken och handikappanpassad kollektivtrafik (TU 1987/88:15)	Traffic Committee report: on deregulation of professional traffic and handicap-adapted public transport
Regeringens proposition: En ny kategori av taxi (Prop. 2017/18:239)	Government proposition: A new category of taxi
Lagrådsremiss: En ny kategori av taxitrafik (2018)	Law Council's referral: A new category of taxi traffic
Swedish Taxi Association (blog, reports, articles)	
Uber Engineering Blog --- 73 entries (2014 - 2019)	
Swedish Uber Blog	

Table 1: Data Sources

Our aim in analyzing a particular social setting, employing the framework of discourse theory and added view on materiality, was to identify discourses through the interaction between the discursive and the material (Carpentier, 2017). More specifically, the analysis was framed to inquire into how digital platforms (Uber) has affected the Swedish taxi market. The analytical work within the discourse theoretical tradition is about tracking down key concepts and figure out their historical origins, potential transformations, and relations to other concepts (Wæver, 2005). We accomplished this task by exposing the sedimented discourse through identifying vital *nodal points*¹ and signs related to them. Then, we moved on to find and investigate which element/s which contributed in dislocating discourse, and the emergence of potential *empty signifiers*² which could act as placeholders for new meanings. We concluded the analysis by addressing the problems and challenges (soft antagonism) currently at hand, primarily by tracking down *chains of equivalence*³ that are build up around said signifiers. In the analysis phase we have been inspired by Nabers (2015) framework of crisis and change. We constructed our analysis workflow as follows:

Phase	Action	Description
Sediment	Reconstruct the sedimented Swedish Taxi discourse	The main function of this step was to define the structural order of the sedimented Swedish Taxi discourse. We relied on thematical analysis (cf. Carpentier, 2017) as coding procedure, where vital nodal points rise as overarching themes through the empirical data.
Dislocation	Reconstruct the Uber Engineering discourse	The main function of this step was to define the structural order of the Uber Engineering discourse. We relied on thematical analysis (cf. Carpentier, 2017) as coding procedure, where vital nodal points rise as overarching themes through the empirical data.
Antagonism	Uncover the reciprocal behaviors between contesting and contested discourse	Identify and outline potential chains of equivalence which tries to build new meaning, and bridge structural differences in discourse. Further, identify and describe hegemonic and counter-hegemonic acts; how actors try to level out discourse by investing “their” meaning in existing empty signifiers.

Table 2: Analytical Framework

¹ Privileged sign from which other signs obtain meaning (Howarth, 2007; Howarth, 2005; Nabers, 2015).

² Signs that act as symbols of a missing fullness (Howarth, 2007; Howarth, 2005; Nabers, 2015).

³ Identities are grouped together to form a front towards a common *other* (Nabers, 2015; Carpentier, 2017).

5 The Swedish Taxi Discourse

Up until the 1st of July 1990 the Swedish taxi market were strictly regulated and surrounded by well-defined rules. These rules – stipulated by the government – regulated the number of cars which could exploit the market, along with national defined fares as well as demands on people who decided to apply for becoming a taxi driver. Over time, these regulations were considered outdated in that they prevented further development of the taxi service as such. In addition, an increased dissatisfaction among customers could be discern, and was attributed to long waiting times, both regarding reaching the telephone exchanges as well as the approaching of the taxi itself. Furthermore, it showed to be problematic for the authorities to conduct surveillance and control of established rules. It became evident that a change of rules was needed. A change which was aimed to promote competition and the emergence of a free market.

5.1 Sediment: A deregulated taxi market takes shape

“Institutional changes can be seen as part of a ‘trial-and-error-process’. It is seldom possible to predict in advance exactly what the consequences will be, especially not in the longer term. Changes are being made to solve certain problems, and may be [...] successful in that regard, but they often do lead to new problems” – (Lind and Wigren, 1993)

The purpose of this part of the analysis is to outline the sedimented segments of the Swedish Tax Discourse, as they emerged in the wake of the deregulation in 1990. The sediment act as foundation for the analysis on the rise of antagonistic fronts (see section 5.3). One of the more prominent reasons for the deregulation to happen was due to ‘inefficiency’. Customers had started to complain about poor service and long waiting times. The solution to the problem was thought to be the introduction of more cars to the market, but since the strict regulation didn't foster competition, the market had reached a kind of status quo. Therefore, the deregulation of the market with subsequent notion's such as 'competition' and 'free market' articulated into discourse was thought of being a solution to the problem. The result would be more cars operating on the market, and thereby shorter waiting times for customers. Yet another reason underpinning the deregulation was to be found in that a number of authorities, mainly the SPK (State's pricing and competition agency), argued that strict regulation created inefficiency within the taxi companies as well as on the market as a whole; hence, the incentives for 'rationalization', 'change' and 'innovation' were low and could ultimately lead to unnecessarily expensive transports. Accordingly, the deregulation was also aimed at promoting the taxi industry's development towards greater ‘efficiency’ and ‘service capacity’. But this emphasis on greater 'competition' led the government to point to the importance that this competition must take place on equal terms. Here, the notion of 'justice' was introduced as a beacon and important signifier into discourse; the 'taximeter' – which prior to the deregulation was understood as a tool primarily used for calculating prices – was re-articulated into the discourse as an important component in the control and supervision mechanism which was set to monitor the discursive construction that the new 'deregulated taxi market' constituted (TU: 1987/88; Lind and Wigren, 1993; SOU 2004:102).

"In the event of deregulation of taxi traffic, it is, in the Government's view, particularly important that guarantees be created to the extent that increasing competition within the industry can take place on equal terms. This should be done e.g. by requiring that every vehicle used in conventional taxi traffic must be equipped with a receipt writing and registering taximeter." (TU 1987/88:15; author translation)

The interventions executed in connection with the deregulation contributed to a more favorable situation in certain aspects, at least for the customers as it showed. For example, the number of cars operating on the market rapidly increased - especially in the urban areas - with a subsequent discussion of a possible 'over-establishment' flourishing in discourse; a discussion which mainly pivoted around the fact that the many cars had led to an ineffective market the-other-way-around to what had previously been the case, where the market now had low capacity utilization leading to many taxis were idle much of the time. One thing that spurred from the changed market situation – queues of cars instead of customers – and came to trouble the discourse to a great extent was attributed to 'law and order'. Various problems related to financial irregularities, e.g. manipulations of taximeter to deceive the tax authorities, became

apparent and the government authorized an investigator to review the regulations governing the taxi industry. The investigation concluded that: "Improved supervision is the most important measure to get rid of the economical crime that exists in the taxi industry." (SOU 2004:102, p.14; author translation). Thus, the importance of 'supervision' was further emphasized in discourse. Collaboration between authorities was said to be foundational for achieving good supervision. And as a tool in this work, the 'taximeter' came to be articulated in relation to a new instance, the so-called 'accounting center', which was intended to function as an independent collection point for taximeter data; data which would serve as control material for tax investigations. "Improved supervision should be the most effective means of working against financial crime in the taxi industry. However, for such supervision to be effective, certain aids are required, of which accounting centers are one" (SOU 2004:102, p.15; author translation). Here a sedimentation of the deregulated taxi-discourse can be discerned where certain objects (the taximeter) gains fundamental meaning, and where new institutions (account center) arises. The already mentioned importance of 'justice' became again discursively apparent and through the extended discursive boundaries 'taximeter' more closely linked to the notions of 'control' and 'supervision'. Although the 'taximeter' became the primary control function within discourse, the 'vehicle' was articulated as the 'thing' which was set to be controlled. The 'vehicle' thereby became an object which were put into scrutiny; the supervision of the 'vehicle' was primary to stop the 'unregulated taxis' to grow on the market, but also to see that no drivers would contribute to tax evasion. Apart of being identified as an object to control, the 'vehicle' needed to comply to certain rules and regulations. In order to signal 'legitimacy' to the riders, the 'vehicle' which was registered to be used as taxi needs a specific registry sign, where the letter 'T' is put to the farther right, and where the fond is of a yellow color. Furthermore, and in line with the 'legitimacy' aspect, the 'vehicle' needed to have a clear and visible pricing information in the windows.

The Swedish taxi discourse has ever since evolved into a myth of how signs such as 'driver', 'taxi' and 'taximeter' relates to one another, as well as to the institutionalized roles (Marttilla, 2015) of 'taxi company' and 'order center' (see figure 1). At the same time, it is obvious that the discourse, over time, has struggled to retain its initial intention of being a 'just' and 'free market'. The problem with low profitability along with a rather inefficient market has made the incentives for 'economical crimes' to happen. But through continuous regulations (cf. SOU 1999; SOU 2004) - and the

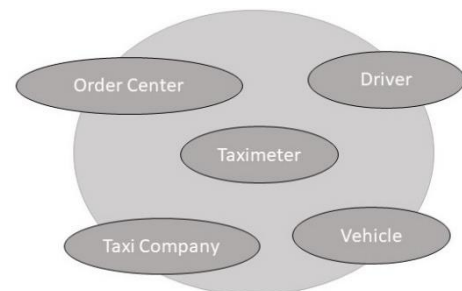


Figure 1: The sedimented taxi discourse

addition of discursive constructs such as 'account center' - along with the strengthening of 'supervision', the discourse has tried to manage and contain its stability without any major disruptions happening. In the analysis thus far, the 'taximeter' is to be perceived as a gravitational center within discourse. The overarching discursive construct which The Swedish taxi market constitutes, has come to rely and concentrate much on 'control' and 'supervision'. The articulated fairness of the market, as well as the information for which taxes that are to be collected, are now semantically anchored to this piece of material which constitutes the 'taximeter'. The hiring forms of a 'taxi driver' has been rather fixed and stable within the discourse over time. The notion of 'taxi driver' has then given rise to the creation of various institutions (e.g. Swedish Taxi Association), which in turn operates with other established and adjacent institutions (e.g. Skatteverket, Polisen, Transportstyrelsen) to secure and enable a 'fair' and 'just' taxi market. The myth further stipulates that there exists a robust scheme regarding responsibilities, rules and norms.

"The Swedish taxi association works for competition on equal terms as well as non-existing conditions for companies with rogue working methods to operate on the taxi market. Healthy competition and tax control is important prerequisite for the trade to be able to develop" (Seriös Taxi, Swedish Taxi Association).

5.2 Dislocation: Enter Uber

"[W]e create and work with complex data. Then we bundle it neatly as a platform that enables drivers to get business and riders to get around." – (Uber Engineering blog, 2016-07-19)

Uber started their business in 2009 in San Francisco. The only service at the time were UberBLACK, one single offer for one single city. The thought and design of the IT-infrastructure that were put in place, was quite similar to that of many startups - a monolithic architecture with "a bunch of app servers and a single database" (Uber Engineering blog, 2015-07-28): One, single, code base that solved Ubers core business problem, which were to connect riders with drivers, and to support billing and payment. At the start of 2014 the company had grown to offer the app in 100 cities, and by early 2016 that number had grown to more than 400 cities worldwide and the company offered a catalogue of services. At the end of 2017 Uber counted that they had 75 million drivers, 3 million drivers, where represented in 65 countries and 600+ cities worldwide, and that 15 million trips were completed each day. In what follows, we outline the Uber Engineering discourse as mediated through their engineering blog. And we do this by carving out specific material artefacts and important signifiers within the discourse (Figure 2).

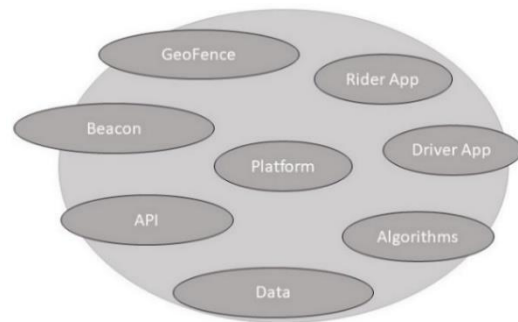


Figure 2: Uber Engineering Discourse

Platform: The meaning-making system which is mediated by the Uber engineering blog perceives Uber as much more than a simple matchmaker, connecting riders and drivers by means of an app. Instead they focus on describing and conceptualizing the technological heavy lifting needed to enable the scale and scope of Uber (Uber Engineering blog, 2017-12-27). The discursive work pivots around the technology which must be developed, further developed and maintained so that the company can continue to grow and deliver on the many complex and technically demanding challenges faced by its employees: "We take on real-time logistics and optimization problems that are among the hardest tackled today by many academic and engineering disciplines, and the tools we build enable us to move more people to more places, more efficiently" (2015-07-28). As the demands on the IT infrastructure increased – due to the businesses scaled to more cities – it became obvious that the early monolithic architecture impeded further growth, and needed to be re-designed: "The original architecture was fine for running a relatively modest number of trips in a few cities. By early 2014, the architecture had evolved into a true service-oriented architecture of close to 100 services" (2015-07-28). Hence, the 'platform' was articulated into the discourse as a hub of action and center of gravity. On the one hand the 'platform', acts as a discursive structure to which Ubers different services and technological undertakings can be connected. At the same time, it is articulated as a potent yet complicated technological architecture which introduces greater 'extensibility' and 'maintainability' at the benefit of the further growth and scale of Uber (2018-04-12).

Algorithm: The 'algorithm' is articulated into discourse as an invisible yet crucial part of the Uber technological framework: "[W]hat looks simple on Uber's frontend actually consists of complex architecture and services on the backend, including sophisticated routing and matching algorithms that direct cars to people and people to places" (2015-11-03). The 'algorithm' thereby appears as a central component and building block, acting as a kind of overseer and executor at the same time. Despite the seemingly general discursive revelation of the 'algorithm', it becomes apparent that the Uber digital platform is imbued with unique code loops which are intended to solve specific problems. A notion which becomes apparent in the following: "We use modern routing algorithms to build carefully optimized system capable of handling hundreds of thousands of ETA [Estimated Time of Arrival] requests per second" (2015-11-03). As well as in: "Because we don't want to interrupt Uber's seamless experience for riders and driver partners, our algorithm must deduce a rider's ability to pay [...] in a fraction of a second" (2017-03-08). Yet another aspect of the 'algorithm', which is discursively articulated as an extremely important feature, is its capacity to distinguish patterns from massive amounts of data. A property which is understood as a necessary condition for subsequently being able to generate business critical features of 'decision', 'estimation', and 'prediction': "A variety of teams [...] build and deploy ML [Machine Learning] algorithms to handle the immense coordination, hyperlocal decision making, and learning needed to tackle the enormous scale and movement of our transportation network" (2017-11-10).

Data: If the 'algorithm' was introduced into discourse as a crucial cog in the Uber machinery, 'data' is considered the fuel on which this engine feeds: "While Uber moves people and packages around the world, data moves Uber" (2016-03-29). Accordingly, 'data' is articulated as a paramount resource which permeates all parts of Uber's business, constantly present in everything they do: "Uber data include information about trips, billing, and the health of the infrastructure and services behind our apps" (2016-03-29). One area of use where data plays a vital role (as a training set fed into neural nets to build a forecasting model), and which can be considered Uber's main 'matchmaking' tool in streamlining the taxi market, is the possibility of being able to, as precisely as possible, assess and predict ride requests: "The goal is to accurately predict where, when, and how many ride requests Uber will receive at any given time" (2017-06-09). The constant stream of data coming into the platform provides opportunity for further exploration of new functions. E.g. the notion of 'safe driving' is introduced as a way to use data to detect and indicate unsafe driving behavior: "Across the globe, nearly 1.250.000 people die in road crashes each year. At Uber, we're determined to decrease this number by raising awareness of driving patterns to our partners" (2016-06-29). More recently, the notion of an 'intelligent infrastructure' has been introduced to the discourse. This 'rethinking of infrastructure design' is attributed to the data-science mindset, signaling that the focus on large amounts of 'data' does not only contribute to new innovations on the platform itself but can also be applied in other areas as well. In this case as a tool for optimizing, and re-designing parts of Uber's own IT-infrastructure: " Given Uber's expertise in data science, we decided to apply principles from that field to optimize our data infrastructure [...] [T]his project demonstrated how the power of machine learning and data science can be infused into the data infrastructure world" (2019-03-20).

API: As the platform matured, Uber recognized an opportunity to open their internal API for others to innovate through. In August 2014, the 'API' was introduced into the discourse as a way for third party developers to access "many of the primitives that power Uber's magical experience" (2014-08-20). As the Uber engineers developed the API further it evolved into a discursive structure with the aim to attract potential third party developers to connect and integrate with the Uber 'platform': "We believe developers are going to create some really powerful integrations [...] and we plan to continue pushing the boundaries of what is possible with our API" (2015-03-17). Lately, the Uber API has made it possible for a variety of integrations between different services which blur boundaries and can make it difficult to sometimes discern the concrete contours of the Uber platform: "Ask any of the popular conversational agents these days, like Google home, Alexa, or Hound, to call an Uber, and they will activate the Ride Request API - no taps required" (2017-04-14). Over the years, the 'API' has thereby evolved from primarily acted as a rudimentary channel into Uber's platform, to enable advanced integrations. Through this development, Uber itself has evolved from a closed system, where the primary focus has been on riders and drivers, to now also include third-party developers innovating on their platform along with further integration with other platforms and services (2014-08-20; 2017-04-14).

Driver and Riding App: The 'Driver app' is articulated into the discourse as way for Uber to be able to communicate with, help, steer, and pay their driver-partners: "Whenever a driver produces an event on the mobile app, such as crossing a geofence or finishing a trip, there might be a need to push a real-time message to their feed" (2017-05-02). As a way of creating meaningful connections between drivers and riders, the concept of 'Driver Profile' appear as a discursive space where professional (completed trips, present rating) as well as personal (languages spoken, where they are from, if they have any city recommendations) information about the driver is put for the riders to read and take part of (2017-08-01). Over time, Uber is conveyed as transformed from a rather rigid company aimed at a dedicated task, to a creature in constant change where the organizations growing capabilities are continuously highlighted. One can discern this change of self-perception in the decision to rewrite their driver app; an undertaking which were considered to be 'incredibly risky' and 'resource-intensive': "[T]he rewrite of the driver application came within the context of the desire to build a more reliable and stronger product experience for our users, and, at the same time, amplify our organization's ability to execute on this vision" (2018-10-09). In this statement, Uber appear as a performative assemblage where the accomplished endeavors recursively strengthen their identity of being a 'technological company' with an ever-growing capability of disrupting the domain of 'transportation'.

The 'Rider App' on the other hand is introduced as being equated with the initial and driving idea to request premium black cars. An idea which is based on the simple concept to "push a button, get a ride [...] connecting riders to on-demand transportations" (2016-12-20). The expansion and development of their business resulted in the need of a rewrite of the rider app as well (in 2016); this new architecture was communicated as being 'feature-rich' with support for Uber's range of products - from UberPool to UberX - and even further 'extensibilities'. But Uber noted that users in different markets did have problem with the new version; problems mainly related to lack of hardware performance from rider's phones as well as low network bandwidth. Given Uber's geographical expansion they became forced to consider different demographic areas and thus different conditions in terms of purchasing power and quality of IT infrastructure. Hence, conditions such as 'telephone hardware' as well as 'networking limitations' was articulated into the discourse as constraints which needed to be dealt with. To address this challenge, they "built Uber Lite, a rider app designed for use on older Android devices and in areas where network infrastructure may not reliably serve LTE data connectivity" (2019-01-23).

Geofence: In line with the continuous growth and scale of the Uber business, a need to be more granular in how they were able to target drivers and riders arose. In order to remedy this, the notion of 'geofence' was introduced to the discourse. "At Uber, a geofence refers to a human-defined geographic area [...] on the Earth's surface. We use geofences extensively at Uber for geo-based configurations" (2016-02-24). The 'geofence' property is used for targeting and show users which products and services that are available at a given location. Through the notion of 'geofence' Uber can implement the concept of 'dynamic pricing', as well as defining areas with specific requirements, such as airport terminals.

5.3 Soft Antagonism: The dawn of a new category of Taxi

"It is not surprising that Sweden has become an attractive country for new taxi services as the country offers a combination of a well-developed network for communication technology, a liberalized taxi market with low establishment costs and a customer base that is familiar with 'smartphones'" – (SOU 2016:86; author translation)

In discourse theory, with its tradition firmly rooted in political soil, the view on antagonism has been the more traditional one, where two or more parties struggle for the win of discourse (Laclau and Mouffe, 2001). But as the framework has spread to include research in other domains (media, sociology, technology) a need for a complementary, softer view of antagonism has been raised (Stäheli, 2004). This softer view points to the insight that actors operates, and will continue to do so, within a common market, where hegemonic interventions are made by the actors in order to make their view of the world the ruling one. Accordingly, hegemony should not in this case be perceived as a search for domination primarily, but rather as a contestation and interrogation between competing social logics. In that sense, antagonism and the subsequent hegemony can be thought of as a project that links different identities and political forces together with the aim to create a new social order (Howarth, 2007; Nabers, 2015). This softer kind of antagonism is therefore not to be seen as a struggle where one actor seeks to circumvent and/or exclude the 'others' completely; rather, it is a sensemaking process of a new phenomenon's occurrence within discourse, where different actors – sometimes together, sometimes by themselves – struggles to arrive at a perception and understanding of 'things' in accordance with their overall view of the world.

The fact that the Swedish taxi market became 'deregulated' in the early nineties paved the way for Uber, in 2013, to be able to enter the market. From a discourse theoretical perspective, it is important to point out that the Swedish taxi-market at the time was a sedimented discourse, with the notions of 'competition' and 'free market' firmly rooted. This meant that Uber could enter as a taxi company amongst others, while there existed rules and norms within the Swedish taxi market which Uber had to identify with and relate to. A thing which should show to be a somewhat complicated affair. In September 2014, Uber introduced its 'carpooling' service UberPOP in Sweden. An ordinary driver (no taxi driver certification is required) could pick up a passenger who would go in the same direction and get a compensation. Here, Uber challenged the norms of the Swedish taxi discourse and clearly stepped into a discursive struggle about what the notion 'taxi driver' really meant. The Swedish taxi Association was very clear in their communication on how they perceived the situation: "Uberpop's biggest differences with taxi are, in addition to the pricing, that Uber does not require taxi driver certification

[...] The company also does not require drivers to have a license to engage in taxi operations [...] In daily speech, this is referred to as unregistered taxis.” (Svenska Taxiförbundet, 2016; author translation). The struggle ended with Uber's withdrawal of its service. The company stressed that the Swedish taxi market wasn't really ready for these types of services yet: “Our pilot service has successfully tested carpooling in Sweden, but clearer regulation is needed before it can be taken further. The deferred proposal from the government's investigators, regarding regulation of carpooling, means prolonged uncertainty and pressure on those who use our service” (Uber Sverige, 2016). On the contrary, Uber has sometimes been used as a kind of 'good example'. For example, when the Swedish taxi Association tried to build a case around how a governmental discount could contribute to lower price for the customer and thereby an increased use of taxis, they pointed to the fact that:

“Uber's entry into different geographic markets around the world could be seen as a test of what happens to the demand for taxi services when the price is lowered (as a Rut-discount for Taxi [in Sweden]) - and whether the means of transport then acts as a complement or as a substitute for public transport” (Svenska Taxiförbundet, 2018a; author translation)

Our analyze has aimed at understanding both the Swedish sedimented taxi discourse as well as the Uber engineering discourse; which type of mindsets and sensemaking mechanisms that are apparent in the different discourses. In this section our aim has been, thus far, to visualize and give some example of the further evolution of the Swedish taxi discourse and Uber merging with the same. While the actors may not be the sweetest of friends, they have tried to adapt to the conditions and environment. But in a specific event regarding the potential use of digital technology, one can discern the origin of the two discourses. In a state inquiry concerning *A new category of Taxi* (SOU 2016:86), the investigation stresses the great potential of digital technology and its possibility to influence the taxi-market:

“As technology innovations develops that enable a car and a driver to be identified and located digitally with certainty, the need for signage, decals and other special equipment for taxis will decrease. It becomes more attractive to use ones own car as a taxi because the vehicles can change function without changing shape” (SOU 2016:86; author translation)

The investigation suggests that, instead of the 'taximeter' acting as the focal controlling mechanism, a digital 'special equipment for taxi vehicles' could now also be used as a controlling device. This proposal is put forward as a solution driven by the innovative capacity that digital technology brings. Taxi vehicle equipped with such a special device must then join a 'licensed order center'; this to enable the transmission of necessary control information to be collected for the Swedish tax authority. And it is primarily the proposals vague notion of 'special equipment for taxi vehicles' – what it means and how to relate to it – which have evoked a clear discursive antagonistic front between actors of discourse (see figure 3). Due to the vagueness, the actors are uncertain how the future will unfold. The question that participants of the discourse must try to answer is: How to perceive digital technology in relation to the described proposal, and more specifically the notion of ‘Special Equipment for Taxi Vehicles’? The Swedish Taxi Association – an institution firmly rooted in the sedimented Swedish taxi discourse where the role of technology (e.g., the 'taximeter') has primarily been thought of as a means to support authorities in supervision of the market – comments a bit defensively on the new category of Taxi in their referral response:

“The Association supports the proposal that a taxi should be equipped with a special equipment [...] However, the association would point out that this is one of the investigation's less substantiated parts, as there is a lack of detailed technical descriptions [...] The proposal opens for technological neutrality, which may be benevolent, but also creates significant uncertainty [...]” (Svenska Taxiförbundet, 2018b; author translation)

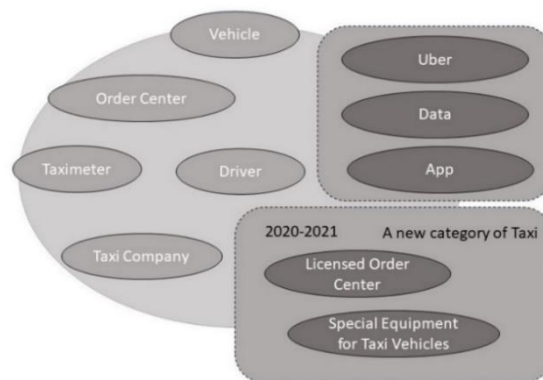


Figure 3: Antagonistic fronts - a new category of taxi

Uber Sweden on the other hand employs more of an engineering mindset in their referral response. A mindset where digital technology is perceived as an ongoing evolution which must be cultivated – and not primarily regulated according to old beliefs – and therefore should be perceived as an enabler for further innovation:

“When the investigation now opens for certain taxi traffic without taximeter, it starts from the historical weaknesses of existing control systems instead of starting from the possibilities of the new technology [...] Through detailed control, the legislator inhibits innovative technological development. Legislation should be technology-neutral [...] An overworked certification system creates unnecessary bureaucracy which hinders the market's ability to design innovative solutions.” (Uber Sverige, 2017; author translation).

In discourse theoretical terms, the notion of 'special equipment for taxi vehicles' appear as an empty signifier (Howarth and Stavrakakis, 2000); a signifier without any specific conceptual meaning bound to it. Hence, it is open for interpretation. Such a signifier is often found at heart of conflicts, and at the core of antagonisms. This became clear in our analysis, where all three actors now needs to relate to and struggle with the notion of 'special equipment for taxi vehicles', and what it will mean for their possibilities to act and work within the future discourse: Firstly, the government who suggested the idea of a new category of taxi: How will they convey its further development? Secondly, the incumbent actors, being used to strict and defined rules regarding technology (cf. 'taximeter'), where artefacts are perceived as well-defined, already-made black boxes than generative and malleable objects. Thirdly, Uber whose DNA is within software engineering, where coping with and exploiting the generative capacity of digital artifacts lies at the heart of what they do; and where their business model depends on their produced artefacts working together – collecting and mining data, delivering algorithmic insights.

6 Conclusion

This paper has explored how technology interplays with institutional forces. By means of a discourse analysis we showed how a digital platform emerges into an existing discursive system, where incumbent actors perceive said platform from their specific perspective and expect it to adhere and align with established rules and norms. As the analysis outlined, Uber could take advantage of the deregulated Swedish taxi market and enter as a new actor without major obstacles. Yet, Uber is a generative creation and hence perpetually in the making (Kallinikos et al., 2013; Zittrain, 2008), with subsequent characteristic of crossing traditional industry borders (Nambisan et al., 2019). A fact which was highlighted in the analysis of the Uber Engineering discourse, where various digital artifacts being constantly developed and transformed. Specifically, the evolution of the 'open API' emphasize this ever-changing nature, where a variety of integrations between services and other platforms were said to blur the boundaries of the Uber platform. These findings reveal Uber as not just a taxi company, but also and probably more, a technological one. Armed with these insights and moving onto the discursive struggle which appeared in the wake of a 'new category of taxi', we discern a situation where Uber perceives a different 'reality' compared to the deeply rooted institutional actors. As the analysis of the sedimented discourse revealed, the taximeter was and is the material artifact which traditionally has anchored the 'culture of supervision' within discourse. An artifact with the appearance of being quite stable over time. But now, the malleable characteristic of digital materiality – in this analysis primarily conceptualized as the empty signifier 'special equipment for taxi vehicles' – is challenging this stability. Facts which opens for dislocation and antagonism to happen (Bridgman and Wilmott, 2006). The analysis highlights that the material (digital artefacts) and conceptual universe of Uber needs to be aligned with the Swedish Taxi discourse for Uber to get foothold within the same (Nabers, 2015). Hence, one challenge global digital platforms faces are how to be incorporated and understood as natural constituents of already existing discursive systems.

This paper makes three contributions: First, we exemplify how discourse theory can be used as an analytical framework within IS research. Secondly, we extend the analytical toolbox, which is discourse theory, by integrating the concept of digital materiality. Thirdly, we add to the research on the dynamics of digital platforms (cf. de Reuver et al., 2018).

7 References

- Bazerman, C. (1998). "The Production of Technology and the Production of Human Meaning." *Journal of Business and Technical Communication* 12(3), 381-387.
- Bazerman, C. (1999). *The Languages of Edison's Light*. Cambridge, MA: MIT Press.
- Bridgman, T., and Wilmott, H. (2006) "Institutions and Technology – Frameworks for Understanding Organizational Change – The Case of a Major ICT Outsourcing Contract." *The Journal of Applied Behavioral Science* 42(1), 110-126.
- Carpentier, N. (2017). *The Discursive-Material Knot*. New York: Peter Lang Publishing, Inc.
- Constantinides, P., Henfridsson, O., and Parker, G. G. (2018). "Introduction: Platform and Infrastructures in the Digital Age." *Information Systems Research* 29(2), 381-400.
- Constantiou, I., Marton, A., and Tuunainen, V. K. (2017). "Four Models of Sharing Economy Platforms." *MIS Quarterly Executive* 16(4), 231-251.
- Cusumano, M. A., Gawer, A., and Yoffie, D. B. (2019). *The Business Of Platforms – Strategy in the age of Digital Competition, Innovation, and Power*. New York: Harper Business.
- de Reuver, M., Sörensen, C, and Basole, R. C. (2018). "The digital platform: a research agenda." *Journal of Information Technology* 33, pp. 124-135.
- Dourish, P. (2017). *The Stuff of Bits: An Essay on the Materialities of Information*. Cambridge, MA: MIT Press.
- Ekbia, R. H. (2009). "Digital Artifacts as Quasi-Objects: Qualification, Mediaton, and Materiality." *Journal of the American Society for Information Science and Technology* 60(12), 2554-2566.
- Gawer, A. (2014). "Bridging differing perspectives on digital platforms: Toward an integrative framework." *Research Policy* 43, 1239-1249.
- Gillespie, T. (2010). "The politics of platforms." *New Media and Society* 12(3), 347-364.
- Gillespie, T. (2014). "The Relevance of Algorithms". In: *Media Technologies – Essays on Communication, Materiality, and Society*. Ed. by Gillespie, T., Boczkowski, P. J., and Foot, K. A. Cambridge, MA: The MIT Press.
- Helmond, A. (2015). "The platformization of the web: Making web data platform ready." *Social Media+ Society* 1(2), 1-11.
- Howarth, D., and Stavrakakis, Y. (2000). "Introducing discourse theory and political analysis." In: *Discourse theory and political analysis: Identities, hegemonies and social change*. Ed. by Howarth, D., Norval, A. J., and Stavrakakis, Y. Manchester: Manchester University Press, pp. 1-23.
- Howarth, D. (2005). "Applying Discourse Theory: the Method of Articulation." In: *Discourse Theory in European Politics: Identity, Policy and Governance*. Ed. by Howarth, D., and Torfling, J. New York: Palgrave Macmillan.
- Howarth, D. (2007). *Diskurs*. Malmö: Liber
- Jørgensen, M. W., and Philips, L. (2002). *Discourse Analysis as Theory and Method*. London: SAGE Publications.
- Kallinikos, J. (2002). "Reopening the black box of technology artifacts and human agency", In: *Proceedings of the twenty-third International Conference of Information Systems*.
- Kallinikos J (2012) "Form, function, and matter: Crossing the border of materiality". In: *Materiality and organizing: Social interaction in a technological world*. Ed. by Leonardi, P. M., Nardi, B. A., and Kallinikos J. Oxford: Oxford University Press.
- Kallinikos, J., Aaltonen, A., and Marton, A. (2013). "The Ambivalent Ontology of Digital Artifacts." *MIS Quarterly* 37(2), 357-370.
- Laclau, E., and Mouffe, C. (2001). *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. 2nd Edition. London: Verso.
- Leonardi, P. (2010). "Digital materiality? How artifacts matter without matter." *First Monday*
- Leonardi, P. (2011). "When flexible routines meet flexible technologies: Affordance, constraint, and the imbrication of human and material agencies." *MIS Quarterly* 35(1),147-167.
- Lind, H. and Wigren, L. (1993). *Ordning på taximarknaden – var god dröj!*. Stockholm: SNS Förlag.
- MacAfee, A. and Brynjolfsson, E. (2017). *Machine, Platform, Crowd – Harnessing Our Digital Future*. New York: W.W. Norton & Company, Inc.
- Marttila, T. (2015). Post-Foundational Discourse Analysis: A Suggestion for a Research Programme. In: *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 16(3).

- McIntyre, D. P., and Srinivasan, A. (2017). "Networks, platforms and strategy: Emerging views and next steps." *Strategic Management Journal* 38(1), 141-160.
- Nabers, D. (2015). *A Poststructuralist Discourse Theory of Global Politics*. Basingstoke: Palgrave Macmillan.
- Nambisan, S., Wriht, M., and Feldman, M. (2019). "The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes." *Research Policy* 48(8), 1-9.
- Neyland, D. (2015). "On Organizing Algorithms". *Theory, Culture and Society*, 32(1), 119-32.
- Parker, G. G., Van Alstyne, M. W., and Choudary, S. P. (2016). *Platform Revolution: How networked markets are transforming the economy – and how to make them work for you*. New York: W.W. Norton & Company, Inc.
- Plantin, J. C., Lagoze, C., Edwards, P. N., and Sandvig, C. (2018). "Infrastructure studies meet platform studies in the age of Google and Facebook." *New Media and Society* 20(1), 293-310.
- Putnam, L. L. (2014) "Unpacking the Dialectic: Alternative Views on the Discourse-Materiality Relationship." *Journal of Management Studies* 52(5), 706-716.
- Schneier, B. (2018). *Click here to kill everybody*. New York: W.W. Norton & Company, Inc.
- Srnicek, N. (2017). *Platform capitalism*. Cambridge, UK: Polity Press.
- Stäheli, U. (2004). "Competing Figures of the Limit – Dispersion, transgression, antagonism, and indifference." In: *Laclau – A critical reader*. Ed. by Chritchley, S., and Marchart, O. New York: Routledge.
- Sumic, J. (2004). "Anachronism of emancipation or fidelity to politics". In: *Laclau – A critical reader*. Ed. by Chritchley, S., and Marchart, O. New York: Routledge.
- Sutherland, W. and Jarrahi, M. H. (2018). "The Sharing Economy and Digital Platforms: A Review and research Agenda." *International Journal of Information Management*, 43, 328-341.
- Torfin, J. (2005). "Discourse Theory: Achievements, Arguments, and Challenges. In: *Discourse Theory in European Politics: Identity, Policy and Governance*. Ed. by Howarth, D., and Torfin, J. New York: Palgrave Macmillan.
- van Dijk, J., and Poell, T. (2013). "Understanding Social Media Logic". *Media and Communication*, 1(1), 2-14.
- Wæver, O. (2005). "European Integration and Security: Analysing French and German Discourses on State, Nation, and Europe." In: *Discourse Theory in European Politics: Identity, Policy and Governance*. Ed. by Howarth, D., and Torfin, J. New York: Palgrave Macmillan.
- Yoo, Y., Henfridsson, O., and Lyytinen, K. (2010) "Research commentary – The new organizing logic of digital innovation: An agenda for information systems research." *Information Systems Research* 21(4), 724-735.
- Zittrain, J. (2008). *The Future of the Internet – And How to Stop It*. New Haven: Yale University Press.
- Zuboff, S. (2015). "Big other: surveillance capitalism and the prospects of an information civilization". *Journal of Information Technology*, 30(1), 75-89.
- Åkerström Andersen, N. (2003). *Discursive analytical strategies: Understanding Foucault, Koselleck, Laclau, Luhman*. Bristol: The Policy Press

Empirical Data (excerpts):

- Lind, H. and Wigren, L. (1993). *Ordning på taximarknaden – var god dröj!*. Stockholm: SNS Förlag.
- Svenska Taxiförbundet (2016). *UberPOP – En fråga om skatt*. Solna: Svenska Taxiförbundet.
- Svenska Taxiförbundet (2018a). *RATT – Rut-avdrag för taxi: vad skulle samhället och konsumenterna vinna?*. Solna: Svenska Taxiförbundet.
- Svenska Taxiförbundet (2018b). "Remissvar, "Taxi och samåkning – idag, imorgon och I övermorgon" (SOU 2016:86)."
- Taxiutredningen (1999). *Kundvänligare taxi (SOU 1999:00)*. Stockholm: Näringsdepartementet.
- Trafikutskottets betänkande (1987/88) om avregleringen av yrkestrafiken och handikappsanpassad kollektivtrafik (TU 1987/88:15).
- Uber Sverige (2016). 618 dagar med samåkning. *Uber Blogg* [blogg], 10 maj.

Uber Sverige (2017). “Remissyttrande över betänkande från Utredningen om anpassning till nya förutsättningar för taxi och samåkning – Taxi och samåkning – i dag, i morgon och i övermorgon (SOU 2016:86).”

Utredningen om taxinäringen (2004). *Ekonomisk brottslighet inom taxinäringen (SOU 2004:102)*. Stockholm: Näringsdepartementet.

Utredningen om anpassning till nya förutsättningar för taxi och samåkning (2016). *Taxi och samåkning – I dag, I morgon och i övermorgon (SOU 2016:86)*. Stockholm: Näringsdepartementet.