Metaphors to describe and explore platform company strategies

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Summary

Platform companies are challenging the current operational environment of industries with new value-creation logics and business models, which may ultimately lead to a shift from the industrial service economy to a networked platform economy. Since organised discussion and analysis of platforms is recent and the impacts of the platform economy are uncertain, there are only rather scattered views of what platforms are and what kinds of business opportunities and challenges the platform economy will bring about.

In this report we use nine metaphors to explore different perceptions of platform companies as organisations. Each metaphor captures a unique viewpoint, helping to make sense of the characteristics of the platform and its strategies to grasp the opportunities and avoid the threats of the platform economy. Our subject matter knowledge base and understanding of platforms and the platform economy is based on continuous horizon scanning over the past three years.

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Preface

Digital platforms and the platform economy are spreading to all areas of life. Known platform companies, such as Google and Facebook, have become a part of the everyday life all over the world. The very basic idea of a platform is to collect and use data to create added value for the platform itself as well as the users and producers that the platform matches together. Here, data is the new asset! Platforms, however, can be implemented in many more ways and in many more application areas than what is obvious so far. In fact, companies of all sizes are striving hard to find their way to renew their strategies, participate in the new platform-based business and survive in the global competition. New ways of thinking are needed.

In the platform economy companies don't necessarily have a pre-defined static strategy like many traditional businesses do. Instead, platform companies need to design their strategy to meet the reality of the platform economy and also be open for their strategy to evolve along the way. The value of a platform depends greatly on the data it has available, provided by the users and producers or by other involved parties in the platform ecosystem. It often is difficult to forecast the success of a platform, and the changes in the development of the platform business landscape may be rapid and unforeseen. Therefore, a platform company should be agile enough to grasp new emerging opportunities and adapt their strategy as the business landscape changes. Innovative thinking in strategy planning is needed. We propose the use of metaphors as a tool to bring out such new insights.

A metaphor is defined by Merriam-Webster as "a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them". Morgan (1997) used metaphors to describe different perceptions of organisations, and in this report our aim is developed this further in the context of the platform economy. We analyse and interpret platform company strategies using the nine metaphors for organisation: machine, organism, brain, flux and transformation, culture, political system, psychic prison, instrument of domination and carnival.

We wish you insightful reading!

Authors

Contents

1. Introduction

One change trajectory in the transformation process of the global economy is from the industrial service economy towards networked, digital and platform-based modes of operation – the platform economy. Literally the word platform refers to 'a raised level surface on which people or things can stand' (see Oxford dictionary, 2017), such as a train platform or oil drilling platform. More figuratively speaking a platform can also be a product or technology on which to build additional functionalities or even a social construct for accumulative interaction. In general, platforms provide an access for the many whether it be to a train, crude oil resources, product family offering or social communication forum. In our understanding of the platform economy in its widest form, we consider platforms not necessarily to be physical or technological surface constructs but as enablers for accessing knowledge, services, contacts, business opportunities, expertise, work, etc. In this report we define platforms as a collection of digital technologies and social practices enabling people to connect and cooperate.

Platform companies aim to create social network capital on top of products and services; the added value comes from the extensiveness and functioning of the network (Evans et al. 2011; Thomas et al. 2014). Platforms connect actors around an activity or need and enable them to collaborate, allocate and use resources more efficiently and co-create value for each other (see e.g. Venghaus and Stummer 2015; Holzmann et al. 2014). Widely known examples of platform companies include ride-sourcing platform Uber and lodging-brokerage platform AirBnB, both of which showcase how platforms characteristically blur the boundaries between consumers and producers and necessitate a rethinking of business models as well as regulations. It has been argued that platform thinking – moving from a linear to a networked view of value creation – is something that companies need to embrace in order to find new strategies and survive in the future (Choudary et al. 2016).

While the platform economy is indisputably progressing, it is unclear what opportunities and challenges the platform economy presents in the longer term. The current discussion around platforms revolves around the immediate growth opportunities and disruptions they will bring (see e.g. Choudary et al. 2016; Sampere 2016). Much of the discussion is anchored around information and communications technology (ICT) solutions and companies. Digitalisation and ICTs are indeed key enablers of the platform economy, but they capture only one, technology-oriented strand of the wider phenomenon. More recently there has been increasing concern about the societal consequences of shifting to the platform economy, such as anticipated negative consequences for work and employment (see e.g. Fidler 2016; O'Connor 2016). Traditional structures struggle to address emerging questions such as how the social welfare of workers can be organised or what it means to be managed by an algorithm. Our starting point in this report is to look at the platform economy as a phenomenon of interconnected technological, economic, and societal dimensions.

On the scholarly side the discussion around platforms originates from research on two-sided markets (Rochet and Tirole 2003) and has been steadily growing. The current discussion spans from, for example, the role of platforms in innovation ecosystems (Autio and Thomas 2013; Bosch-Sijtsema and Bosch 2015) to the different logics used in platform approaches (Eloranta and Turunen 2015). In addition, different streams of platform literature have been identified (e.g. Thomas et al. 2014). However, the different perceptions or expectations of platforms and the platform economy have not been systematically analysed.

The underlying motivation for this report is to make sense of and to structure the discussion around the platform economy by studying platform companies by means of two research questions:

- What characteristics of platform companies do different metaphors of an organisation reveal or highlight?
- How can these metaphoric interpretations be used to guide strategy-making in platform companies to grasp opportunities and to avoid threats?

In order to answer the research questions, we approach the concept of the platform economy using nine metaphors derived from organisational studies (Morgan 1997; Jackson 2003). The aim is to illustrate alternative perceptions about platform companies, structure the discussion around them, and to make sense of the opportunities and threats around the platform business. Based on the nine metaphors, we draft recommendations for action for companies' strategy work. We analyse platform companies both in general and using ride-sourcing platform Uber as a concrete example.

We argue that by exploring multiple views in strategy work, for example, by using metaphors, companies can design robust platform strategies that efficiently grasp the platform economy opportunities but also anticipate possible threats involved. The broader perspective provided by the metaphors supports the creation of fair and societally sustainable platforms that can help in solving wicked problems and grand challenges.

2. Research approach

Our research approach is based firstly on horizon scanning as a method for collecting data and building subject matter expertise on the platform economy and secondly on metaphors as a method to analyse multiple perceptions of platform companies.

2.1   Horizon scanning

Horizon scanning is 'the systematic outlook to detect early signs of potentially important developments' (Cuhls et al. 2015, 3; see also Miles and Saritas [2012] for a detailed analysis of the definition of horizon scanning). It aims to identify and make sense of relevant signals from the noise surrounding an emerging phenomenon. Horizon scanning is based on the work on weak signals by Ansoff (1975) in the seventies, although it became more widely used after the millennium (Schultz 2006; Ilmola and Kuusi 2013). It offers a set of tools and approaches for collecting signals of current or imminent changes and emerging issues (Könnölä et al. 2012).

Our data gathered through the horizon scanning of platform economy developments was obtained from scientific journals, news articles, blogs, social media, and personal communications. Taking into account the novelty of platform phenomena, it is clear that digital media and especially non-academic outlets are of central importance. Therefore we searched the web and twitter feeds for relevant signals of recent developments or opinions about the platform economy. The keywords used in initial searches included 'multi-sided markets', 'platform economy', 'platform ecosystem' and 'platform thinking'. Based on the results of the initial searches, interesting blogs, newsletters or people to follow were identified as potential sources of key signals. The scanning continued iteratively, screening through the identified sources and searching for more sources. It included searching for both positive and negative consequences and development directions of the platform economy, as well as related enablers, barriers, trends, and counter-trends. The results of the scanning were stored in a database and categorised in terms of the sector they focus on (e.g. mobility), the

main area of impact (e.g. regulation), the technologies mentioned (e.g. blockchain), and geographic focus.

Horizon scanning enabled us to systematically follow news about platform companies as well as societal and political reactions to their operation. The signals give an indication of, for example, what kinds of start-ups there are, how company value-creation has evolved or what kinds of new services companies provide and how these are received as markets expand. As we have conducted horizon scanning on the platform economy since autumn 2015, we have been able to follow the chain of events, the debate, and the different perspectives that have developed around Uber.

2.2   Metaphors

Metaphors are mappings across conceptual domains, meaning that they describe a concept in terms borrowed from another context (Lakoff 2009). For example, a file repository can be described as being 'in the cloud' or a collection of digital technologies and practices can be described as a 'platform'. Metaphors are not just an aspect of language, they also influence thoughts and actions, for example, influencing how a situation or problem is structured or described (Lakoff and Johnson 2008; Thibodeau and Boroditsky 2011). Metaphors are especially useful in thinking and shaping futures. As Inayatullah et al. (2016, 3) write in the introduction to a special issue of Futures: '[Metaphors] do not just describe reality but they constitute reality. They are foundational in disrupting the present, unlocking alternatives, and creating new futures.'

Metaphors are often derived from an understanding of a present or foreseeable future state. These metaphors are then challenged and replaced in order to create space for alternative views and empower different actions (see e.g. the summary of special issue contents in Inayatullah et al. 2016). Metaphors, and especially the changing of metaphors, offers a nuanced way to question current ways of thinking (Judge 2016). While our aim in this report is also to question the dominant and typically one-dimensional thinking about the platform economy and open up alternative trajectories, our use of metaphors is more instrumental. Instead of deriving the metaphors from the current discussion, we use an existing set of metaphors. This allows us to ensure broad coverage of the issue and multiple perspectives.

In order to structure the results from the horizon scanning and deconstruct narratives about platform companies, we use the metaphors for organisation: machine, organism, brain, flux and transformation, culture, political system, psychic prison, instrument of domination, and carnival (Morgan 1997; Jackson 2003; for applications see Koivisto et al. 2011 and Dufva and Dufva 2016). While these metaphors are originally meant to describe different perceptions of organisations from the management perspective, we argue that they are equally useful for understanding different perceptions of platform companies and their strategy design, as platforms are a means to organise actors around a common activity. Although we focus on platform companies, it should be noted that our analysis does not limit itself to internal organisation but extends to users and producers in the activity system.

The nine metaphors offer a comprehensive structure since they cover four common research approaches or paradigms in social theory: the functionalist, interpretive, emancipatory, and postmodern (a division from Jackson [2007] and Jackson and Keys [1984] based on Louis, Burrell and Morgan [1983] and Alvesson and Deetz [1996]). Paradigm, in its original sense, means the set of ideas, assumptions and beliefs that shape and guide the scientific activity of a research community (Kuhn 1970). Similar to metaphors, the four paradigms emphasise different aspects of platforms. The functionalist paradigm aims to demonstrate law-like relations between objects – the functionality, as the name suggests. The interpretive paradigm highlights the plurality of interpretations and the behaviour of people based on these interpretations. The emancipatory paradigm problematises this plurality and emphasises the power relations in society and ways to liberate and empower people. The

postmodern paradigm takes a step back and critiques the attempt to form grand narratives and assume rationality and direction.

3. Exploring the platform economy through the metaphors

In this section we introduce the nine metaphors that cover the four paradigms of social theory. We use these metaphors as lenses to explore platforms and their company strategies. Each metaphor serves as a viewpoint to design a company strategy in terms of grasping opportunities for platform-based business but also in terms of identifying and avoiding possible threats. After going through platform companies and their company strategies in general, we analyse Uber as a concrete example of an established platform company. The rationale for studying Uber is to illustrate the metaphors as well as to test how they can be operationalised.

3.1 Platform company strategies

Table 1 summarises, through the nine metaphors, the descriptions of a platform and the focus of its company strategy to grasp opportunities and avoid threats in the platform economy. The corresponding visual interpretations are illustrated in Figure 1.
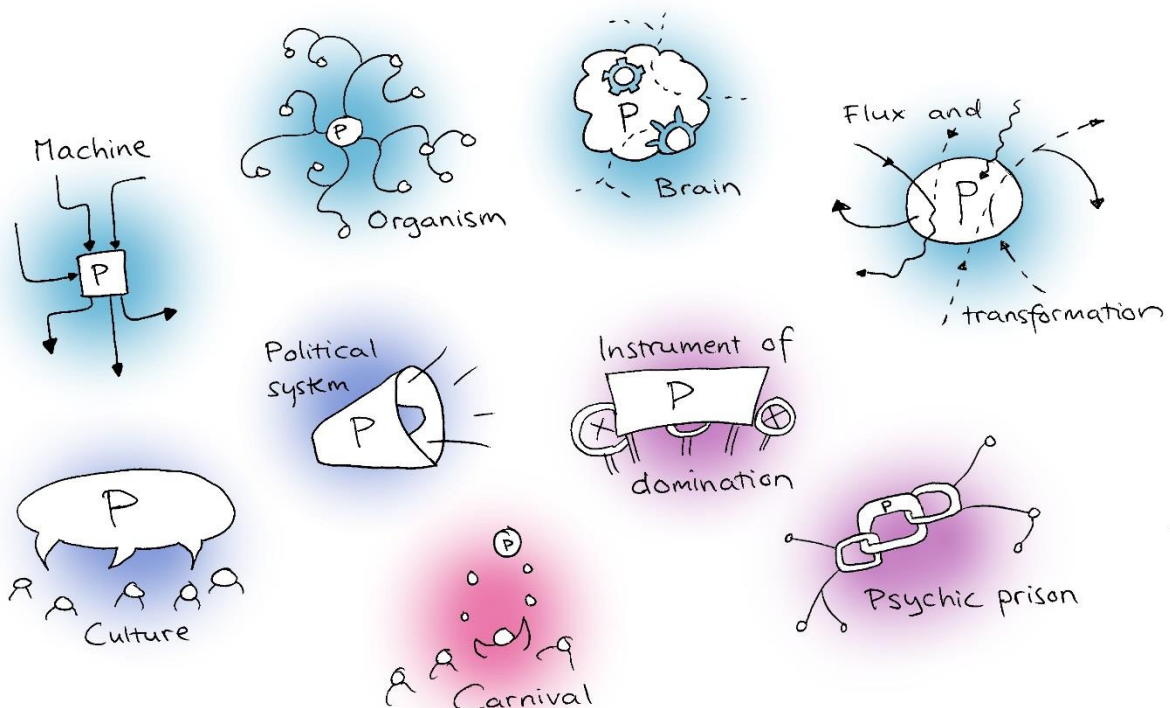

Figure 1. Visual interpretation of a platform (P) through the nine metaphors.

Table 1. Platform company strategies through nine metaphors.

Metaphor	Description of a platform	Focus in company strategy: grasping opportunities	Focus in company strategy: avoiding threats
Machine	Mechanism for transforming input into output	Create the technical solution, stable structures and rules, and advertise the functionality	Examine if too predetermined a structure threatens to limit growth opportunities
Organism	Network of actors serving a common purpose	Focus on gathering the network and letting it grow organically	Consider minimum basic rules to avoid reliance on 'laws of the jungle' or downright misuse
Brain	Central node or protocol for coordinating action	Create a standard and coordinate the development, guided by the accumulating data	Ensure that the platform and its functions remain transparent and understandable
Flux and transformation	System of information flows	Focus on creating the prerequisites for a platform to emerge and share data based on openness and trust, create value from data	Ensure safety and security so that sharing can take place in a trustful environment
Culture	Shared code of conduct based on an ideology	Strengthen a shared vision and articulate common values and goals	Assess if the culture is exclusive, and identify related risks
Political system	Complement or disruptor of institutional structures	Be aware of existing structures and choose a relationship to them	Anticipate potential conflicts and be prepared to adapt
Instrument of domination	Tool for control	Conquer the market, try to maximise value from being the intermediary	Ensure a value basis that is acceptable and that complies with the legal environment
Psychic prison	Mechanism for capturing users	Focus on making the platform addictive and hard to leave, keep and guard user generated data	Identify potential social and societal risks, and prepare a corporate responsibility strategy
Carnival	Creative disruptor deconstructing existing structures	Play and experiment, develop iteratively, adapt to new circumstances	Consider setting up a minimum set of rules and a realistic, responsible risk-taking strategy

The first four metaphors we consider are based on the functionalist paradigm, which offers a mechanical, rather unproblematic view of the platform economy. In the **machine** metaphor, platforms are depicted through the algorithmic functions they offer for transforming input into output. For example, Airbnb turns people's homes into hotels and Upwork connects employees and employers. The main focus is thus on the core transaction, and less focus is on the formation of a network.

The machine metaphor directs the attention in strategy making to the technical solution and to the definition of a rather rigid structure and set of rules for operation. The platform is described and marketed based on its core transaction and functionality. However, in order to ensure the development of the platform and capture new growth opportunities, the functionality should be rethought from time to time and adjusted or broadened according to the demand changes from the operational environment.

The metaphor of an **organism** describes a platform as a living ecosystem, i.e. a network of users, producers, etc. interacting with one another to achieve a common purpose. The actors in the network have different roles and exchange information. This view aligns well with common discussions around platforms claiming that the collection, analysing, and sharing of information among multiple actors globally as the result of rapidly progressing digitalization is the main driver of the platform economy (Watanabe et al., 2015, 2016; Yoo et al. 2012).

From the strategy perspective, the organism metaphor focuses on supporting the formation and growth of the network. Strategic choices aim to guide the development of the network, both on the supply and demand side, although a more organic development and formations of unexpected alliances are possible. The network is acknowledged to be partly self-organizing, which may lead the platform to develop in unforeseen directions. The setting of basic rules can alleviate reliance on 'laws of the jungle' or downright misuse.

The **brain** metaphor shifts the focus to the platform itself, which is perceived as a central node, algorithm, or protocol through which the activities are organised. It emphasises the role of data as the key asset in the formation and operation of a platform. The platform is not just a machine for transforming inputs into outputs, but also a coordinator of the network and the inputs and outputs. It has in-built judgement, creativity, and innovativeness, which allows it to adapt to the changes in the network and operational environment. The brain metaphor also takes the layered essence of platforms into account; in addition to the core transaction, there can be other multiple, important services provided by the platform.

In the brain metaphor, the more data there are, the better the platform can coordinate and provide services. Therefore, the focus in the strategy is on ensuring the accumulation of data and its optimal utilisation. The brain metaphor advises the creation of standards and APIs (application programming interfaces), through which the functionality of the platform is coordinated. In the development of the platform, it is essential to ensure that the core functionality and algorithms of the platform remain transparent and understandable. The platform should not become a black box to its users.

The **flux and transformation** metaphor focuses on creating the prerequisites for a platform to emerge and for data to flow freely in the platform. Whereas the brain metaphor assumes the central coordination, the flux and transformation metaphor emphasises openness and trust. The users of the platform have an active role in producing, transforming, curating and using the data in the platform. The network may be self-organising, even chaotic, and the core transaction is flexible. From the viewpoint of flux and transformation, an established platform can also assume novel functionality given out-of-ordinary circumstances.

In the flux and transformation metaphor, strategy focuses on enabling the sharing and transforming of data by providing a basic infrastructure. Guidance is minimal and the users have a lot of freedom in defining what the purpose of the platform is and how its functionality evolves. The openness and sharing also pose risks related to privacy and the misuse of

data. Therefore it is essential to ensure safety and security in the platform and foster a trustful environment.

In comparison to the functionalist paradigm that does not question the purpose of a platform, the interpretive paradigm focuses on the intentions, meanings and interpretations that people associate with or give to platforms. In the **culture** metaphor, a platform represents the shared code of conduct, the joint agreement between actors. The focus is thus on the community and its values around a platform. The sharing economy is a good example of this; platforms are seen as both the tools to share unused resources and as embodying the rules for sharing.

The culture metaphor guides the strategic focus on fostering and strengthening a shared vision and ideology, and articulating common values and ways of operating. The informal structures are highlighted and reflected against the formal, i.e. the technological structures and standards. In this view, special attention needs to be paid to the inclusiveness of the platform: who is included and who is left out, and what consequences this might have.

In the **political system** metaphor, the emphasis is on the institutional structures that the platforms create. In comparison to the culture metaphor, it broadens the view from inside the platform to its surroundings. A platform as a political system may complement, but also disrupt existing institutions. For example, Twitter and other social media platforms have changed the way we produce, curate, distribute and consume media (Newman 2009).

A successful strategy in the political system metaphor is one that is aware of the existing institutions and makes an explicit choice about the relationship between these and the platform. The consequences of the relationship with existing systems needs to be thought through and potential reactions anticipated.

The emancipatory paradigm highlights the power relations among platforms as well as between platforms and non-platform actors. The **instrument of domination** metaphor unmasks the use of power by platforms. Platforms can evoke conflicts with incumbent actors and governments, causing power struggles and resistance. For example, aggregator platforms, which mediate the transactions between companies and customers in a specific sector, aim to create a monopoly and dominate in global markets, leaving the companies and customers with little or no choice but to cooperate and join the platform. Amazon is one platform company that can be seen to apply this logic (see e.g. Streitfeld 2014).

The instrument of domination metaphor seeks a winner-takes-all dynamic and thus directs attention to ensuring a dominant position. Measures to achieve this include, for example, aggressive pricing to drive away competition and using the dominant position to maximise the value captured from acting as an intermediary. The platform company needs to be careful to have an acceptable value basis and comply with legislation.

Compared to the instrument of domination metaphor, the **psychic prison** metaphor takes a more platform-internal view of power imbalances, and concentrates on how users become 'addicted' to the platform. Since the platform offers multiple services and benefits such as ease-of-use from tight integration, the user feels compelled to use the platform. Switching to another platform seems too cumbersome. The psychic prison metaphor thus highlights key questions in the platform economy, such as how feasible it is to transfer data from one platform to another and what kinds of lock-ins might be created by the network effects.

The psychic prison focuses strategic actions on 'capturing' the users by making the platform addictive and hard to leave. For example, data created by the users is not made freely available in order to make transitioning to another platform more difficult. At the same time, the platform needs to keep the users satisfied enough that they do not have an incentive to 'break free'. The perceived value of the platform services should outweigh the compromises made by the users with regards to, for example, data ownership or privacy. Preparing a

thorough and transparent corporate social responsibility strategy supports anticipatory and proactive measures to mitigate social and societal risks, and helps in communicating the intentions and motivations of the platform.

In the postmodern paradigm the operational environment shaped by platforms is viewed through the **carnival** metaphor and the emphasis is on creative destruction. In this view platforms are questioning conventional ways of doing things, disrupting current systems, and raising and challenging taken-for-granted assumptions. Platforms are depicted as the 'booths and joyrides' in a carnival – something fundamentally different in terms of purpose and logic compared to conventional forms of service.

The postmodern metaphor of carnival guides the strategy maker to challenge everything and just play and experiment. Failure is allowed and celebrated. It is assumed that there are no ready solutions, and the strategy is based on iterative and innovative development. The first definition of the core transaction of the platform might not be the one that appeals to users, and the needs and environment changes. Thus continuous experimentation is crucial. However, in order to avoid completely losing focus, there should be some boundaries as to what is attempted. Thus the carnival metaphor encourages both experimentation and a realistic, responsible risk-taking strategy.

3.2   The case of Uber

In order to illustrate the metaphors as well as to test how they can be operationalised, we apply them to analysing ride-sourcing platform Uber. The Uber mobile app for smartphones by Uber Technologies Inc. is one of the best known examples from the platform economy. The Uber app connects drivers and those who need a ride, and cashless payments are handled via Uber as automatically charged from the user's credit card at the end of a ride. The company was founded in 2009 and has since then expanded its services to business travel and deliveries. Starting in San Francisco in 2009, the Uber app and services had spread to over 500 cities worldwide by 2016 (Watanabe et al., 2016; Uber Technologies Inc., 2017).

Although providing a novel type of ride-sourcing service, attempts to capture Uber's impacts and success often rely on comparisons to previously established transport services. Indeed, Uber is described as 'the world's largest taxi company that owns no vehicles' (Goodwin, 2015). While this characterisation brings to front ride-sourcing as an alternative to traditional mobility choices, such as the taxi, and even gives a subtle hint of wider underlying phenomena of a shift from ownership to a sharing economy, many essential qualities of Uber go unnoticed. Our assumption is that using the nine metaphors we can go deeper in understanding Uber as a phenomenon: its emergence, operation, justification and impacts, covering both positive and negative implications. Table 2 summarises our interpretation of Uber as a reflection of each of the nine metaphors and derives focus points for company strategy design in order to grasp the opportunities and avoid threats most relevant to each metaphor.

Table 2. Nine metaphors for Uber.

Metaphor	Interpretation of Uber	Focus in company strategy: grasping opportunities	Focus in company strategy: avoiding threats
Machine	App to connect the supply and demand for rides	Create technical software solution and make widely available for mobile devices	Ensure software availability for different devices
Organism	Open network of drivers and passengers connected by the app	Gather a balanced clientele of drivers and passengers	Ensure safety by e.g. a user review and reputation system
Brain	Algorithmic, data-driven management of rides	Examining growth opportunities and developing the service offering continuously through data analysis	Identify vulnerabilities in existing operations
Flux and transformation	System of information flows between drivers, users and platform	Enabling both users and the platform to create value from data, e.g. reputation scores and services based on metadata	Address access, confidentiality, and use of data
Culture	A culture combining aspirations for flexible mobility and employment	Service design to build a shared code of conduct between drivers and passengers	Design a preventive and corrective strategy for violations
Political system	Disruptor of existing mobility patterns, trades, legislation and other structures	Align with or attempt reshaping of existing structures such as legislation and taxi industry	Seek ways to collaborate and solve conflicts together with the incumbents
Instrument of domination	Tool for controlling drivers and constructing a leading position in ride-sourcing markets	Establishing a dominant intermediary role in ride-sourcing	Ensure compliance with legal and regulatory frameworks
Psychic prison	Drivers and passengers conform and cling on to the service model even if compromising employment conditions, safety, environmental values, etc.	Focus on persuading clientele to commit and grow, keep and utilise their data	Exercise social and societal responsibility in corporate strategy
Carnival	Experimental forerunner with an innovative mobility alternative, a disruption with societal benefits but also notable threats	Experiment and innovate in new markets and with a growing service offering	Keep an eye on competitors and newcomers

The metaphors of the functionalist paradigm drill into the Uber app and the algorithm that brings together car-owning drivers and passengers needing a ride. The **machine** metaphor looks especially into the technical solution that connects supply and demand for rides, including the surge pricing and other financial business aspects. The focus in the strategy is thus in creating an easy to use and widely available app and ensuring it works across different devices.

The **organism** metaphor focuses on the user network created using this connection, i.e. a network where newcomers are welcome and where a reasonable balance of supply and demand is essential. Strategic focus is on fostering the network of drivers and passengers, for example, by ensuring that joining the network of drivers is easy and that there are measures, such as a reputation system in place to ensure safety in the network.

The algorithmic nuances and the data-driven nature of the app are in turn highlighted in the **brain** metaphor, which also helps to understand how important are the efficiency in ride matchmaking and the specialisation in different types of services. The metaphor depicts Uber as a big brain coordinating rides and optimising efficiency based on data and algorithms (see e.g. Helft 2016). The focus on strategy is thus on developing the algorithms further, finding new opportunities through analysing data and identifying vulnerabilities in existing operations.

The fourth metaphor in the functionalist paradigm, **flux and transformation**, concentrates on the information flows between drivers and passengers and how the services make use of these information flows. The users gain information on alternative ride options, and the platform can utilise the metadata collected to create new business opportunities. For example, the platform can provide earning opportunities and more flexible mobility by utilising data about popular routes and mobility patterns. Compared to the brain metaphor, the strategic focus is not just on how the platform can utilise the data, but also on enabling users to create benefits from the information. Since data is of central importance, its access, confidentiality and use should be clearly defined.

The interpretive paradigm metaphors look into the stakeholder interactions and operating environment of Uber and what prerequisites, ongoing processes and impacts can be identified. The **culture** metaphor focuses on the visions and aspirations related to mobility and employment (see e.g. 'Our Story' on the Uber webpages or Wong [2017]). Uber provides a service for passengers to get from place to place cheaply without owning a car. For the drivers, Uber provides a flexible source of income. Uber as a platform combines these complementary ideologies into one culture of flexibility and speed. The strategic focus is on service design for fostering and enacting the culture of flexibility through defining a shared code of conduct between drivers and passengers. Threats can be mitigated by anticipating and responding to violations and conflicts threatening the creation of a shared culture.

The **political system** metaphor aims to cover the wider system and its existing structures, which may be under pressure to address issues and conflicts raised by Uber's activities. For example, Uber has had a major impact on the taxi service industry and mobility patterns (Isaac 2014; Enoch 2015). As a response, legislative structures have been adjusted either in support of or in resistance against Uber, while Uber itself has been active in lobbying (Baiyere and Salmela 2015; Solomon 2017). The strategic focus is thus on shaping the legislative system and, on the other hand, in seeking ways to collaborate and solve conflicts with existing players in the field (cf. Watanabe et al. 2017).

The metaphors under the emancipatory paradigm portray some of the threats and negative sides of Uber. The **instrument of domination** metaphor depicts Uber as a tool for controlling drivers and constructing a leading position in ride-sourcing markets (see e.g. Manjoo 2017; Rosenblatt 2016). It helps to articulate the concerns over drivers being exploited by high commissions and the lack of employment security. The strategic focus is on

establishing and maintaining a dominant position as an intermediary for ride-sourcing. Threats are mitigated by ensuring compliance with legal and regulatory frameworks.

The **psychic prison** metaphor in turn identifies potentially addictive patterns that may lead to drivers and passengers clinging to the platform – even when employment conditions, safety, environmental ambitions, etc. are compromised – because of having grown familiar with and dependent on the ride-sourcing service (see e.g. Scheiber 2017). The strategic focus is on persuading both drivers and passengers to keep using the service, while at the same time utilising the data gathered from the transactions. A proactive social responsibility strategy is essential, since the public backlash can emerge rapidly, as demonstrated by the '#deleteuber' campaign and other protests against Uber (Fung, 2017).

Carnival, the metaphor of the postmodern paradigm, presents Uber as the innovator, experimenter, and forerunner that has brought to the market a novel mobility alternative. International growth and popularity have initiated a disruption, bringing about societal benefits as well as notable threats, with similar competing services having followed the example. The strategic focus is thus on continuing to experiment, to develop new services, and to proactively respond to threats posed by competitors and newcomers.

4. Discussion and concluding remarks

The nine metaphors help structure and clarify the discussions around platforms by illustrating different perceptions of platform companies and by providing focus points for their company strategies. Since the platform economy is becoming increasingly popular, it is important to structure the discussion and broaden the viewpoints in order to capture as wide a range as possible as well as the preferable futures. The metaphors help to identify alternative or complementary perceptions of platforms and how different viewpoints influence the direction and focus of strategy-making.

4.1 Metaphors supporting strategy-making in a platform company

As the platform economy is an emerging phenomenon, it is challenging for companies to 'get on-board' and identify the opportunities for transforming the company strategy towards a platform-based business model. Metaphors are one way to support this strategy process, especially in testing and assessing platform-centric business plans.

Each of the metaphors offers a partial view as to what platforms are and what strategy choices exist to promote them. Metaphors could be thought of as lenses for strategy making. They help to identify and grasp the future opportunities of the platform economy as well as to anticipate possible threats that should be addressed by the company strategy. However, using the metaphors is not always simple and some metaphors are more applicable and relevant than others. Still, we argue that the value does not come from individual metaphors only, but from the overall picture they present.

The metaphors help to broaden the considerations from technological aspects towards the societal aspects as well as to anticipate key challenges that need to be solved, such as questions of ownership, privacy, and worker rights. A winning strategy might be achieved in the right balance between building a platform top-down and bottom-up. Developing a platform is thus not just about building the technological solution or gathering a critical mass of users, but in aligning the platform to the surrounding societal environment and its needs.

4.2   Learning points from the case of Uber

The Uber case study tested how metaphors can be used as a tool to reveal different aspects of the ride-sourcing platform Uber. In general, the metaphors captured the success points of Uber arising from a well-functioning app and a large enough network, but they highlighted also the clashes with incumbent industries and existing legislative frameworks. As Uber is a well-established platform, our metaphor exercise served mainly as an assessment of the existing standing and strategy of the company. For an emerging platform company, the metaphor analysis would be more forward-looking and exploratory.

The metaphors of machine, flux and transformation, culture, instrument of domination, and carnival bring together key aspects of Uber as a pioneering and internationally successful platform. Machine describes the core: the mobile device app connecting the private supply and demand for rides, while the flux and transformation highlights the importance of data for both the platform and users: sharing data benefits both the platform and the user through improved service and reputation systems. Culture explains the way Uber captures different aspirations and combines them into one culture, emphasising flexibility and ease of both employment and mobility. The instrument of domination shifts the focus to how Uber has been able to establish and use its dominant position as a ride-sourcing platform. Finally, carnival captures the essence of Uber as a disruptive innovation and phenomenon.

4.3   Limitations and further research

The metaphors are based on four paradigms from the social sciences that have been used in organisational research. They thus offer a rather comprehensive look at the organisational aspects of a platform company, providing that the scope covers not only the internal organisation of the platform company but also the users and producers in the activity system. However, the metaphors are not comprehensive in the sense that they would capture all aspects of the platform economy. For example, the varying dynamics of value creation, social and societal benefits, and needs and innovativeness are not fully captured. Nevertheless, as argued previously, the metaphors do provide a broader than usual view of platform companies and are useful especially when it comes to analysing the organisation of transactions between users, producers, and the platform.

It should also be noted that the coverage and usefulness of the metaphors is highly dependent on the interpreter. Metaphors by their very nature are ambiguous, and thus interpretations can vary. This a potential bias should be taken into account when using the metaphors.

In order to validate whether the metaphors are useful and cover alternative views sufficiently, more experimentation is needed by practitioners from different backgrounds. This would also enhance the description of each metaphor. Further experiments could be limited in their scope, for example, focusing on a specific sector. Of special interest are the tensions between different views and how the metaphors can make these tensions more explicit. Interpreting a given topic through different metaphors may help to understand linkages and tensions, for example, between stakeholders or levels of analysis. Metaphors can be used to study and learn from successful and failed platform companies, and they provide a powerful tool to ideate and refine new platform opportunities. We thus offer the description of platform economy companies through different metaphors as something to comment on and build upon. In general, we believe it will prove beneficial in helping to broaden understanding of the emerging phenomenon of the platform economy.

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