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Is Facebook A Ride-Sharing Platform? Exploration Through Affordance Theory

MIJALCHE SANTA & ANITA CIUNOVA SHULESKA

Abstract Peer-to-peer ride-sharing is one of the most complex archetypes of the sharing economy. As a result, dedicated digital platforms, designed specifically to handle this complexity, have emerged. However, there are practices where Facebook is used to organise the ride-sharing, although it lacks features that can handle the complexity of ride-sharing. In this research-in-progress paper we demonstrate the importance for researching these practices. We justify the appropriateness for using the Affordance - actualisation lens for analysing the practices. We present the preliminary results from the first case study research.

Keywords: • Facebook • Sharing economy • Ride-sharing • Affordance theory • Platform •
1 Introduction

Peer-to-peer ride-sharing is one of the most complex archetypes of the sharing economy. This is because of the requirements for “highly coordinated arrangement of resources in a tightly defined timeframe” and “ephemeral and interactive nature of the exchange” (Andersson et al., 2013, p. 3). The provider and consumer need to agree on pick-up and drop-off points, waiting time, music playing, smoking policy, compensation, etc. (Teodorović and Orco, 2008). As a result, dedicated digital platforms, designed specifically to handle this complexity, have emerged. Most prominent examples being Uber, Lyft, Blablacar and others. They are identified as the face of the ride-sharing economy. However, there are ride-sharing practices that are done through non-dedicated digital platforms, like the peer-to-peer Facebook group “Arcade City Austin / Request A Ride” (Tepper, 2016). This is interesting because Facebook significantly lacks the technical features necessary to meet the challenges of ride-sharing complexity, but again there are more than 38000 members in the “Arcade City Austin / Request A Ride” group. Practices of using Facebook for ride-sharing are also present in other countries (Andersson et al., 2013), however it seems that research of these type of ride-sharing practices is somehow ‘off our patch’. Thus, we have yet to seriously explore how ride-sharing is organised through non-dedicated platforms and what are the socio-technological mechanisms that enable it?

Dedicated peer-to-peer ride sharing platforms, through their intermediary role and features provide mechanisms that support the sharing between the peers (Puschmann and Alt, 2016). Their purpose it to provide sufficient pool of participating peers, minimise the hazards and increase the trustworthiness (Täuscher and Kietzmann, 2017; Weber, 2014). The dedicated platforms use different models (Constantiou et al., 2017) but they all impact the strategy, processes and systems of the sharing economy (Puschmann and Alt, 2016). Therefore, dedicated platforms are the lens we use to explore the sharing economy. On the other hand, dedicated platforms for ride-sharing mainly operate in large cities and in certain countries. For example, Uber primarily operates in big cities in 80 countries (Uber.com, 2018). But sharing is distinct, ancient, fundamental consumer behaviour (Belk, 2010) and analysing it through dedicated platforms’ lens may limit the insight we get about the ride-sharing practices.
In the literature it has been identified that in certain countries social networking platforms, like Facebook, are used for organising ride-sharing (Andersson et al., 2013), but they have not been analysed. Analysing peers’ practices of ride-sharing organised through Facebook can provide an additional insight in the sharing economy. Affordance theory provides an appropriate lens because it claims that “actor perceives an object in the environment in terms how it can be used and not as a set of characteristics or features that are inherent to the object and independent of the actor” (Gibson, 1977, 1979 in Volkoff and Strong, 2017). Thus, the focus is to downplay the characteristics or features of the object (in our case dedicated ride-sharing platform) and to focus what the actor could do with the object (in our case general purpose social media platform i.e. Facebook) (Bygstad et al., 2015). In sharing economy context this will mean focusing not on the platforms’ features, but on the actions of the actors and their interpretation of available technology through their goals for action (Leonardi, 2011). To date there is no research about affordances in sharing economy. Thus, using affordance theory as a lens can provide novel insight on how the sharing economy is organised.

The purpose of this short paper is to explore how Facebook is used to organise inter-city ride-sharing in a developing country. We present how affordance theory can be used as a lens to achieve this and its appropriateness for theorising the empirical findings by paying attention to “socio-technical” dimension of affordances (Robey et al., 2013). To demonstrate this, we present our initial research outcomes. The paper is structured as follows. First, we present the theoretical context of sharing economy and platforms. This is followed, by justification of affordance theory usage for this research. Then, we explicate the research methodology and the empirical context where the research is performed. Finally, we present our preliminary results and the avenues for further research.

2 Sharing economy and digital platforms

Interest in what is and how the sharing economy is organised and realised is rapidly growing among practitioners and academics (Barnes and Mattsson, 2016; Schor and Fitzmaurice, 2015). This interest is fuelled by the impact and the heterogeneity of sharing economy. The sharing economy, although emerging field, impacts diverse aspects such as the practice on the economy (Zervas et al.,
2017), pollution (Möhlmann, 2015), labour and employment (Codagnone and Martens, 2016) etc. Furthermore, the sharing economy presents its self in different forms, levels, approaches due to the heterogeneity in terms of subject of exchange (Schor and Fitzmaurice, 2015), whether they are profit-or not-for profit oriented (Schor and Fitzmaurice, 2015), variety of sectors involved (Wosskow, 2014), business models (Cohen and Kietzmann, 2014; Constantiou et al., 2017) and type of platforms used (Andersson et al., 2013).

Andersson and his colleagues (2013) distinguished four archetypes of peer-to-peer sharing platforms based on object of sharing, timing and meeting requirements: peer-to-peer file sharing, peer-to-peer trading, peer-to-peer-goods sharing, and peer-to-peer service sharing platforms. According to them the peer-to-peer service sharing is more complex than the others due to the need of “highly coordinated arrangement of resources in a tightly defined timeframe” and “ephemeral and interactive nature of the exchange” (Andersson et al., 2013, p. 3). Furthermore, there is a need the peer providers and consumers to agree on pick-up and drop-off points, waiting time, music playing, smoking policy, compensation, etc. (Teodorović and Orco, 2008). Thus, a need for specialised peer-to-peer ride-sharing platform was created. The sharing economy start-ups emerged to meet these challenges and provided digital platform and applications to enable the ride-sharing (Cusumano, 2015). They operate using different business models.

Cohen and Kietzmann (2014) analysed three shared mobility business models: carsharing, bikesharing and ridesharing. In this paper we focus on ridesharing. Ridesharing consists of carpooling, flexible carpooling, vanpooling and peer-to-peer ridesharing (Chan and Shaheen, 2012). Although, historically, all these models have been present for a long time, it is the development of the technologies that fuelled the massiveness and globalisation of the commercial peer-to-peer ridesharing model. The result is large number of intermediaries that own specialised/dedicated digital platform and provide services that facilitate the ridesharing like Uber, Lyft, Blablacar and other. These specialised/dedicated platforms are in the focus of academic research on the sharing economy. However, peer-to-peer ridesharing also exists outside these dedicated platforms. For example, Andersson and his colleagues (2013) identified Skjutsgruppen, a public Facebook group existing from 2007 with more than 50000 members that supports the organisation of peer-to-peer ridesharing in Sweden. In our country
we have also identified more than ten public Facebook groups that facilitate the organisation of inter-city ride sharing. As identified by Andersson and his colleagues (2013) Facebook does not provide features that will enable ridesharing and meet the challenges of peer-to-peer ride sharing complexities. Thus, the question is how is this possible? We try to answer this question through the affordance theory. In the next section we provide the justification for using affordance theory as a lens.

3 Affordances

Affordance theory provides a fresh look at the familiar topic of IS adoption and adaptation (Volkoff and Strong, 2017). The main element in the affordance theory is the affordance. An affordance is the potential for behaviours associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artefact) and a goal-oriented actor or actors (Bygstad et al., 2015). Affordances have several characteristics: first, they are relational; they are relations between the abilities of the human and features of the object. Second, they are possibilities for action. Affordances exist even if they are not realised or actualised. Third, affordances are not only enabling, but also constraining. Forth, the potential behaviour behaviours of an actor are goal directed (Strong et al., 2014). However, the realisation of the affordances depends on the presence of appropriate enabling, stimulating, and realising conditions (Volkoff and Strong, 2013). It is the particular concatenation of different affordance strands/mechanisms is what leads to the observed phenomenon (Gambetta, 1998 through Volkoff and Strong, 2013). Furthermore, the affordances can be multilevel. Leonardi (2013) differentiates between individual, shared, and collective affordances. Thus, it is necessary to have more contextual approach in the research. To achieve this, we will look on the empirical context through the usage of affordance - actualisation (AA) lens.

Affordance - actualisation (AA) lens highlights the importance of theorising both affordances and the actualisation process, and the context of both (Strong et al., 2014). Actualisation process has been defined as “the actions taken by actors as they take advantage of one or more affordances through their use of the technology to achieve immediate concrete outcomes in support of organisational goals” (Strong et al., 2014). AA lens provides a level of granularity that is specific with respect to the technology while also providing some generality beyond
individual case examples (Volkoff and Strong, 2013). Thus, it enables IS researchers to build theoretically sound mid-range theories by focusing on explaining, at a sufficiently detailed level, how and why outcomes occur (Burton-Jones and Volkoff, 2017; Volkoff and Strong, 2017). Affordance theory as a lens have been successfully used for research of IS adoption, adaptation and organisational change (Volkoff and Strong, 2017) and generation of new theories (Leonardi, 2011).

Using the affordances to think about the artefact/user relationship can be useful for generating not only new socio-technical theories (Volkoff and Strong, 2017), but also to create a contextualised theory for effective use (Burton-Jones and Volkoff, 2017). According to Burton-Jones and Volkoff (2017) effective use refers to that type of use that helps users attain desired goals. The effective use can be decomposed by identifying the “immediate concrete outcome”, a specific expected outcome from actualisation useful for achieving the organisational goals (Strong et al., 2014). This enables us to identify the affordance network i.e. a linked set of more immediate concrete outcomes (Burton-Jones and Volkoff, 2017). To contextualise the theory means to “discover the specific affordance network and specific actualisation most relevant in that setting” (Burton-Jones and Volkoff, 2017). We use this approach to develop a context-specific theory about organising ride sharing through Facebook in developing country. How we performed this is presented in the next section.

4 Methods and data

To explore Facebook as non-dedicated ride sharing platform, we will use case study research. The distinctive need for the case study comes from the need to understand complex phenomena and to retain the holistic and meaningful characteristics of this phenomena (Yin, 2009, p. 4). More specifically, the case study has a distinctive advantage when questions of why or how are asked for contemporary set of events over which the investigator has little or no control (Yin, 2009, p. 13). As data collection techniques within the case study interviews and observation techniques were used.

First, observation was performed to get insight into the way of operation of Facebook as a ride-sharing platform. Facebook search engine was used to find a pool of potential Facebook groups for analysis. We limited the search results to
Groups only, excluding the pages or people using the search phrase “ridesharing Skopje” (in local language). We identified 10 groups and further examined the information sections of these groups. Based on the information about the number of group members, we selected and focus our attention on two of them i.e. (Facebook group: Veles-Skopje-Veles and Facebook group: Bitola-Skopje-Bitola). Then, we requested to become members of these groups. As group members we have access to all the posts, therefore, consent to analyse the posts from administrator or group users was not required given that all the posts are public and visible to all group members. We analysed the interactions on the Wall section (where group members post messages and information) in the period of February to December 2018. Posts were analysed in a way that the content was categorized according to its source (i.e. who initiated the post - driver versus passenger). Also, content was analysed for distinct themes and concepts.

Second, in order to analyse the process of communication after the posts have been published on Facebook groups, we conducted semi-structured interviews with 4 respondents. We had a list of predetermined questions that leaded the interview, nonetheless, based on the answers of the interviewees additional questions were asked during the interview process. Through in-depth interviews we aimed to understand the experience of the individuals and the meaning they make from using Facebook as a platform for organising ride sharing (Seidman, 2006). Interviews although identified as a separate research category are typically part of other methodologies, such as case studies (Palvia et al., 2003). The four respondents were users of the analysed Facebook’s groups for ridesharing. One has participated only in the role of car driver, two only in the role of passengers and one had a dual role of trip organiser and passenger. One individual is employed and three were students. The interviews were performed within the premises of our Faculty and both of the researchers were present on each interview. Interviews were not voice recorded because the interviewees were reluctant to participate in tape recorded face-to-face interviews. Thus, one of the researchers took extensive notes during each interview. Before starting the interview, the researchers introduced themselves, explained the purpose of the interview, stressing the confidentiality issue, options to withdraw, and explained the use and scope of the results. Preliminary questions were based on previously designed interview guide focused on asking participants about their perceptions and experiences with ridesharing. This interview guide allowed the researcher freedom with follow-up questions. All the preliminary questions were divided in
five groups: what, where, how, why and other questions. Each interview lasted approximately 90 minutes.

As a result of the Facebook groups Wall post analysis, three primary themes emerged: Theme1: Making ridesharing offer by the drivers, Theme 2: Making car seat request by the passengers and Theme 3: Other information (shared by both drivers and passengers). From the analysis of all posts that belong to Theme 1, we concluded that the intent of the posts is dominantly information giving with differences in type of information provided. For example, users may express an offer providing minimum information about the destination and time of departure such as “Free place to City X around 10:00 (Friday)” or additional information (specific destination point and pick-up location, phone number and name of the driver) such as “Free seat to city X Place Y pick-up from location Z between 13:00 and 13.15 (Friday) [phone number] [driver name]. The posts within the second theme “Making car request” are generally in form of questions in which limited information are given (destination point and departure time) such as “For city X somebody going now?” or in form of statements where information about the phone number of the passenger and/or passenger name are provided such as “I need 2 seats to Place Y after 14:00 [phone number] [passenger name]” or about the exact desired destination/drop-off point such as “I need a seat to City X tomorrow [date] Departure at [time] from Place Z, Destination: Suburb A spot B [phone number] [driver name]). The third theme refers to other traveling route information shared by both drivers and passengers such as “Be careful, rockfalls on the road” or “Radar control at spot X”.

Since comments are rare to the published posts, in order to reveal the whole process of communication we conducted interviews with 4 respondents.

For each interview the notes were read and through coding we aimed to identify a pattern that could be used as a base for theorizing (Charmaz, 2006).

5 Preliminary results

The desired goal of the Facebook group’s participants is “to arrive at point B at time X”. To achieve this the participants, use an affordance network consisting of affordances resulting from the relations between Facebook, mobile phones and the participants as goal-oriented actors. Each identified affordance is named
as a gerund associated with the actions that would be taken to actualise that affordance (Strong et al., 2014). In Table 1 we present the affordances and the immediate concrete outcomes.

**Table 1: Affordances and Immediate Concrete Outcome.**

<table>
<thead>
<tr>
<th>Affordance</th>
<th>Immediate concrete outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making car offer/car request for ride-sharing</td>
<td>Need for ride-sharing published. Relevant information presented.</td>
</tr>
<tr>
<td>Evaluating peer that made offer/request for ride sharing</td>
<td>The person behind the offer/request identified.</td>
</tr>
<tr>
<td>Bidding on an offer/request for ride-sharing</td>
<td>Relevant information presented.</td>
</tr>
<tr>
<td>Matching values of variables between offer/request and a bid.</td>
<td>The best available ride-sharing combination determined. Achieved agreement between peers.</td>
</tr>
<tr>
<td>Arranging pick-up place</td>
<td>Determined point on ride-sharing path.</td>
</tr>
<tr>
<td></td>
<td>Determined ride-sharing path.</td>
</tr>
</tbody>
</table>

The elements that gave rise to these affordances can be identified through the Facebook features (software object), mobile phones characteristics (hardware object) and characteristics of the participants (actors). They are presented in Table 2.

**Table 2: Elements giving rise to affordances**

<table>
<thead>
<tr>
<th>Facebook features</th>
<th>Mobile phones characteristics</th>
<th>Characteristics of the participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Publish posts in a group</td>
<td>- smart telephone able to browse internet or install apps</td>
<td>- Individuals have the skills to use facebook on mobile phones</td>
</tr>
<tr>
<td>- Send and receive messages through messenger</td>
<td>- Ability to access to wireless internet</td>
<td>- Individuals know the geographical area from/to where they travel</td>
</tr>
<tr>
<td>- Add Photos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The links among the affordances and outcomes by explicating the goal-directed actions of the participants are presented below. This is the base for creating the affordances network and identifying the emerging dimensions of effective use.
The starting point for using Facebook as a platform for organising ride-sharing is publishing a post in the group. From the posts analysis we concluded that the posts at minimum contain information about the destination place and departure time. However, there are also more informative posts.

From the interviews we identified that when a phone number is provided, the communication continues over telephone, otherwise the communication is done through Facebook messenger. One of the interviewees identified that before engaging in the bidding process it visits the Facebook profile of the person who made the ridesharing offer/request and sees the pictures to identify who is making the offer/request. “You can see from the pictures what kind of a person it is, normal or…” female respondent. The other interviewees do not do this. Through Facebook messenger or telephone, the peers bid for the car offer/request. This is usually done fast, and additional information is provided about the pick-up place. This is where the usage of Facebook, as a platform for organising ride-sharing, stops.

By reflecting of what we observe in the Facebook groups and interview information we preliminary found that key dimensions for effective use of affordances are sufficient, trust and multiple exit points. Sufficient means that the information provided are adequate in quality and quantity for the actors’ needs. The participant can have different extend to which they provide information in the post for car offer/car request. Furthermore, Facebook post features are not constraining the number of words or type of information you add, but again participants publish information that is sufficient for the other participants to make a decision to bid or not to bid for the ride-sharing. Trust is the strong believe in the reliability of the group. We could see a community trust that what is published in the posts or shared through the messenger will be realised. During the interview’s interviewees had hard time to identify when something which was agreed was not delivered. Finally, multiple exit points mean that you can leave Facebook at different points and continue the organisation of the ride-sharing through mobile conversations. For example, first exit point could be if the post contains the mobile phone, the second is if you’re not satisfied with the profile of the person behind the offer/request and third when the mobile phone’s number is exchanged through messenger.
What we identified that is not done through Facebook, at this stage of analysis, is: i) arranging the price for the trip. In none of the post there is information about the price. The price is socially constructed, no one knows when, but “everybody knows it so you do not need to share it”. ii) Facebook is not involved in the transfer of money. This is done on site, in cash at the drop-off point. iii) There is no review of the drivers and the passengers. The features like “Like” are only sporadically used and mainly to promote the post, but not to review the driver or passengers after the ride-sharing. Some incidents are discussed in the group, but this is also very sporadically.

6 Discussion

This research-in-progress paper explores the practice of ride-sharing that is realised through Facebook although Facebook is general social media platform lacking features for organising ride-sharing. We think that this is a non-usual case and as such it can help us to better understand the mechanisms behind the sharing economy where there are non-dedicated platforms. On a theoretical aspect, we make contribution by demonstrating the usability of the affordance theory for developing context-based theories of effective use (Burton-Jones and Volkoff, 2017) and the benefits of using affordance-actualisation lens (Strong et al., 2014). Finally, we demonstrate that the affordance theory can be also used in a community setting with no dedicated platform.

To improve and validate the results we will continue the interviews and increase the number of interviewees. We will extend to nethnographic research and will become participants in the ride-sharing. During the preliminary research we have identified that one of the groups is most active and we will focus our research on it.

References


