Does Sharing Economy Have a Moral Capital? Comparing Semantic Networks in Social Media and News Media

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Abstract
Sharing Economy organizations appear to enjoy positive moral capital associated with supporting local entrepreneurs, the economy, and the environment. However, they operate in a regulatory limbo allowing them to engage in business practices that would not be permitted in other sectors. Hence a question remains: Does Sharing Economy (SE) have a moral capital? To explore whether the sharing economy has a moral capital, we explored the discussions around Uber after a number of scandals in 2017 in news media and on Twitter. Our findings show that news media play a critical role in developing and maintaining a positive moral capital of Uber, while the general public on Twitter tend to be more negative and do not afford SE much moral capital.

Keywords: sharing economy, moral capital, sharing economy controversies, media coverage, Twitter

1. Introduction
Organizations have historically been operating in either hierarchies or markets with clearly demarcated roles for the producer and the consumer. Increasingly, hybrid models have emerged, where this distinction is blurry. On BlaBlaCar or Airbnb providers of a vacant seat or spare bed are often also consumers on the platforms seeking rides or rooms. Similarly, consumers on these platforms have also turned around and provided products or services on the same platform. While it is hard to find consensus on the definition of such businesses, the dominant nomenclature appears to be Sharing Economy (SE).

The concept builds on the notion that owners of underutilized durable goods or providers of unique skills can share these with peers who are willing to consume them from other peers rather than traditional providers of such goods or services forming a community of “prosumers” rather than mere producers or consumers (Havas, 2014). The emergence of the words Sharing Economy over other terminologies, such as collaborative economy or gig-economy or on-demand economy (Owyang & Samuel, 2015), suggests a closeness to a gift-economy and it carries a gloss of altruism (Roberts, 2015). In addition, SE pursues the vision of promoting a sustainable use of scarce resources (Tse, Esposit, & Soufani, 2016). Practitioners in the SE share a sentiment of wanting to create an inclusive and equal society, where communal bonds may be spurred (Belk, 2010; Belk, 2007; Botsman & Roger, 2010) and people out of work may be enabled to become micro-entrepreneurs (Cafe, 2013).

Given that SE companies aim at lowering environmental impact through less consumption, provide employment opportunities to newer segments, and spur communal bonding and create more equal societies (Belk, 2010; Belk, 2007; Botsman & Roger, 2010), they are often assigned a moral capital (Godfrey, 2005; Godfrey, Merrill, & Hansen, 2009; Ding & Wu, 2014; Goodard, 2015; Kindleberger, 1991) that disposes stakeholders positively toward the organization. This surplus of goodwill or status that such SE companies enjoy can be considered a sort of stock of reputational capital for shareholders (Margolis & Walsh, 2001) and an insurance-like protection for the relationships with their stakeholders because it “mitigates negative stakeholders’ assessments and related sanctions when bad acts occur” (Godfrey, 2005, p. 10). Put differently, moral capital provides stakeholders a sign of corporate blamelessness that pardons corporate misconducts.
This moral capital may have been precious for SE players because they have often been operating by bending the boundaries of existing regulatory framework (Rauch & Schleicher, 2015). In this situation of lack of regulation, their moral capital may have provided them the benefit of doubt, when they have not been complying with the regulatory standards expected of non-SE companies (Moore & Robinson, 2015; Beverungen, Bohm, & Land, 2015).

Recent studies (e.g., Moore & Robinson, 2015; Buckland, Val, & Murillo, 2016), however, indicate that SE companies do not always operate with altruistic intent, instead they are often seen pursuing neoliberal capitalist ideology of profit maximization. Stakeholders have raised the issue that a pursuit of a free market ideals by SE’s is challenging important conquests in labor rights and fair market norms that have been in place since decades (Bucher, Fieseler, & Lutz, 2016; Bucher & Fieseler, 2016; Owyang & Samuel, 2015; Pasquale, 2015). It is likely that users were aware that SE firms were possibly breaching laws or business ethics but were unwilling to give up access to cheaper accommodation or transport provided by such services. It is equally plausible that this utilitarian view (Whelan, 2017) does reach a point where the personal gains do not outweigh the lack of moral capital enjoyed by these firms.

This inherent tension between social and environmentally conscious consumption and alleged violations of legislation (Geobey, 2018) creates an interesting setting to study the ethical impact (Whelan, 2017) of SE organizations in society and outline the implications for management. Specifically, one may ask: Does SE have a moral capital?

In order to answer this question, we investigate the perception of Uber, the ride sharing company, within the general public and news media. Uber represents a particularly interesting case, as it is a key player in SE but has been involved in different scandals. Hence, if the media and the general public tolerate Uber despite their scandals, it would suggest that being in the SE provides a moral capital to SE players. This paper is structured as follow. In the next section, we review in detail the literature on sharing economy, outlying three main perspectives of investigation, and exploring its relationship to moral capital building. Furthermore, we outline the research questions of the study. In the subsequent section, we explain the methodology applied to the study, in particular we describe the database used for the analysis, the proxy variables and the statistical methods. Finally, we present the result of our study, comparing the results on the three main perspectives on sharing economy across news media and Twitter. We then summarize the results of our research, discuss implications of findings, and consider limitations of our study.

2. Literature Review

2.1 Sharing Economy

SE has changed the rules of the game for the business world, empowering every individual who owns any underutilized asset to monetize it. It also provides an alternative solution to one of society’s classic issues: allocating scarce resources. Communal ownership has been seen in the past in the form of Kibbutzim in Israel and the Hois in Vietnam. Yet, they suffered from the tragedy of commons due to a lack of incentives to invest in an ‘ownerless’ asset. The SE model, however, offers an incentive model for utilizing the communal asset.

Widespread internet penetration, and its immediacy via the location aware hand-held devices, has allowed the SE to go global. Over 4 million hosts have offered accommodation to over 800 million users on Airbnb as of September 2020 (Airbnb, 2020). In comparison, Hilton has 1 million rooms available globally. With online sharing platforms, internet users can now lend almost any of their personal ‘property’ for a price: Getaroud.com and RelayRides.com—their car; Fon.com—their unused broadband, and taskrabbit.com and Vayable.com—their skills. In the US alone, the SE amounts to an estimated $3 to 4 billion (Hamari, Sjöklint, & Ukkonen, 2015) and is expected to generate annual cost savings of up to $1 trillion by 2025. Another study estimates that the average weekly wage of a worker in the SE in the US is $1060; that is an impressive $55,120 a year. SE has stirred up debate among academics. Based on research conducted on Zipcar in the US, scholars Eckhard & Bardhi (2015) published a paper in the Harvard Business Review in January 2015, stating that: “… the sharing economy isn’t really a ‘sharing’ economy at all; it’s an access economy.” However, their argument is rather a matter of semantics. Temporary access to all types of idle resources is being shared. After all, sharing does not always have to be selfless, unconditional, or not-for-profit. There is consensus that incumbent industries are bound to see the impact of this new disruption (Sundararajan, 2016).

Ad-hoc solutions that either got around a regulatory framework or an inefficiency in the extant solution have existed for over hundreds of years. In 1915, the precursor to Uber was the Jitney bus which was a privately-owned car service, where one could hail a shared ride for 5 cents, also called a “Jitney”. Freelance operators, fuelled by cheap gasoline, mass produced cars, and growing unemployment noticed a gap in the
service offered by the electric tramcars that plied along the fixed routes that were dependent on where the electric lines that powered them were laid. The service originated in San Francisco and was soon copied in Los Angeles and Boston. The value offered by the Jitney bus was obvious—frequent vehicles servicing regions that the town’s public transport was unable to cover and offering the service at a fraction of the cost of the state-run infrastructure. The success of the Jitney bus was noticed as far away as London. Despite the overwhelming success at the time, inviting both the romantic ideals of free-market libertarianism and the wrath of the protectionist unions, the business model of freelance cab drivers supplanting incumbent industries never really became mainstream. The credit to the success of ride sharing some 100 years after it was first seen can possibly be attributed to a combination of technological, economic, and social factors. Attitudinal changes that value access over ownership is another likely factor to the growth of Uber currently compared to Jitney buses in the early 20th century. It is likely that access to cheaper gasoline and mass-produced automobiles fueled a demand in ownership. This trend, however, seems to have seen a shift in recent years with millennials having relatively less money to spend and more open to renting.

Evidence of economic benefits from entry of sharing economy players have been mixed. SE seems to create value for local economies. For example, rooms rented out in AirBnB platforms have contributed to an additional $240 million to the economy of the city of Paris, $130 million to the economy of the city of Berlin, and $632 million to the city of New York (Cafe, 2013). However, data from the US appear to show that despite the opportunities touted by sharing economy companies the impact on the labor force in the US has appeared to be marginal (Zumbrun & Sussman, 2015). However, it is also likely that the impact of these business models has not trickled down to the labor market. In an interesting paper, Burtch, Carnahan and Greenwood (2018) show that with the entry of Uber in a market, there is a 14% reduction in crowdfunding campaigns on Kickstarter a year later in the same market. This suggests a substitution in rather low-quality entrepreneurial activity. However, for the neighborhoods that have seen an entry of Airbnb, there is a notable decrease in hotel room revenue (Zervas, Proserpio, & Byers, 2017).

2.2 Moral Capital

Literature on moral capital suggests that possessing moral capital endows the actor with a status that signals positive intention and actions with no expectation of appropriating returns (Satybaldieva, 2005). However, human beings do place a premium on relationships with partners that command moral worth. We value trading partners, employees, life partners etc. that exhibit such positive intent. Thus, this asset, while symbolic and intangible, accrues significant non-pecuniary benefits (Sherman, 2006).

The moral worth of an organization is the “outcome of a process of assessment, evaluation and imputation of intention by stakeholders of a firm’s activity” (Godfrey, 2005, p. 7). Attempts to translate moral capital from individuals to organizations (Godfrey, 2005; Godfrey et al., 2009; Ding & Wu, 2014; Goodard, 2015; Kindleberger, 1991) emphasize the challenge in discerning the moral behavior of the organization from that of its members (Kindleberger, 1991; Ding & Wu, 2014). Also, it is problematic to identify whether a company has a utilitarian approach to its moral capital (Godfrey, 2009), where investment in moral capital is meant to be an insurance against other unethical acts of business. There is an open debate on what constitutes a genuine approach to organizational moral capital (for more details see Bright, 2006). As with individuals, organizations too can generate economic value from moral capital (Margolis & Walsh, 2001), for instance, by creating stronger ties with customers (Brown & Dacin, 1997), government and politicians (Wang & Qian, 2011; Werner, 2015), or employees (Goddard, 2015). In addition, moral capital has been found to preserve economic value (e.g., Schnietz & Epstein, 2005).

Stakeholders apply a cognitive logic of mens rea, that is, their judgement of the firm’s moral worth is a function of both action and intent. They evaluate not only whether corporate actions were morally acceptable but also if the intent was positive (Godfrey, 2005; Kindleberger, 1991; Ding & Wu, 2014). When a misconduct is observed, it is possible to observe sanctions (e.g., fines, lawsuits, boycotts, incarceration of organizational members, etc.) which are the outcomes of the mens rea process, even if the mens rea attribution process itself is unobservable. Greater moral capital can allow the firm to enjoy the benefit of doubt regarding intentionality during controversies. A recent study (Godfrey et al., 2009) has found that this is even more the case, when moral capital has been built through actions that benefit community and society rather than just to their primary partners. Therefore, a pertinent question to ask is to what extent this moral capital provides an insurance to unethical actions of an organization. This is especially relevant in the context of firms that operate in legal grey areas.

2.3 Sharing Economy and Moral Capital

Despite this positive moral capital, however, recent studies (e.g., Moore & Robinson, 2015; Buckland et al.,
2016) indicate that the legal limbo in which SE companies operate offers a much more nuanced understanding of SE, possibly eroding their moral capital.

From an economic perspective, it is not clear whether SE companies need to operate under the same taxes-rules of traditional companies, or whether they are taking advantage of users who provide products and services required for the sharing platforms to operate (Schneider, 2014).

While SE companies generate collaboration among users, when it comes to the distribution of economic value, it is rarely shared with the prosumers of this business model (Ganski, 2010). Occasionally, owners of services or goods may not even be assured stable profits (Carson, 2017). Furthermore, SE companies may not play fair in the market as they can easily balance demand and supply but the owners of the assets are left with the inflexible costs of licenses and taxes (Malhotra, 2015). SE companies are not typically held to the regulatory standards expected of non-SE companies (Moore & Robinson, 2015; Beverungen et al., 2015). Successful players in this space have almost always operated by bending the boundaries of existing regulatory framework (Rauch & Schleicher, 2015). For example, SE offerings do not come with the guarantees that come with traditional services; service providers in this sector are rarely afforded the rights typically offered to employees of traditional firms (Bucher et al., 2016; Bucher & Fieseler, 2016). It is therefore possible that SE’s moral capital may be eroded given the weak power of legislation on the SE (Rifkin, 2014). SE’s are often accused of facilitating the rise of illegal markets for not operating under the same tax or licensing rules thus fostering unfair competition (Malhotra, 2015; Ganski, 2010).

From a societal perspective, even if SE has the potential to create more jobs (Rifkin, 2014), these jobs often threaten existing ones (Hern, 2015), or are not protected by labor regulations. Pension schemes, job stability, health insurance, and fair pay are not assured by any union, neither by a legal system, because owners of services and products are not considered employees (Bucher et al., 2016; Bucher & Fieseler, 2016; Malhotra, 2015). Finally, when something goes wrong, SE companies may not be considered legally persecutable, and thus, owners of products and services may be responsible to pay for any damage caused.

From a technological perspective, while trust and transparency are the keystones of the SE (Owyang & Samuel, 2015), there is an increasing debate about the ethical implications of gathering data through sharing platforms. Although both customers and providers intentionally provide personal data, this data can potentially be used for a different purpose than the one intended by the owner of the data (Flyverbom et al., 2017; Martin & Freeman, 2004; Pasquale, 2015).

To date, little work has been devoted to understanding ideological controversies and to comprehend how SE firms are portrayed in the public discussion. While the general public tend to be the users of the service and thus have a firsthand experience, institutions such as news media and experts act as information intermediaries that build the image of the organization. It is crucial to analyze both news media and the public perception about the SE because members of the general public can express negative judgements about businesses in a different way than institutional actors (Etter, Colleoni, Illia, Meggiorin, & D’ Eugenio, 2018). Unveiling this difference would provide a contribution to the SE literature, as analysis of institutional actors and consumer’s attitude have been the main roadblocks for SE thus far (Buckland et al., 2016).

To address how organizations in the sharing economy are portrayed and whether they have a moral capital, we investigated the case of Uber. Uber is one of the largest companies in the emerging sharing economy field. Uber represents an interesting case, as, while they have been portrayed as contributing to society merely through the nature of their business, recently, they have also been involved in a number of scandals related to poor management.

3. Methodology

3.1 Case Study

Uber is a mobile phone-based platform in which a registered consumer can order an “Uber” to pick them up from their designated location and drop them off elsewhere. Payments for rides are handled by the platform, and prices are adjusted by demand. After passing a series of background checks, the registered driver installs the Uber app and is then ready to pick up riders. This is the original model, and this is the manner in which it operates in the US. Regional variations to the model exist depending on local rules. Uber retains a percentage of the fare as a commission for linking the rider to the driver. In 2017, Uber faced varied controversy. In January 2017, Uber drivers continued to provide airport-ride services during a taxi strikes at U.S. airports which was called in response to anti-immigration travel ban declared by former U.S. President Trump. This move from the ride-sharing service was perceived as an insensitive and aggressive move by Uber to exploit the taxi shortage. In
response to this event, numerous consumers decided to uninstall the Uber app, joining the online call #deleteUber. The same year in March, Uber was accused of exploitation by its drivers (Carson, 2017). At the same time, its engineers were accused of promoting a sexist culture (Hern, 2015). The disastrous answers by the company and the CEO that followed did not help to restore public trust. Together these events question the moral capital that Uber enjoys from belonging to the SE company.

3.2 Database

To capture the perception of Uber in the public discussion, we collected articles and messages concerned with Uber’s public image as portrayed in both newspapers and on Twitter by the general public during the period January-April 2017 during the time of the three scandals.

We collected 512 English newspaper articles via Factiva to assess the existence of a moral capital of the SE and Uber specifically. Examples of newspapers and magazines within our data set are Forbes, City AM, TechCrunch, Bloomberg, Financial Times, The Daily Telegraph, Lexology, Sydney Morning Herald, The Guardian, MailOnline, CNBC, Fortune, Observer, The Denver Post, and Wired. Our search keyword was “Uber”. We built a semantic network of keywords (Guest, MacQueen, & Namey, 2011) by identifying the ties between keywords in each article (Diesner & Carley, 2004; Carley, 1997). The main goal of this step was to identify news media coverage about Uber.

Next, we collected public discussions around Uber on Twitter. Using Twitter API, we collected 229,644 tweets. Illegible and non-English tweets were excluded. After this procedure, the sample contained 149,366 tweets. Then we selected those tweets that were crucial to create volume of conversations, and specifically those tweets that were central in the networked conversations in terms of bridging and retweeting power on a weekly basis (Illia, Colleoni, & Meggiorin, 2021). After this, we ended up with a total of 3513 tweets that were core for the emergence of network of conversations in the 13 weeks from January to April 2017. Other studies conducted on Twitter that have followed a similar sampling procedure as ours (i.e., focus on tweets that are core for the spread of conversations) have ended up with a proportionally smaller dataset than ours (e.g., Chew & Eysenbach (2010) had 5395 tweets out of a total of over 2 million), hence our selected final sample is proportionally in line with that of other studies.

3.3 Data Analysis

To analyze Uber’s moral capital among news media and the public, we decided to use a mixed-method approach (Creswell, 2016). Specifically, we combined a quantitative network analysis (Blondel, Guillaume, Lambiotte, & Lefebvre, 2008; Bogatti, 2005) with a qualitative thematic analysis (Gioia, Corley, & Hamilton, 2013), the former being functional for the latter.

3.3.1 Tonality of News Media Semantic Analysis of Tweets

We assessed the tonality of the news media articles and of the tweets on Twitter by applying sentiment analysis. For tonality of news media articles, we used the supervised learning technique called Naive Bayes Classifier (Katakis, Tsoumakas, & Vlahavas, 2005) with the lexicon designed by Loughran and McDonald (2011) to build an index of sentiment that goes from -1 to +1 and that allows to categorize words as either positive or negative. To both binary values, we added the possibility to categorize the word as “uncertain” in order to gather terms that were missing in the original sentiment dictionary.

In the case of tweets, following recent studies (Etter et al., 2018), we coded each tweet with a machine-learning approach, that we developed for this analysis. We chose a full-text machine-learning approach (Manning, Raghavan, & Schutze, 2008) to sentiment rather than a linguistic analysis and lexicon-based method because we wanted to increase the reliability of our results. Each article and tweet were given a unique sentiment value (negative sentiment (-1), neutral sentiment (0), and positive sentiment (+1)) by a supervised learning algorithm that was trained to infer a mathematical model that can be used for mapping new data. The quality of the feature extraction and classification model was confirmed by the experimental results obtained through a 10-fold cross-validation on the training dataset.

3.3.2 Identifying Semantic Networks

First, we extracted the first 150 words that co-occur with Uber in the public discussion in news media and on Twitter, respectively. Second, we filtered the first 250 edges with the highest weight (Jaccard >= 0.08), and, based on this, we reduced the nodes to visualize to 134 (which is the number of nodes tied to the 250 edges). Second, we visualized the network of co-occurrences with a minimum spanning tree (prim method) that accounts for the strength of the co-occurrence ties between attributes. At this point we identified the semantic networks based on the in-between centrality Newman-Girvan algorithm to identify key areas of discussions in news media.
and on Twitter, respectively. Third, we qualitatively classified the key networks of discussion to our three areas of analysis: economic, societal, and technological.

3.3.3 Quadratic Assignment Procedure (QAP)

Finally, we compared the networks of discussion of news media and general public to statistically assess whether the areas of discussions are similar among the two by applying Quadratic Assignment Procedure (QAP) test (Illia, Bantimadouris, & Meggiorin, 2016). QAP determines the correlation between two networks on the basis of two properties of links: the absence or presence of a link between two nodes, and its weight (Vargo et al., 2014). This analysis tests whether the same attributes correspond to a link with the same weight. As a result, it returns a score ranging from 0 to 1 that can be read as a correlation index accompanied by a p-value for statistical significance.

We did the QAP of the 20 terms with the highest betweenness centrality of each one of the three areas: economic, societal, and technological. These terms were extracted from the dataset of news media and compared on two levels. First, we considered the centrality and hierarchy of attributes and we compared the differences of the degree of centrality between the couple of terms in each one of the networks. This way, we were able to know if the most central attributes used by the public were also those used by news media. Second, we considered the structure of the network and the patterns of associations between words and compared the weight of the links between couples of terms in each one of the networks. As a result, we were able to know, if the way people use the attributes is similar to the way news media does.

4. Results

To understand whether there are ideological controversies around the SE, and if the SE has a moral capital, we investigated the public discussion in the news media and Twitter around Uber during its crisis in 2017.

4.1 Sentiment Analysis

Looking at the sentiment expressed around Uber in 2017 by news media and the general public on Twitter, we can see that the percentage of neutral content is similar around the two categories of actors, 44.4% in news media and 46% on Twitter. However, differences emerge around the positive and negative content. In terms of the public discourse on Twitter, Uber is considered quite controversial, as all the affectively charged content is negative (51.3% of tweets are negative, while only 2.7% of tweets are positively oriented). In contrast, news media seem to be more balanced with 31.3% negative content and 24.3% positive content. This is consistent with the role of traditional media which tend to present both sides of the story and, in so doing, tend to be more balanced (Etter, Ravasi, & Colleoni, 2019). In this sense, the news media play a key role in building and maintaining the moral capital Uber and the sharing economy (SE) acquired in the public discourse. In contrast, the general public on Twitter is less inclined to give Uber a moral capital, and, as a consequence, to justify their actions.

4.2 Networks of Discourse in News Media vs Twitter

In Figure 1, we present the network of word co-occurrences and the communities detected from the discourse in news media (left) and on Twitter (right), respectively. To explore and compare the two networks, the communities were manually coded into the three main areas of the SE: economic, societal, and technological.
In order to investigate to what extent news media and Twitter networks of discourse were similar, we ran a Quadratic Assignment Procedure (QAP). As explained earlier in the methods section, the QAP test provides an indication of the degree and significance of the correlation between the semantic network expressed in news media and on Twitter. In particular, the correlations between news media and Twitter network of discourses have been analyzed across two metrics: the term co-occurrence, which captures to what extent the most highly co-occurring words are the same across the network of conversation in news media and on Twitter; the degree of centrality, which captures whether the most central words are similar across the network of conversation in news media and on Twitter.

Table 1. Quadratic assignment procedure to compare news media and Twitter

<table>
<thead>
<tr>
<th>QAP correlation results for TERM CO-OCCURRENcy (10000 permutations, 11251 seeds)</th>
<th>Obs. Value</th>
<th>Sign.</th>
<th>Average</th>
<th>Std Dev</th>
<th>Minimum</th>
<th>Maximum</th>
<th>N Obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECO TWT * ECO EVA</strong></td>
<td>0.215</td>
<td>0.028**</td>
<td>-0.0003</td>
<td>0.0804</td>
<td>-0.0962</td>
<td>0.5641</td>
<td>10000</td>
</tr>
<tr>
<td><strong>SOC TWT * SOC EVA</strong></td>
<td>0.330</td>
<td>0.011**</td>
<td>-0.0014</td>
<td>0.0954</td>
<td>-0.1317</td>
<td>0.5401</td>
<td>10000</td>
</tr>
<tr>
<td><strong>TEC TWT * TEC EVA</strong></td>
<td>0.156</td>
<td>0.084</td>
<td>-0.0009</td>
<td>0.1043</td>
<td>-0.1335</td>
<td>0.6472</td>
<td>10000</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td><strong>ECO TWT * ECO EVA</strong></td>
<td>0.554</td>
<td>0.016**</td>
<td>0.0020</td>
<td>0.2281</td>
<td>-0.5362</td>
<td>0.8579</td>
<td>10000</td>
</tr>
<tr>
<td><strong>SOC TWT * SOC EVA</strong></td>
<td>0.557</td>
<td>0.014**</td>
<td>-0.0043</td>
<td>0.2281</td>
<td>-0.5325</td>
<td>0.8179</td>
<td>10000</td>
</tr>
<tr>
<td><strong>TEC TWT * TEC EVA</strong></td>
<td>0.542</td>
<td>0.017**</td>
<td>-0.0000</td>
<td>0.2280</td>
<td>-0.5165</td>
<td>0.8606</td>
<td>0.0175</td>
</tr>
</tbody>
</table>

Note. **p < .05.

Table 1 shows the degree of centrality and the term co-occurrence correlations for each of the three areas: economic, societal, and technological. In terms of degree centrality, the table shows that there is a significant positive correlation between the network of discourse in news media and on Twitter. This means that the words that are connectors in the networks are similar. This result holds true across all the three areas (0.55 p<0.05 for economy; 0.55 p<0.05 for society; 0.54 p<0.05 for technology). However, when looking at the term co-occurrence, the table shows that the association of words are not as similar across networks. This means that news media and Twitter users develop only two different discourses across the same connectors. In particular, while we find significant, yet little correlation between the two discourses in the economic and societal areas (0.21 p<0.05 for economy; 0.33 p<0.05 for society), these semantics are uncorrelated for the technology area.

Since networks are correlated but different in structure, with the final aim to explore their differences in detail in...
the following paragraphs, we analyze in detail both the news media and Twitter users’ network of discussion around the three main areas of sharing economy, i.e., economic, societal, and technological in news media and on Twitter, respectively.

4.2.1 Economic Discourse: Unfair Competition, Problematic Employability and Service to Customers
The economic aspects and implications of the sharing economy are present in both networks of discourse. In the news media, the economic aspects are prevalent in the light-green community, and, in part, in the purple community. In Twitter network of discourse, the light-green community reflects the economic discussions. Both networks discuss relevant economic issues as emerged during the scandals Uber has been facing during the first quarter in 2017: issues about drivers and Uber business model, and the CEO’s behavior towards the drivers. Conversations here refer to the need to impose a regulatory framework to the car sharing in order to protect customers and to avoid tax evasion, that the SE business model does not safeguard. However, the news media and the general public on Twitter discuss this issue in different ways. On Twitter, people debate about how the business model unfairly impacted the taxi driver’s professional category, and how it does not really provide good employment opportunities because driver’s job conditions are considered unacceptable. Again, people express their discontent about the SE service, which is in some instances of lower quality compared to traditional ones. Instead, news media present the issue more objectively, by discussing the issue raised by the watchdog organizations, using words such as ambition, promise, contract, and struggle. Compared to the Twitter discourse, they do not take a side and, instead, describe the issue but also remind about the high levels of employability ensured by SE companies. Similar results are observed for the accusations refocused on the CEO, which on Twitter are debated as “It’s all the CEO’s fault”, and in news media are discussed through less affectively charged words, such as court, count-rival, and legal.

4.2.2 Societal: Political Ties, Ubiquity and Criminal Acts of SE
The societal aspect of the SE is debated in both networks of discourse. In the news media network of discourse, the yellow and purple communities relate in part to this aspect. In the Twitter network, the yellow community completely reflects the societal aspects and the purple only partially. Comparing the two networks, it appears clear how the discourse in Twitter is more articulated, comprising a number of episodes where Uber did not live up to its standards. Furthermore, the discourse on Twitter is more emotional and explicitly fomenting the boycott of Uber through the #deleteboycott call to action. Instead, the network of news media highlights less controversial aspects of Uber and of SE in general, focusing on aspects for which the company is on trial. In particular, in both networks there is a great discussion around the sexual harassment case faced by one engineer at Uber. But while the news media discussed about “diversity” and “attrition”, the general public on Twitter debate Uber as a tech company that discriminates women in many instances such as employees’ sexual harassment, and violence toward women clients. This conversation, however, is not unique to Uber because people report sexism episodes as typical of Silicon Valley tech start-ups. Compared to the news media network of discourse, people on Twitter focus largely on the controversial behavior of Uber during the strike against the Immigration Ban. In particular, people dislike the fact that Uber has not stopped its services during the travel ban manifestation and transport strikes against the immigration ban; also people are skeptical toward any Uber action that tries to separate Uber from any political speculation. Here, one may postulate that conversations are specific for Uber, rather than representing an SE controversy. However, in the data, it appears that people dislike when boundaries between companies and politics are not clearly divided. Uber is considered to be one of the examples of the tech companies that is embedded in politics, and is blamed with other tech companies—not only SE companies—such as Amazon, Netflix, Apple, etc. These aspects are simply not present in the news media network of discourse.

4.2.3 Technology: Safety, Privacy, and Espionage
The technological aspect of the sharing economy is debated in both networks, but more critically among the general public in Twitter. In the news media network of discourse, the purple and yellow communities relate in part to this aspect. In the Twitter network, the purple community reflects this aspect. In particular, in both networks, Uber is recognized as a highly innovative tech company. In particular, in both networks, Uber’s technological innovations developed with other tech-giants such as Google and Apple that allow to track users’ mobility real time are positively debated. However, in both networks, there are mentions to the self-driving cars issue, and, in particular, to the acquisition of Waymo. More specifically, people on Twitter contest that Uber absorbed Waymo, a start-up of an ex-employee of Google that was launched in collaboration with Google to create an automatic driving software for cars, also contesting the safety issues related to automated driving, and the fact that Uber stole this technology by absorbing Waymo. Again, the tone is completely different in the news...
media that just mentions how Uber is accused of wrongdoing, but connecting this to positive elements such as the benefit of its innovations. Twitter discourse also mentions problems of cybersecurity of Uber and the numerous episodes, when the privacy of suppliers and customers of SE was threatened by hacking and bugs on the platform.

5. Discussion

This research explores the moral capital of the Sharing Economy (SE) in the public discourse by analyzing and comparing the discourse around Uber in news media and on Twitter. Our results show how even a very contested SE company such as Uber benefits from a positive moral capital built on SE (Moore & Robinson, 2015), and that this moral capital depends on who conveys it (Buckland et al., 2016). Our findings suggest that moral capital of SE is conveyed by news media. In particular, news media tend to convey a moral capital that is linked to SE contribution to society, as news media tend to be more positive in portraying the SE companies and their impact on society. Indeed, they express a positive tonality (24% of news articles) with regards to several benefits of SE for society. Furthermore, news media tend to be more objective when describing scandals around these companies, as it happened for Uber, focusing on the evidence emerging from the legal controversies (Etter et al., 2018). Members of the general public refer to what news media say about SE controversies, however, to a certain extent because they experience these controversies in their private sphere. In fact, the discourse in Twitter tends to erode this moral capital, questioning practices of SE firms in general and Uber in particular. Specifically, we found that people express economic, societal, and technological dissent on two levels: they criticize managerial decisions and actions at the business level (e.g., bad customer service, bad CEO), and they oppose to SE overall through SE accusations at the social (e.g., faded confines with politics, upsetting ubiquity, discrimination and illegal actions), economic (e.g., unfair competition, low quality service), and technological level (e.g., privacy violation, espionage). Overall, these results show the moral capital held by Uber, and, in general, by the SE companies, depends greatly on the medium (Moore & Robinson, 2015; Etter et al., 2018). In fact, news media and the general public on Twitter use different attributes, tone and associations to discuss and evaluate Uber’s behavior. In particular, news media tend to be more positive and balanced, while discussions on Twitter tend to be more polarized and judgmental of the company.

6. Limitations

Even though the study is grounded on the case of a single organization, Uber, in terms of moral capital it may be considered typical of other SE organizations. Our research can benefit from further analysis in similar technology enabled platforms that operate in the SE to further generalize our findings. It would be particularly relevant to explore whether the managerial aspect of moral capital of SE is also relevant for those SE organizations that have less managerial issues. Furthermore, our study successfully shows that there is a difference between what is discussed about SE in terms of moral capital on news media vs social media, but further research needs to explore the broader correspondence of topics discussed on SE beyond these two typologies of actors.

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