

# **The Influence of Social Curiosity on Real-Time Ridesharing Service Usage**

*Completed Research*

**Claus-Peter H. Ernst**

European Management School / Frankfurt UAS / SRH University Heidelberg  
c.ernst@ems.de / cernst@fb3.fra-uas.de / claus-peter.ernst@srh.de

## **Abstract**

In this article, I will evaluate the influence of general social curiosity and covert social curiosity on real-time ridesharing services (RTRSS) usage by drawing from the uses and gratifications theory (U&G). After collecting 69 online questionnaires and applying a structural equation modeling approach, I confirmed that people's covert social curiosity is a positive predictor of RTRSS usage. In contrast, I could not confirm the influence of general social curiosity on RTRSS usage. I will discuss the practical implications of my findings for both car drivers and service providers, and also offer a U&G-based explanation for the insignificance of the relationship between general social curiosity and RTRSS usage.

## **Keywords**

Ridesharing, Social Curiosity, Uses and Gratifications Theory.

## **Introduction**

The sharing economy describes “economic and social activities involving online transactions in which individuals can rent assets owned by someone else” (Lee et al. 2017, p. 1) (cf. Hamari et al. 2016). One popular representative of the sharing economy is real-time ridesharing services (RTRSS)—web-based services that instantly match up drivers and their cars with people that need a one-time ride via mobile applications. RTRSS have gained momentum over the last years and proved to be disruptive to the traditional taxi businesses in many cities around the world. (cf. Rayle et al. 2016).

Although RTRSS are quite successful, the specific drivers of their usage behavior, beyond the factors that are already widely known to drive technology and digital service usage such as usefulness, enjoyment, etc. (cf. Hawlitschek et al. 2016), are still largely unknown. In this article, I introduce a construct from social psychology into the realm of RTRSS: social curiosity, which is “an interest in how other people behave, think, and feel” (Renner 2006, p. 305). More specifically, by drawing from the uses and gratifications theory (U&G) (Rubin 2002), I postulate that social curiosity's two distinct facets—general social curiosity and covert social curiosity (Renner 2006)—are positive predictors of RTRSS usage.

U&G postulates that people choose and use a medium if they believe it will gratify their needs and wants (Rubin 2002). Since RTRSS regularly includes face-to-face interactions, it can potentially satisfy an individual's general social curiosity, which is “a broad interest in the acquisition of new information about how other people behave, act and feel” (Renner 2006, p. 314). Additionally, RTRSS may offer passengers an effective way to covertly observe other people's actions, attitudes, etc., and to analyze other observable things such as the car and its condition. These particular behaviors can gratify covert social curiosity, which is defined as an interest in obtaining interpersonal information by unobtrusive or covert exploratory behaviors (Renner 2006). As a result, I expect both covert social curiosity and general social curiosity to positively influence the frequency with which an individual uses RTRSS.

After collecting 69 completed English-language online questionnaires and applying a structural equation modeling approach, I confirmed covert social curiosity to be an influence factor of RTRSS usage. In contrast, I could not confirm a corresponding influence of general social curiosity but offered a U&G-based explanation for this insignificance.

In the next section, I will introduce the two facets of social curiosity, as well as the U&G. Following that, I will present my research model and research design. I will then reveal and discuss my results before concluding my article.

## **Theoretical Background**

In the context of real-time ridesharing services (RTRSS), multiple studies have been conducted in order to identify potential drivers of people's corresponding usage behavior and adoption.<sup>1</sup> In this section, I will introduce social curiosity, which will later be postulated to also be an influence factor of RTRSS usage. Moreover, with the uses and gratifications theory (U&G) (Rubin 2002), I will introduce the subsequent theoretical justification of my hypotheses regarding social curiosity.

### ***Social Curiosity***

Curiosity, in general, is a human being's intrinsic "desire for [acquiring] new information and knowledge" (Renner 2006, p. 305). In addition to its generic conceptualization, studies regularly distinguish between various facets of curiosity (Renner 2006).

One such facet of curiosity that has piqued researchers' interest is social curiosity: "an interest in how other people behave, think, and feel" (Renner 2006, p. 305). It is essential for human beings to extract information from their social environment in order to better integrate it (Baumeister et al. 2004; Foster 2004) and to build interpersonal relationships (Renner 2006), thus ultimately satisfying their need to belong<sup>2</sup> (cf. Baumeister and Leary 1995; Hartung and Renner 2013). Hence, social curiosity is an essential personality trait that facilitates a person's sense of belonging to a community.

Social curiosity itself has been found to be a construct with two distinct facets: general social curiosity and covert social curiosity (Renner 2006). The first facet "describes a broad interest in the acquisition of new information about how other people behave, act and feel" (Renner 2006, p. 314); the second one describes an interest in obtaining interpersonal information by unobtrusive or covert exploratory behaviors (Renner 2006). However, research on social curiosity has so far been limited to just a few studies and none were related to the RTRSS context.

First, Renner (2006) introduced the concept of social curiosity and developed a measurement for both general social curiosity and covert social curiosity. In another study, Hartung and Renner (2011) found that social curiosity positively influences people's capacity to judge others people's personalities in terms of extraversion. Hartung and Renner (2013) examined the interrelations between social curiosity and gossip, that is, "conversation[s] about social and personal topics" (Hartung and Renner 2013, p. 1), and found that both these constructs were related yet distinct from one another. In the context of social network site services, Ernst et al. (2015) confirmed that general social curiosity and covert social curiosity have a positive influence on the observing behavior of social network site members. Finally, Ernst and Scheurer (2017) confirmed a positive influence of covert social curiosity on reality TV addiction.

### ***The Uses and Gratifications Theory***

The uses and gratifications theory (U&G; Figure 1) postulates that individuals' media usage is determined by their needs and wants, with the ultimate goal being gratification (Rubin 2002). More specifically, U&G assumes that people have specific needs and wants. Consequently, they are motivated to fulfill them and, hence, perform behaviors that they believe can do so. For example, imagine an extraverted person: U&G postulates that they will choose and use a medium if they believe it will gratify their extraversion.

---

<sup>1</sup> Hawlitschek et al. (2016) provided an extensive overview of the studies that evaluate the factors driving the usage and adoption of sharing economy services in general and RTRSS in particular. Their article also provides an extensive list of potential factors that might drive RTRSS usage.

<sup>2</sup> According to the need to belong theory (e.g., Baumeister and Leary 1995; Watson and Johnson 1972), every person has, to some extent, a fundamental need to connect to other people and be accepted by them.



Figure 1. Uses and Gratifications Theory

## Research Model

In the following section, I will present my research model (in Figure 2) and outline my corresponding hypotheses.

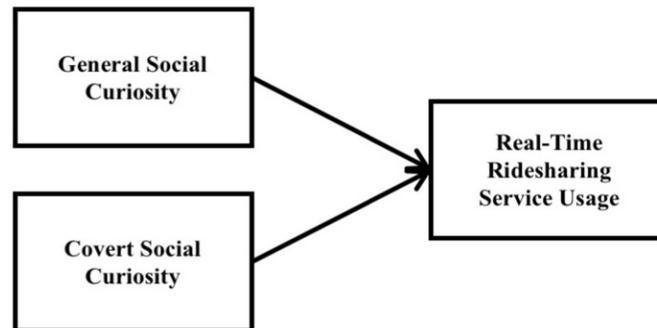


Figure 2. Research Model

RTRSS regularly includes face-to-face interactions with the driver and, in the case of shared rides, also with other previously unknown passengers. As a result, passengers are able to gain information about people, their actions, behaviors, feelings, thoughts, and attitudes (cf. Ouellette 2014). In other words, using RTRSS may provide information that is able to satisfy an individual's general social curiosity, which "describes a broad interest in the acquisition of new information about how other people behave, act and feel" (Renner 2006, p. 314). According to the uses and gratifications theory (U&G), people will choose a medium and use it in such a way that they believe will satisfy their desires. As a result, general social curiosity can be expected to positively influence how often individuals use RTRSS. I hypothesize the following: *There is a positive influence of general social curiosity on real-time ridesharing service usage (H1).*

Although RTRSS passengers do not necessarily need to talk much to the driver and can act uninvolved and unconcerned, they can still observe the driver's behavior and looks, draw their conclusions from observable things such as the car and its condition, or, in the case of shared rides, observe other passengers and listen to their potential conversations with the driver. As a result, RTRSS can be seen as an unobtrusive, covert behavior that enables people to observe other people, thus allowing individuals' to satisfy their covert social curiosity, which is an interest in obtaining interpersonal information by unobtrusive or covert exploratory behaviors (Renner 2006). Drawing again from U&G, covert social curiosity can also be expected to positively influence the frequency with which individuals use RTRSS. I hypothesize the following: *There is a positive influence of covert social curiosity on real-time ridesharing service usage (H2).*

## Research Design

### Measurement

I adapted existing scales to my context in order to measure general social curiosity, covert social curiosity, and RTRSS usage. For general social curiosity and covert social curiosity, I used three items each from Renner's study (Renner 2006) (cf. Ernst et al. 2015). These six items were measured using a seven-point Likert-type scale ranging from "strongly disagree" to "strongly agree". RTRSS usage was measured "using

two questions regarding the frequency with which the respondent currently ... [uses real-time ride sharing services]. The first was a 7-point scale with the adjectives frequent and infrequent at the endpoints. The second was a 'check the box' format, with categories for current use of: not at all; less than once a week; about once a week; 2 or 3 times a week; 4 to 6 times a week; about once a day, more than once a day" (Davis et al. 1989, p. 991). Table 1 presents the resulting items with their corresponding sources.

Construct	Items (Labels)	Adapted from
General social curiosity	When I meet a new person, I am interested in learning more about him/her (GSC1)	Renner (2006) (cf. Ernst et al. 2015)
	I like to learn about the habits of others (GSC2)	
	I'm interested in other people's thoughts and feelings (GSC3)	
Covert social curiosity	When on the train, I like listening to other people's conversations (CSC1)	
	Every so often, I like to stand at the window and watch what my neighbors are doing (CSC2)	
	I like to look into other people's lit windows (CSC3)	
Real-time ridesharing service usage	How frequent do you use real-time ridesharing services? (RTRSSU1)	Davis et al. (1989)
	How often do you use real-time ridesharing services? (RTRSSU2)	

**Table 1. Items of my Measurement Model**

### Data Collection

In May 2018, I recruited English-speaking respondents living in the US via Amazon Mechanical Turk over a period of one day. More specifically, speaking English and living in the US were obligatory qualifications for participation in the study and I promised a reward of 1 \$ per questionnaire. In this manner, I obtained 70 completed online questionnaires. However, I had to drop one dataset from my sample because the respondent failed my attention check.<sup>3</sup> As a result, I had a final sample size of 69 respondents. 25 respondents were female (36.2 percent) and 44 were male (63.8 percent). The average age was 36.14 years (standard deviation: 8.57). 60 respondents were in employment (87.0 percent), 3 respondents were unemployed (4.3 percent), 1 respondent was a student (1.4 percent), and 5 respondents selected "other" as a description of themselves (7.2 percent).

### Results

I used the Partial-Least-Squares approach via SmartPLS 3.2.4 (Ringle et al. 2015). With 69 datasets, I met the suggested minimum sample size threshold of "ten times the largest number of structural paths directed at a particular latent construct in the structural model" (Hair et al. 2011, p. 144). To test for significance, I used the integrated bootstrap routine with 5,000 samples (Hair et al. 2011).

### Measurement Model

Tables 2 and 3 present the correlations between constructs together with the average-variance-extracted (AVE) and composite-reliability (CR), and my items' factor loadings, respectively: AVE and CR were higher than .69 and .87, respectively, meeting the suggested construct reliability thresholds of .50/.70 (Hair et al. 2009). All items loaded high (more than .74) and significant ( $p < .001$ ) on their parent factor and, hence, met the suggested threshold of indicator reliability of .70 (Hair et al. 2011). Finally, the loadings from my indicators were highest for each parent factor and the square roots of the AVE of all constructs were larger than the absolute value of the constructs' correlation with each other, thus indicating discriminant validity (Fornell and Larcker 1981; Hair et al. 2011).

<sup>3</sup> Throughout the questionnaire, I placed two attention check items that asked the respondents to "please select agree" and to "please select disagree", respectively. One respondent failed to select both correct answers and was dropped from the analyses.

	GSC	CSC	RTRSSU
General social curiosity (GSC)	.910 (.968)		
Covert social curiosity (CSC)	.293	.697 (.872)	
Real-time ridesharing service usage (RTRSSU)	.223	.314	.931 (.964)

**Table 2. Correlations Between Constructs [AVE (CR) on the Diagonal]**

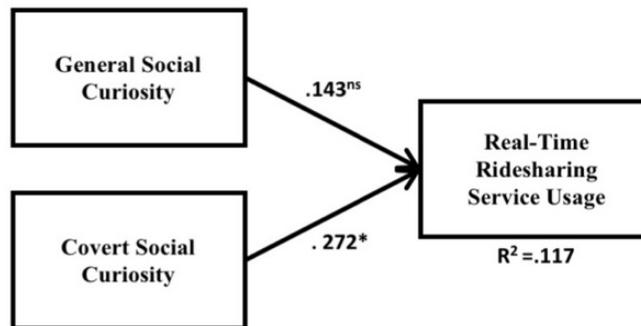
	GSC	CSC	RTRSSU
GSC1	.942 (13.3)	.177	.221
GSC2	.971 (13.5)	.362	.245
GSC3	.949 (10.3)	.297	.146
CSC1	.343	.952 (6.5)	.375
CSC2	.130	.741 (3.7)	.096
CSC3	.117	.796 (4.3)	.137
RTRSSU1	.201	.298	.963 (40.6)
RTRSSU2	.229	.307	.967 (33.7)

**Table 3. Items' Loadings (T-Values)**

**Structural Model**

Figure 3 presents the path coefficients of my previously hypothesized relationships as well as the R<sup>2</sup> of the endogenous variable (\* = p<.05; ns = non-significant): Covert social curiosity was found to positively influence RTRSS usage ( $\beta$ =.272, p<.05), confirming hypothesis 2. In contrast, hypothesis 1 could not be confirmed, since I found no corresponding significant influence of general social curiosity ( $\beta$ =.143, t=1.391).

Drawing from uses and gratifications theory (people will choose a medium and use it in such a way that they believe it will satisfy their desires), the insignificance of this relationship suggests that people might consider other ways to be more capable or appropriate to satisfy their general social curiosity and choose these instead of RTRSS.



**Figure 3. Findings**

**Conclusion**

In this article, I drew from the uses and gratifications theory (U&G) to study two potential predictors of real-time ridesharing services (RTRSS) usage, i.e., general social curiosity and covert social curiosity. By surveying 69 English-speaking respondents living in the US via an online questionnaire and applying a structural equation modeling approach, I confirmed that covert social curiosity significantly influences the frequency with which individuals use RTRSS. In contrast, I could not confirm a corresponding influence of general social curiosity but provided a U&G-based explanation for this insignificance.

Hence, I contributed to the field of technology and digital service usage as well as to the field of social psychology. Indeed, my study emphasizes that RTRSS can gratify people's covert social curiosity but not their general social curiosity. The inconclusiveness of hypothesis 1 seems to indicate that people do not

believe RTRSS can satisfy their general social curiosity. What are possible reasons to explain this belief? It is possible that passengers do not consider face-to-face interactions with the driver to be appropriate when using RTRSS—similar to other cases of public transportation use, such as the bus. This is a question I would like to explore in a subsequent study.

My findings also have important practical implications. More specifically, they suggest that human drivers may influence the usage of RTRSS for people with a high degree of covert social curiosity. This has implications for both service providers and car drivers. Indeed, multiple researchers already believe that fully autonomous cars—cars “in which operation of the vehicle occurs without direct driver input to control the steering, acceleration, and braking and [that] are designed so that the driver is not expected to constantly monitor the roadway while operating in self-driving mode” (National Highway Traffic Safety Administration 2013)—will fundamentally alter mobility by ultimately decreasing the need for human drivers (cf. Fagnant and Kockelman 2015). Correspondingly, recent research deals with the question of whether RTRSS drivers should stay in the business or prepare to leave it (Chou 2017). My findings suggest that the end of RTRSS drivers may not come as soon as once thought, since ride services using driverless cars will have a central social disadvantage in the case of rides where no other people (drivers and passengers) are present. Indeed, in those cases, travelers will have no contact with anyone, and are thus left with no sources to satisfy their covert social curiosity.

Although my study has important theoretical and practical implications, it also has some limitations. More specifically, my study did not differentiate between RTRSS rides where only the passenger and the driver were present, and rides that included other additional passengers. Hence, I cannot say whether people's covert social curiosity is being satisfied solely by the driver, or by other potential passengers; nor can I determine the degree with which this curiosity is being fulfilled by either category of co-traveller. This, in turn, means I cannot say whether RTRSS usage is being influenced by the presence of the driver, by the presence of other additional passengers, or by both to varying degrees. In addition, my sample individuals were relatively young (mean: 36.14 years; standard deviation: 8.57) and were mostly English-speaking people who were currently employed and living in the US (87 percent). Additionally, all participants were using Amazon Mechanical Turk as one source of personal income. Thus, my results might not hold true for people from other age groups, countries, or social groups. Finally, the  $R^2$  of .117 suggests that there are other, potentially stronger predictors, of people's RTRSS usage than covert social curiosity. Indeed, since RTRSS is first and foremost a service that offers utilitarian benefits with regards to mobility, the strongest influence factor of RTRSS usage will probably be its perceived usefulness (cf. Hawlitschek et al. 2016).

As a next step, I plan to expand my research and address its limitations. More specifically, I would like to roll out my survey to other countries and in particular survey people that are older and younger than those in my sample. Furthermore, I plan to differentiate between two different cases of RTRSS usage: rides where only a single passenger and driver are present (or when all passengers know each other) and rides where other unknown passengers are present (in addition to the driver). Finally, I want to explore the impact of potential social conventions, such as talking to the driver, on the usage behavior and adoption of RTRSS.

## References

- Baumeister, R. F., and Leary, M. R. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation," *Psychological Bulletin* (117:3), pp. 497-529.
- Baumeister, R. F., Zhang, L., and Vohs, K. D. 2004. "Gossip as Cultural Learning," *Review of General Psychology* (8:2), pp. 111-121.
- Chou, C.-Y. 2017. "A Lie on Sharing Economy: Solutions for Uber Drivers' Dilemma When Self-Driving Cars Arrive," *DIGIT 2017 Proceedings*.
- Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. 1989. "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science* (35:8), pp. 982-1003.
- Ernst, C.-P. H., Pfeiffer, J., and Rothlauf, F. 2015. "The Influence of Social Curiosity on the Observing Behavior of Users on Social Network Sites," *AMCIS 2015 Proceedings*.
- Ernst, C.-P. H., and Scheurer, M. 2017. "The Influence of Social Curiosity on Reality TV Addiction," *Symposium "Wissenschaft und Praxis im Austausch über aktuelle Herausforderungen" 2017 Proceedings*, pp. 39-50.

- Fagnant, D. J., and Kockelman, K. 2015. "Preparing a Nation for Autonomous Vehicles: Opportunities, Barriers and Policy Recommendations," *Transportation Research Part A: Policy and Practice* (77), pp. 167-181.
- Fornell, C., and Larcker, D. F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.
- Foster, E. K. 2004. "Research on Gossip: Taxonomy, Methods, and Future Directions," *Review of General Psychology* (8:2), pp. 78-99.
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. 2009. *Multivariate Data Analysis*, 7th ed., Upper Saddle River, NJ: Prentice Hall.
- Hair, J. F., Ringle, C. M., and Sarstedt, M. 2011. "PLS-SEM: Indeed a Silver Bullet," *Journal of Marketing Theory and Practice* (19:2), pp. 139-151.
- Hamari, J., Sjöklint, M., and Ukkonen, A. 2016. "The Sharing Economy: Why People Participate in Collaborative Consumption," *Journal of the Association for Information Science and Technology* (67:9), pp. 2047-2059.
- Hartung, F.-M., and Renner, B. 2011. "Social Curiosity and Interpersonal Perception: A Judge × Trait Interaction," *Personality and Social Psychology Bulletin* (37:6), pp. 796-814.
- Hartung, F.-M., and Renner, B. 2013. "Social Curiosity and Gossip: Related but Different Drives of Social Functioning," *PLoS ONE* (8:7), pp. 1-9.
- Hawlicsek, F., Teubner, T., and Gimpel, H. 2016. "Understanding the Sharing Economy—Drivers and Impediments for Participation in Peer-to-Peer Rental," *HICSS Proceedings*, pp. 4782-4791.
- Lee, C., Rahafrooz, M., and Lee, O.-K. D. 2017. "What Are the Concerns of Using a Ride- Sharing Service?: An Investigation of Uber," *AMCIS 2017 Proceedings*.
- National Highway Traffic Safety Administration. 2013. "U.S. Department of Transportation Releases Policy on Automated Vehicle Development." Retrieved 02-16, 2019, from <https://www.transportation.gov/briefing-room/us-department-transportation-releases-policy-automated-vehicle-development>.
- Ouellette, L. 2014. "Introduction," in *A Companion to Reality Television*, L. Ouellette (ed.), Chichester, UK: Wiley-Blackwell, pp. 1-8.
- Rayle, L., Dai, D., Chan, N., Cervero, R., and Shaheen, S. 2016. "Just a Better Taxi? A Survey-Based Comparison of Taxis, Transit, and Ridesourcing Services in San Francisco," *Transport Policy* (45), pp. 168-178.
- Renner, B. 2006. "Curiosity About People: The Development of a Social Curiosity Measure in Adults," *Journal of Personality Assessment* (83:3), pp. 305-316.
- Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." <http://www.smartpls.com>.
- Rubin, A. M. 2002. "The Uses-and-Gratifications Perspective of Media Effects," in *Media Effects: Advances in Theory and Research*, J. Bryant and D. Zillmann (eds.), Mahwah, NJ: Lawrence Erlbaum Associates Publishers, pp. 525-548.
- Watson, G. B., and Johnson, D. 1972. *Social Psychology; Issues and Insights*, 2nd ed., Philadelphia, PA: Lippincott.