Abstract

This paper explores the use of mobile technology to enable lift-share in the leisure travel domain of camping tourism. Here mobile devices can connect a user community on the move undertaking non-routine trips and reveal temporal and spatial connections suggesting lift-share opportunities. Data were derived from a questionnaire survey (n=339) administered at campsites in a rural tourism destination in Dorset, UK. Analysis focuses on the role of trust, sense of community and existing lift-share practices in willingness to engage in lift-share and other forms of share use of private vehicles using a mobile app. The findings indicate that previous experience of lift-share and sense of community both have a small effect, however, trust had no effect on the desire to lift-share. Analysis indicates trust is generated through community participation rather than being a precursor to taking part. Lift-share app developers and providers need to design strategies which build trust in the system using peer-to-peer ratings, where appropriate, and establishing user etiquette through user champions and visualising successful exchanges.

Key words: peer-to-peer sharing; lift-share; trust; community; travel habit

1. Introduction

The dominance of individual car travel for utility and leisure trips is leading to a range of environmental and societal externalities including greenhouse gas emissions, localised pollution, congestion and social exclusion. At a theoretical level research has explored how societal structures have co-evolved with the car (Shove et al., 2012) and to a large extent tied people into car use which has become habitual (Schwanen et al., 2012). Given high car dependence and 'lock-in' (Randles and Mander, 2009) to this mode, it makes sense to explore desirable transport futures where cars can be used more efficiently. Car sharing schemes, where drivers access shared vehicles, is one strategy (Kent and Dowling, 2013), a second is lift-share in privately owned vehicles. This paper draws on data from a project that designed and tested a mobile app primarily designed to facilitate ad-hoc lift-share and other forms of shared use of private vehicles in the leisure setting of camping tourism. The aim is to understand the role played by trust, sense of community and existing engagement in lift-share in individuals' willingness to share private vehicle resources using a mobile app.

Camping tourism is predominantly car-based and growing in importance on the European scale (Mikulic et al., 2017). It is a travel context which is normally considered non-routine, though shared temporal and spatial routines exist (Dickinson et al., 2013). Given low vehicle occupancy rates (1.56 in the UK in general, 1.7 for leisure and 2 for holidays and daytrips (Department for Transport, 2016) and 1.45 in Europe (European Environment Agency,2016)) there is considerable scope for lift-sharing. The focus here is on short trips. While most gains might be made from longer distance trips, a surprisingly large proportion of greenhouse gas emissions are associated with journeys of less than 10 miles (40% in the UK, Department for Transport, 2011) and there is scope for people to develop new travel skills and habits for short trips. The paper makes four key contributions to the field: i) the study focuses on non-routine trips in lift-share; ii) it explores lift-share where there is no financial gain and the users vary as tourists come and go and potential lift-sharers are therefore less likely to be known; iii) it extends existing work that has looked at demographics, vehicle access and motivational factors in relation to lift-share (Delhomme and Gheorghiu, 2016) to understand better the trust and community factors that also play a role; and iv) the paper informs opportunities to develop lift-share.

2. Background

2.1. Lift-share, trust and community

The ubiquitous connectivity of smartphones has provided new scope to for individuals to make opportunistic connections with others while on the move. A variety of mobile apps have been developed that aim to facilitate lift-share. To date these apps largely replicate existing internet tools where users input their travel parameters, however, apps have the capacity to extend internet tools by utilising real-time location based data and also have capabilities to record, understand and predict users' spatial patterns over time. Increasingly lift-share apps will be able to respond to the more ad-hoc needs of users and realise connections between users that would otherwise not be visible. These raise wider issues regarding trust in the community of users.

Various forms of exchange exist for lift-share (see Table 1). Kent and Dowling (2016) refer to this as 'cars on demand' and categorise these into peer-to-peer and commercial operation. To date the most developed mobile app solutions for cars on demand have focused on commercial exchanges, such as the Uber taxi app, however, experimental apps based on peer-to-peer lift-share are emerging that are beginning to exploit real-time location based technology (Davies et al., 2012). Questions remain as to the wider success of these and in what contexts they will work best. Given the potential gains from sharing vehicles (Fremstad, 2014), this is an important area for research.

This study focuses on generalised exchange which extends reciprocal exchange and has emerged more widely with the growth of internet communities (Table 1.). In a generalised exchange community a lift-taker may never directly reciprocate to the lift-giver, but may reciprocate to another member of the community. This removes the dyadic relationship encountered in traditional reciprocal lift-share and calls for new theoretical perspectives.

Table 1. Forms of exchange in Lift-share

Form of exchange	Explanation	Examples
Commercial exchange	A financial exchange for commercial gain focused on providing a service.	Uber (https://www.uber.com) Lyft (https://www.lyft.com)
Reciprocal exchange	Peer-to-peer. Relies on established social connections. Participants take it in turns to give lifts or share travel costs.	Sharing lifts to work or to routine leisure activities with friends

Negotiated or pseudo-exchange (Belk, 2014)	Peer-to-peer. Small economic rewards are available for the lift provider to cover costs.	BlaBlaCar (www.blablacar.co.uk)
Generalised exchange	Peer-to-peer. Users broadcast lift offers or requests to a community of users who agree to share car resources.	6ST Travel (http://www.sixthsensetransport.com/mobile-apps-and-platforms/6st-travel/)

Through social capital people gain access to various forms of support, including the material support needed to share vehicle resources (Carrasco and Cid-Aguayo, 2012). Social capital is derived from belonging to communities, though new forms of virtual community have evolved (Wellman et al., 2003) with implications for access to forms of support (Hampton, 2016). Belonging to a community is not always positive for all and can lead to restricted access to certain resources (Julien, 2014). For example, tourism spaces might emphasise established friendship groups which limit wider social involvement (Dickinson et al., 2017a). Sense of community and commitment to that community is therefore likely to be significant to lift-share.

Trust is a core concept in social capital aligned with civic engagement (Putnam, 1995) and community participation (Boeckmann and Tyler, 2002). Trust is important to lift-share communities and BlaBlaCar recognise trust as one of their challenges (Rose and Wheeler, 2017). It is a psychological barrier that has been shown to be significant in other aspects of mobile technology use (Nikou, 2015). Trust exists in two forms: generalised trust applies to a community as a whole and personalized trust which relates to known individuals. Both play a role in lift-share depending on whether the exchange is reciprocal, between known individuals (personalized trust), or negotiated/generalized exchange between a larger community (generalized trust). Trust can also be further divided into categories (McKnight et al., 1998) with the concepts of honesty and benevolence having most applicability to generalized exchange. Honesty is the belief that a party will keep his or her word, fulfil promises and be sincere. Benevolence is the belief that one of the parties is interested in the wellbeing of the other without intention of opportunistic behaviour and is motivated by a search for a mutually beneficial relationship (Flavián et al., 2006). Both are important to lift-share contexts as users express concerns about lift-offers being undertaken as agreed (honesty) and that the other party will not exploit the lift-share context (benevolence).

2.2. Travel habit

A growing body of transport research acknowledges the role of habit in modal choice (see for example, Gärling and Axhausen, 2003; Middleton, 2009; Murray and Doughty, 2016). Habit is interpreted in various ways from an automatically elicited behaviour based on repetition to an embodied intelligence that emerges from an interaction of the person with the environment and resources available (Schwanen et al., 2012). Based on the former, transport studies show a relationship between measures of past behaviour and current behaviour, however, Schwanen et al. (2012) argue this may be because such studies essentially measure the same thing. In Schwanen et al.'s (2012, p527) perspective, habit depends on "relatively stable body-mind-world assemblages" that is travel habit is less an individual decision and more a way we have come to perform particular ways of travelling in a given context. Drawing on this perspective a lift-share habit may develop in a routinized setting, such as travel to work, with particular travel partners. If the parameters of the lift-share setting change, the habit is likely to be modified and it is unclear whether it would continue in new social and community contexts. This is reinforced by Murray and Doughty (2016, p 81) who argue that "habit is situated within 'constellations of mobilities', which are historically and geographically specific". In contrast to this, Miller et al. (2015) found sustainable transport choices in urban tourism were strongly explained by habits in home settings, though this did depend on availability of relevant transport resources. Sustainable transport choices can even increase in tourism settings (Miller et al., 2015). Therefore, while familiarity with lift-share is likely to play a role in future travel decisions it is unclear to what extent the home habits may set precedent for the tourism domain where the structure of lift-share resources is likely to be different.

There is much that needs to be further understood about the under-utilisation of lift-share. The literature suggests that travel habits can persist, therefore this study set out to analyse whether engagement in lift-share activities at home are likely to increase willingness to lift-share in a tourism setting. Meanwhile, theory from exchange communities suggests trust and sense of community are also likely to play a role. Based on these theoretical contexts, the framework in figure 1 was proposed. This proposes that involvement levels in travel collaboration at home would predict the desire to collaborate in tourism. Trust would mediate this effect (Boeckmann and Tyler 2002) along with sense of community. The term 'travel collaboration' was used in the theoretical framework as, while the study questions focused predominantly on lift-share, other forms of shared use of private vehicles were also embedded in the study.
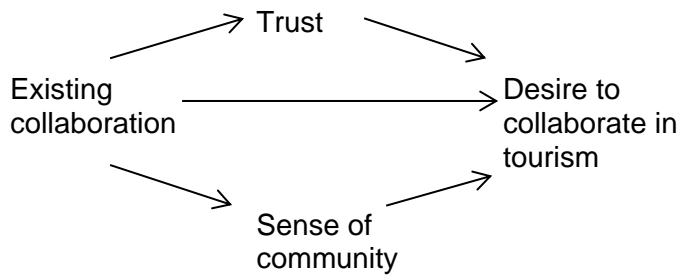
Figure 1 Proposed theoretical framework

3. Method

The study involved the design and trial of a mobile app that facilitated lift-share and other forms of shared use of private vehicles among camping tourists based on generalised exchange. Research involved a sequential mixed method strategy which involved exploratory interviews, app trials and a questionnaire. All aspects received university ethical approval. This paper reports findings from the questionnaire (n= 339) which was informed by the exploratory interviews.

3.1 Study context

The study was based in the Purbeck area of Dorset, UK. This is a popular rural tourism destination on the south coast of the UK with varied countryside and seaside leisure activities. Based on a directory of campsites in the area, three campsites were purposefully chosen for distribution of the questionnaire that reflect varying size, locational characteristics and camping accommodation formats (see Table 2) that were also reasonably accessible to researchers. All had a small shop on site for immediate provisions. The sample captured tourists engaging in the different camping opportunities in the area. The mobile app was trialled and promoted at campsite A.

Table 2.

Campsite	Size	Location	Accommodation
A	100 pitches	Located 1km from cliff top walks and on a bus route about 5km from the main seaside town	Predominantly tents and some campervans (recreation vehicles)
B	80 pitches	Located inland about 13km from the main	Tents, campervans

		seaside town. Public transport not readily accessible.	and touring caravans
C	Over 100 pitches	Located inland on a bus route and close to a heritage rail route about 12km from the main seaside town	Tents, campervans, touring caravans and static caravans

3.2 Questionnaire design and latent variables

The questionnaire began by asking respondents about their camping group. It then moved on to questions addressing a number of latent variables of interest to the study before finishing with questions on demographics, travel mode and their stay. The questionnaire embedded an explanation of the mobile app.

Four latent variables are considered here. Three independent variables: sense of community, trust and the extent of travel collaboration at home, and one dependent variable: desire to travel collaboratively in tourism. Items for the latent variables were developed based on theory and exploratory interviews. In order to refine the measurement of these latent variables a pilot survey (n=110) was conducted over 8 days in autumn 2012 and spring 2013 achieving a 37% response rate. Following exploratory factor analysis a number of items were dropped from the measurement scales. An explanation of the items included in the main study is reported here.

Sense of community and trust emerged from the interviews as key issues for the mobile app development and acceptance. Sense of community aligns with the literature on significance of social capital in systems of exchange. This was measured in terms of respondents' sense of community at the campsite based on feelings towards the campsite. Four items were developed specifically for the study. These focused on shared interests, feelings of belonging, emotional attachment and intention to return to the campsite.

Trust has been measured in various established scales. Given the study's interest in generalised trust, two items were derived from the generalised trust scale which is widely recognised (Mannemar Sonderskar, 2001): most people at this campsite would try to be fair; most of the time people at this campsite try to be helpful. Exploratory research indicated the trust sub-latents of honest and benevolence were relevant to the mobile app scenario, therefore a further three items were adapted from Flavián et al. (2006) to a campsite setting: people staying at this campsite would not deliberately try to take advantage of the campsite community; people staying at this campsite would not compromise the wellbeing of other

visitors; I think I can have confidence in people staying at this campsite to keep promises made. Sense of community and trust items were measured using 5-point Likert-type scale questions (strongly agree to strongly disagree).

Given the literature suggests habit plays a role in travel practices, the extent of travel collaboration at home was measured using four items specifically developed for the study using a 5-point frequency of engagement scale. These focused on giving and receiving lifts and shared travel for community and leisure activities. Finally, desire to travel collaboratively in tourism was measured using five items derived from interview analysis using a 5-point willingness to engage scale. These focused on giving and receiving lifts and collecting items of shopping.

3.3 Implementation

The main survey (n=339) was conducted over 16 days during summer 2013 with a response rate of 47%. Questionnaires were distributed on each site by researchers using a drop and collect process. Potential respondents were approached outside their accommodation or by the campsite facilities. One adult respondent was sought from each group approached. The questionnaire took approximately 10 minutes to complete. A third of the questionnaires were sourced from each of the three campsites. The response rate was a little lower at campsite A as some potential respondents were engaged in the mobile app trial. There was no incentive for completion. The analysis presented here focuses on 305 questionnaires that were fully completed for the variables of interest.

3.4 Data analysis

Following cross-campsite comparisons, the data were found to be similar and therefore collapsed into one data set. The items measuring the four latent variables were subject to factor analysis to extract factor scores. Principal axis factoring was used due to the exploratory nature of the study (Field, 2013). The resultant factors were saved as new variables with ANOVA and t-tests used to explore socio-demographic patterns. The theoretical framework proposed was subject to a mediated regression process using a pre-prescribed model developed by Hayes (2013).

There are various caveats to the analysis presented here. The study is undertaken at one point in time in a particular context. The study is not seeking to attribute causation and the findings cannot be generalised. Schwanen et al. (2012) have questioned studies of habit which show links between past and current behaviour. In this study, analysis focused on transference of transport practices in one setting to another, therefore an established habit

would require modification and the transport resources are not directly comparable. However, there is evidence that transport habits in home settings explain transport choices in holiday contexts (Miller et al., 2015) and it was considered worthwhile exploring this further. The analysis reveals, however, an interesting finding that is supported by theory and offers avenues for practice and further study.

4. Results

4.1. Characteristics of existing travel collaborators and 'would be' travel collaborators

Women (56%) were slightly over represented in the sample and the mean age was 47, which reflects the middle aged and family orientated camping market (75% with partner/spouse and 52% with children). The respondents were relatively well educated (54% had degree level or higher qualification), relatively affluent (34% had a household income over £50,000 per year) and predominantly British (95%). The majority travelled to the campsite by car (73%) or campervan (24%) and, although private vehicles dominated travel while staying at the site, their use dropped (car 71% and campervan 15%) and more use was made of public transport (bus 13%, train 13%) cycling (15%) and walking (65%) during the stay. This supports evidence that tourists seek to reduce their car dependence in tourism settings (Miller et al., 2015). The respondents had limited engagement with travel collaboration at home (Table 3), but indicated more willingness to engage in travel collaboration during tourism (Table 4). The latter should be noted as aspirational rather than actual uptake of collaboration.

Table 3. Travel collaboration at home

How often do you:	Twice a week or more %	Once a week %	Once a month %	Less than once a month %	Never %
Receive lifts from close friends or neighbours?	7	12	21	40	20
Give lifts to close friends or neighbours?	8	18	23	35	18
Car share related to a leisure activity (e.g. sport or social activities)?	8	18	16	31	26
Undertake collaborative travel with people in a community group (e.g. church)?	2	6	9	22	62

Table 4. Desire to collaborate in tourism

	Very willing %	Willing %	Uncertain %	Unwilling %	Very unwilling %
If you were going to a shop off-site, would you be willing to pick up an item for another camper?	30	51	13	3	3
Are you willing to engage in travel collaboration with people who share your leisure interests (e.g. climbing, walking, cycling, diving)?	15	41	26	14	4
If a lift was offered would you be happy to accept it?	13	42	32	10	3
If you needed something from a shop off-site, would you be willing to ask someone to pick this up for you?	7	34	33	19	7
Assuming you had space, would you be willing to give lifts to other people staying at this campsite?	13	45	28	9	6

4.2. Trust and sense of community

A large proportion would like to return to the campsite in the future and respondents felt a degree of shared interest and community. However respondents were less emotionally attached to the campsite. Trust in the camping community was fairly high (Table5).

Based on the pilot work, the questions on travel collaboration at home, desire to collaborate in tourism, trust and sense of community were each expected to emerge as factors. Principal axis factoring was used to generate factor scores for further analysis (Field, 2013). Given the sample size, the scree plot was examined (Field, 2013) which indicated a four-factor solution as anticipated from the study design. Factor scores were generated using the regression method. There were no low values in the communalities table, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was good at 0.814 and the Bartlett's Test of Sphericity was significant (p<0.001). The solution accounted for 61% of the total variance which is adequate (Doise et al., 1993) and the four factors emerged as anticipated (Table 6).

The factor scores were analysed in relation to demographic variables. A t-test revealed a significant, though small, gender relationship indicating women were engaged in more travel collaboration at home compared to men ($t(279) = 2.636$, $p = .009$, $r = 0.16$, women ($M = -.131$, $SE = .072$) and men ($M = .144$, $SE = .074$)). There were no relationships apparent for age, education or income.

Table 5. Sense of community and trust

Sense of Community	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
I would like to return to this campsite in the future	51	38	10	1	>1
I feel people staying at this campsite share my interests	9	46	40	4	1
I feel part of a community at this campsite	10	45	28	17	2
I feel emotionally attached to this campsite	11	17	29	32	12
Trust					
People staying at this campsite would **not** deliberately try to take advantage of the campsite community	22	58	16	3	1
Most people at this campsite would try to be fair	19	67	13	2	0
People staying at this campsite would **not** compromise the wellbeing of other visitors	15	66	17	1	1
I think I can have confidence in people staying at this campsite to keep promises made	11	48	38	2	1
Most of the time people at this campsite try to be helpful	23	69	8	1	0

Table 6. Principal Components Factor Analysis

	Desire to collaborate in tourism	Travel collaboration at home	Trust	Sense of community
People staying at this campsite would **not** compromise the wellbeing of other visitors			.855	
Most people at this campsite would try to be fair			.794	
People staying at this campsite would **not** deliberately try to take advantage of the campsite community			.774	
I think I can have confidence in people staying at this campsite to keep promises made			.591	
Most of the time people at this campsite try to be helpful			.508	
Are you willing to engage in travel collaboration with people who share your leisure interests (e.g. climbing,	.822			

walking, cycling, diving)?			
If a lift was offered would you be happy to accept it?	.794		
Assuming you had space, would you be willing to give lifts to other people staying at this campsite?	.768		
If you needed something from a shop off-site, would you be willing to ask someone to pick this up for you?	.667		
If you were going to a shop off-site, would you be willing to pick up an item for another camper?	.562		
Give lifts to close friends or neighbours?		.758	
Car share related to a leisure activity (e.g. sport or social activities)?		.723	
Receive lifts from close friends or neighbours?		.714	
Undertake collaborative travel with people in a community group (e.g. church)?		.547	
I feel emotionally attached to this campsite			.741
I feel part of a community at this campsite			.723
I would like to return to this campsite in the future			.545
I feel people staying at this campsite share my interests			.453

4.3. Theoretical framework

The framework proposed in figure 1 represents a mediated model that was analysed using the Hayes (2013) PROCESS add-on for SPSS. PROCESS can estimate direct and indirect effects in multiple mediator models (Hayes 2016). The results indicate the relationships shown in figure 2. Respondents' engagement in travel collaboration at home is positively related to trust, however, travel collaboration at home is not related to sense of community (Table 7) and level of trust does not increase desire to collaborate in tourism (Table 8). The direct and indirect effects (Table 9) indicate respondents more involved in travel collaboration at home have a stronger desire to collaborate in tourism, however, trust and sense of community do not mediate this desire. A multiple regression was then performed using a hierarchical regression with Travel Collaboration at Home input at the step. This shows a very small effect (Table 10).
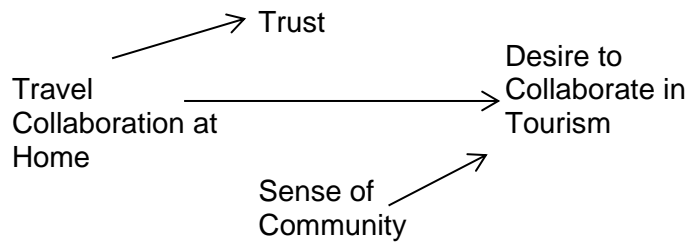
Figure 2. Effects identified in the proposed model

Table 7. Mediated model effects

Travel Collaboration at Home effect on Trust

Model Summary

R	R-sq	MSE	F	df1	df2	p
.15	.02	.85	6.81	1.00	303.00	.0095

Model

	coeff	se	t	p
Constant	.00	.05	.00	1.00
Travel Collaboration at Home	.15	.06	2.61	.01

Travel Collaboration at Home effect on Sense of Community

Model Summary

R	R-sq	MSE	F	df1	df2	p
.07	.01	.78	1.63	1.00	303.00	.20

Model

	coeff	se	t	p
Constant	.00	.05	.00	1.00
Travel Collaboration at Home	-.07	.06	-1.28	.20

Table 8. Main model outcome on Desire to Collaborate in Tourism

Model Summary

R	R-sq	MSE	F	df1	df2	p
.45	.20	.71	24.80	3.00	301.00	.00

Model

	coeff	se	t	p
Constant	.00	.05	.00	1.00
Trust	.10	.06	1.58	.12
Sense of Community	.2273	.07	3.37	.00
Travel Collaboration at Home	.36	.06	6.44	.00

Table 9. Direct and indirect effects

Direct effects of Existing Collaboration on Desire to Collaborate in Tourism

Effect	SE	t	p	LLCI	ULCI
.36	.06	6.44	.00	.25	.47

Indirect effect of Travel Collaboration at Home on Desire to Collaborate in Tourism

	Effect	Boot SE	BootLLCI	BootULCI
TOTAL	-.00	.02	-.05	-.04
Trust	.02	.01	-.00	.05
Sense of Community	-.02	.02	-.06	.01

Table 10. Linear model of predictors for Desire to Collaborate in Tourism

	b	SE B	ß	p
Step 1				
Constant	4.387E-17	0.05		$p = 1.00$
	(-0.10, 0.10)			
Travel Collaboration at Home	0.36	0.06	.34	$p < .001$
	(0.25, 0.47)			
Step 2				
Constant	4.788E-17	0.05		$p = 1.00$
	(-0.10, 0.10)			
Travel Collaboration at Home	0.38	0.05	.36	$p < .001$
	(0.27, 0.48)			
Sense of Community	0.29	0.06	.27	$p < .001$
	(0.18, 0.40)			

$R^2 = .12$ for Step 1; $\Delta R^2 = .08$ for step 2 ($ps < .001$)

5. Discussion and conclusion

This paper has explored lift-share based on generalised exchange. It set out to understand the role played by trust, sense of community and habit in potential adoption of lift-share using a mobile app in a tourism setting. Smartphones, with their ability to track a user's location over time and reveal connections to communities of users, offer a new prospect to manage ad-hoc lift-share arrangements in real-time. The concept of generalised exchange implies connections are made between users within a community who may not know one another and may not directly reciprocate lifts. This represents a true form of community sharing (Belk, 2014).

Previous research has provided an understanding of factors such as gender, vehicle ownership and motivations in lift-share (Delhomme and Gheorghiu, 2016), however, generalised exchange requires a better understanding of social and community factors. The analysis presented in this paper indicates that previous experience of lift-share had a small effect on the desire to lift-share in tourism. The desire to lift-share is speculative and overall

received a more positive response than reported lift-share behaviour. On the one hand, this reflects an enthusiasm for a socially desirable activity, however, this does support Miller et al.'s (2015) finding that sustainable travel might increase on holiday if appropriate provision is available. Analysis indicates those engaging in existing lift-share would be more willing to lift-share in the tourism settings but the effect is small. Similarly sense of community has a very small effect on lift-share intentions in tourism. This is smaller than anticipated and the temporary nature of the tourist community is likely to play a role here. In other settings sense of community is likely to be more important, but remains untested.

Surprisingly a lack of trust does not reduce the desire to lift-share in tourism. While trust remains a concern for businesses (see for example, Rose and Wheeler, 2017) and organisations promoting lift-share, our analysis suggests this may not be as significant a barrier as thought. Initial work in the project highlighted a lack of trust as a barrier related to mobile travel collaboration solutions (Dickinson et al., 2017b). In seeking an explanation for these mixed findings, studies in other fields have shown that community participation generates trust (Boeckmann and Tyler, 2002; Brown et al., 2012) rather than trust leading to community participation, which is supported by the analysis in this paper (Figure 2). This finding is significant for generalised and negotiated exchange in lift-share contexts. It suggests that trust is built through the community participation rather than being a precursor to involvement in the community. Therefore developers of lift-share systems need to be mindful of how trust is built through the community.

A key implication for policy and practice is lift-share initiatives cannot be easily established by an external organisation that develops a system and expects a community of users to join. Communities are self-generating. Meanings are derived during use of systems of exchange. It is through use that trust and sense of community are built. It therefore makes sense to implement systems with established communities. Lift-share apps are also likely to have more traction in communities where there are existing patterns of lift-share. In this context the app is a tool to improve lift-share organisation that builds on established habit. Furthermore, as a community of users evolves, systems need to consider how to build trust within the system.

One mechanism to build trust through community participation is the use of peer-to-peer ratings. These are common in online exchange systems and in lift-share communities this gives users an insight into who they are travelling with (for example, BlaBlaCar embed this approach). However, evidence elsewhere (Dickinson et al., 2015) suggests peer-to-peer ratings present a level of discomfort to a geographically localised community of users who

are more likely to meet in future exchanges. Users can be unwilling to rate someone they might meet regularly and could be aware they have been given a negative review by a specific individual. Community scale and context is therefore important. Another strategy is user etiquette which has helped in other forms of community exchange (Nelson and Rademacher, 2009). This can be built through user champions and making visible successful exchanges to other users which help novice users understand how the system operates (Lampinen et al., 2013).

Research is needed to explore in-depth successful lift-share initiatives mediated by mobile apps. The current evidence base is thin and largely anecdotal. There is a need to understand how communities of users emerge and build critical mass and to understand the strategies that might best be leveraged by practitioners seeking to improve peer-to-peer use of private vehicles. Further work is needed to understand the triggers for initial uptake given that theory suggests sense of community and trust are built once users join the community. Recent research in the transport field suggests travel disruptions play a role in transport decisions and these might be harnessed as a positive policy tool (Chatterton et al., 2015; Marsden and Docherty, 2013). Kent et al. (2017) found disruptions specifically lead to uptake of car sharing schemes and there is evidence from BlaBlaCar that travel disruption has influenced uptake of its lift-share system during rail strikes (Rose and Wheeler, 2017). Promoting lift-share systems at strategically opportune moments is likely to lead to greater success. Further research is needed to explore this.

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