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Andrew Duffy

ABSTRACT

When faced with a lack of information, consumers turn to trust to make a decision; but what happens to trust when individuals are confronted with the wealth of data on the Internet? This study evaluates three forms of trust in information-abundant contexts: trust in the site, trust in the reviewers, and a postulated third form, trust-in-self. It looks at the roles of these three forms of trust in the information-rich travel review website TripAdvisor. Two studies of site users, interviews (N= 30) and a survey (N= 237), found trust-in self was highly influential in purchase decision making. Further, even with so much information, consumers sought more; the site is just one source they turn to, and they cross-check among sources.

Scholarly work on trust has long been based on uncertainty or lack of information, in a world where information has usually been scarce. In the face of uncertainty, consumers first gather information, and then if that is insufficient to eliminate the uncertainty, they turn to trust in order to act (Mudambi and Schuff, 2010). Trust is so essential in bridging an information gap that if people were omniscient and could act with certainty, it has been said that there would be no need for trust (Lewis and Weigert, 1985). Now, however, given the abundant supply of information on consumer review websites, omniscience is almost realizable. This new development raises the question of the relative roles of trust-in-others, which focuses on others' competence, benevolence, and integrity (Gefen, Benbasat and Pavlou, 2008), and trust-in-self, which focuses on one's own confidence in decision making using such websites.

If trust-in-others becomes less important, does trust-in-self become more so? This challenges the traditional idea of trust as being directed towards others, and demands the intellectual leap of conflating truster and trustee in some circumstances; but by way of compensation offers a new dimension for research into consumer trust.

This study proposes that in information-abundant contexts, trust-in-self becomes more important than trust-in-others, reflecting a new form of literacy required of the consumer to process the wealth of data online. This runs counter to the more accepted conceptualization of trust as being directed towards another (Lewis and Weigert, 1985; Gambetta, 1988; Mayer, Davis and Schoorman, 1995; Gefen, 2000; Hardin, 2002; Grabner-Kräuter, Kaluscha and Fladnitzer, 2006). However, in the new Internet-enabled paradigm of information abundance, a central element of this existing conceptualization is lacking; thus, this paper suggests that in such circumstances it is helpful to consider how trust is directed towards the self, too.

To examine this new paradigm, I consider the roles of these three forms of trust in the information-rich, travel review website TripAdvisor. While not omniscient, the site is information-abundant, with 320 million reviews of 6.2 million hotels, attractions and destinations (TripAdvisor, 2016). As a result, one dilemma facing consumers is that if they try and process all its hotel reviews for a particular destination, it can overwhelm them. Equally, variance in opinion between reviewers can cause the consumer to consult even more sources to overcome doubts generated by this inconsistency. This is evident on TripAdvisor, where conflicting reviews add to uncertainty. This extends beyond travel. In other industries, Epinions and Ciao.com carry reviews from consumers. Amazon has reviews by amateurs and professionals. Academia is not immune and students share comments about faculty on Ratemyprofessors.com. Even within the industry TripAdvisor is not alone. Online user review sites (called OURS in this paper as they belong to and are made by us) such as Booking.com and Agoda also allow travelers to share opinions, and may be considered more credible than TripAdvisor as the contributor must have booked through the site to write a review, reducing fraudulent reviews.

Today, information on OURS is plentiful; the challenge is sifting through it to find what is relevant, demanding greater cognitive resources which can lead to disorientation (Eveland and Dunwoody, 2000). Such information abundance helps overcome one form of

uncertainty—that of choosing badly—which implies less need for trust in others. But it contributes to another form of uncertainty—that of information overload (Bergamaschi, Guerra and Leiba, 2010)—demanding trust in one’s own abilities to process the information efficiently. It has been observed that ‘the abundance and diversity of such information sources make ... traditional credibility assessment strategies and techniques potentially outdated’ (Metzger, Flanagin and Medders, 2010: 414), so this paper hypothesizes that a wealth of information can overcome uncertainty to a point where trust in others becomes less necessary, and instead trust-in-self becomes a significant factor in decision-making.

Such a change in the conceptualization of trust is important because trust underpins society: ‘Without the general trust that people have in each other, society itself would disintegrate’ (Simmel, 1978: 178-9, cited in Meyerson, Weick and Kramer, 1996); and ‘trust functions as a deep assumption underwriting social order’ (Lewis and Weigert, 1985b). Uslaner (2002: 1) called trust ‘the chicken soup of the social sciences. It brings us all sorts of good things... Yet, like chicken soup, it appears to work somewhat mysteriously.’ Proponents of the social-capital school say that trust brings society together as it allows for transactions even in the face of uncertainty (Putnam, 1995; Stolle, 2001). On the other hand, the self-reliance that emerges when trust is not needed can be associated with a more atomized society: ‘Without such attitudinal predispositions [as trust]... to facilitate social exchange, individuals become isolated and suspicious of other citizens, groups, and government itself and social, economic, and political life functions poorly’ (Smith, 1997: 170). This raises a question: if trust is essential for society, then what happens if lack of information and trust-in-others is replaced by crowd-sourced information abundance, and trust-in-self? This paper takes one OURS—TripAdvisor—as a locus for study of these three forms of trust.

THEORETICAL FRAMEWORK

Uncertainty- or risk-reduction is one reason for consumers to visit TripAdvisor. Risk-reduction is ‘a process by which consumers seek to reduce the uncertainty or consequences of an unsatisfactory decision ... by obtaining additional information’ (Mitchell, Davies, Moutinho and Vassos, 1999: 169). OURS do not remove all uncertainty, however. A consumer faces three risks when using TripAdvisor: first, choosing a less-than-satisfactory

hotel; second, being taken in by a fraudulent review; and third, lacking the skills to differentiate honest from bogus reviews and suitable from unsuitable hotels. Each demands a different form of trust: the first requires trust that the site will provide the information they need (trust in the site); the second requires trust that the writers will behave honorably and with the consumer's interests at heart (trust in the reviewers); and the third requires them to trust their own ability in searching, discriminating, and deciding (trust-in-self).

Trust has traditionally involved a truster and a trustee. Gambetta (1988: 217) states that trust is 'the subjective probability by which an individual A expects that another individual B performs a given action on which its welfare depends'. Others have suggested it is a propensity to trust, 'based upon positive expectations of the intentions or behaviour of another' (Rousseau, Sitkin, Burt and Camerer, 1998: 395). It is not a choice to trust, they say, but rather an underlying psychological disposition. It has been divided into trust in people and trust in systems. Following Lee and Turban (2001) to place trust as social-psychological, the individual within the system, this paper examines two forms of trust-in-others: personal trust in the reviewers and system trust in the site itself (Lewis and Weigert, 1985), following Jeacle and Carter's (2011: 305) concern for 'the importance of both personal and systems trust for understanding the phenomenon that is TripAdvisor'.

Other scholars have questioned whether the Internet has changed trust. For a while, it was argued that trust could only exist between people, but that has been challenged by research into human-computer interaction (Lenzini, van Houten, Huijsen and Melenhorst, 2010). Some propose that websites can be objects of trust, thanks to the intentionality of the actors posting on them (Corritore, Kracher and Wiedenbeck, 2003: 738). Sundar (2007: 89) also states that 'users orient toward computers as autonomous beings instead of as conduits for delivery of pre-programmed content.' Trust has been seen as essentially unchanged when it moves into cyberspace: 'Since trust can mitigate risk, fear and complexity in the offline environment, it is likely that it can do the same in the on-line environment' (Corritore, Kracher and Wiedenbeck, 2003: 738).

If trust is the same online, then so is its opposite: a lack of trust in what is found on the Internet and the people who post it there. As anyone with the will and the technology can post online and much is done anonymously, it can be hard to know what is trustworthy

(O'Mahony and Smyth, 2010). TripAdvisor has been accused of allowing fraudulent reviews (Elliott, 2012; Randall, 2011; Wu, Greene and Cunningham, 2010), and yet the site *is* trusted, according to a 2010 Guardian/ICM survey (Jeacle and Carter, 2011). That an absence of online identities behind OURS can lead to untrustworthiness has been highlighted (Zhang, Lee and Zhao, 2010); although this may be balanced by the aggregation of messages that makes the uncertain provenance of each one less germane. These issues of online trust-in-others led to a first research question: What is trusted on TripAdvisor, and what do consumers trust the site to do for them?

Trust-in-self may appear to be a given—who does not trust themselves? Yet it is not necessarily so. Conversationally, one might hear ‘I trust myself to choose a spouse more than my parents,’ for example, but ‘I don’t trust myself to be civil to Jo’, and ‘Take my car keys; I don’t think I can trust myself to drive tonight’. Trust traditionally has three sub-constructs—integrity, benevolence, and competence (McKnight and Chervany, 2001; Chen and Dhillon, 2003; Gefen, Benbasat and Pavlou, 2008)—and these are features of trust-in-self, too. The first statement, for example, hints at trust in one’s own integrity to do the right thing; the second hints at a lack of benevolence towards self and others; while the third hints at competence and, clearly rather more than one small glass of wine. An individual can trust their own benevolence and integrity towards others and themselves, and their own competencies to bring that benevolence and integrity to bear. As a result, while people may be less likely to consciously question their own integrity, benevolence, and competence as they might question others’, they are still factors in decision making.

Further, individuals may assume they show integrity towards themselves, although this may not always be the case—they may set different standards for others than for themselves, for example (France-Kaatrude and Smith, 1985; Foschi, 2000). People may be benevolent or not towards themselves. Even if they believe they have their own best interests at heart, uncertainty remains as to what those best interests are, as evidenced by millions of smokers who are aware of the health risks (Viscusi, 1991; Denscombe, 2001; Bandura, 2004). Finally, consumers may possess or lack the competence to make a good decision, based on under/overconfidence, inconsistent risk perception, existing path dependencies, resistance to or observance of social norms, faulty logic, misunderstanding of information, age-related

changes in abilities, or inconsistent recall of facts, all of which can lead to imperfect judgment (Bruine de Bruin, Parker and Fischhoff, 2007; Yoon, Cole and Parker, 2009).

Trust-in-self is similar to but distinct from another element of an information search that overcomes uncertainty and leads to action: self-efficacy. Taken from social cognitive theory (Bandura, 1977, 1982, 2001), this is defined as an individual's belief that he or she has the *skills* to complete a task. An individual's self-efficacy belief influences how much effort they expend on a task, and thus influences the outcome. Self-efficacy is protean enough to be put to use in many arenas. It has been generalised (Bandura, 1987) and made very specific (eg. Murphy, Coover and Owen, 1989; Zhu, Chen, Chen and Chern, 2011). Distinguishing it from its many similar counterparts—self-confidence, self-esteem, self-worth, and self-belief—is difficult, and any distinction is likely to be contested. This paper argues that such distinctions can be made, however. In this instance, trust-in-self is separate from but allied to self-efficacy. The latter is more tangible and is based on competencies—how well the individual believes they have the skills to perform a task—while the former is intangible and is based on emotions and attitudes. Self-efficacy is concerned with certainties and competencies; trust-in-self is concerned with these too, but also comes with a more ephemeral sense of one's benevolence and integrity to act in the best interest of oneself and others, and to know what those best interests are—which are based on the confidence that comes with competence. Thus this paper expands the concept of trust to include system trust, individual trust, *and* trust-in-self. This led to a second research question: To what extent do OURS users trust their own skills and judgment to use the site; and to a hypothesis: In an information-abundant environment, trust-in-others will be less important and trust-in-self will be more associated with decision-making.

This paper reports the results of two concurrent studies. One employed interviews with 30 TripAdvisor users, while the other involved a survey ($N = 237$) of regular visitors to the site. Findings of the two data sets are reported separately, and then combined to enhance interpretation (Leech and Onwuegbuzie, 2007). As it can be hard to combine qualitative and quantitative data, this paper used simultaneous integration in which data sets complement each other, rather than sequential integration in which the results of one inform the other (Morse, 1991).

Study 1: Interviews

Thirty subjects were interviewed; all were regular users of the site, recruited from among the social and professional circles of the author and an assistant. Having two researchers helped to counterbalance problems of single-researcher bias in subject selection. Subjects were aged from 22 to 63 ($M = 30$), with a more or less equal split between female (16) and male (14), with children (15) and without (15), and Asian (13)/Western (17). All had used TripAdvisor in the six months before the interview, and self-declared as being familiar with and mostly enthusiastic about the site. The sample was chosen to gain viewpoints from a variety of people, from young students to retired consultants, professors, housewives, administrators, company directors, designers, therapists, and librarians; and with subjects from North America, South-east Asia, India, Europe, and Australia. Such maximum variation sampling (Patton, 2002) was assisted by the cosmopolitan variety of Singapore (Chua, 2003), where the interviews were done. The questions related to the three forms of trust were:

- What do you use TripAdvisor for?
- What do you trust the site to do for you?
- Do you trust the writers to be helpful?
- Do you trust yourself to use the site to get what you want?

Interviews were 20 minutes long, and were semi-structured so they could be compared while still giving freedom for new ideas to emerge. This study took an interpretive, qualitative approach based on guidelines by Leech and Onwuegbuzie (2007) who state that such an approach can offer insight into psychological and cultural practises in a specific context to answer ‘*why* and *how* questions’. The unit of analysis was a statement, ie. spoken words framed by two questions, and each could be coded in multiple ways. At least five examples of each kind of statement were sought in order to substantiate assertions (Berg, 1989, cited in Babbie, 2011).

The texts were analyzed for indicators of each form of trust, taking the inductive grounded theory approach favoured by Strauss and Corbin (1998: 12), in which ‘the researcher begins with an area of study and allows the theory to emerge from the data’. The interviews were first open-coded to allow many concepts to be explored; these were later

reduced with focused coding into broader themes. These themes were subsequently considered in the light of the trust sub-constructs of integrity, benevolence, and competence (McKnight and Chervany, 2001; Chen and Dhillon, 2003; Gefen, Benbasat and Pavlou, 2008). For trust in TripAdvisor, statements that the site offered best judgment by aggregating and applying the ‘law of large numbers’ were taken to indicate people trusted the site based on its integrity. Subjects spoke of the idea that the site represented a community with good intentions, which indicated its benevolence. Statements that TripAdvisor served their needs indicated its competence. For trust in the reviewers, statements that reviewers were friendly, helpful, and sincere all showed perception of their integrity. Subjects also questioned the motives for posting a review, and the validity of critical ‘flaming’ reviews, both of which suggested a concern with the benevolence of the reviewers. And subjects’ ideas of reviewers’ competence was based on whether they could accurately represent their experience; the way they wrote, offering a balanced rather than a one-sided view; and whether their expectations about a hotel were misplaced. Finally, for analysis of trust-in-self, integrity was noted when subjects said they trusted themselves because they were reliable and dependable, and did things with their best judgment to help themselves and others. Benevolence emerged when subjects said they trusted themselves because they had good intentions, were caring and responsive to others, and were well meaning; while competence was shown when they said they trusted themselves have the ability to use the site to achieve their goals.

Study 1: Results

RQ1 concerned site trust and reviewer trust (Lewis and Weigert, 1985). TripAdvisor was trusted to provide up-to-date-information, prices, range of hotels, aggregation of comments, or to help differentiate among hotels. No interview subject indicated wholehearted trust in the site. At best they trusted only certain aspects, and 22 subjects alluded to this. One marker of integrity is giving best judgment, and it was the aggregation or the number of reviews which made the site trustworthy. The facility to limit a search by location, rating, star or price were taken as a marker that the site has integrity as the judgment offered is neutral, based on an algorithm. Eighteen subjects commented that the site was trustworthy because the number of reviews would return a reliable result: ‘I trust they could basically aggregate the comments people have for me,’ and ‘I guess by the law of averages it is more credible because there are more people’. Equally, small numbers of reviews for any hotel were associated with distrust

by three subjects. Benevolence was observed in the idea that the site was a community with good intentions, noted by six subjects, even if there was some doubt: 'I think it likes to project itself as a community of like-minded people giving advice to each other. Whether or not it is that in reality I don't know.' The same number suggested that it had the good intention of suggesting new ideas, variety and choice: 'I also like the fact that it pulls up more boutique hotels that you don't intend to come up with.' Finally, the competence of the site was a decisive factor in generating trust, as it was clearly designed to serve users' needs. Four subjects trusted the site because it saved time; and while three trusted it for its overview that gave a valuable perspective, three also disliked the complexity of the site. The design, interface and colours of the site generated trust among seven subjects, and distrust among four as it was considered too corporate: 'you know what would make me trust it more? If it wasn't so well-designed.' Finally, 13 subjects expressed an active *lack* of trust in the site. 'After seeing all these sites, and especially the ones that are really negative, I sort of shift into a different mode and think that they are using it to get back at something or, you know, like one incident pissed them off.'

Trust in reviewers was less evident, and no one showed absolute trust, for example 'I don't know if I trust them... I don't even know them.' Reviewers' integrity and sincerity was observed by eight subjects who proposed that reviewers are generally friendly, regular people so they approach TripAdvisor assuming that they are sincere; while six subjects took the opposing viewpoint, that it was risky to believe reviews and it was best to be skeptical. Benevolence was often doubted. A frequent theme (five subjects) was to question the motives of the reviewer, or to express skepticism about them, as in 'when I initially start reading, I do assume that everyone is authentic... but then I start thinking, who *are* these people who spend time doing this?' Another four subjects noted that reviewers may not be trusted because they are not benevolent; rather they might be angry and want to punish a hotel: 'There's always someone out with a vengeance like, "I had one bad experience, I'm going to ruin it for them."' For six subjects, competence was based on the reviewer being trusted to write an authentic account of a genuine experience, while honesty was also used as a marker of trustworthiness such as 'I trust that they are being candid and honest with their own experience.' Competence was often evidenced in the way they wrote, such as including details rather than generalities, being balanced rather than biased, and being reassuringly

conversational rather than suspiciously corporate: ‘if a person is really sincere or genuine, you can see from the words that they use, like what they experience, all the details that they write.’ It was also associated with a subject judging that writers are able to express an opinion, have control over what they write, and can report an authentic experience, then they are credible: ‘I certainly would respect the opinion of a first-time traveler with their family, they are hungry, the kids are noisy, there is a huge mess, everyone is crabby, all you want to do is have a hot bath and clean sheets, and you find there is something amiss at the front desk. It’s more credible.’ Not that they were always trusted to be competent. Expectations could be misplaced, which weakens the competence of the reviewer as they simply do not appreciate value for money, or the limitations of a budget hotel; so five subjects dismissed ‘those who are inexperienced and maybe just don’t know what to post, or they have ridiculous expectations about what to expect from the experience.’

RQ2 was concerned with trust-in-self. It asked to what extent consumers using OURS trusted their own skills and judgment. When subjects said they trusted themselves because they were reliable, dependable, and did things with their best judgment, that was taken as a marker of the sub-construct of integrity (McKnight and Chervany, 2001; Chen and Dhillon, 2003; Gefen, Benbasat and Pavlou, 2008). Seven indicated that they had previously experienced success when using the site, for example ‘most of the time I pick pretty good accommodation. In fact, I think 90% I’m happy with and maybe 100%.’ Five said that the site allowed them to get a good deal where price and quality met, suggesting best judgment: ‘it’s sort of like the holy grail, you are on a journey and you want to the best you can get for this journey.’

Benevolence emerged when subjects said they trusted themselves because they had good intentions, were caring and responsive to others, and were well meaning (McKnight and Chervany, 2001; Chen and Dhillon, 2003; Gefen, Benbasat and Pavlou, 2008). First, 14 of the subjects had a clear idea of what they wanted, which helped them trust their own judgment, with statements such as ‘I’ve spent so many years traveling that I know what I am looking for.’ Three subjects, on the other hand, said that they did not know quite what they wanted, and as a result could not trust their own judgment: ‘I probably would be concerned about my opinion not being as good... I usually don’t have very steadfast opinions when I go somewhere.’ Five others noted that trust-in-self would be compromised if they had to

accommodate other travelers in the decision-making process: ‘If I am buying a trip for myself then yes, if I knew enough to make a right decision for myself. But if it was a lot of us going to India, then it is a lot more complex because a lot of us have very different needs, and so *do* I trust myself to make a decision?’

Trust-in-self includes competence, so that relying on one’s own judgment by checking against other sources and increasing the information available was a major factor mentioned by 14 of the 30 subjects: ‘I am not using it by itself, I am cross-referencing it with any other sources of information that I can get.’ This was one of the most consistent points made, and it places any trust in TripAdvisor in perspective: Users do not trust it to give them the information to choose a hotel. Rather, it fits into a wider search, and they trust themselves to make that search. Their ability to analyse was also used as a marker of trust-in-self: ‘I consider myself to be knowledgeable, discerning with information,’ and ‘I read through and analyse the comments and so I suppose I make up my own judgment.’ Another form of competence involved subjects’ analysis of whether reviewers had similar tastes as them, which would indicate how relevant their opinions would be: ‘I like to analyse it a bit, and go into more details, and think about the person who wrote this, and then I would look at their photographs... I would think maybe they are looking for something different from me, maybe they are just being fussy.’ Seventeen of the subjects specifically mentioned that they analysed the reviewers based on age, traveling behavior, nationality, life stage or budget, such as ‘when I read a review, I always try to find out where the person is from. If it’s a Singaporean, then I go, oh OK, because I can sort of gauge what a Singaporean expects.’ Not everyone showed this trust-in-self, however, and five subjects said that they doubted their ability to tell good reviews from bad, or fake reviews from honest: ‘most of the time, I can see, “This does not sound right...” I wouldn’t say definitely I will be able to, but yeah I can sort of see it.’

Study 1: Discussion

Consumers trusted TripAdvisor to help them, but only insofar as they trusted themselves to use it, particularly by comparing it with other sources. Interview subjects were cautious in trusting the site, using phrases such as ‘I *guess*’, ‘they could *basically* aggregate’ and ‘I’m *skeptical*’. The site helped them achieve their goals and they respected it for that, but pure trust was never evident. The site would help them overcome one form of risk, that of

choosing a bad hotel through lack of information; but it brought a secondary risk, the surfeit of information. This raises the question of what consumers *do* that engages their trust-in-self. One common topic in the interviews was that they compared information from the site against sources which included other sites, friends, and the media. In other words they trusted their own skill to gather data and analyze it more than trusting someone else to provide information. Another was analyzing the reviewers to see if they had similar tastes and interests, as an indicator of their salience. This demanded trust in one's own ideas of what one wanted, as well as trust in one's ability to discern reviewer type and motive: 'I guess it depends because certain people writing certain reviews are in different socio-economical standards from myself. For example, they might be families with like eight kids, which doesn't reflect on myself and my girlfriend.'

This suggests that trust-in-self plays a greater role than trust-in-others when consumers use information-abundant sources, although not altogether replacing the latter. Omniscience does not remove the need for trust (Lewis and Weigert, 1985): it simply demands another form of trust as one risk (inadequate information) is replaced by another (excessive information). OURS may not be trusted, but the consumers' information self-sufficiency skills, which allow them to sift through many sources, fit them into existing mental models, reduce them into useable amount of information, and then act on them, *are*.

Such qualitative data can 'put meat on the bones' of quantitative data (Bryman, 2006: 106), so a survey was also done as a 'skeleton'. Jick (1979: 602) states that 'given the basic principles of geometry, multiple viewpoints allow for greater accuracy. Similarly, organisational researchers can improve the accuracy of their judgments by collecting different kinds of data bearing on the same phenomenon', so at the same time as conducting the interviews, I ran a survey of TripAdvisor users which included the issue of trust.

Study 2: Survey

A paper and online survey ($N = 237$) gathered data from site users. Respondents were recruited in two waves; first through students and their families in the researcher's university; and second through a snowball sample using SurveyMonkey for a more global reach. Respondents were primarily female (58%), Asian (66%), and aged under 40 (67.2%).

Almost half had traveled once or twice in the previous year (46%) while around a third had traveled twice that amount (35%). One third had used TripAdvisor more than 10 times in the previous year (35.7%) while a similar number had used it only once or twice (33.2%). The survey examined three forms of trust. All measurements were adapted from pre-tested survey instruments, reported in Table 1 with the range of Cronbach's alphas for their measurements. All were well above the .50 minimum acceptable alpha coefficient (Nunnally, 1978).

Table 1: Sources of measurement items with alphas for trust survey

Author(s)	Year	Topic	α
Bart, Shankar, Sultan and Urban	2005	Drivers and role of online trust	.61 - .92
Dickinger	2011	Trustworthiness of online channels	.70 - .85
Hsu and Chiu	2004	Internet self-efficacy scale	.74 - .97
Hsu and Huang	2011	Internet self-efficacy scale	> .90
Kim and Kim	2005	Online purchasing risk and trust	.72 - .92
McKnight, Chaudhury and Kacmar	2001	Trust measures for e-commerce	.70 - .96
Roehl and Fesenmaier	1992	Risk components of vacation travel	.70 - .78

Table 1: Sources of measurement items with alphas for trust survey

Each form of trust was measured with nine questions, using a five-point Likert scale where 1 = 'strongly disagree' and 5 = 'strongly agree' (Table 2). Trust in TripAdvisor reviewers included three measurements of how highly respondents considered reviewers' integrity—that they would be reliable, honest, and sincere; their benevolence—that they would have good intentions, have the respondent's interests at heart, and would be well-meaning; and their competence—that reviewers would know about hotels, could describe them, and were competent at providing information. Table 2 shows the scale had a good internal reliability (Cronbach's α .90). Similarly, trust in TripAdvisor as a site included three measurements of how highly respondents considered the site's integrity—that it would be sincere and serve with its best judgment; its benevolence—that it would have good intentions, put customers' interests first, and be well-meaning; and its competence—that it could provide

information, it knew what travellers want, and would serve people well. The scale had a good internal reliability (α .91).

Measuring the third form of trust demanded a departure from existing scales, in keeping with a fresh conceptualization of trust. While one can discriminate integrity and benevolence in other people, it is hard to be so clear-eyed about oneself. Thus measurements for trust in other people and systems could not be easily adapted for trust-in-self. For example, a direct question such as ‘Do you expect yourself to have good intentions/be well-meaning?’ might bewilder the subject and bias a score towards the upper register of a Likert scale. Instead, this study used Bandura’s guidelines for self-efficacy scales (2006) and adapted items from two scales for Internet self-efficacy (Hsu and Chiu, 2004; Hsu and Huang, 2011). These items were considered suitable because they asked respondents about their confidence in searching online, their sense of control, interaction with others online, how they compared information, and the confidence of knowing what they intended to do on a website. The final nine-item scale departed from skills-based self-efficacy scales by including more intangible attitudes, such as their will to help others, their instincts about fraudulent postings, and their desire to help themselves and others by getting the best price and the best hotel. Three integrity-related factors asked about recognition of fake reviews which needed personal integrity to identify (M 3.24, SD 1.1), respondents’ self-awareness of what was relevant to them (M 3.8, SD 1.0), which could thus allow them to trust themselves to identify the information which was pertinent to their goals (M 3.77, SD .99). Three factors related to benevolence concerned the respondent’s will to interact with and help others (M 3.47, SD 1.18), and their diligence in finding the best for themselves and others by comparing prices (M 3.78, SD 1.05) and sites (M 3.83, SD 1). Finally, the three factors related to competence concerned respondents’ capabilities to access the site (M 4.38, SD .93), search it (M 4.13, SD .89), and choose a hotel (M 3.76, SD .98). The resulting nine-item scale had a good internal reliability (α .91). The importance to the respondents of each trust measurement is reported in Table 2.

Table 2: Likert-type scales of three forms of trust

Trust in TripAdvisor REVIEWERS (Likert scale 1-5) α = .90	Mean	SD
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Integrity		
Reviewers are likely to be reliable	3.49	.77
I do not doubt the honesty of reviewers	3.26	.89
I can count on the reviewers to be sincere	3.42	.79
Benevolence		
I expect the reviewers have good intentions	3.62	.72
I expect the reviewers are well-meaning	3.57	.74
I expect the reviewers have my interests at heart	3.19	.87
Competence		
The reviewers are competent information providers	3.33	.77
The reviewers can accurately describe their stay	3.45	.78
The reviewers know about staying in hotels	3.40	.75

Trust in TripAdvisor as a WEBSITE (Likert scale 1-5) $\alpha = .91$	Mean	SD
Integrity		
I believe the site is sincere in helping me	3.76	.66
I do not doubt the integrity of the site	3.62	.79
I believe the service given by the site is done with their best judgment	3.76	.64
Benevolence		
I expect that the site has good intentions towards me	3.71	.65
I expect that the site puts customers' interests before its own *	3.30	.80
I expect that the site is well meaning	3.77	.60
Competence		
The site is a competent information provider	3.87	.63
The site really knows what travellers want	3.63	.65
The site is able to serve the readers well	3.79	.57

Trust in SELF to use TripAdvisor (Likert scale 1-5) $\alpha = .91$	Mean	SD
Related to Integrity		
Distinguish between honest and deceptive reviews	3.24	1.10
Identify if a review on the site is relevant to me	3.80	1.00
Use the different kinds of information on the site	3.77	.99
Related to Benevolence		
Exchange information about hotels with other users	3.47	1.18
Compare prices of a hotel on different sites	3.78	1.05
Compare reviews of a hotel on different sites	3.83	1.00
Related to Competence		
Visit the site	4.38	.93
Look for information about hotels using the database	4.13	.89
Choose a hotel based on what I see on the site	3.76	.98

*Removed in factor analysis for scoring less than .60 in factor analysis

Table 2: Likert-type scales of three forms of trust

The survey also measured what respondents intended to do after going to TripAdvisor: whether they would visit it again (M 4.14, SD .71), go to another site to compare information against what they had found there (M 3.84, SD .85), and whether they would book a hotel after using the site (M 3.51, SD .89). The aim was to observe correlations between respondents' trust while using the site, and their intentions afterwards. The survey was pre-tested on a class of travel journalism students and some items were modified to better reflect the constructs they measured. One measurement scoring less than .60 in factor analysis using Varimax orthogonal rotation was removed, and the remainder were reduced to scale variables with reliability $\alpha > .90$, then standardized before analysis.

Study 2: Results

The survey data was analyzed for descriptive statistics and using linear regression analysis to observe correlations between the three forms of trust (as independent variables) and the three intentions to act after using the site (as dependent variables). In simple descriptives, the mean score out of five was highest for trust-in-self (M 3.80, SD .83) above trust in the site as a whole (M 3.68, SD .51) and trust in the reviewers (M 3.41, SD .59), suggesting that any trust present is more in the self than the site, and more in the site than the reviewers. In terms of intention to act after visiting TripAdvisor, respondents were most likely to go to the site again (83.6% strongly/agree, M 4.15, SD .69) followed by comparing it against other sources (71.0% strongly/agree, M 3.85, SD .38) but least likely to book a hotel (55.1% strongly/agree, M 3.52, SD .88). Linear regression analysis showed that trust-in-self was consistently the most significant factor (Tables 3-5), a result that coincides with the interview data. In each case, VIF values to see if the data met the assumptions of collinearity indicated that multicollinearity was not a concern. Data also met assumption of independent errors (Durbin-Watson 1.79; 1.9; 1.84).

The dependent variable of intention to visit TripAdvisor (Table 3) again showed strong association with site trust (β .26, $p < .001$) and trust-in-self (β .25, $p < .001$); but none with trust in the reviewers, although the latter was slightly evident using Pearson's product

moment coefficient ($r=.21$, $p < .001$, $N 237$). The variables here explained a good part of the variance, at 37%. Taken together, these suggest that there is no clear link between intention to visit the site again and trust in the reviewers; and only a small link with trust in the site itself. Rather, the strongest link is with trust-in-self, concurring with the interview data and giving some support for the hypothesis.

*Table 3: Linear regression analysis and Pearson's product moment correlation
for trust and intention to visit TripAdvisor again*

Intention to visit TripAdvisor again in the future					
	β		VIF	r	
Trust in Reviewers	-.09		1.80	.21	**
Trust in the Site	.26	***	2.03	.42	**
Trust-in-self	.41	***	1.34	.52	**
R-square	.37				
F-change	26.79	***			

* $p < .05$, ** $p < .01$, *** $p < .001$

*Table 3: Linear regression analysis and Pearson's product moment correlation
for trust and intention to visit TripAdvisor again*

The dependent variable of intention to compare TripAdvisor against other sources (Table 4) showed no association with either form of trust-in-others, but a strong correlation with trust-in-self ($\beta .25$, $p < .001$), although accounting for just 6.0% of variance. Neither form of trust-in-others correlated to the intention to compare against other sources. However, this did show a positive correlation with trust-in-self ($r .25$, $p < .001$, $N 237$); once again, trust-in-self was more statistically significant than trust-in-others, once again supporting the hypothesis.

*Table 4: Linear regression analysis and Pearson's product moment correlation for trust and
intention to compare TripAdvisor against other sources*

Intention to compare TripAdvisor against other sources

	β	VIF	r
Trust in Reviewers	-.12	1.80	.02
Trust in the Site	0	2.03	.05
Trust-in-Self	.25 **	1.34	.21 **
R-square	.06		
F-change	3.0 *		

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4: Linear regression analysis and Pearson's product moment correlation for trust and intention to compare TripAdvisor against other sources

The dependent variable of intention to book a hotel (Table 5) showed slight associations with trust in the reviewers ($\beta .14$, $p < .05$) and in the site ($\beta .16$, $p < .05$), and a stronger one with trust-in-self ($\beta .19$, $p < .01$), giving the weakest support so far for the hypothesis. These variables accounted for a reasonable 21% of variance. Pearson's r , meanwhile, gives similar weight to all three forms of trust, with trust in the site having a slightly stronger correlation ($r .33$, $p < .05$, $N 237$). From a consumer behavior perspective, this might be considered the most significant intention; and here trust was shared between trust-in-others and trust-in-self.

Table 5: Linear regression analysis and Pearson's product moment correlation for trust and intention to book a hotel

Intention to book a hotel after using TripAdvisor

	β	VIF	r
Reviewer Trust	0.14 *	1.8	0.29 **
Site Trust	0.16 *	2.03	0.36 **
Self-Trust	0.19 **	1.34	0.33 **
R-square	0.21		
F-change	12.4 ***		

* $p < .05$, ** $p < .01$, *** $p < .001$

*Table 5: Linear regression analysis and Pearson's product moment correlation
for trust and intention to book a hotel*

Study 2: Discussion

Overall, trust-in-self was more consistently a factor in a decision to act than either form of trust-in-others. Table 3 suggests that the uncertainties inherent in the site are adequately countered by respondents' confidence in their abilities and intentions when using the site—which may be expected given that the sample were regular users of TripAdvisor. That confidence to use the site extends into Table 4, and the intention to look at other sources too, as this replicates the search process which they have already shown themselves to be successful at. Yet trust is weaker here, which also suggests that uncertainty is still a significant factor—and may thus be expected to provoke a further search. The respondents do not trust the site enough to act, so they search for more data. Even the information abundance of TripAdvisor is not sufficient. It may be that respondents see it as a single source rather than as a repository of collective intelligence; and therefore they wish to be sure that another source will not give better data. Or they may instinctively not wish to rely on any one source; even if multiple sources say the same thing, they prefer to rely on their own skills at assessing information, rather than any source doing it for them. They trust themselves, not any single source. Additionally, trust in one's abilities to use the site may not extend to trust in one's own judgment after using it (Table 5), which implies that trust-in-self is context-specific, just as trust-in-others is. Trust can be specific and based on judgments of expertise or sincerity (Green, 2007), so that one might trust a dentist to perform root-canal work, but would not extend that same level of trust to, say, a tabloid journalist. There is a sliding scale of trust-in-self: it is high for the repeated viewing of the site, because they have demonstrated the ability; it is lower for the slightly different task of ratifying information on TripAdvisor with other sources; and it is at its lowest for the signally different task of choosing a hotel, in which case the trust is shared with fellow travelers as well.

CONCLUSION, LIMITATIONS, FUTURE DIRECTIONS

This study compared the roles of three forms of trust in the information-abundant OURS TripAdvisor in their association with intentions to act after using the site. Both data sets suggest that trust in reviewers is limited, although it contributes to overall trust in the site as a whole. A more important factor was trust-in-self which was a better predictor of intention to act after going to TripAdvisor, and was the most significant feature of the interviews. This raises conceptual issues around trust, as this study indicates that different forms of trust would become predominant under different circumstances.

A limitation of this study is that it takes information abundance only as a context rather than as a variable; future studies could compare the three forms of trust in an information-poor versus an information-rich setting. A second limitation is that, as in any interpretive, grounded-theory-based study, it is possible to contest the interpretation of the interview data and place it in an alternative framework. Yet there are significant similarities in attitudes towards trust-in-self in evidence in both data sets. Another limitation lies in the subjects. While care was taken to achieve a maximum-variation sample (Patton, 2012), it is possible that a different sample could offer different viewpoints. It also relied on self-recollection, and follow-up studies might better observe subjects as they actively search using TripAdvisor. Fourth, an online survey is open to self-selecting bias, so follow-up studies could work more closely with OURS' management to secure more statistically satisfactory samples. Even with such samples, however, results would not necessarily be applicable to all travelers, much less to all online information-searchers, as TripAdvisor regulars are likely to be more independent minded than tourists who look for pre-planned packages, and to have greater trust-in-self.

Often included under the label of 'crowdsourcing', OURS reflect a democratization of information, a greater scepticism of the expert, and a shift away from authority towards the amateur (Jeacle & Carter, 2011) towards a 'reliability approach' of information self-sufficiency (Lankes, 2008: 106). This information self-sufficiency is an oft-touted benefit of Web 2.0 where 'the notion of celebrating the "self" is becoming an increasingly prevalent and popular part of digital media' (Sundar, 2008: 85). This may have bigger implications beyond the Internet and 'society may soon be at this inflection point in terms of how people... identify credible information, abandoning traditional methods for determining credibility that are based on authority and hierarchy for digital tools and new network approaches' (Lankes, 2008: 101).

This research emphasises the theoretical value of including trust-in-self as a factor in consumers' information searches on OURS. Measurements for trust-in-self, which is observed and described here but not empirically proven, need to be operationalized and validated. Doing so opens up new avenues for research into online purchasing behavior when the consumer must assess a large amount of information. Some choose not to, relying on trust-in-others by using only the aggregated score to choose a product (Bart, Shankar, Urban and Sultan, 2005; Rabanser and Ricci, 2005; Metzger, Flanagin and Medders, 2010). This may demonstrate higher trust-in-others and lower trust-in-self. Other consumers will spend hours looking at all options and trusting in their own skills to aggregate it. If information self-sufficiency is to be an increasing feature of online consumer choice, then it is helpful for online retailers to consider how different forms of trust affect different behaviors. Are there associations between personality types, age, gender, or other demographics that correlate with reliance on different forms of trust? For e-commerce, site design and other tactics that increase trust-in-self may increase purchase decisions.

In terms of theory, if trust is to be extended beyond relationships with others and into self-perception, it raises questions of self-awareness (how much are consumers aware of their levels of trust-in-self?) and cognition (is trust-in-self primarily a conscious or unconscious phenomenon?); as well as the interplay between the three forms of trust (how much does trust-in-self influence trust on sites and reviewers, for example, and in what way?). This joins with Salo and Karjaluoto (2007) who looked at external and internal factors that affect trust among consumers in online environments. Within the traditional sub-constructs of trust, awareness of capabilities and competencies may be clear for a consumer. Yet assessing trust in one's own benevolence or integrity, having one's own best interests at heart, would suggest a cognitive process of analysis that may not be present in all consumers.

Finally, including trust-in-self in future studies is likely to alter the relative significance ascribed to inter-personal trust and system trust, which have been the bedrock of many analyses (eg. Lewis and Weigert, 1985; McKnight, Choudhury and Kacmar, 2001; Jeacle and Carter, 2011). Such an approach may not be relevant in situations where trust is overwhelmingly in others. But it is germane for consumers interacting with OURS. Trust-in-others is effective when information is limited; trust-in-self becomes effective when information is abundant.

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