Filieri R. [What makes an online consumer review trustworthy?](#). *Annals of Tourism Research* 2016, 58, 46–64.

Copyright:

© 2016. This manuscript version is made available under the [CC-BY-NC-ND 4.0 license](#)

DOI link to article:

<http://dx.doi.org/10.1016/j.annals.2015.12.019>

Date deposited:

23/08/2016

Embargo release date:

27 February 2018

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International licence](#)

Manuscript Number: ATR-D-15-00053R4

Title: What makes an online consumer review trustworthy?

Article Type: Full Length Article (6000 - 9000 words)

Keywords: Electronic word-of-mouth; online consumer reviews; grounded theory; untrustworthy reviews; trustworthy reviews; credibility theory.

Corresponding Author: Dr. raffaele filieri, Ph.D.

Corresponding Author's Institution:

First Author: raffaele filieri, Ph.D.

Order of Authors: raffaele filieri, Ph.D.

Abstract: Online consumer reviews (OCRs) are increasingly used by consumers to make informed decisions about tourism-related products. However, there is an increase in concern about the level of trustworthiness of OCRs. As yet, little is known about how consumers assess trustworthiness and untrustworthiness of OCRs. This study aims to fill this gap by using a grounded theory approach based on 38 interviews with users of OCRs. Results show that consumers primarily use cues related to the message content and style and review extremity and valence to assess trustworthiness. Findings indicate that moderating variables such as consumer involvement and experience as well as the type of website affects the way consumers assess trustworthiness. Reviews perceived as untrustworthy are discounted by consumers.

Author Biography

dr. Raffaele Filieri received his Ph.D. from Università Roma Tre and is Senior Lecturer in the Marketing, Operations and Systems Group at Newcastle University Business School, Newcastle University. His research interests revolve around e-tourism topics such as e-word of mouth and travelers behavior. His research has appeared in *Tourism Management*, *Journal of Travel Research*, *Journal of Business Research*, *Industrial Marketing Management*, *Transportation Research Part E*, *Journal of Knowledge Management*, *Expert Systems*, *Marketing Intelligence & Planning* and many more.

Title Page

What makes an online consumer review trustworthy?

Author Name – Dr. Raffaele Filieri

Author affiliation - Newcastle University Business School, Newcastle
University, 5 Barrack Road, NE1 4SE, Newcastle Upon Tyne, United
Kingdom

Corresponding Author's Email – filieri.raffaele@gmail.com

Mobile number – 0044- (0) 191 227 3334

Highlights

The current study:

1. explores how consumers process information from online consumer reviews;
2. explores how consumers assess trustworthiness of online consumer reviews;
3. is based on interviews with 38 users of online reviews having various backgrounds;
4. develops a new theoretical framework to explain perceived review trustworthiness.

What makes an online consumer review trustworthy?

Abstract

Online consumer reviews (OCRs) are increasingly used by consumers to make informed decisions about tourism-related products. However, there is an increase in concern about the level of trustworthiness of OCRs. As yet, little is known about how consumers assess trustworthiness and untrustworthiness of OCRs. This study aims to fill this gap by using a grounded theory approach based on 38 interviews with users of OCRs. Results show that consumers primarily use cues related to the *message content and style* and *review extremity* and *valence* to assess trustworthiness. Findings indicate that moderating variables such as consumer involvement and experience as well as the type of website affects the way consumers assess trustworthiness. Reviews perceived as untrustworthy are discounted by consumers.

Keywords Electronic word-of-mouth; online consumer reviews; grounded theory; untrustworthy reviews; trustworthy reviews; credibility theory.

1. Introduction

Online consumer reviews (OCRs) are becoming increasingly popular among travel consumers worldwide who read them to make informed decisions about products and services (Filieri & McLeay, 2014; Litvin, Goldsmith, & Pan, 2008). Websites like TripAdvisor, Yelp, Open Rice have changed the way consumers decide where to go, what to see and do on holiday, where to eat, and so on.

1 Research has established that OCRs influence consumers' decisions (Filieri & McLeay,
2 2014), consumer awareness and attitudes towards hotels (Vermeulen & Seegers, 2009), and
3
4 product sales in the tourism industry (e.g. Ye, Law, & Gu, 2009).
5
6

7
8 The topic of trustworthiness of online reviews has acquired particular relevance in the last
9
10 years considering that the mass media all over the world frequently document scandals in the
11
12 online reviews industry, especially in the tourism sector, revealing the practice of some
13
14 managers of posting promotional reviews about their business and offering discounts or
15
16 freebies to consumers in exchange for glowing reviews (Smith, 2013).
17
18
19
20

21 It has been suggested that the rise of promotional reviews requires an in-depth investigation
22
23 of consumer perceptions of trustworthy and untrustworthy content in online reviews from an
24
25 academic perspective (Cox, Burgess, Sellitto, & Buultjens, 2009; Yoo & Gretzel, 2009).
26
27

28 However, most of the existing studies in electronic word-of-mouth (e-WOM) adopt
29
30 quantitative methods and focus on source credibility and how it affects consumer decisions
31
32 (Cheung, Luo, Sia, & Chen, 2009; Park, Xiang, Josiam, & Kim, 2014; Xie, Miao, Kuo, &
33
34 Lee, 2011).
35
36
37

38
39 Thus, there is a dearth of studies that use qualitative methods to inductively explore consumer
40
41 information processing of online reviews (Cox et al., 2009; Hernández-Méndez, Muñoz-
42
43 Leiva, & Sánchez-Fernández, 2013; Papathanassis & Knolle, 2011) and even fewer studies
44
45 have attempted to investigate how consumers assess credibility, trustworthiness and
46
47 deception in e-WOM (Cantallops & Salvi, 2014; Yoo & Gretzel, 2009). The present study
48
49 aims to fill this gap and to answer the following research question: What makes OCRs
50
51 trustworthy vs. untrustworthy in e-WOM communications?
52
53
54
55
56
57
58
59
60
61
62
63
64
65

1 In order to acquire an in-depth understanding of the phenomenon under investigation and to
2 inductively develop an empirically grounded theory (Glaser & Strauss, 1967), this study
3
4 adopts a qualitative method of investigation based on interviews with users of consumer
5
6 review websites.
7
8
9

10 The findings of this study are expected to have several theoretical and practical implications.
11
12 From a theoretical point of view, this study contributes to understanding travellers'
13
14 information processing of OCRs as well as to knowledge on consumer perception of
15
16 trustworthy and untrustworthy reviews. By doing so, the study advances credibility theory in
17
18 online settings. This research has practical implications for managers of accommodation and
19
20 restaurants, for consumer review websites, and potentially for companies that develop
21
22 software to detect fraud in OCRs.
23
24
25
26
27
28
29
30
31

32 **2. Literature Review**

33 *2.1 e-WOM*

34 e-WOM refers to 'any positive or negative statement made by potential, actual or former
35
36 consumers about a product or company, which is made available to a multitude of people and
37
38 institutions via the Internet' (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004, p.39).
39
40
41

42 Consumer reviews and ratings are the most accessible and prevalent form of e-WOM
43
44 (Chatterjee, 2001). OCRs are one-way asynchronous communications between one reviewer
45
46 and many readers (one-to-many communication) (Litvin et al., 2008). OCRs can be defined
47
48 as any positive, negative or neutral comment, rating, ranking of a product, a service, a brand,
49
50 or a person supposedly made by a former customer and that is shared with other consumers in
51
52 an unstructured format such as a blog post or in a more structured format such as consumer
53
54
55
56
57
58
59
60
61
62
63
64
65

1 reviews published on an independent consumer review website (e.g. TripAdvisor.com), third-
2 party e-commerce website (e.g. Booking.com), or corporate website (e.g. Thomson.co.uk).
3

4
5 Tourism scholars have dedicated much attention to travel-related reviews, for example
6
7 showing the influence that they have on hotel sales (e.g. Ye et al., 2009), on how they affect
8
9 consumer awareness and attitude towards hotels (Vermeulen & Seegers, 2009), and consumer
10
11 purchasing intentions (Filiari & McLeay, 2014; Vermeulen & Seegers, 2009). Researchers
12
13 have also investigated the antecedents of perceived review helpfulness (Park & Nicolau,
14
15 2015), and the use and importance of OCRs at different stages of the trip planning process
16
17 (Gretzel, Yoo, & Purifoy, 2007). Although these studies prove that consumer travel reviews
18
19 have an impact on consumer behaviour there is currently little research on how consumers
20
21 assess trustworthiness and deception in OCRs (Cantalops & Salvi, 2014; Cox et al., 2009;
22
23 Yoo & Gretzel, 2009).
24
25
26
27
28
29
30

31 Trustworthiness is a component of the credibility construct and is defined as “a trustor’s
32
33 expectations about the motives and behaviour of a trustee” (Doney & Cannon, 1997, p.21). A
34
35 trustworthy review can be defined as a review that is perceived by the reader as the honest,
36
37 sincere, truthful, and non-commercial opinion of a customer who has experienced a product
38
39 or a service. Deceptive or promotional reviews can be equated to reviews that are perceived
40
41 as untrustworthy, sponsored or fake. Promotional reviews – also known in literature as
42
43 deceptive opinion spam – are defined as ‘fictitious opinions that have been deliberately
44
45 written to sound authentic’ (Ott, Cardie, & Hancock, 2012, p. 309). A promotional review
46
47 can be written by the owner/manager, by staff members or by any individual who has
48
49 received an incentive (e.g. money, freebies, and discounts) for writing a glowing review as if
50
51 they were customers. Promotional reviews are also written to give an unfair view of some
52
53
54
55
56
57
58
59
60
61
62
63
64
65

1 products/services/businesses so as to influence the consumers' perception of the products'
2 reputation (Dellarocas, 2006).
3

4
5 The relevant literature on manipulated consumer reviews for promotional activity is in its
6 infancy (Hu, Bose, Koh, & Liu, 2012; Jindal & Liu, 2008; Ott et al., 2012; Yoo & Gretzel,
7 2009). For instance, scholars have investigated when and for what type of vendor fake
8 reviews are more likely to appear (Hu et al., 2012), while tourism scholars have attempted to
9 identify the characteristics of deceptive reviews through textual analysis (Ott et al., 2012;
10 Yoo & Gretzel, 2009). Although it has been suggested that more research is needed on
11 review deception on aspects regarding the source as well as the text of reviews, very few
12 studies have explored consumer perception of trustworthiness and deception in OCRs
13 (Cantalops & Salvi, 2014; Yoo & Gretzel, 2009). This study aims to fill these gaps by
14 providing an in-depth understanding of consumer perceptions of trustworthy vs. deceptive
15 content and reviewers.
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

36 *2.2 Credibility Theory*

37
38
39

40 Credibility is a complex and multifaceted concept whose two main source-related
41 components are trustworthiness and expertise (Wathen & Burkell, 2002). Credibility results
42 from an interaction of source characteristics (e.g. expertise, trustworthiness, labels,
43 reputation), message characteristics (e.g. internal consistency, quality, and plausibility),
44 receiver characteristics (e.g. cultural background, motivation, involvement, previous beliefs)
45 and the media (e.g. design features of the medium such as usability and ease of navigation)
46 (Wathen & Burkell, 2002).
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Online trust is considered as a main influencer of consumer intention to use and purchase from e-commerce websites (e.g. Bart, Shankar, Sultan, & Urban, 2005). This study focuses on trust towards OCRs, a form of e-WOM also known in literature as user-generated content. Below we review the e-WOM literature on source and message credibility.

2.2.1 Source credibility and trustworthiness

Source trustworthiness refers to the consumer perception that a source of communication is reliable, sincere, and honest, while source credibility derives from the consumer perception of the knowledge, skills or expertise possessed by a source in a specific domain (Ohanian, 1990). Consumers often depend on experts or on unbiased sources when they lack knowledge of a product or service. Source credibility and trustworthiness have been found to strongly affect customers' opinion change and acceptance of source messages in offline WOM (Brown & Reingen, 1987; McGinnies & Ward, 1980).

Research in e-WOM has investigated the role of source credibility in consumer decisions and found mixed results. For instance, Cheung, Lee, and Rabjohn (2008) found that source trustworthiness and expertise do not influence information adoption in a Chinese food community, while in another study on travel and computational fluid dynamics communities the perceived credibility of the source was found to affect information adoption decisions (Zhang & Watts, 2008). In a Chinese online community (MyETone), Cheung et al. (2009) found that source credibility affects e-WOM perceived credibility, and Yoo, Lee, Gretzel, and Fesenmaier (2009) conclude that perceived expertise and trustworthiness (source credibility) of reviewers are significant predictors of trust in travel-related review websites. In these studies, source trustworthiness in e-WOM is mainly measured by using pre-existing items that were developed to measure source credibility in offline WOM. Moreover, such a scale

1 integrates the two components of credibility (e.g. McGinnies & Ward, 1980), without
2 disentangling their effects.
3

4
5 Unlike offline WOM, in which communication between a source and a receiver is based on
6 face-to-face, synchronous interactions; in e-WOM communications the message is posted on
7 an online platform often by an anonymous source and read by several thousands of readers at
8 different points in time after its publication. Moreover, the source and the receiver often have
9 no direct and prior relationships and this may hinder the possibility of inferring the
10 trustworthiness of a source as trust develops over time and repeated interactions. However,
11 tourism scholars explain that consumers may use personal identifying information (PII),
12 which are cues consumers identify within an online setting, for assessing source credibility
13 (Xie et al., 2011). They assume that good reviewers would disclose personal information and
14 found that some PII (name, state of residence, and date of stay) affect source credibility. Park
15 et al. (2014) found that the reviewer's self-disclosed travel interest and geographical location
16 (PII) affects credibility judgment of travel reviewers. In these studies, scholars measure the
17 influence of some PII while neglecting others and they also fail to investigate whether
18 consumers use such PII when they process information from OCRs, and if they use them to
19 assess reviewer's trustworthiness.
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 Thus, it emerges that an in-depth investigation into consumer information processing would
44 be helpful in understanding how consumers assess source trustworthiness in online
45 environments (Cantallos & Salvi, 2014). So a research question arising is:
46
47
48
49
50

51 *RQ1: What makes a reviewer trustworthy vs. untrustworthy in consumers' eyes?*
52
53
54
55

56 *2.2.2 Message credibility* 57 58 59 60 61 62 63 64 65

1 In the online environment users may create fully formed impressions of others based on the
2 linguistic content of electronic messages (Brown, Broderick, & Lee, 2007), which implies
3
4 consumers analyze the content of a consumer review to assess trustworthiness. One of the
5
6 most disputed issues currently surrounding the impact of user-generated content on consumer
7
8 behavior is the extent to which consumers trust the information that is posted on user-
9
10 generated content websites (Cox et al., 2009), however, little research has explored this issue.
11
12 For instance, Cheung et al. (2009) investigate the determinants of e-WOM perceived
13
14 credibility in China and found that source credibility, confirmation of prior belief,
15
16 recommendation consistency, recommendation rating, and argument strength influence
17
18 perceived e-WOM review credibility. Qiu, Pang, and Kim (2012) used experiments with
19
20 students and found that a conflicting aggregated rating decreases review credibility and
21
22 diagnosticity for positive reviews but not for negative reviews via the mediating effect of
23
24 review attribution. Kusumasondjaja, Shanka, and Marchegiani (2012) conducted experiments
25
26 with 639 travel consumers and found that a negative review is more credible than a positive
27
28 review when the identity of the reviewer is disclosed. However, when the reviewer's identity
29
30 is not disclosed, there is no significant difference between positive and negative reviews
31
32 either in terms of perceived credibility or impact on consumer trust.
33
34
35
36
37
38
39
40
41

42 As can be seen from the reviewed literature most studies are based on quantitative methods
43
44 and focus on the determinants of message credibility selected by researchers. Moreover,
45
46 message credibility is measured against a pre-existing scale (information that is factual,
47
48 credible, believable, and accurate) (Cheung et al., 2009), and these studies often focus on the
49
50 effect of a single review message while in real life consumers read and process multiple
51
52 reviews (Qiu et al., 2012). Additionally, there is paucity of studies that have carried out an in-
53
54 depth investigation of the way consumers process the content from OCRs. The present study
55
56
57
58
59
60
61
62
63
64
65

1 instead attempts to provide an in-depth analysis of how consumers assess trustworthiness and
2 untrustworthiness of review messages and attempts to provide an answer to the following
3
4 research question:
5
6
7

8 *RQ2: What makes a review message trustworthy vs. untrustworthy to consumers' eyes?*
9

10 11 12 **3. Methodology** 13

14 15 *3.1 Context of the study and methodology considerations* 16 17

18 The most suitable methodology for the exploratory nature of this research is to conduct an
19 inductive study (Patton, 2002). The qualitative method based on the use of interviews was
20 chosen due to it being able to provide an in-depth understanding of the respondent's own
21 perceptions and information processing of OCRs. Interviews with users of travel reviews
22 have been carried out to get an in-depth understanding of the phenomenon under
23 investigation and to inductively develop an empirically grounded theory (Glaser & Strauss,
24 1967). Additionally, the grounded theory approach has been selected because of the novelty
25 of the researched topic, and because of the 'emergent' and versatile nature of the research
26 method, which has enabled the researchers to explore and reveal new categories that have not
27 been planned or anticipated (Charmaz, 2011).
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 This study is based on interviews with users of the world's most popular and largest
44 consumer review website for travel, TripAdvisor, which has been selected for this study
45 because of its popularity among travellers, and because of it being frequently criticized in the
46 mass media in recent years over allegations from private businesses of not being able to
47 prevent publication of fake reviews (e.g. Smith, 2013). TripAdvisor enables any registered
48 user to post reviews on restaurants, accommodation, attractions and vacation rental services
49 without requiring any proof of their actual purchase. Reviewers must provide a title, an
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

overall rating of the product/service (on a scale from one to five, from ‘terrible’ to ‘excellent’), 100/200 words of text (for restaurants and accommodation respectively).

3.2 Interviews

The seven steps procedure proposed by Kvale (2007) for conducting interviews was followed, which includes: thematization; design; conduction of the interview; transcription of interviews; analysis; validation; and reporting. *Thematizing* an interview study involves explaining the purpose of the study, namely the *why* and *what* of a study (Kvale, 2007). The purpose of this study initially was to develop an in-depth understanding of the consumer’s perception of untrustworthy reviews (*message*) and reviewers (*source*). However, with the progression of data collection the researcher realized that consumers more frequently use review content and valence factors and less frequently reviewers’ personal profile information to assess review trustworthiness. Later on the concept of credibility and trustworthiness assumed growing importance in interviews as well as the experience and involvement of the *receiver* of communications. This is consistent with the ‘emergent’ nature of research in grounded theory (Charmaz, 2011).

To obtain a pre-knowledge of the subject matter to be investigated, the researcher immersed himself on Tripadvisor.com both as a user and as a contributor (Kvale, 2007). A draft of the questions to be asked was prepared and pilot tested with six respondents (acquaintances of the researcher) before interviews took place (*design*). Using the purposive sampling method, the researcher arranged interviews with TA users with varying ages, nationalities, occupational backgrounds, and levels of experience in the use of travel reviews (e.g. from users who had a long history of using and writing OCRs to users who had recently started to use OCRs for travel planning) (see Table 1). Most of interviewees also had experience with

1 third-party commercial platforms such as Booking.com. TA users were approached firstly
2 personally or by email by the researcher, who has been registered with the community since
3
4 2006. In this regard, integration between TA and Facebook enabled easy identification of TA
5
6 users among the researcher's network of acquaintances and friends. Subsequently, the
7
8 researcher proceeded by using the snowballing method to recruit information-rich key
9
10 informants with various backgrounds (i.e. age, nationality, occupation) (Patton, 2002). An
11
12 equal number of female and male participants (19) were interviewed.
13
14
15
16

17 A total of 38 interviews were carried out either face-to-face or through Skype (*interview*
18 stage) within a period of six months, mainly in English. The total number of interviews was
19
20 judged as sufficient for reaching a theoretical saturation, which means that additional
21
22 interviews were adding no new insights, themes or issues (Strauss & Corbin, 1998).
23
24
25
26

27 Interviewees were asked to talk freely about their experience with OCRs in general;
28
29 subsequently they were asked to narrate their experience with travel reviews from TA (how
30
31 long they have been using OCRs, when, why, and the like). At this point, the conversation
32
33 generally led to questions related to the topic of untrustworthiness of OCRs. Following the
34
35 critical-incident technique (Flanagan, 1954), the interviewee was asked to state whether
36
37 he/she was aware of fake reviews and if he/she had ever come across a 'suspect' review that
38
39 he/she had perceived as untruthful, thus potentially fake. The respondent was asked to narrate
40
41 the event and discuss in detail what made him/her suspicious (i.e. signals) to the point that
42
43 he/she perceived the review/s as potentially fake/s. Subsequently, the respondent was asked
44
45 to talk about the characteristics of reviewers and reviews that he/she perceived as highly
46
47 trustworthy.
48
49
50
51
52
53
54
55

56 The *transcription stage* concerns information on recording and transcription of interviews
57
58 (Kvale, 2007). In order to ensure comparability, reliability, and consistency all interviews
59
60
61
62
63
64
65

1 were conducted, recorded, and transcribed verbatim by the same researcher at the end of each
2 interview without waiting until all interviews were completed (Silverman, 2009). The length
3
4 of these conversations varied from 34 to 55 minutes, and the average interview was about 45
5
6 minutes.
7

8
9
10 Open and axial coding were adopted to *analyze the data* as proposed by Strauss and Corbin
11
12 (1998). Open coding was used to shed light on the properties and dimensions of the concepts
13
14 in the dataset. Axial coding was used for crosscutting and relating concepts/categories to each
15
16 other and for identifying the *how* or the means through which a category is manifested
17
18 (Strauss & Corbin, 1998). The categories referring to the characteristics of untrustworthy
19
20 reviews were mostly discussed by individuals who were more experienced in the use of
21
22 online reviews and who were also highly involved with the purchase at the time they were
23
24 planning their trip (e.g. purchase of an expensive, long-haul or particularly important
25
26 holiday).
27
28
29
30
31

32
33 In order to check the *validity* and *reliability* of the category, the dimensions, and the sub-
34
35 dimensions obtained, the researcher contacted five expert reviewers who participated in the
36
37 research and three academics who did not participate in the interviews to test the inter-rater
38
39 agreement. These people were given a sample of the data and were asked to develop
40
41 categories and sub-categories. Validity and reliability was also guaranteed by asking
42
43 academics with expertise in online reviews to review and comment on the results of this
44
45 study.
46
47
48
49
50

51 **Table 1.** Profile of Interviewees.
52
53
54
55
56
57
58
59
60
61
62
63
64
65

<i>Interview ID</i>	<i>Age</i>	<i>Gender</i>	<i>Nationality</i>	<i>Occupation</i>	<i>Usage Experience (in years)</i>
ID 1	35-49	F	Other European	Professional	8
ID 2	25-34	M	Other European	Worker (service industry)	7
ID 3	35-49	M	UK	Academic	6
ID 4	25-34	M	UK	Worker (service industry)	8
ID 5	35-49	F	UK	Worker (service industry)	8
ID 6	25-34	M	UK	Business analyst	7
ID 7	35-49	F	UK	Consultant	3
ID 8	25-34	M	UK	Worker (industrial)	3
ID 9	50-64	M	UK	Business manager	7
ID 10	35-49	F	UK	Academic	5
ID 11	25-34	M	Other European	Academic	5
ID 12	18-24	F	Other European	Student	1
ID 13	25-34	M	Other European	Worker (service industry)	3
ID 14	18-24	M	Other European	Unemployed	1
ID 15	25-34	F	Middle-East	Housewife	3
ID 16	50-64	M	UK	Retired	5
ID 17	25-34	M	Other European	Worker (military)	3
ID 18	25-34	F	UK	PhD Student	5
ID 19	35-49	F	South-Asia	Academic	5
ID 20	35-49	F	UK	Academic	6
ID 21	18-24	M	UK	Student	1
ID 22	25-34	F	UK	Entrepreneur	4
ID 23	50-64	F	UK	Retired	5
ID 24	50-64	M	Other European	Medical worker	5
ID 25	35-49	M	Other European	Worker (industrial)	7
ID 26	35-49	M	UK	Professional	5
ID 27	35-49	F	Other European	Medical worker	4
ID 28	35-49	F	UK	Professional	3
ID 29	25-34	F	UK	Academic	5
ID 30	18-24	M	South-Asia	Student	>1
ID 31	25-34	F	UK	Worker (service industry)	3
ID 32	18-24	M	UK	Student	2
ID 33	35-49	F	Middle-East	Worker (service industry)	3
ID 34	25-34	F	Other European	Consultant	4
ID 35	18-24	F	South-Asia	Student	>1
ID 36	25-34	M	Other European	Worker (military)	1
ID 37	35-49	F	UK	Medical worker	4
ID 38	50-64	M	UK	Manager	6

4. Findings

4.1 Consumers' perception of trustworthy vs. untrustworthy travel reviews

The data highlight that interviewees discuss perceived trustworthy and untrustworthy reviews and these factors have been grouped under the following main categories, which have been listed based on the importance to interviewees and temporal sequence of credibility

assessment: the *content* and *writing style* of a review *message*; the *valence* and review *extremity*; the *source* of communication; the *pattern* in reviews. The *type of website* where reviews are retrieved and the *receivers' experience* and *involvement* emerged as factors that can potentially influence the way consumers assess review trustworthiness.

4.1.1 Review Content and Style

The most important cue that respondents use to assess review trustworthiness is the way a message is presented, namely *the content (length of the review, type of information, type of detail)* and the *writing style* of a review. The content of an online review is referred to as the information it provides, while the style of a review involves the choice of words and language style that the reviewer adopts to express this information (Schindler & Bickart, 2012).

According to Mudambi and Schuff (2010) longer reviews often include more product details, and more details about how and where the product was used in specific contexts are considered to be more helpful to understand the quality of a product. Interviewees state that not only *longer reviews* are more helpful to better assess products' quality but rather they are also perceived as more trustworthy. However, interviewees also highlighted that not all lengthy reviews are necessarily truthful: to be perceived as trustworthy lengthy reviews must contain *factual, detailed, and relevant* information. Information factuality is conceptualized here as the degree to which a comment in a review is logical and concise, is based on specific facts related to experiencing a product, and is free from emotional and subjective comments.

Detail is the key...fake reviews are reviews that say The best, Awesome, Horrible, Would not go again,...these reviews are not specific, and provide no further detail of their experience...no evidence that they have really stayed there and that they tried those products
[ID 6]

Although longer reviews are more likely to be perceived as trustworthy, respondents state

1 that *the type of details* in a review is also important to assess review trustworthiness. In fact,
2 some lengthy reviews can still be perceived as untrustworthy; reviews that are not written
3 using a consumer writing style and contain details that are irrelevant to consumers like for
4 example the details of the reviewer's family; the owner/staff's full name, his/her skills and
5 personality, the full name of the establishment, or its history, will be perceived as
6 untrustworthy. Interviewees agreed that reviewers generally do not provide such sort of
7 details in a review, thereby they perceive those reviews as potentially fake.

8
9
10
11
12
13
14
15
16
17
18 *I'm wary of reviewers that mention the name of the owner or of the chef in their review and*
19 *provide those kinds of details that you will never find in a normal review, real reviewers do*
20 *not bother about giving such details [ID 25]*
21

22
23
24 Interviewees perceive as untrustworthy reviews that are *very short* and do not provide
25 specific details of the reviewer's experience with a product and how this was used. In
26 addition, they mention that short reviews are perceived as untrustworthy if the review
27 contains sensational titles and is characterized by emotional, gushy language, with an
28 abundance of superlatives.

29
30
31
32
33
34
35
36
37
38 *... one sentence it does not give anything to base upon what this person did and did not like*
39 *... especially for hotels, they are so multifaceted how can you say about a hotel in one line ?*
40 *give there are so many differences in facilities... The longer reviews I read them, I do not*
41 *mind doing that ...someone is giving more time, hotels are multi-dimensional there is a lot to*
42 *discuss here the room, the pool, breakfast...[ID 3]*
43

44
45 *...there are some that use a very gushy language ... a great deal of...lots of superlatives... I*
46 *suppose one of the things I look out [ID 3]*
47

48
49 Interviewees also perceive as untrustworthy reviews that are written using a *marketing*
50 *writing style*. Reviews written with marketing writing often use promotional language and
51 include details that can be sometimes found in the company's brochure or website.
52
53
54
55
56
57
58
59
60
61
62
63
64
65

1 *Some reviews are little bit too like salesmanship, which like even if someone had a nice time*
2 *I don't think that they'd write a review like that. [ID 23]*
3

4 Conversely, consumers view as trustworthy the reviews that are *detailed* and in which the
5 reviewer provides some sort of *evidence of his/her stay* (e.g. pictures), and adopts a *consumer*
6 *writing style*. According to interviewees, trustworthy reviews provide information that is
7 *relevant* to other consumers and such information is *unique* in the sense that it cannot be
8 found in other media (e.g. either in the company's website or in other printed marketing
9 communications).
10
11

12 *...real reviewers talk like normal consumers...they discuss things that are relevant for other*
13 *people that you will not find in the website or in the brochure of the hotel... [ID 37]*
14
15
16

17 Respondents declare that *consumer pictures* of the purchased product/service are extremely
18 useful to them to evaluate the product and the trustworthiness of both the review and the
19 reviewer. Travelers' pictures of a product represent the vividness of the information in a
20 review, namely "the representational richness of a mediated environment as defined by its
21 formal features; i.e., the way in which an environment presents information to the senses"
22 (Steuer, 1992, p.81). According to respondents, customers' pictures help them to objectively
23 evaluate the quality of a product (e.g. size of hotel rooms). Moreover, customers' pictures
24 posted on consumer review websites often differ from the pictures available on the
25 company's websites, the latter are known to be retouched and thus perceived as untruthful.
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

48 *I use pictures to get a real view of the hotel rooms...it is known that the pictures provided on*
49 *the hotel's website are made by professionals and they are not realistic...picture from*
50 *customers are more reliable... I trust those reviews more than others. [ID 20]*
51
52
53

54 4.1.2 Review Valence and Extremity 55 56 57 58 59 60 61 62 63 64 65

1 The analysis of interview data reveals that consumers not only analyze the content of a
2 review, rather they also use the valence and extremity of a review message to assess
3 trustworthiness. The valence of a review is a consumer's positive or negative evaluation of a
4 product. A positive experience will include pleasant, vivid or novel descriptions of
5 experiences, whereas negatively valenced communication is likely to include private
6 complaining, unpleasant or denigrating product descriptions (Anderson, 1998).
7
8
9
10
11
12
13
14

15 Interviewees state that they view as untrustworthy some *extreme reviews*. Extreme reviews
16 are reviews that are very often associated with an *overly positive* (i.e. five star rating in TA)
17 or *overly negative rating* (i.e. one star rating in TA). Respondents believe that these reviews
18 are more likely to be manipulated, namely posted by the owner of an establishment, by
19 competitors, or by overly critical people. However, interviewees are also aware that some of
20 these reviews may be legitimate and therefore they assess review trustworthiness by
21 scrutinizing the reason for their satisfaction/dissatisfaction, the language such as emotional
22 (perceived untrustworthy) vs. moderate (perceived trustworthy), and the content in a review
23 such as the degree and the type of detail.
24
25
26
27
28
29
30
31
32
33
34
35
36
37

38 *I ignore the top and bottom of reviews as they are useless to me, the first may be written by*
39 *the management, the latter by stupid or overly critical people or by competitors. [ID 8]*
40
41
42
43
44

45 Moreover, respondents perceive as untrustworthy negative reviews that discredit a property
46 and recommend another one in the same review. According to respondents, these reviews
47 stand out from the rest of reviews as they are supposedly written by other companies that
48 attempt to denigrate a direct competitor.
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

1 *Once I was reading the reviews for a hotel in Rome, [name removed] hotel ... one review was*
2 *very bad and at the end of his review the reviewer suggested to try the nearby Hotel [name*
3 *removed] without providing any reason for indicating that specific establishment...this was*
4 *clearly a review written by the management of that hotel ... [ID 2]*
5
6

7 Furthermore, findings reveal that extreme reviews accompanied by *overly positive ratings* are
8
9 more likely to be viewed as untrustworthy rather than overly negative rating reviews. This
10
11 finding can be explained by the fact that respondents state that they tend to focus and read
12
13 more attentively the content of negative or extremely negative rating reviews because they
14
15 are more interested in knowing if something went wrong and what it was. Instead, extremely
16
17 positive reviews are more likely to be perceived as promotional compared to overly negative
18
19 ones. Interviewees also believe that customers are more likely to write reviews for a product
20
21 if they are disappointed, whereas businesses are more likely to inflate their scores to
22
23 minimize the impact of negative reviews.
24
25
26
27

28
29
30 *... people are more likely to make a comment when they have had a bad experience...good*
31 *reviews should generally be viewed as potentially 'bogus' ... I doubt more of positive than*
32 *negative reviews. [ID 9]*
33
34
35

36 In addition, reviews accompanied by *moderate ratings* and that provide *two-sided*
37
38 *information* are perceived as highly trustworthy. Respondents declare that they value highly
39
40 more moderate reviews (e.g. 2, 3, or 4 stars out of 5 stars) because these reviews often
41
42 provide a balanced and more plausible opinion of an establishment than reviews with extreme
43
44 ratings. Moderate rating reviews often contain two-sided information, which refers to a
45
46 message that discusses both the positive and negative sides of a product (Kamins, Brand,
47
48 Hoeke, & Moe, 1989). Two-sided reviews are perceived as trustworthy because they describe
49
50 both the good and the bad aspects of an accommodation or restaurant.
51
52
53

54 Conversely, one-sided messages are overly positive and lack any form of criticism and
55
56
57
58
59

therefore these reviews are more likely to be perceived as untrustworthy as they only present a favorable view of a product.

...real reviews often mention both the pros and the cons of a hotel...they mention what works and what does not ...for example they tell you that the food was good but... there is always 'a but' ... [ID 20]

4.1.3 Source factors

Based on the analysis of consumer information processing, only if a review is suspicious from the message (e.g. gushy language) and valence (e.g. extreme review) points of view, consumers will subsequently assess trustworthiness using the reviewer's profile information.

In consumer review websites the source is often anonymous and travel consumers have to adopt different cues than in face-to-face word-of-mouth communications to assess source credibility. To cope with such anonymity, consumer review websites now require reviewers to provide personal identifying information (Xie et al., 2011).

The data analysis enabled us to understand that consumers mainly look at PII such as reviewer's number of submissions. Participants of this study perceive the reviews coming from one-time posters as less trustworthy compared to all other reviews. Interestingly, reviewers who have posted many reviews are generally perceived as more trustworthy than reviewers who have submitted one or few reviews.

In the same way, 'destination experts' (designation that denotes travelers who have extensively reviewed a particular destination in TripAdvisor) seem to be the most trustworthy sources of information but mainly for local restaurants and attractions. Thus, the credibility of the destination expert is presumed due to their expertise and knowledge of the destination in which he/she is living.

Based on the findings from interviews, respondents also look at the reviewer's profile picture (real vs. default), registration date (recent vs. old profile), and range of activities undertaken to assess source trustworthiness. Interviewees state that a one-time poster with a default profile picture who has created an account and has submitted an extreme review, her/his review is most likely to be perceived as untrustworthy by consumers.

I often check the review record of the reviewer [to spot promotional reviews]. If it's something like a new account with only one glowing review of an establishment or a place it is probably a bogus review... I take it with a pinch of salt. ... Genuine reviews will always be from people who write a wide range of reviews for different things such as attractions, restaurants, hotels etc.... [ID 16]

I also look at the profile picture of the reviewer...I generally look with suspicion to accounts with default profile pictures [ID 34]

4.1.4 Review pattern criteria

In the information search stage, consumers not only read and evaluate a single review, rather, depending on the degree of involvement with a purchase, they may read a certain number of reviews. Generally, the higher the involvement the higher the amount of information (i.e. consumer reviews) consumers will need before making a purchase decision. In this context, it can occur that interviewees may notice patterns in reviews which make them suspicious. As reported by respondents, a first pattern is represented by an establishment with several glowing reviews from one-time posters. Some respondents also mention that these reviews often present similar comments and are all posted within a short period of time.

1 *I am always suspicious of properties with many glowing reviews where each of the posters*
2 *has only written one review. The date that the poster joined TA can also be a giveaway... I*
3 *remember of a pizzeria in Newcastle...[name removed] opened some months ago close to*
4 *where I live. When they opened the place was almost empty even on weekends...however, a*
5 *couple of weeks ago I noticed the place was almost full every day. I checked on TA to see*
6 *what people say and found that it was ranked 5th among hundreds of restaurants in*
7 *Newcastle... I noticed that this pizzeria had received over 100 reviews in just a few months*
8 *from its opening... well, that's really strange! ... there are so many restaurants in Newcastle*
9 *who are on TA from more than 10 years and they have received about 40-80 reviews... I then*
10 *decided to check these reviews and I noticed that most of them are 4 and 5 five stars and only*
11 *a few 1, 2, 3 stars. The 4 and 5 stars were from users who had posted just one or 2 reviews...*
12 *and surprisingly the titles of some reviews were similar... 'the best pizza in Newcastle', or*
13 *'amazing pizza', or 'awesome pizza' ... 90% of reviews on this restaurant are promotional...*
14 *they do it regularly to ensure the top ranking position. [ID 24]*
15
16
17
18
19
20
21

22 *Consensus among reviewers is perceived as evidence of the trustworthiness of reviewers'*
23
24
25 *evaluations. Consumers check for consistency between reviewers and they believe that if*
26
27 *many reviewers are complaining about the same issue/s (e.g. a feature/service of a*
28
29 *hotel/restaurant) their evaluation is more likely to be perceived as plausible. On the contrary,*
30
31 *the presence of divergent opinions about a specific feature of a product or service is*
32
33 *something that makes travel consumers leery about the trustworthiness of reviews.*
34
35
36

37 *Interviewees check what the comments of previous reviewers were and then they make up*
38
39 *their mind based on the degree of consensus reached by reviewers regarding the perceived*
40
41 *quality of an accommodation/restaurant or of a specific feature/service (e.g. poor room*
42
43 *cleanliness). Consensus manifests also in the form of overall star ranking, which is*
44
45 *considered a trusted information cue for accommodation and attractions (but less for*
46
47 *restaurants), because it summarizes all of the evaluations for a specific*
48
49 *organization/destination. Thus, if they find that a particular feature of a product is criticized*
50
51 *by many people or equally if a point of strength is stressed repeatedly, they will tend to*
52
53 *consider these comments and the related reviews as highly trustworthy.*
54
55
56
57
58
59
60

1 *I check for the common occurring in the complaints...In general, if many people complain*
2 *about something ... and other people are complaining about the same things...it means that*
3 *this hotel has a problem then I would worry a bit...I search for consistency [ID 33]*
4

5
6 *I often use the ranking to do a shortlist of accommodation or of the 'things to see' in a*
7 *destination...if many people have rated an accommodation highly it should not be bad ... it*
8 *starts to get some reliability [ID 13]*
9

10
11 *...fake reviews are easy to spot as these reviews stand out from the crowd... their evaluations*
12 *and experiences are so different from those of the majority of reviewers [ID 27]*
13
14
15
16
17

18 The *similarity* between reviews is something respondents look at closely to assess reviews'
19
20 trustworthiness. If similar reviews for the same or for different establishments occur more
21
22 than once in the same or in various consumer review websites, these reviews are very likely
23
24 to be perceived as untrustworthy. Duplicate reviews (from different reviewers on the same
25
26 product or from a single reviewer for different products) are likely to generate suspicious
27
28 attitudes. Respondents mention that duplicates often have the same structure, contain the
29
30 same wording or titles, and sometimes they can be found in various consumer review
31
32 platforms.
33
34
35
36
37

38 *... I once noticed that a reviewer had used the same generic wording to positively review*
39 *eight different hotels, which indicated they were probably paid in every instance...[ID 23]*
40
41

42 Interviewees affirm that they also perceive as untrustworthy the *reviews with overly positive*
43 *ratings immediately posted after a negative review*. In fact, participants believe that these
44
45 reviews are written by the owner/manager of an establishment who rapidly reacts to a
46
47 negative or overly negative review submitted by a real customer. Another peculiarity of these
48
49 reviews is that they are often overly positive (valence) and tend to reject or contradict all or
50
51 most of the criticisms discussed in the previous (negative) review.
52
53
54
55
56
57
58
59
60
61
62
63
64
65

1 *Once I came across a reviewer who wrote about how great his/her experience was and then*
2 *put down anyone who had given negative reviews. [ID 39]*
3
4
5
6

7 *4.1.5 Receiver's Involvement*

8
9 It is important to point out that some consumers make intersections between various criteria
10
11 to assess review trustworthiness. Moreover, the findings reveal that the higher the
12
13 involvement in the purchase, the more reviews consumers will use and the more attentively
14
15 they will read them to reduce the possibility of being deceived by fake reviews. Petty and
16
17 Cacioppo's (1986) Elaboration Likelihood Model (ELM) suggests that consumers may take
18
19 one of two different routes: a central or a peripheral route, when they process information
20
21 from advertising messages depending on the degree of willingness, motivation and capability
22
23 of processing information. When the involvement in a purchase is high (i.e. when the
24
25 personal importance of the topic/product increases), consumers will take a central route and
26
27 they will be more motivated to allocate their limited cognitive resources to process
28
29 information from advertising messages, in this case cues such as argument strength are more
30
31 likely to be effective in persuading consumers (Petty & Cacioppo, 1986). The degree of
32
33 involvement in a purchase proved to be particularly important in the determination of
34
35 trustworthiness because the higher the consumer's involvement in the product to be
36
37 purchased, the higher was the effort produced to assess review trustworthiness.
38
39
40
41
42
43
44
45

46 *When I buy something that is expensive I will go through several reviews and I will check the*
47 *star ranking as well. For a restaurant that is around £30 if it is bad I do not mind, it does not*
48 *matter to me, I will not go back but if it is an hotel and I'm going on holiday for a relatively*
49 *long period of time, I'm going to check what people say and see if there is consistency in*
50 *what they say ...If it's a hotel and you have to spend a week away, I would play safe [ID 13].*
51
52
53
54
55

56 *4.1.6 Consumer experience*

57
58
59
60
61
62
63
64
65

1 Additionally, experience also emerged as a contextual, moderating factor that may affect
2 consumer processing of information. Experienced users can be defined as users highly
3 experienced with the use and writing of consumer reviews. The level of experience in using
4 the internet in the decision making process can be an important factor to consider when
5 investigating the antecedents of trust (Bart et al., 2005). We found that more *experienced*
6 users tend to be more knowledgeable about consumer reviews and more confident to be able
7 to spot untrustworthy reviews. Additionally, interviewees agree that the capability to detect
8 untrustworthy content may develop with time. This highlights that consumers' level of
9 experience with OCRs is an important moderating factor in the assessment of review
10 trustworthiness and that users with less experience have less knowledge to distinguish
11 between trustworthy and untrustworthy reviews (thus they use less or no cues).
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

27 *...the longer you are an active member of this site you will begin to understand who are the*
28 *"real" travelers reporting in an unbiased manner on "real" experiences, and who are plants,*
29 *shills and potential frauds [ID 38]*
30
31

32 *....the more you use them [consumer reviews], the more you learn how to detect the fakes [ID*
33 *11]*
34
35
36

37 4.1.7 The medium 38 39 40

41 A topic that emerged in interviews was the relevance of the type of medium. In particular, we
42 found that consumers have more trust in some types of website rather than others and this
43 belief influences their perception of OCRs. There are three types of website that enable
44 consumers to post reviews: independent consumer review website (or online community),
45 third-party e-commerce website, and company's website. Interviewees seem to be more
46 skeptical about the trustworthiness of the reviews that appear on a company's website.
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

positive, which make them think that the organizations filter the reviews because they are interested in selling the products. As noted by one interviewee:

I should mention about hotels that we booked through Company X [large travel company based in the UK]...they have their own reviews on their website we would look at those but... it is strange actually I have never read a review on the Company X website that makes me think that is crap but by definition because it is on the Company X website would not give as much credibility as in Tripadvisor purely for the independence of the latter...I have never seen a massively negative review on the Company X website eheh they do not make it [ID 3]

Additionally, interviewees tend to cross-check reviews and scores from different types of websites before booking a product/service because interviewees believe that independent review websites are more open to manipulation than third-party commercial websites. Thus, consumers often check both types of websites and compare reviews and scores to evaluate products.

I generally try to get advice from my friends, parents or relatives...however, when friends can't help I go on TripAdvisor but I do tend to cross-reference the score from different websites...in Boooking.com only people who have purchased a room can leave a review so it is possible that these reviews are more likely to be from real customers. TripAdvisor is a more neutral source of information but it is open to anyone...I look at both and compare the scores. [ID 31]

4.1.8 Consumer decision making

Consumers state that when they come across untrustworthy reviews they discount them from their information set, namely they will not consider these reviews in their decision making. This finding is particularly important as it shows that not all reviews have the same influence on consumers and that the more a review is perceived to be trustworthy, the higher will be its influence on consumer decisions.

I do discount all suspicious reviews, like the ones written by reviewers who have just published a single glowing review... I don't trust any of these reviews [ID 1]

The analysis of the results from interviews led to the development of a theoretical framework of trustworthiness and persuasion in e-WOM communications, which is illustrated in Figure 1.

Figure 1.

Theoretical framework emerging from the study

5. Discussion

The present study is one of the first that inductively explains how consumers process information and assess trustworthiness and untrustworthiness in user-generated content. In doing so, we advance credibility theory in online settings. The findings of this study provide several insights on how consumers process information from review messages and has

1 enabled the development of a theoretical framework explaining trustworthiness and
2 persuasion in e-WOM communications (see Figure1).
3

4
5 This study has shed light on the cues that consumers use to assess trustworthiness, which
6 have been grouped under four macro categories: the *content* and *writing style* of a review,
7
8 *review extremity* and *valence*, the *source* of communication, the *pattern* emerging from
9
10 reading several reviews.
11
12
13

14
15
16 It is important to point out that while processing information from OCRs, consumers make
17
18 intersections of some of the criteria identified in this study to assess trustworthiness. For
19
20 example, we have highlighted that consumers often connect review valence and review
21
22 content as well as review valence and cues about the source to assess trustworthiness in
23
24 OCRs. This finding is particularly important as it sheds light on how these different aspects
25
26 of credibility assessment interact (Wathen & Burkell, 2002).
27
28
29
30

31
32 Moreover, we have also found that consumers more frequently use review content and
33
34 valence factors and less frequently reviewers' personal profile information and pattern factors
35
36 to assess review trustworthiness. This finding provides an answer to an important gap in the
37
38 credibility literature regarding the model of assessment of credibility and trustworthiness
39
40 (Wathen & Burkell, 2002).
41
42
43

44
45 The findings of this study provide evidence that consumers more frequently use cues related
46
47 to the *style* and *content of a review message* to assess trustworthiness, including the degree of
48
49 detail, the type of information, the length of a review, and the reviewer's writing style.
50
51

52 Consumers perceive as untrustworthy reviews that are short, contain few and irrelevant
53
54 details, are superficial, do not provide factual information or evidence of purchase, make
55
56 abundant use of superlatives (emotional language), and use a 'marketing' writing style.
57
58
59

1 Conversely, consumers perceive as trustworthy reviews that are relatively lengthy, but most
2 importantly lengthy reviews that provide detailed and factual information that is relevant to
3 consumers, and are written using ‘consumer’ language. Travelers’ picture/s of the purchased
4 product (information vividness) also helps in assessing review trustworthiness. These results
5 support and advance previous findings showing that the degree of detail in a review, travel
6 photos, and length of a review are particularly important when evaluating travel reviews
7 (Gretzel et al., 2007).
8
9

10 Message credibility is measured in literature with items that assess the perceived factuality,
11 credibility, believability, and accuracy of the provided information (Cheung et al., 2009).
12
13

14 This study sheds light on the various cues that consumers adopt to assess message
15 trustworthiness; such cues are specific to e-WOM communications and can be used to
16 develop a new scale for information quality dimensions that are more likely to affect
17 perceived review trustworthiness. With regards to the role of review length, previous studies
18 found contrasting results regarding the influence of review length on perceived review
19 helpfulness (Mudambi & Schuff, 2010; Racherla & Friske, 2012). This study perhaps
20 provides an explanation of these contrasting results proving that it is not only the length of a
21 review that influences perceived trustworthiness, rather a lengthy review should also provide
22 details, factual and relevant information to be perceived as trustworthy by consumers.
23
24

25 Therefore, scholars in the future should consider also the interaction effect between review
26 length and other information quality dimensions to assess the influence of review length on
27 perceived review trustworthiness and helpfulness.
28
29

30 While scrutinizing the content, consumers also use cues related to the *extremity* and the
31 *valence* of a review to assess trustworthiness in OCRs. Based on the findings, consumers trust
32 more negative than positive reviews and perceive extreme reviews to be more likely to be
33
34

1 untrustworthy reviews. The fact that consumers consider negative reviews as more
2 trustworthy than positive reviews is consistent with previous research findings in offline and
3 online settings (Chatterjee, 2001; Herr, Kardes, & Kim, 1991; Kusumasondjaja et al., 2012;
4 Papathanassis & Knolle, 2011). Additionally, we also found that consumers are more likely
5 to discount overly positive than overly negative rating reviews from their information set.
6
7 This result contrasts with Park and Nicolau (2015) who reveal that extreme ratings (positive
8 or negative) are more useful than moderate ratings. In contrast, it was found that moderate
9 two-sided reviews are perceived as more trustworthy than one-sided, extreme reviews. This
10 finding accords with advertising research, which found that two-sided messages enhance the
11 credibility of the advertiser (Eisend, 2006). It was also found that extreme reviews will be
12 perceived as untrustworthy especially if these reviews are short, emotional, and contain no
13 details.
14

15 Findings show that a review message that is perceived as untrustworthy will motivate
16 consumers to scrutinize the profile information of the reviewer. This means that consumers
17 are normally not particularly interested in scrutinizing the profile information of a reviewer
18 when they read reviews. This study demonstrates that some personal identifying information
19 is reviewed (and thus produces some effect) only if the content of a review is perceived as
20 untrustworthy. In this situation, consumers look at some specific information regarding the
21 *web profile of a reviewer* in order to assess his/her expertise and trustworthiness such as:
22 number of reviews submitted, subsequently they may check the reviewer's date of
23 registration, range of activities undertaken (e.g. forum posts, reviews for restaurants, hotels
24 and the like), and profile picture. This study did not find evidence that consumers use self-
25 disclosed travel interest, state of residence, and date of stay, to assess source credibility,
26 which had been identified as significant PII factors in previous studies (Park et al., 2014; Xie
27

et al., 2011). A source is perceived as trustworthy if he/she has been registered to a community for a relatively long period of time, has published many (e.g. >10-20 reviews) and balanced (both positive and negative) reviews and has undertaken various activities. The fact that highly active reviewers such as ‘destination experts’ are considered as more trustworthy contrasts with Jindal and Liu (2008), who found that top-ranked reviewers are considered as less trustworthy and agrees with Lee, Law, and Murphy (2011) and Gretzel et al. (2007) who found that useful reviews are written by experienced travellers. This finding is in line with Arsal, Woosnam, Baldwin, and Backman (2010) who revealed that residents are more influential in accommodation and food and beverage recommendations.

This study has found that source trustworthiness in online reviews is assessed through the number of reviews submitted by a reviewer, but its assessment also depends on the extremity, valence, and content of a review message. We found that extreme reviews from one-time posters are more likely to be perceived as untrustworthy by travel consumers. Thus, this study’s findings advance source credibility theory in e-WOM communications in the following ways: firstly, the study shows how consumers assess source trustworthiness; secondly, findings can be useful for the development of a new scale that measures perceived source trustworthiness in e-WOM; thirdly, findings shed light on the reviewers’ PII that consumers use to assess trustworthiness.

Findings also indicate that the more consumers are involved with a purchase the more reviews they read and the more likely they are to notice *patterns* in reviews, which enable them to assess trustworthiness. The cues that they adopt more frequently are: the (glowing) tone used in several reviews from one-time posters; lack of consensus (divergent evaluations); duplicates reviews; extremely positive reviews posted immediately after a negative one. This study has proved that duplicate and near-duplicate reviews are perceived

as very likely fake reviews. Instead, consensus among reviewers in terms of the product's evaluation and between product's evaluation and overall ranking seem to be highly important. In general, it was found that the ranking is a trusted information cue because it summarizes the evaluation of all reviewers of a specific establishment. Interestingly, overall rankings of accommodation and attractions are more trusted than rankings of restaurants.

Gretzel et al. (2007) reveal that the type of website on which a review is posted is important to many travelers; our study shows that consumers trust more reviews from commercial third-party and independent websites (e.g. TripAdvisor) than reviews posted on corporate websites (e.g. service provider's website), the latter are the least trusted reviews. This finding is particularly interesting because it proves that consumers no longer consider consumer reviews from TripAdvisor as a highly trustworthy source as previous studies have suggested (Dickinger, 2011; Munar & Jacobsen, 2013). It emerged that some commercial third-party operators seem to be perceived equally or even more trustworthy than independent user-generated content platforms (Cox et al., 2009) and therefore consumers cross-check reviews and scores from both types of websites.

Results highlight that consumers, especially those who are highly involved with the purchase process (e.g. purchase of a long haul, expensive, important holiday), tend to read more reviews and consequently make higher efforts to assess trustworthiness in OCRs compared to individuals with lower involvement. Thus, in high involvement situations consumers will spend more time and make more effort to scrutinize more reviews more attentively.

With regards to the role of experience with consumer reviews, this study's finding shows that the level of trust towards OCRs is not the same for all consumers. Previous studies found contrasting results regarding the role of experience on online trust. Some scholars found that OCRs have a greater effect on individuals with more experience in using travel websites than

those with less expertise (Hernández-Méndez et al., 2013), while others found that more knowledge of and experience with the Internet can spur greater confidence in using it, which would inflate online trust (Bart et al., 2005). This study's results show that users who are experienced in the use of consumer review websites are more aware of the possibility of deception, use some cues to assess review trustworthiness, and as such they tend to scrutinize reviews more attentively. On the other hand, novice users are more inclined to trust reviews and to consider them as honest accounts from real travellers. This supports the belief that lack of experience may lead to naivety and credibility being given to information on the Internet (Brown et al., 2007). This result may also be explained by the fact that users with low experience in travel tend to rely more on external sources of information rather than on internal sources of information (e.g. prior experience) (Beatty & Smith, 1987).

Findings demonstrate that when a source lacks in credibility, it loses effectiveness and will not be very persuasive (Hovland, Janis, & Kelley, 1953), which supports attribution theory in advertising and offline WOM research (e.g. Brown & Reingen, 1987; McGinnies & Ward, 1980). Thus, consumers, and particularly those consumers who are more experienced in the use of online reviews, do not trust reviewers blindly rather they are aware that some reviews can be fake. It follows that not all reviews have the same level of influence on consumer decisions and the more a review is perceived as trustworthy the higher the chances that it will be adopted by consumers in their decision-making process (high persuasiveness). Conversely, the more a review is perceived as untrustworthy, the lower will be its persuasiveness due to consumers discounting it.

6. Managerial Implications

1 Review trustworthiness in the near future is expected to become increasingly important. In
2 order to keep high levels of trustworthiness, websites that publish consumer reviews such as
3
4 TripAdvisor.com should invest in reliable defense mechanisms against the rise of fake
5
6 reviews. The tendency to pay for promotional reviews is expected to grow; therefore, the
7
8 attention of these organizations towards this phenomenon must increase in order to avoid
9
10 decreases in credibility.
11
12
13
14

15 We also recommend managers of hotels and restaurants to constantly monitor consumer
16
17 reviews on various consumer review websites. Tourism businesses need to take special care
18
19 of consumer reviews especially when their guests are less experienced tourists who tend to
20
21 rely more on external sources of information. Moreover, it has been found that the practice of
22
23 writing fake reviews is a widespread practice (Jindal & Liu, 2008). When this happens,
24
25 tourism managers must report this immediately to the TripAdvisor team for further
26
27 investigation. In fact, potentially fake reviews can be removed from the website if they are
28
29 found to be suspicious.
30
31
32
33
34

35 Given the results of this study, we recommend that consumer review websites provide more
36
37 signals that would help consumers to assess reviewers' trustworthiness. For example, review
38
39 websites could improve the web profile of reviewers by displaying additional profile
40
41 information with the review such as the number, diversity, and valence of a reviewer's
42
43 reviews, links to social networks, and registration date details. Findings show that visual
44
45 information (i.e. pictures) is often used by consumers to make assumptions of review
46
47 trustworthiness. Thus, we recommend websites that publish consumer reviews to facilitate
48
49 consumers to post pictures of the purchased product or service.
50
51
52
53
54

55 This research is also likely to offer new insights to companies specializing in reputation
56
57 defence mechanisms but also to consumer review websites by providing a list of indicators
58
59
60
61
62
63
64
65

that might be helpful to identify untrustworthy reviews. The results of this study show that consumers use a set of criteria which are different than those adopted by Ott and colleagues (2012) to develop their ‘reviews liar detector’ software. Therefore, our results can stimulate the debate and further research around the characteristics of potentially fake reviews. We believe that opinion mining techniques should integrate experienced consumer knowledge and both could be adopted for the detection of suspicious reviews. TripAdvisor and other consumer review websites could adopt a system that is similar to the one adopted by Wikipedia, where *Wikipedia’s editors* monitor the quality of the articles and decide which articles are the best (featured articles), and attribute a bronze star icon to them.

Furthermore, it was highlighted that the more consumers use reviews the more they develop the skills and knowledge that enable them to identify untrustworthy reviews. This leads to a warning to hotel and restaurant managers who pay or offer incentives to individuals for writing fake reviews: this is a risky strategy, which is expected to pay off only with some purchases (e.g. low involvement), in the short term, and with some type of users (less experienced in the use of OCRs). However, there is a better way to manage negative (and positive) e-WOM. First, managers of hotels and restaurants can ask or remind through an email satisfied customers to post a review on popular review websites when they leave the establishment. Additionally, it is recommended that tourism operators provide a balanced and accurate reply to every reviewer’s comment, both positive and negative. In the event of a negative review or negative comment within a moderate review, the company should apologize for the event that has caused dissatisfaction and show willingness to work out ways to improve the service in the future. This way, potential customers may infer that the manager/company cares about their customers.

1 Finally, results suggest that even when service providers enable customers to comment on the
2 services offered on their website, this does not increase trust towards them. In this regard, it
3 was noted that the presence of too many positive reviews diminishes the trustworthiness of a
4 company's website and of the recommendation hosted on these websites. In order to increase
5 the trustworthiness of these reviews, tourism operators should not filter consumer reviews;
6 negative reviews can be good because their presence increases perceived website
7 trustworthiness.
8
9
10
11
12
13
14
15
16
17
18
19
20

21 **7. Limitations and Future Research**

22 This study has some limitations. First, the participants in this study were selected among
23 users of TripAdvisor.com, mainly from the UK and other European countries, who had
24 experience with using reviews of accommodation and restaurants. To generalize the results of
25 this study, new research should adopt a culturally different sample (e.g. Asian consumers) or
26 focus on users of different websites and on a different product or service category (e.g. tour
27 operators, rental agencies).
28
29
30
31
32
33
34
35
36
37
38
39

40 This study has found that consumer perceptions may vary across different types of consumers
41 and websites on which user-generated content is posted (e.g. corporate *vs* independent).
42 Moreover, trust evolves over time. Thus, future research could adopt a longitudinal approach
43 and investigates consumer perception of trust at different points in time and across a variety
44 of platforms publishing user-generated content.
45
46
47
48
49
50
51
52

53 An interesting avenue for future research would be the adoption of quantitative methods of
54 investigation in order to test the reliability of the scales emerging from this study as well as
55 the relationships between the constructs. In addition to the moderator variables proposed in
56
57
58
59
60
61
62
63
64
65

1 this study, scholars could consider different moderators such as service type, consumer
2 personality, travel experience, and risk taking behaviour.
3

4
5 Moreover, scholars could use the criteria proposed in this study to categorize a random
6 sample of reviews (perceived untrustworthy vs. perceived trustworthy) and assess the signal
7 detection rate of the proposed criteria. A factorial experiment could be conducted for this
8 purpose to investigate the influence of the attributes of untrustworthy and trustworthy reviews
9 on consumer choices.
10

11
12 Finally, future studies could assess the impact that perceived trustworthy and untrustworthy
13 reviews have on consumers' attitudes towards brands and consumer review websites and
14 behaviour.
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29

30 **References**

31
32
33 Aarsal, I., Woosnam, K.M., Baldwin, E.D., & Backman, S.J. (2010). Residents as travel
34 destination information providers: an online community perspective. *Journal of Travel*
35 *Research*, 49(4), 400–413.
36

37
38
39 Anderson, E. (1998). Customer satisfaction and word of mouth. *Journal of Service*
40 *Research*, 1(1), 5-17.
41
42

43
44 Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online
45 trust the same for all web sites and consumers? A large-scale exploratory empirical
46 study. *Journal of Marketing*, 69(4), 133-152.
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

- 1 Brown, J., Broderick, A. J., & Lee, N. (2007). Word of mouth communication within online
2 communities: conceptualizing the online social network. *Journal of Interactive Marketing*,
3 21(3), 2-20.
4
5
6
7
8 Beatty, S.E., & Smith, S.M. (1987). External search effort: An investigation across several
9 product categories. *Journal of Consumer Research*, 14(1), 83-95.
10
11
12
13 Brown, J. J. & Reingen, P. H. (1987). Social ties and word of mouth referral behavior.
14 *Journal of Consumer Research*, 14(3), 350–62.
15
16
17
18
19 Cantallops, A.S. & Salvi, F. (2014). New consumer behavior: A review of research on
20 eWOM and hotels. *International Journal of Hospitality Management*, 36(January 2014), 41–
21 51.
22
23
24
25
26
27 Charmaz, K. (2011). Grounded theory methods in social justice research. In N. K. Denzin &
28 Y.S. Lincoln (Eds.). *The Sage Handbook of Qualitative Research* (Vol. 4, pp. 359-380).
29 California, US: Sage Publications Inc.
30
31
32
33
34
35
36 Chatterjee, P. (2001). Online reviews: Do consumers use them? *Advances in Consumer*
37 *Research*, 28(1), 129-133.
38
39
40
41
42 Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The Impact of e-WOM: The
43 adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229-
44 47.
45
46
47
48
49 Cheung, C. M. K., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-
50 mouth: Informational and normative determinants of on-line consumer recommendations.
51 *International Journal of Electronic Commerce*, 13(4), 9–38.
52
53
54
55
56
57
58
59
60
61
62
63
64
65

- 1 Cox, C., Burgess, S., Sellitto, C., & Buultjens, J. (2009). The role of user-generated content
2 in tourists' travel planning behavior. *Journal of Hospitality Marketing & Management*, 18(8),
3 743-764.
4
5
6
7
8 Dellarocas, C. (2006). Strategic manipulation of internet opinion forums: Implications for
9 consumers and firms. *Management Science*, 52(20), 1577-1593.
10
11
12
13
14 Dickinger, A. (2011). The trustworthiness of online channels for experience- and goal-
15 directed search tasks. *Journal of Travel Research*, 50(4), 378–391.
16
17
18
19
20 Doney, P.M. & Cannon, J.P. (1997). An examination of the nature of trust in buyer–seller
21 relationships. *Journal of Marketing*, 61(2), 35–51.
22
23
24
25
26 Eisend, M. (2006). Two-sided advertising: A meta-analysis. *International Journal of*
27 *Research in Marketing*, 23(2), 18-198.
28
29
30 Filieri, R., & McLeay F. (2014). E-WOM and accommodation: An analysis of the factors that
31 influence travelers' adoption of information from online reviews. *Journal of Travel Research*,
32 53(1), 44-57.
33
34
35
36
37 Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin*, 51(4), 327-
38 358.
39
40
41
42
43 Glaser, B. G. & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for*
44 *Qualitative Research*, Chicago: Aldine Publishing Company.
45
46
47
48
49 Gretzel, U., Yoo, K.-H., & Purifoy, M. (2007). Trip Advisor online travel review study: The
50 role and impacts of online travel review for trip planning. College Station, TX: Laboratory
51 for Intelligent Systems in Tourism.
52
53
54
55
56
57
58
59
60
61
62
63
64
65

- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38-52.
- Hernández-Méndez, J. Muñoz-Leiva, F. & Sánchez-Fernández, J. (2013). The influence of e-word-of-mouth on travel decision-making: consumer profiles. *Current Issues in Tourism*, 18(11), 1001-1021.
- Herr, P. M., Kardes, F.R., & Kim, J. (1991). Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnostics perspective. *Journal of Consumer Research*, 17(4), 454-462.
- Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and Persuasion*. New Haven: Yale University Press.
- Hu, N., Bose, I., Koh, N. S., & Liu, L. (2012). Manipulation of online reviews: An analysis of ratings, readability, and sentiments. *Decision Support Systems*, 52(3), 674-684.
- Jindal, N. & Liu, B. (2008). Opinion spam and analysis. *WSDM'08*, February 11-12, 2008, Palo Alto, California, USA.
- Kamins, M. A., Brand, M. J., Hoeke, S. A., & Moe, J. C. (1989). Two-sided versus one-sided celebrity endorsements: the impact on advertising effectiveness and credibility. *Journal of Advertising*, 18(2), 4-10.
- Kusumasondjaja, S., Shanka, T., & Marchegiani, C. (2012). Credibility of online reviews and initial trust: The roles of reviewer's identity and review valence. *Journal of Vacation Marketing*, 18(3), 185-195.
- Kvale, S. (2007). *Doing Interviews*, London, UK: Sage Publications.

- Lee, H. A., Law, R., & Murphy, J. (2011). Helpful reviewers in TripAdvisor, an online travel community. *Journal of Travel & Tourism Marketing*, 28(7), 675-688.
- Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic Word-of-Mouth in Hospitality and Tourism Management. *Tourism Management*, 29(3), 458-68.
- McGinnies, E., & Ward, C. D. (1980). Better liked than right: Trustworthiness and expertise as factors in credibility. *Personality and Social Psychology Bulletin*, 6(3), 467-472.
- Mudambi, S. M., & Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon.com. *MIS Quarterly*, 34(1), 185-200.
- Munar, A. M., & Jacobsen, J. S. (2013). Trust and involvement in tourism social media and webbased travel information sources. *Scandinavian Journal of Hospitality and Tourism*, 13(1), 1-19.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39-52.
- Ott, M., Cardie, C., & Hancock, J. (2012). Estimating the prevalence of deception in online review communities. *Proceedings of the 21st International Conference on World Wide Web*, ACM, 2012, pp. 201-210, April 16-20, Lyon, France.
- Papathanassis, A., & Knolle, F. (2011). Exploring the adoption and processing of online holiday reviews: a grounded theory approach. *Tourism Management*, 32(2), 215-224.
- Park, H., Xiang, Z., Josiam, B., & Kim, H. (2014). Personal profile information as cues of credibility in online travel reviews. *Anatolia*, 25(1), 13-23.
- Park, S., & Nicolau, J. L. (2015). Asymmetric effects of online consumer reviews. *Annals of Tourism Research*, 50, 67-83.

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods*, Thousand Oaks, CA: Sage Publications Inc.

Petty, R.E., & Cacioppo, J.T. (1986). *Communication and Persuasion: Central and Peripheral Routes to Persuasion*. New York: Springer-Verlag.

Qiu, L., Pang, J., & Kim, K. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems*, 54(1), 631-643.

Racherla, P., & Friske, W. (2012). Perceived 'usefulness' of online consumer reviews: An exploratory investigation across three services categories. *Electronic Commerce Research and Applications*, 11(6), 548-559.

Schindler, R. M. & Bickart, B. (2012). Perceived helpfulness of online consumer reviews: The role of message content and style. *Journal of Consumer Behavior*, 11(3), 234-243.

Silverman, D. (2009). *Doing Qualitative Research*, London, UK: Sage Publications.

Smith, O. (2013). TripAdvisor fails to spot fake restaurant, The Telegraph, 25 Jul 2013, available at <http://www.telegraph.co.uk/travel/travelnews/10201754/TripAdvisor-fails-to-spot-fake-restaurant.html>.

Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication*, 42(4), 73-93.

Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Grounded Theory Procedures and Technique*, 2nd Edition. Sage, Newbury Park, London.

Vermeulen, I. E., & Seegers, D. (2009). Tried and Tested: The Impact of Online Hotel Reviews on Consumer Consideration. *Tourism Management*, 30(1), 123-27.

1 Wathen, C. N., & Burkell, J. (2002). Believe it or not: Factors influencing credibility on the
2 Web. *Journal of the American Society for Information Science and Technology*, 53(2), 134-
3 144.
4
5

6
7
8 Xie, H., Miao, L. Kuo, P. & Lee, B. (2011). Consumers' responses to ambivalent online hotel
9 reviews: The role of perceived source credibility and pre-decisional disposition. *International*
10 *Journal of Hospitality Management*, 20(1), 178-183.
11
12
13

14
15
16 Ye, Q., Law, R., & Gu, B. (2009). The impact of online user reviews on hotel room sales.
17
18 *International Journal of Hospitality Management*, 28(1), 180-182.
19
20
21

22 Yoo, K.-H., & Gretzel, U. (2009). Comparison of deceptive and truthful travel reviews. In
23
24 Höpken, W., Gretzel, U. & Law, R. (Eds.), *Information and Communication Technologies in*
25 *Tourism 2009* (pp. 37–48). Vienna, Austria: Springer.
26
27
28

29
30 Yoo, K. H., Lee, Y., Gretzel, U., & Fesenmaier, D. R. (2009). Trust in travel-related
31 consumer generated media. In Höpken, W., Gretzel, U. & Law, R. (Eds.), *Information and*
32 *Communication Technologies in Tourism 2009* (49-59). Vienna, Austria: Springer.
33
34
35
36

37
38 Zhang, W., & Watts, S. A. (2008). Capitalizing on content: Information adoption in two
39 online communities. *Journal of the Association for Information Systems*, 9(2), 73-94.
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65

Summary statement of contribution – This is one of the first qualitative studies investigating how consumers assess trustworthiness and untrustworthiness in online consumer reviews. The results of this study have helped the authors to develop an original theoretical framework on the determinants of trustworthiness in online consumer reviews. The study advances credibility theory in electronic word of mouth and provides several insights regarding consumer information processing and adoption. The results have also several implications for theory and practice.

Acknowledgements – I would like to thank all of those who agreed to be interviewed for this research, those who have helped me to improve the manuscript with their comments, and the three anonymous reviewers and the associate editor for their honest, helpful and constructive comments.