Chapter 4 Information and Communication Technologies: Impacts on Older Tourists' Behavior

Abstract In the last couple of decades, the increasing pervasiveness of information and communication technologies (ICTs) has radically transformed travel behavior, also among older tourists. This chapter retraces the development of ICT in the tourism industry and discusses the extent and nature of the age-related digital divide. In addition, it describes the effects of ICTs on the travel experience, with a focus on older tourists. In particular, it addresses the interface between everyday life and tourism, the subjectivity of the tourist experience, the pluralization of motivations and alternatives, and complementarity between simulated and authentic experiences. In addition, the impact and potentialities of ICTs in key travel planning activities are discussed, with specific regard to information searching, information sharing, booking, and experiential moments at the destination.

4.1 Information and Communication Technology Development in Tourism

The role of information and communication technologies (ICTs) in the tourism industry has widely been addressed in the literature (Buhalis and Law 2008; Sigala et al. 2012). ICTs have revolutionized the tourism industry and the whole travel experience for tourists, including the information search, booking, experience at the destination, and information sharing. For example, ICT development has determined the flourishing of online travel agencies (such as Booking.com or Expedia.com), meta-search websites (such as Skyscanner.com or Trivago.com), and travel review websites (such as TripAdvisor.com or Yelp.com) (Buhalis and O'Connor 2005; Minazzi 2015). To understand the impact and potentialities of ICT regarding tourism, it is necessary to recall the evolution of Web 1.0–Web 3.0.

While Web 1.0 represents the first stage of the World Wide Web, characterized by a unidirectional communication in which users were passive receivers, Web 2.0

shifts the approach to an active and dynamic mode in which users can share knowledge and experiences (Minazzi 2015). Web 2.0 has been described as an environment where social interactions occur, generating content (Leung et al. 2013). Kaplan and Haenlein (2010, p. 61) emphasized the role of Web 2.0 in the evolution of social media, described as:

... a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User-Generated Content.

Scholars have proposed different taxonomies of social media. Based on Kaplan and Haenlein (2010) and Fotis et al. (2012), nine types of social media can be identified:

- social networking websites (e.g., Facebook, LinkedIn)
- blogs (e.g., Nomadic Matt)
- content communities (e.g., YouTube, Flickr, Scrib, Slideshare)
- collaborative projects (e.g., Wikipedia, Wikitravel)
- virtual social worlds (e.g., Second Life)
- virtual game worlds (e.g., World of Warcraft)
- microblogs (e.g., Twitter)
- consumer review and rating websites (e.g., TripAdvisor.com, Silvertraveladvisor)
- Internet forums (e.g., ThornTree, Fodor's Travel Talk).

From a travel behavior perspective, the application of Web 2.0 to tourism is called Travel 2.0 and is characterized mainly by the significant transformation from offline to online booking and the use of social media (Buhalis and Law 2008).

Scholars and practitioners have different perspectives on the evolution of Web 2.0–Web 3.0. Minazzi (2015) identified three main positions on Web 3.0. The first focus is on the relational and social aspects linked to semantic Web technology and artificial intelligence. The second views the increase of speed and graphic improvements as the main feature of Web 3.0, while another position believes that interoperability, three dimensional experiences, and co-creation will represent the main changes in Web evolution.

In recent years, several scholars have addressed in detail the relationship between ICTs and older adults, focusing on ICT adoption (e.g., Millward 2003; Friemel 2014; Yu et al. 2015), barriers to and perceived risk in online purchases (e.g., Buhalis and Law 2008; Kazeminia et al. 2015; Pesonen et al. 2015), and use of social media (Fotis et al. 2012; Thébault et al. 2013). However, limited research has been conducted regarding the relationship between ICT and travel behavior for older adults. After presenting an overview of ICT adoption among older persons in Sects. 4.2, 4.3 and 4.4 examine the impact of ICTs and social media on the tourist experience, and specifically on four main activities related to travel planning behavior: information searching, information sharing, booking, and experiencing.

4.2 Information and Communication Technology Adoption Among Older Persons

Several studies have addressed the relationship between age and technology adoption, emphasizing that Internet access is strongly correlated with various socio-demographic variables, such as income, education, gender, and age (Loges and Jung 2001; Helsper 2010; Korupp and Szydlik 2005; Zickuhr and Smith 2012). Millward (2003) conceptualized the existence of a "gray digital divide," intended to refer to the lower usage of ICT by older persons in comparison with younger generations. The term "divide" suggests the existence of a gap in digital technology that needs bridging to reach social inclusion and equal distribution of resources and life chances (Van Dijk and Hacker 2003). In fact, individuals who are digitally disadvantaged are often those who are socially disadvantaged (Mossberger et al. 2003). Scholars consider that the digital divide is a complex phenomenon that includes the differentiation of adoption, usage, and skills regarding the Internet (Pearce and Rice 2013; Friemel 2014). Specifically, two levels of digital divide can be identified (Friemel 2014):

- first-level or first-order digital divide, which describes an access gap related to Internet adoption (i.e., those who have used the Internet versus those who have never used the Internet) and Internet usage (i.e., frequency of Internet use)
- second-level or second-order digital divide, which describes differences in Internet-related technology use, skills, and literacy.

While the first-level digital divide is about to be overcome in several countries, major differences exist between countries and within societies regarding Internet-use skills (Norris 2001). Several factors explain the digital divide besides the lack of technical devices to access the Internet—mainly motivational indifference (i.e., the perceived uselessness of information found on the Internet or the lack of relevance of information to one's life), and lack of knowledge (Friemel 2014). Regarding older people in particular, Lee et al. (2011) explored the barriers to Internet usage in different age segments, namely "the pre-senior" (50–64 years), "the young-old" (65–74 years), and "the older-old" (75+ years). Four main dimensions of constraints emerged:

- intrapersonal limitations, such as motivation and self-efficacy
- functional limitations, such as decline of memory or spatial orientation
- structural limitations, such as costs
- interpersonal limitations, such as the lack of support to start using the Internet.

Intrapersonal and functional dimensions refer to an individual's perception and ability in handling new technologies (internal factors), while structural and interpersonal dimensions refer to living conditions beyond physical and mental status (external factors). Overall, the findings showed that internal constraint factors were slightly higher than external constraint factors. Consistent with previous research (Rosenthal 2008), Lee et al. (2011) found that the over-75s had to face a much

higher level of challenge to start learning and using ICTs than did the younger age group (50–64 years). Similarly, Friemel (2014) addressed the "gray divide" among older individuals aged 65-plus years. Based on a representative survey in Switzerland, the findings revealed that that older individuals aged 70-plus are partially excluded from Internet usage. The study also showed that gender differences in usage disappear if controlled for education, income, technical interest, pre-retirement computer use, and marital status. In addition, the social context exerts an influence on Internet use: encouragement by family and friends is a strong predictor for Internet use, and older persons prefer private learning settings over professional courses. The findings thus support the results of previous research that emphasizes the importance of help from peers and relatives in the use of the Internet and online purchases of older persons (Eastman and Iyer 2004; Eisma et al. 2004; Zickuhr and Madden 2012).

According to recent statistics (Eurostat 2016), 39% of the population aged 16–74 reported having used the Internet for travel-related purposes in the three months preceding the study. In addition, in 2015, 65% of Europeans who used the Internet bought or ordered goods or services online and, among these, more than half bought travel services, mainly accommodation. The propensity to purchase online steadily increased from 56% in 2010 to 65% in 2015, and a similar pattern was observed for travel-related services. Specifically, recent European statistics (Eurostat 2016) on ICT show than 38% of older individuals (aged 65–74) in the EU-28 use the Internet on a regular basis, at least once a week. Only a decade before, just 7% of older people were using the Internet at least once a week. Across the whole of the EU-28, about 20% of older persons used the Internet for making online purchases in 2014 (Eurostat 2015). According to the most recent data available, in the United States, in 2016 the proportion of older individuals using the Internet was higher than in Europe (64%) (Smith 2017).

Overall, a growing proportion of older persons use the Internet and this could be explained by the process of younger generations who have used the Internet moving into the older age classes, or by some individuals developing Internet skills as they grow older.

4.3 The Impact of Information and Communication Technology and Social Media on the Tourist Experience

The tourist experience is a core concept in tourism studies (Ryan 2002; Mossberg 2007; Ritchie and Hudson 2009; Volo 2009). In a study about older tourists, Milman (1998, p. 166) emphasized the impact of travel experience on psychological well-being:

Actual tourism and travel experience is not only composed of physical activities such as flying, riding a bus, or eating and drinking, but also a wide range of cognitive activities

pertaining to the mind. These cognitive activities may have a possible impact on the traveler's perception, awareness, imagination, and reasoning. They also have an effect on the psychological well-being of the traveler, both positive and negative.

The multifaceted nature of the tourist experience emerged also in subsequent studies (Larsen 2007; Volo 2009; Ritchie and Hudson 2009). For example, Tung and Ritchie (2011, p. 1369) described the tourist experience as:

An individual's subjective evaluation and undergoing (i.e., affective, cognitive, and behavioural) of events related to his/her tourist activities which begins before (i.e., planning and preparation), during (i.e., at the destination), and after the trip (i.e., recollection).

From early conceptualization in the 1970s, scholars have addressed the tourist experience from a variety of perspectives. By analyzing the conceptual developments of the tourist experience over the years, Uriely (2005) identified four major shifts:

- 1. from differentiation to re-differentiation of everyday life and tourism
- 2. from generalizing to pluralizing portrayals of the tourist experience
- 3. from focusing on the toured objects to the attention given to the role of subjectivity in the constitution of experiences
- 4. from contradictory and decisive statements to relative and complementary interpretations.

Building on Uriely's (2005) analysis, it can be argued that the rapid development of ICT and social media have further emphasized (1) the interface between everyday life and tourism; (2) the pluralization of motivations, alternatives and travel types, (3) the subjectivity of the tourist experience, and (4) the complementary of simulational or hyperreal experiences with authentic experiences.

1. The interface between everyday life and tourism. If early literature about travel experiences emphasized the distinctiveness of tourism from everyday life (e.g., Cohen 1972, 1979), in the 1990s the post-modern perspective argued that there is a blurred delimitation between tourism and daily activities (Lash and Urry 1994). For example, through the use of the Internet, many activities that were once limited to tourism experience, such as engaging with different cultures, are now available without needing to move from one's place of residence. Several museums (e.g., the Louvre in France or the Smithsonian National Museum of Natural History in the United States) provide interactive virtual tours so that people can move around and observe the exhibition, as well as digital content to enhance the visiting experience (Cavriani 2016). The Google Art Project is a unique collaboration between Google and over 250 art institutions to enable people to discover and view artworks online in detail. The project is a kind of virtual gallery, which proposes super high resolution images of famous artworks and 360 degree tours of individual galleries using Street View "indoor" technology. A wide range of institutions, art museums and other settings collaborate, such as the White House in Washington DC, the Museum of Islamic Art in Qatar, or the Musée d'Orsay in Paris, France. Further, tourism destinations provide virtual tours among the main attractions and have live webcams so that people can experience the destination without being there. Moreover, the interface between the tourism experience and everyday life is guaranteed by the intense use of social media, social networks in particular, to share—even on a moment-by-moment basis—the travel experience. Winstead et al. (2013) conducted a longitudinal qualitative study among older adults from assisted living communities to explore whether the use of technology such as Google Maps with Street View and virtual tours of cultural institutions could help to overcome health and social barriers. The findings revealed that these visits reduced the level of loneliness and social isolation. In addition, Kostoska et al. (2015) explored the possibility for older tourists to participate in remote museum visits with virtual environments. They found that participants particularly liked the guided tours and to follow another person in the visit, thus emphasizing the social motivation. Further, Signoretti et al. (2015) described the design approach and the testing of the app "Trip 4 All" (T4A), that is, a gamified virtual assistant for older tourists during walking visits. The aim of the app is to improve visitors' motivation while increasing ease of use and enjoyment. T4A is based on georeferenced maps where the users' geoposition is a trigger to launch storytelling content and/or challenges based on the aspects of the visited site (e.g., geographical, art, religious, historic, cultural, and human). If users succeed in the challenges, they obtain prizes, new resources, and abilities to try more complex challenges.

- 2. Pluralization of motivations and travel alternatives. ICT and the Internet have given a strong impulse to the emergence of new travel motivations. An analysis of segmentation studies based on travel motivations and travel behavior have shown that the older tourist market is far from being homogeneous and that several tourist profiles can be identified (see Chap. 2). In addition, the chance to compare alternative offerings has greatly increased, and tourists have the possibility to access an unlimited number of diverse and plural experiences (Chap. 3). Several virtual communities offer advice to older people about many aspects of their lives, including travel. For example, Sixtyandme.com is an online community for women aged 60-plus, providing tutorials (e.g., yoga courses), and sections about games, health, travel, money, life, family, mindset, dating, and beauty; it also has a chat facility where users can exchange ideas.
- 3. **Subjectivity of the tourist experience**. As explained by Uriely (2005, p. 206), the concept of the tourist experience has changed its focus over time, moving toward the increasing centrality of the tourist:

The current notion of the tourist experience as a diverse phenomenon is accompanied by another development in which attention is shifted from the displayed objects provided by the industry to the tourist subjective negotiation of meanings as a determinant of the experience.

Over the years, tourism literature has progressively focused on the role of the tourist as the creator of subjective meanings (Wang 2000). For example, the massive use of the selfie (i.e., a picture of oneself taken with a digital camera)

over the last years embodies well the centrality of the self in tourist practices. Scholars have described the selfie as a mode of self-presentation (Murray 2015; Dinhopl and Gretzel 2016; Rettberg 2016). Building on the concept of the tourist gaze (Urry 1990), Magasic (2016) developed the concept of the "selfie gaze" to explain how the presence of a social media audience influences the tourist's perception of travel. From this perspective, the practice of taking photos of oneself during daily life is justified by the existence of an audience to view these images. This "gaze" is described as "the mode of conception which helps us decide when, where and how we produce these self-referential" contents (Magasic 2016, p. 180). The role of subjectivity emerges also in the proliferation of travel review websites (see Sect. 4.4.2).

In addition to the subjectivity of the tourist experience, the literature has emphasized the role of tourists as prosumers and co-creators of their experiences (Payne et al. 2008; Grönroos and Voima 2013). Web 2.0 technologies facilitate the co-creation of value by a customer and a firm by boosting the opportunity for interaction (Harrison and Barthel 2009; Cassia et al. 2016). Through Web 2.0, customers are not "passive receivers" of value created by service organizations (Park and Allen 2013), but rather they participate in co-creating value by means of their own interactions (Negri et al. 2016). Accordingly, tourists and companies, as well as destinations, collaborate in the co-creation of unique experiences (Binkhorst and Den Dekker 2009) with the support of technology. For example, smartphones are considered the core technology of Smart Tourism (Gretzel et al. 2015), where ICTs enable and mediate the co-creation of personalized and unique experiences on site (Neuhofer et al. 2012; Buhalis and Foerste 2015; Gretzel et al. 2015).

4. Complementary of simulational experiences with authentic experiences. Early theories about tourist experience presented two opposed approaches: on the one hand, the tourist experience was regarded as a superficial quest for artificial attractions, such as theme parks (Lash and Urry 1994); on the other, it was considered a quest for the authentic, for example nature travels (e.g., MacCannell 1973). From the late 1970s to the early 1980s, these two approaches started to coexist in a complementary perspective (Uriely 2005). In addition, with the development of augmented reality the border between authentic and fictitious has become difficult to identify. In this regard, some applications offer the opportunity to see buildings and places as they were in the past or as they could be in the future. Concerning older tourists, previous studies have identified nostalgia as a travel motivation (Sellick 2004; Sie et al. 2015); therefore, these apps could enrich the tourist experience by recreating a view of the places as they were years ago.

Overall, the aspects of interface, subjectivity, complementarity and pluralization represent different facets of the same phenomenon. The rapidly reducing digital divide leads to the thought that ICT will have an increasing role for older tourists in the near future.

4.3.1 Micro-moments in the Tourist Experience: The Role of Mobile Devices

Mobile technology allows the use of the Internet while on the move by using the Internet on a portable computer or handheld device, via mobile or wireless connections (Law et al. 2014). Mobile Internet has rapidly gained popularity (Baccarani and Golinelli 2005). For example, while in 2012, 36% of individuals aged 16-74 within the EU-28 used a mobile device to connect to the Internet, in 2015, this share had risen to 57% (Eurostat 2016). The most common mobile devices for Internet connections are mobile or smart phones, laptops, notebooks, netbooks, and tablet computers. In the United States, about 77% of older people aged 50-64 are now smartphone owners, as are 42% of those 65 and older (Smith 2017). Even though tourists use mobile devices during all phases of travel, the mobile devices' biggest impact is regarded to be on site, that is, while the tourist is at the destination (Neuhofer et al. 2012; Wang and Fesenmaier 2013). Wang et al. (2011) argued that the information services of smartphone apps are personalized and they can support several micro-moments in the travel process. For example, mobile devices can help tourists find a restaurant, local transport or other facilities at the destination. One such app, developed to help families to find playground areas for children while at the destination, is Playground Around the Corner. Google describes a micro-moment as "an intent-rich moment when someone acts on a need," and it identifies four main types of micro-moments: "I-want-to-know moments," "I-want-to-go moments," "I-want-to-do moments," and "I-want-to-buy moments" (www.thinkwithgoogle.com). During the ongoing travel planning, micro-moments happen throughout the journey, and people face many decisions and increasingly rely on their smartphones for immediate answers to their travel questions. According to Google (2015), the United States' mobile's share of visits to travel sites in 2015 has grown by 48%, and times spent per session on mobile travel sites is down by 7%, thus indicating that mobiles respond to tourists' needs more quickly. In addition, mobile Web conversion rates for travel sites have grown 88% (Gevelber and Heckmann 2015). This data reveals that people are increasingly using their smartphones for travel planning, and they do that in smaller moments across more sessions on their phones. Google defines these moments as "I-want-to-get-away" (i.e., dreaming about the travel), "Time-to-make-a-plan" (i.e., planning), "Let's-book-it" (i.e., booking), and "Can't-wait-to-explore moments" (i.e., experiencing).

Eriksson and Fabricius (2015) conducted a qualitative study among retired people aged between 60 and 75 to develop an understanding of the participants' potential use of mobile devices during a trip. The sample was drawn from a Swedish speaking pensioners' association in Helsinki, Finland. Participants expressed experiencing added-value by using the Internet with mobile devices during a trip. Overall, technology anxiety did not seem to be a great barrier. Usage barriers were related to travelers' style of traveling, their personal knowledge of using technology, and the support available from a younger family member. These

findings are in line with previous studies that found older people may rely on help for the adoption and use of mobile devices (Mallenius et al. 2007).

In addition, Kim et al. (2013) investigated the relationships among motivations (ease of use, usefulness, and enjoyment), as well as attachment and usage intention regarding older tourists' (aged 55+) use of mobile devices. They also explored the moderating role of knowledge in these relationships. The findings revealed that ease of use has significant effects on usefulness and enjoyment. These motivations significantly affect attachment, which in turn influences usage intention.

4.4 Information and Communication Technology and Social Media in Tourism Activities

As explained in Sect. 4.3, ICTs and the Internet affect the whole travel experience. However, the tourism literature emphasizes that the role of technology and Web 2.0 is particularly evident in the following activities:

- information searching
- information sharing
- booking
- experiencing

Each of these activities can be performed in either one or multiple moments of the tourist experience (before the trip, during the trip, and after the trip), and can involve different types of technologies and social media.

4.4.1 Online Information Searching

While some studies have shown that older tourists prefer traditional sources of information (as discussed in Chap. 3), recent research has revealed that the Internet is becoming an important source of information for older tourists. For example, Alén et al. (2016) found that 26% of respondents mainly used the Internet for the trip's preparation, while 30.2% opted for travel agencies, 23.5% based travel decisions mainly on previous travel experience, and 22.1% relied on family and friends.

Online information sources include commercial sources (e.g., a hotel website), and non-commercial or non-transactional sources, such as meta-search websites (Buhalis and Law 2008) and user-generated sources (e.g., personal blogs, social network profiles, travel review websites). According to Graeupl (2006), flight information and accommodation are the most searched topics for consumers aged between 50 and 60 years old, and most of these consumers are not interested in package holidays (cited in Buhalis and Law 2008). In a qualitative enquiry among

Finnish retirees, Pesonen et al. (2015) found that before an international trip, respondents searched for information about the destination concerning, for example, history, number of inhabitants, culture, weather, sights, activities, events, local transportation, shopping opportunities and opening times, restaurants, and local specialties, as well as health-related recommendations such as vaccinations. In addition, respondents spent much time and effort searching for information about the accommodation booked. Visual material such as photographs played a major role regarding both the destination and the accommodation. Travel websites rather than social media were the main source of online information.

Online information searching mostly occurs before the trip, when tourists look for inspiration about where to travel, or search for means of transport, accommodation, and activities to perform at the destination. In this step, they also compare competing offerings and evaluate between different forms of travel organizations (e.g., independent travel vs. package tour). Sometimes tourists can also look for travel companions. However, the travel experience at the destination can also stimulate older tourists to look for further information about the destination's history, culture, or attractions when they return home after the travel (Pesonen et al. 2015). In fact, as discussed in Sect. 4.3.1, online search at the destination is supported principally by mobile devices, it occurs in micro-moments and regards mainly urgent information (e.g., about where to eat, or where to find a gasoline station).

In addition, the widespread use of mobile devices, even among older tourists, has increased online information searching during the trip. As explained in Chap. 3, while core activities are usually decided well in advance of the trip, secondary activities such as where to eat at the destination are usually taken while already traveling. For these types of activities, online information searches during the trip are fundamental. However, Pesonen et al. (2015) reported that although older tourists use the Internet at home while looking for information, they do not use it on their trips abroad because they are concerned about the costs and the security of the Internet usage. At the destination, they prefer traditional sources of information, such as tour operators or hotel brochures, television, and pre-printed material brought from home. In addition, they prefer to ask tour guides and hotel personnel for information.

Research has shown the existence of heterogeneity in digital skills among the population (the digital divide). Accordingly, some studies investigated older persons' approaches to and use of ICT and the Internet for travel purposes. Findings revealed different tourist typologies or segments (see Chap. 3 for segmentation studies). For example, Thébault et al. (2013) explored the experience of older individuals with regard to online navigating for information regarding travel planning. Based on semi-directed interviews among French and Canadian older tourists who used the Internet to research their tourism destinations, a conceptual typology of tourists emerged with regard to Internet use: "senior-opportunist," "senior-disinclined," "senior-Web 2.0," and "senior-altruist." The "opportunists" seek information and exchange with other like-minded Web users. Among these individuals, some take advantage of the advice of other people while not

contributing themselves. The "disinclined" do not look for the advice of unknown Internet users, nor do they provide any. Some are totally hostile to any form of exchange of information, while others exchange information with close relatives and friends. In the minority, "senior-Web 2.0" tourists recognize that the Internet has considerably changed their way of researching information. Even though not one of the interviewees belonged to this category, Thébault et al. (2013) theorized the existence of a profile defined the "senior-altruists." Being individuals who offer free advice to others without asking for reciprocity, they are moved by the desire to help others. This category recalls the concept of altruism explored by Kim et al. (2016).

Thébault et al.'s (2013) study also revealed that social interactions help improve the pertinence and specificity of information sought. Similar findings about the importance of social interaction emerged in other studies. For example, Vigolo and Confente (2013) demonstrated that help with online purchases was a significant predictor of online purchase intentions for travel services among older Italian tourists.

4.4.1.1 Information Searching: The Case of the TripAdvisor Senior Travel Forum

The senior travel forum was introduced on TripAdvisor in 2009 as a space where individuals aged 50 years and older ask for advice and opinion about a variety of aspects concerning the type of travel, evaluation of alternative offerings, and seeking travel companions. It now counts 915 topics and 8134 posts. Hereafter are examples of travel threads and related comments presented according to the type of content.

Content: type of travel

Thread: "You too can backpack at 70." A user posted an inspirational message about her experience as a backpacker at 70. A female user responded with the following comment:

My dream is to backpack and travel when I retire but my parents and husband think I am off my rocker. They think as you get older you need to be more comfortable and closer to good medical care. I think their idea of retirement is the typical rocking chair with grandkids staying on weekends and knitting club. How do you balance the comfort and medical issues with a budget backpacking lifestyle?

Content: comparing alternative offerings

Thread: "Company A versus company B." Users asked for advice about competing tour operators offering the same type of travel:

¹The names of the companies have intentionally been removed.

I am interested in getting recommendations for travel to Vietnam/Cambodia with these two companies. Which company has better guides, hotels, itineraries?

Content: looking for travel companions:

Thread: "Is there a safe way to find a travel buddy?" Within this thread, users discussed whether looking for a travel companion over the Internet might be safe.

Here are many threads on both the Senior Travel and Solo Travel forums started by those seeking travel companions. While I do understand that it can be nice to have someone to share with, the Internet is not a very safe place for such a project.

While some users suggested travel sites or organized tours, some others encouraged solo travelers to enjoy the travel experience on their own:

The idea that solo travel is "unsafe" and that it is "safer" to travel with another person, even someone who you know very little about seems daft to me. ... I am female and certainly qualify as "senior" but as much as I love my husband, some of my best trips have been taken by myself. ... If you really can't imagine enjoying yourself without companions, a small group tour surely is the best and safest way to do that?

Interestingly, in this forum younger people also participated looking for information on behalf of or for their parents or grandparents, thus emphasizing the role of social support as a travel motivation (Chap. 3):

I am trying to book a tour of Italy for my 78-year-old mother and 82-year-old aunt. They are mobile but slow. Neither have been to Italy and want to try for Rome, Florence and Venice. Any suggestions?

Hello! I'm a 21-year-old (male) college student and I'm looking at possibly taking my grandma on one last "big" trip. She has never been abroad, so I'd like to take her across the ocean for a 2ish-week summer trip. Do you have any suggestions or advice on places that would be good to have her consider? She has said that her biggest criteria would be the culture aspect and scenery. I'm looking for a mix of culture, scenery and some adventure. I don't even know where to start and I want to make sure it's a great trip for her. Please let me know what kinds of things I can ask her in order to help narrow it down.

This travel forum is extremely rich in information and Kazeminia et al. (2015) used it as a source to collected the narratives of older people and explore their travel constraints and coping strategies. Building on the framework of age as a cognitive phenomenon, the narratives were analyzed and several types of constraints were identified. In the pre-travel stage conversations, two major themes emerged: physical issues and lack of companion. Packaged tour and insurance are the strategies used by older tourist to overcome these constraints. In the post-travel conversations, four main themes emerged: "travel," "hotel," "time," "use," and "insurance."

4.4.2 Online Information Sharing

On social media, tourists share user-generated content (UGC) or consumer-generated content (CGC), which include text, images, photos, videos,

podcasts, and other forms of media generated by users. For example, Age-CAP is a smartphone and web application which aims to create a user-generated database of age-friendly and accessible locations. Users can rate the age-friendliness of locations such as restaurants, libraries, crosswalks, shopping centers, and share their opinion with other users.

According to recent statistics (Eurostat 2016), one of the most common online activities in the EU-28 in 2015 was participation in social networking. About half of individuals aged 16–74 used the Internet for social networking, even though large differences exist among countries. For example, about 73% of people in Norway used social networking sites, while in France, Italy, and Slovenia, the users were less than 40% (2014 data). In the United States, currently, a majority of ages 30–49 (80%) and 50–64 (64%) use social media, but only 34% of individuals aged 65 and older use social media. However, this latter datum has grown intensely in recent years (it was only 10% in 2010) (Smith 2017).

Several studies have examined the effect of UGC on tourism (e.g., Litvin et al. 2008; Xiang and Gretzel 2010; Fotis et al. 2012; Munar and Jacobsen 2014). In addition, some scholars explored the motivations for older tourists involved in social media (e.g., Berger and Schwartz 2011; Bronner and de Hoog 2014; Yoo and Gretzel 2009).

In particular, Yoo and Gretzel (2009) investigated the role of UGC in travel decision-making across different age groups: "Generation Y" (18–24 years), "Generation X" (25-44 years), "baby boomers" (45-64 years) and "seniors" (65 or older). Yoo and Gretzel (2009) found generational differences between travelers' Internet affinity and their travel-related use, perceptions, and creation of UGC. In general, the use of social networking sites generate several benefits for older individuals, mainly social benefits (e.g., staying in touch with friends and relatives or reconnecting with lost friends), informational benefits (e.g., medical and financial support), and personal enrichment (e.g., by reading literary publications) (Moran 2013). In addition, social networking sites provide an easy way of sharing information and helping unknown people, which indirectly demonstrates general altruistic behavior. With this regard, Kim et al. (2016) explored the relationship between social capital, altruism, common bond and identity, and intention to revisit a social networking site for travel purposes among individuals aged 50 years and older. Social capital is intended as a kind of informal norm that encourages co-operation between two or more individuals, it is commonly referred to as "prestige" and "reputation" (Fukuyama 2001). Common bond "defines that members of a group are attached to individual members in the group," whereas common identity "defines that members of a group are attached to the group as a whole" in the context of social networks (Kim et al. 2016, p. 98). The findings revealed that older tourists' common bond attachment to social networking sites is more affected by altruism, whereas common identity attachment is more affected by social capital. In addition, the use of social networking sites provides greater benefits to users experiencing low self-esteem and low life satisfaction by assessing bonding and bridging related to social capital (Ellison et al. 2007).

Social media, including travel review websites (Lu and Stepchenkova 2012) and blogs (Carson 2008), have gained increasing importance as information sources for tourists (Xiang and Gretzel 2010). But most of all, older tourists use social media after the holiday to share experiences with friends and/or other travelers, and to share reviews and evaluations (Fotis et al. 2012), thus activating electronic word of mouth (eWOM). As concerns travel review websites, some of them explicitly target older individuals, such as Silvertraveladvisor.com, a review website that defines itself as "the voice of mature travelers." The website is run by a team of travel industry professionals specializing in travels for older tourists. Users can read and post their own reviews about travels, attractions, and hotels. According to the definition of Schmallegger and Carson (2008, p. 101):

... blogs provide commentary and personal thoughts on a particular subject (for example a specific trip or destination), are frequently updated and displayed in reverse chronological order. Blogs tend to be interactive in nature and allow readers to post comments.

Blogs contain primarily textual information, although photographs, audio, and video files have become increasingly popular. Individual travel blogs can be hosted on public travel blog sites such as Travelblog.org and Travelpod.com. In addition, travel blogs are published on virtual travel communities. For example, Startsat60.com is a blog and information website, as well as an online community targeting people aged 60 and over in Australia and New Zealand. It covers topics such as travel, gray nomads, health, money matters, and retirement. In addition, travel-related companies, such as travel agencies (e.g., Tui.com) or well-known travel guides (e.g., Lonelyplanet.com, community.roughguides.com), provide free Web space to tourists to publish their travel stories. Further, some bloggers have their own website; for instance, Debbie and Michael Campbell, a retired couple from Seattle, Washington, have been traveling non-stop around the world since 2013 and they regularly post their experiences on their blog (http://www.beseniornomads.com/blog):

As we were closing in on retirement, we felt we had "one more adventure in us" so in July of 2013 we rented our townhouse, sold our sailboat and a car, and reduced our stuff to fit in a small storage unit. We waved goodbye to our family and friends and headed off to explore the world!

They refer to themselves as "the senior nomads" and their claim or motto is: "Living life and loving each other one Airbnb at a time".

Regarding the motivation for the creation of UGC, Yoo and Gretzel (2011) found that United States travelers are motivated mainly by altruistic and hedonic benefits and that there is a significant relationship between tourists' personality types and motivational factors. In addition, Munar and Jacobsen (2014) distinguished motivational factors into personal and community-related benefits as well as social capital. Their study revealed a dominance of visual content, along with the relevance of altruistic and community-related motivations. In particular, sharing practice through social media appeared to be a manifestation of sociability and emotional support. However, UGC seemed to have less relevance as a source of travel information.

Erickson (2011) explored the role of online communities in the lives of older people in a study conducted in the United States. Specifically, qualitative interviews aimed to assess the impact of Facebook on social capital. Thematic analysis revealed that Facebook facilitates connections to loved ones and it may indirectly facilitate social capital through other channels. However, some potentially negative impacts of Facebook emerged with regard to the open access to personal information. Interviewees expressed concerns related to privacy, comfort with technology, and the inappropriate content sometimes found on Facebook (e.g., vulgar language).

4.4.3 Online Booking

In 2014, rented tourist accommodation was booked online for 55% of the trips made by residents of the EU. The prevalence of online booking was slightly higher for international trips (59%), but also for 52% of domestic trips, accommodation arrangements were booked online Eurostat (2016). The age pattern of online booking of rented accommodation and transport was in line with the overall Internet use by age group. While abundant literature has devoted attention to online information searching and the creation of UGC, fewer studies have addressed online booking activities, especially regarding older tourists.

As reported by Reisenwitz et al. (2007), lack of trust is one of the most frequently mentioned reasons preventing older consumers from shopping online. With regard to the online context, the concept of trust entails both the consumer's interpersonal trust of the online firm and their institutional trust of the Internet (Lee et al. 2001). Reisenwitz et al. (2007) explored online behavior of consumers aged 65-plus. The findings revealed that older consumers feel more confident about using the Internet, since their use of the Internet was shown to have increased in terms of hours and frequency. These same consumers were also more likely to purchase online. Hence, the results supported previous research of Kuhlmeier and Knight (2005), who found that the number of hours of use per week was more important than the number of years of use ("experience") in determining Internet purchasing.

In a qualitative study conducted in Finland among older individuals, Pesonen et al. (2015) found that respondents booked their trips on the Internet either independently or with the help of a family member. Individuals who bought packaged tours considered the booking as easy and safe. These respondents preferred to buy a package tour not because they were afraid of problems buying the flights and accommodations from the Internet separately, but rather because they were worried about possible problems at the destination, including, for example, not knowing a foreign language.

Overall, older tourists still show some resistance toward online booking, and tend to overcome these difficulties with personal interaction with the service provider, as will be discussed in Chap. 6.

4.4.4 Experiencing

According to Google (2015), in 2015, mobile queries per user from hotel properties grew by 49% from the previous year, with many including the phrase "near me." In fact, an increasing number of people are looking either for a place to stay ("hotels near me" is a common term) or for a restaurant or a bar (e.g., "breakfast near me," "restaurants near me," "bars near me"). Liang (2015) argued that because of the increased use of mobile devices among older people, it is possible to use augmented reality (AR) systems to support older people in terms of mobility and independence. AR as a technological enabler is becoming popular in different fields such as medicine, education, design, navigation, and tourism. By combining virtual information with the real environment in real time, AR enhances the user's perceptions in terms of vision, hearing, touch, and smell. Based on a literature review, Liang (2015) identified four domains of application of AR: transportation, entertainment, aging-in-place (i.e., enabling older adults to maintain independence in their home environment), and training (e.g., rehabilitation training).

Malik et al. (2015) addressed the possible barriers older people might face in engaging AR applications. Results showed that AR applications could be useful for certain occasions or conditions, such as people with disabilities' use of mobile applications in outdoor or remote situations.

Researchers Tom Dieck and Jung (2016) argued that in the tourism industry there has been an increase in AR adoption to enhance the visitor's experience, specifically for attractions, museums, and art galleries. Based on the consideration that smaller organizations often fear high investments' risks of failures, the authors presented a case study based on the experience of a small museum in Manchester. Specifically, one focus group with five visitors aged 60-plus was conducted to explore their opinions about AR experience. Some of the respondents declared that the enhanced availability of information would improve interactivity and add learning to the experience. Interestingly, respondents who did not own a smartphone also perceived that AR applications would add value to the experience.

To conclude, tourism companies and organizations should not underestimate the propensity of older individuals to explore new travel behaviors during the whole travel experience. In fact, older tourist, especially retirees, might compensate the lack of ICT experience with availability of time to learn and familiarize with technology, even at an advanced age.

References

Alén E, Losada N, Domínguez T (2016) The impact of ageing on the tourism industry: an approach to the senior tourist profile. Soc Indic Res 127:303–322. doi:10.1007/s11205-015-0966-x

Baccarani C, Golinelli GM (2005) Tecnologie della comunicazione e creatività Sinergie 66:V-IX

Berger J, Schwartz EM (2011) What drives immediate and ongoing word of mouth? J Mark Res 48:869–880

- Binkhorst E, Den Dekker T (2009) Agenda for co-creation tourism experience research. J Hosp Mark Manag 18:311–327
- Bronner AE, de Hoog R (2014) Social media and consumer choice. Int J Mark Res 56:51-71
- Buhalis D, Foerste M (2015) SoCoMo marketing for travel and tourism: empowering co-creation of value. J Destin Mark Manag 4:151–161
- Buhalis D, Law R (2008) Progress in information technology and tourism management: 20 years on and 10 years after the Internet-The state of eTourism research. Tour Manag 29:609–623. doi:10.1016/j.tourman.2008.01.005
- Buhalis D, O'Connor P (2005) Information communication technology revolu-tionizing tourism. Tour Recreat Res 30(3):7–16
- Cassia F, Magno F, Ugolini M (2016) Does social couponing stimulate positive eWOM and online referrals? Sinergie Ital J Manag 34:113–124
- Cavriani E (2016) Everyone's collections at Art Museums: groundbreaking digital business strategy as cornerstone for synergies. Sinergie Ital J Manag 34:89–115
- Cohen E (1972) Toward a sociology of international tourism. Soc Res 39:164-182
- Cohen E (1979) A phenomenology of tourist experiences. Sociology 13:179-201
- Dinhopl A, Gretzel U (2016) Selfie-taking as touristic looking. Ann Tour Res 57:126-139
- Eastman JK, Iyer R (2004) The elderly's uses and attitudes towards the Internet. J Consum Mark 21:208–220
- Eisma R, Dickinson A, Goodman J et al (2004) Early user involvement in the development of information technology-related products for older people. Univers Access Inf Soc 3:131–140
- Ellison NB, Steinfield C, Lampe C (2007) The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. J Comput Commun 12:1143–1168
- Erickson LB (2011) Social media, social capital, and seniors: the impact of Facebook on bonding and bridging social capital of individuals over 65. In: AMCIS 2011 Proceedings. http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1084&context=amcis2011_submissions. Accessed 20 Jan 2017
- Eriksson N, Fabricius S (2015) Young-elderly travelers as potential users and actual users of Internet with mobile devices during trips. In: Janssen M et al (eds) Open and big data management and innovation. 14th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2015 Delft, The Netherlands, October 13–15, 2015, Proceedings. Lecture Notes in Computer Science, vol 9373. Springer, Cham, p 24–35
- Eurostat (2015) People in the EU—Statistics on an ageing society. Eurostat. http://ec.europa.eu/eurostat/statistics-explained/index.php/People_in_the_EU_%E2%80%93_statistics_on_an_ageing_society#Elderly_tourists. Accessed 20 Jan 2017
- Eurostat (2016) Statistics on ICT use in tourism. http://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_ICT_use_in_tourism. Accessed 10 Jan 2017
- Fotis J, Buhalis D, Rossides N (2012) Social media use and impact during the holiday travel planning process. Inf Commun Technol Tour 13–24. doi:10.4018/ijom.2011100101
- Friemel TN (2014) The digital divide has grown old: determinants of a digital divide among seniors. New Media Soc 18(2):1–19. doi:10.1177/1461444814538648
- Fukuyama F (2001) Social capital, civil society and development. Third World Q 22:7-20
- Gevelber L, Heckmann O (2015) Travel trends: 4 mobile moments changing the consumer journey. https://www.thinkwithgoogle.com/articles/travel-trends-4-mobile-moments-changingconsumer-journey.html. Accessed 20 Jan 2017
- Graeupl A (2006) 'Silver Surfers' and their online information search behaviour. In: Hitz M, Sigala M, Murphy J (eds) Information and communication technologies in tourism 2006. Springer, Cham, pp 236–247
- Gretzel U, Sigala M, Xiang Z, Koo C (2015) Smart tourism: foundations and developments. Electron Mark 25:179–188
- Grönroos C, Voima P (2013) Critical service logic: making sense of value creation and co-creation. J Acad Mark Sci 41:133–150

- Harrison TM, Barthel B (2009) Wielding new media in Web 2.0: exploring the history of engagement with the collaborative construction of media products. New Media Soc 11:155–178
- Helsper EJ (2010) Gendered Internet use across generations and life stages. Communication research 37:352–374
- Kaplan AM, Haenlein M (2010) Users of the world, unite! The challenges and opportunities of social media. Bus Horiz 53:59–68
- Kazeminia A, Del Chiappa G, Jafari J (2015) Seniors' travel constraints and their coping strategies. J Travel Res 54:80–93. doi:10.1177/0047287513506290
- Kim MJ, Kim WG, Kim JM, Kim C (2013) Does knowledge matter to seniors' usage of mobile devices? Focusing on motivation and attachment? Int J Contemp Hosp Manag 28:1702–1727. doi:10.1108/MRR-09-2015-0216
- Kim MJ, Lee CK, Bonn M (2016) The effect of social capital and altruism on seniors' revisit intention to social network sites for tourism-related purposes. Tour Manag 53:96–107. doi:10. 1016/j.tourman.2015.09.007
- Korupp SE, Szydlik M (2005) Causes and trends of the digital divide. Eur Sociol Rev 21:409–422 Kostoska G, Baez M, Daniel F, Casati F (2015) Virtual, remote participation in museum visits by older adults: a feasibility study. In: PATCH'15 Proceedings of the 8th International Conference on Personalized Access to Cultural Heritage 1352:10–13
- Kuhlmeier D, Knight G (2005) Antecedents to internet-based purchasing: a multinational study. Int Mark Rev 22:460–473
- Larsen S (2007) Aspects of a psychology of the tourist experience. Scand J Hosp Tour 7:7–18 Lash S, Urry J (1994) Economies of signs and space. Sage, London
- Law R, Buhalis D, Cobanoglu C (2014) Progress on information and communication technologies in hospitality and tourism. Int J Contemp Hosp Manag 26:727–750. doi:10.1108/IJCHM-08-2013-0367
- Lee B, Chen Y, Hewitt L (2011) Age differences in constraints encountered by seniors in their use of computers and the Internet. Comput Human Behav 27:1231–1237. doi:10.1016/j.chb.2011. 01.003
- Lee MKO, Turban E, Matthew KO, Lee ET (2001) A trust model for consumer Internet shopping. Int J Electron Commer 6:75–91. doi:10.1080/10864415.2001.11044227
- Leung D, Law R, Van Hoof H, Buhalis D (2013) Social media in tourism and hospitality: a literature review. J Travel Tour Mark 30:3–22
- Liang S (2015) Research proposal on reviewing augmented reality applications for supporting ageing population. Procedia Manuf 3:219–226. doi:10.1016/j.promfg.2015.07.132
- Litvin SW, Goldsmith RE, Pan B (2008) Electronic word-of-mouth in hospitality and tourism management. Tour Manag 29:458–468
- Loges WE, Jung JY (2001) Exploring the digital divide: Internet connectedness and age. Communication research 28:536–562
- Lu W, Stepchenkova S (2012) Ecotourism experiences reported online: classification of satisfaction attributes. Tour Manag 33:702–712
- MacCannell D (1973) Staged authenticity: arrangements of social space in tourist settings. Am J Sociol 79:589–603
- Magasic M (2016) The "selfie gaze" and "social media pilgrimage": two frames for conceptualising the experience of social media using tourists. In: Inversini A, Schegg R (eds) Information and communication technologies in tourism 2016. Springer, Cham, pp 173–182
- Malik SA, Azuddin M, Abdullah LM, Mahmud M (2015) Exploring older people's experience with augmented realirt (AR) applications. J Eng Appl Sci 10:18004–18011
- Mallenius S, Rossi M, Tuunainen VK (2007) Factors affecting the adoption and use of mobile devices and services by elderly people–results from a pilot study. In: Proceedings of the 6th annual global mobility roundtable
- Millward P (2003) The "grey digital divide": perception, exclusion and barriers of access to the Internet for older people. First Monday (online) 8

References 103

Milman A (1998) The impact of tourism and travel experience on senior travelers' psychological well-being. J Travel Res 37:166–170. doi:10.1177/004728759803700208

- Minazzi R (2015) Social media marketing in tourism and hospitality. Springer International Publishing, Cham
- Moran K (2013) The overlooked: social media marketing for senior citizens. http://www.forbes.com/sites/sap/2013/05/20/the-overlooked-social-media-marketing-for-senior-citizens/#3ac07d4c183e. Accessed 20 Jan 2017
- Mossberg L (2007) A marketing approach to the tourist experience. Scand J Hosp Tour 7:59–74 Mossberger K, Tolbert CJ, Stansbury M (2003) Virtual inequality: beyond the digital divide. Georgetown University Press, Washington DC
- Munar AM, Jacobsen JKS (2014) Motivations for sharing tourism experiences through social media. Tour Manag 43:46–54. doi:10.1016/j.tourman.2014.01.012
- Murray DC (2015) Notes to self: the visual culture of selfies in the age of social media. Consum Mark Cult 18:490–516. doi:10.1080/10253866.2015.1052967
- Negri F, Vigolo V, Bonfanti A (2016) Managing responses to online reviews: an opportunity for value co-creation? Mercati e Competitività 1:103–122
- Neuhofer B, Buhalis D, Ladkin A (2012) Conceptualising technology enhanced destination experiences. J Destin Mark Manag 1:36–46
- Norris P (2001) Digital divide: civic engagement, information poverty, and the Internet worldwide. Cambridge University Press, Cambridge
- Park S-Y, Allen JP (2013) Responding to online reviews: problem solving and engagement in hotels. Cornell Hosp Q 54:64–73
- Payne AF, Storbacka K, Frow P (2008) Managing the co-creation of value. J Acad Mark Sci 36:83–96
- Pearce KE, Rice RE (2013) Digital divides from access to activities: comparing mobile and personal computer internet users. J Commun 63:721–744
- Pesonen J, Komppula R, Riihinen A (2015) Senior travelers as users of online travel services: a qualitative enquiry. In: Tussyadiah I, Inversini A (eds) Information and communication technologies in tourism 2015. Springer International Publishing, Cham, pp 831–843
- Reisenwitz T, Iyer R, Kuhlmeier DB, Eastman JK (2007) The elderly's Internet usage: an updated look. J Consum Mark 24:208–220. doi:10.1108/07363760710834825
- Rettberg JW (2016) Seeing ourselves through technology: how we use selfies, blogs and wearable devices to see and shape ourselves. Palgrave MacMillan, New York
- Ritchie JR, Hudson S (2009) Understanding and meeting the challenges of consumer/tourist experience research. Int J Tour Res 11:111-126
- Rosenthal RL (2008) Older computer-literate women: their motivations, obstacles, and paths to success. Educ Gerontol 34:610–626. doi:10.1080/03601270801949427
- Ryan C (2002) The tourist experience. Continuum, London, UK
- Schmallegger D, Carson D (2008) Blogs in tourism: changing approaches to information exchange. J Vacat Mark 14:99–110
- Sellick MC (2004) Discovery, connection, nostalgia. J Travel Tour Mark 17:55–71. doi:10.1300/ J073v17n01_04
- Sie L, Patterson I, Pegg S (2015) Towards an understanding of older adult educational tourism through the development of a three-phase integrated framework. Curr Issues Tour 3500:1–37. doi:10.1080/13683500.2015.1021303
- Sigala M, Christou E, Gretzel U (2012) Social media in travel, tourism and hospitality: theory, practice and cases. Ashgate Publishing, Farnham
- Signoretti A, Martins AI, Almeida N et al (2015) Trip 4 all: a gamified app to provide a new way to elderly people to travel. Procedia Comput Sci 67:301–311. doi:10.1016/j.procs.2015.09.274
- Smith A (2017) Record shares of Americans now own smartphones, have home broadband. Pew Research Center. http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/. Accessed 20 Jan 2017
- Thébault M, Picard P, Ouedraogo A (2013) Seniors and tourism: an international exploratory study on the use of the Internet for researching recreational information. Int Bus Res 6:22

- Tom Dieck MC, Jung T (2016) Value of augmented reality to enhance the visitor experience: a case study of manchester Jewish museum. In: eReview of Tourism Research—ENTER 2016, 7 Research Notes
- Tung VWS, Ritchie JRB (2011) Exploring the essence of memorable tourism experiences. Ann Tour Res 38:1367–1386. doi:10.1016/j.annals.2011.03.009
- Uriely N (2005) The tourist experience. Conceptual developments. Ann Tour Res 32:199–216. doi:10.1016/j.annals.2004.07.008
- Urry J (1990) The tourist gaze. Sage, Newbury Park CA
- Van Dijk J, Hacker K (2003) The digital divide as a complex and dynamic phenomenon. Inf Soc 19:315–326
- Vigolo V, Confente I (2013) Older tourists: an exploratory study on online behaviour. In: Xiang Z, Tussyadiah I (eds) Information and communication technologies in tourism 2014. Springer International Publishing, Cham, pp 439–452
- Volo S (2009) Conceptualizing experience: a tourist based approach. J Hosp Mark Manag 18:111–126
- Wang D, Fesenmaier DR (2013) Transforming the travel experience: the use of smartphones for travel. In: Xiang Z, Tussyadiah I (eds) Information and communication technologies in tourism 2013. Springer International Publishing, Cham, pp 58–69
- Wang D, Park S, Fesenmaier DR (2011) An examination of information services and smartphone applications. http://works.bepress.com/dan_wang/1/. Accessed 20 Jan 2017
- Wang N (2000) Tourism and modernity: a sociological analysis. Pergamon Press, Oxford
- Winstead V, Anderson WA, Yost EA et al (2013) You can teach an old dog new tricks: a qualitative analysis of how residents of senior living communities may use the web to overcome spatial and social barriers. J Appl Gerontol 32:540–560. doi:10.1177/0733464811431824
- Xiang Z, Gretzel U (2010) Role of social media in online travel information search. Tour Manag 31:179–188
- Yoo K, Gretzel U (2009) Generational differences in CGM perceptions and use for travel planning. In: Tourism Travel and Research Association: Advancing tourism research globally 2009. http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1501&context=ttra. Accessed 20 Jan 2017
- Yoo K-H, Gretzel U (2011) Influence of personality on travel-related consumer-generated media creation. Comput Human Behav 27:609–621
- Yu RP, Ellison NB, McCammon RJ, Langa KM (2015) Mapping the two levels of digital divide: Internet access and social network site adoption among older adults in the USA. Inf Commun Soc 4462:1–20. doi:10.1080/1369118X.2015.1109695
- Zickuhr K, Smith A (2012) Digital differences. Pew Research Center. http://www.pewinternet.org/2012/04/13/digital-differences/. Accessed 20 Jan 2017
- Zickuhr K, Madden M (2012) Older adults and Internet use: for the first time, half of adults ages 65 and older are online. Pew Internet & American Life Project. http://www.pewinternet.org/files/old-media/Files/Reports/2012/PIP_Older_adults_and_internet_use.pdf. Accessed 20 Jan 2017