Personalizing User Interactions in a Social Shopping Context and Open Challenges

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ABSTRACT

Social shopping enables people to share and discuss about shopping in collaborative shopping environments. While much work has focused on using *social* data to promote *shopping*, fewer works have examined the wayd people socialize in the context of shopping as a personalized collaborative activity. In this paper, we propose to use qualitative methods to gain insight into people's perceptions, concerns, and challenges in social shopping-related activities. Based on the findings, our work may contribute to the design of future online shopping sites and social media platforms that improve user engagement and participation in social shopping interactions, as well as facilitating personalized shopping and social experiences in online communities.

CCS CONCEPTS

• **Human-Centered Computing** → *User Models*; *Interactive Systems and Tools.*

KEYWORDS

Personalization; Interface Design; Social Context; Social Shopping; Social Network

1 INTRODUCTION

Social shopping has emerged as a new form of e-commerce which incorporates social media features into traditional e-commerce platforms [7]. Social shopping facilitates user interactions for the purpose of sharing, discussing, and exchanging information about products and services they intend to purchase [31]. Shopping in a social interactive environment enabled by social media sites and applications brings the possibility of unique and personalized user experiences to consumers [24]. Social shopping is regarded as having the potential to revolutionize online shopping activities, and recent years have witnessed its power to transform a product-centered commercial environment to a user-centered online community [19]. Compared with traditional one-way interactions on e-commerce platforms—where users search for and purchase products provided by businesses [32]—social shopping allows users to communicate, write reviews and comments, rate products, and share their experience while shopping on the Internet [10, 16]. The social attributes of products and shopping experiences are major factors and contributors in online shopping activities [12, 33]. Therefore, peoples' shopping experiences in the context of social shopping involve more social and collaborative interactions between user groups, and lead to further possibilities for exploration of how users' social shopping experience can be accommodated and enriched through personalized design of social shopping interfaces.

However, in the field of "social shopping," popular media channels and academic research mainly focus on the "shopping" aspect and largely overlook the "social" characteristics [9]. While most current research has studied how social interactions between users may contribute to a boost in the sales of products and services [14, 15, 22], very few have examined how personalized interface design can promote user experience and shape shopping as a collaborative social activity on social media and online communities. Recent developments in e-commerce and social media have attracted more individuals to interact with other users on online marketplaces and shopping forums, as well as their family and friends on social networking sites. With the increasing user participation in sharing, discussion, and referrals on social media and retailers' sites such as Amazon.com, Best Buy, eBay, and Etsy.com, researchers may extend the existing knowledge to the personalization of user experience in a social shopping context, and how such shopping interactions may lead to impact on users' social relationships. For example, traditional social matching systems support matching based on romantic intimacy—mainly online dating (e.g., Tinder, Match.com, OKCupid)—and a wide range of other social needs, including professional networking (e.g. LinkedIn), group event planning (e.g. Doodle, Meetup), and information-sharing (e.g., Yelp, TripAdvisor, Pinterest) [29]. The characteristics of social shopping—where users shop for products and interact by reviewing, commenting, discussing, and recommending products on multiple online platforms—create enormous potential for forming new social connections and maintaining current social relationships.

In this paper, we present a research proposal aimed at understanding the challenges that users face in current social shopping platforms, and how a more personalized design of social shopping interfaces may help promote user participation, facilitate social relationships, and improve existing friendships on social media and online communities. The following section will outline related work in social shopping, as well as the research proposal and potential design implications.

2 RELATED WORK

Below we review a summary of prior social shopping research that explores people's shopping activities in social media environments. We then examine the perceived risks associated with people's social shopping usage, to explain why users may refrain from participating and/or interacting in a social shopping context. Finally, we present on impression management literature to examine an issue frequently highlighted in existing research of social media and social matching systems, and discuss the challenges related to that perspective on user participation in social shopping.

2.1 Social Shopping

Currently, the literature does not have a consistently accepted definition of either "social shopping" or "social commerce" [2]. Some use the term *social shopping* interchangeably with *social commerce* [31], or consider social shopping as a subset of social commerce [5], while others argue that the two terms refer to distinctive user behaviors and platforms [28]. For example, Stephen & Toubia [28] regard social shopping as a type of online shopping activity that connects customers who generate content (e.g., by sharing items on Facebook, Twitter, and Instagram; or writing product reviews on websites such as Amazon.com and eBay.com), and social commerce as the industry that includes (typically online) businesses utilizing the interaction data from their buyers and sellers to drive more informed and targeted sales [1].

In our work, we define social shopping as an approach to online shopping based on interpersonal interactions between users on social networks (e.g. Facebook, Instagram, and Twitter) and online third-party platforms (e.g. forums, blogs, and review sites), where the consumers' perceptions, attitudes, and shopping intentions are influenced by their friends and other users through posts, sharing, comments, and recommendations. In the context of social shopping, people are doing more beyond online shopping on their own [11]. Instead, it is an online community for people to make collaborative efforts to explore stores, share information, discover products, and discuss about the shopping experience [23]. Compared with traditional online shopping activities, social shopping makes it easier and more convenient for users to explore interesting products, obtain shopping advice, and discover bargains, thereby improving and personalizing their overall shopping experience [14, 20]. In addition, social shopping is more than just buying products, it is also about creating an online community, where people can gain increased social presence [34] and receive social support [21, 26].

2.2 Privacy and Social Risk in Social Shopping

According to Decision Field theory, risk drives deliberation, which may deter further approach-oriented behaviors [4]. Among many perceived risks, privacy risk and social risk are the two relevant and important deterrents of social interactions in online communities [30]. In social shopping, privacy risk reflects users' potential loss of control over their information. In social shopping interactions, a loss of privacy may occur when users engage in posting and discussion of shopping interests and experience. For instance, when sharing experiences and writing comments on a shopping site, a user's personal information may be discoverable through their user name and/or profile page, and their real identity can be connected

with their expressed opinions. The other relevant risk related to the social community is perceived social risk, which reflects potential loss of social status in the social networks or online communities. The combination of these two risks form an overall "participation risk" for individuals [7]. To design personalized social shopping user interfaces, a comprehensive understand of these risks are essential, as these concerns may deter users from engaging and participating in social shopping discussions and interactions.

2.3 Impression Management in Social Shopping

Impression management is based on the concept of "virtually everyone is attentive to, if not explicitly concerned about how he or she is perceived and evaluated by other people" [18]. Though traditional impression management is based on face-to-face interactions, it has been studied in users' online participations as well. For example, researchers have used qualitative methods to investigate impression management and self-presentation strategies in online dating sites, suggesting that online daters intensively involve themselves in both creating and evaluating impressions being given [6]. Kramer & Winter [17] studied impression management behaviors in online social media systems, and posited that self-reported efficacy with impression management predicted a user's number of online connections and level of participation. For online communities, extant works regarded impression management as an important factor in explaining online community participation [3], and a significant predictor of knowledge contribution in several online settings [27]. Goffman [8] theorized impression management as a way people intentionally shape how others perceive them through actions and performances in day-to-day social interactions. This is also important and prevalent in one's online identity, and is modulated in part by their interactions (and history of interactions) with others, including actions such as sharing and receiving information, leaving comments, liking other people's posts, and making recommendations [25].

However, though impression management features are a relevant topic in the context of social matching and online communities [25], there are no existing works that have examined user participation and interactions in social shopping from the perspective of impression management. Therefore, this paper proposes to address the challenges in the personalization of user experience in sharing shopping information on their social network (enhancing existing social relationships in social shopping), as well as forming new social connections through reviews and discussions on e-commerce websites (initiating new relationships in social shopping).

3 RESEARCH PROPOSAL

In the field of social shopping, most works primarily focus on the "shopping" aspect and largely overlook the "social" characteristics [9]. On the one hand, much work has studied how social interactions can be integrated and translated into purchases. Social media websites, like Facebook and Instagram, are no longer only places for people to chat and share, but, more importantly, also serve as platforms that facilitate interpersonal interactions and communications between brands and people, to increase the level of trust and intention to buy products and services [10].
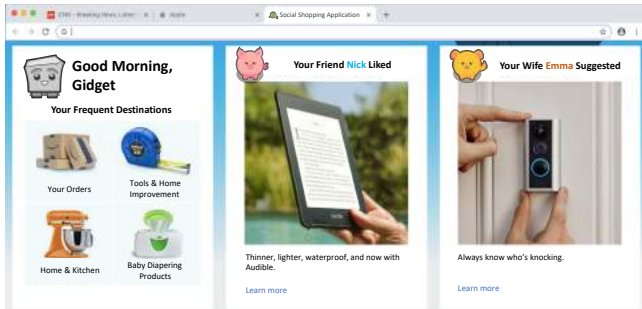
Figure 1: A user's personalized social shopping homepage, showing recommendations from a their own shopping history (left), a friend's "like" (middle), and a friend's product suggestion (right).

However, the social potential of online shopping as an activity has been understudied. For example, Kaptein and colleagues [13] introduced various types of similarities to be discovered and explored in the social media era, including "who-similarity" (people), "what-similarity" (interests, activities, views), "where similarity" (place), and "when-similarity" (timing). In the context of social shopping, we interpret "what-similarity" to be people who are interested in similar types of products, "where-similarity" to be people who mostly shop or review on similar platforms, and "when-similarity" to be people who participate in shopping activities or experience at similar days during the week or time during the day. All of these similarities contribute to shared attributes among people, and therefore lead to potential opportunities of forming new social connections or improving existing social relationships through social shopping. In this paper, we propose a research project which aims to gain a deeper understanding of why current social shopping systems struggle to facilitate the initiation of new social connections and enhancing existing relationships for their users, and what factors need to be taken into account when designing personalized, social-oriented, and engaging social shopping interfaces. We present three research questions (RQs) that we believe are important avenues to study in learning more about designing for personalized social shopping interactions and interfaces.

- RQ1: How do people use 1) social networking sites (e.g. Facebook, Instagram) and 2) online reviews/forum (e.g. Amazon, eBay, Quora, Reddit) to participate in social shopping?
- RQ2: What are the social goals and challenges in personalized collaborative social shopping activities?
- RQ3: How do privacy and social risks affect user participation in social shopping?

We will use a qualitative approach to examine these research questions. More specifically, we plan to conduct semi-structured interviews with people who are active in both online shopping and social media usage. We will pre-screen the participants and chose to only interview the participant who reported to "have at least one purchase in the past three months" (i.e. active in online shopping) and "have used any social media in the past month" (i.e. active social media user). We then will use an open coding scheme to derive themes and theoretical constructs.
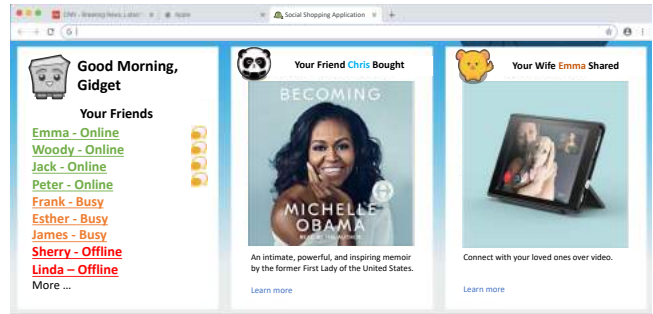

Figure 2: A user's personalized social shopping homepage, showing their contact/chat list with online status (left), and recommendations from a friend's shopping behavior (middle), and a friend's product sharing (right).

4 IMPLICATIONS

User engagement and participation in social shopping activities may have important implications for personalized online shopping experiences and the establishment of social shopping communities, as designing for personalized social shopping interfaces requires a comprehensive understanding of people's behaviors and concerns in their use of existing social systems. A combination of users' shopping preferences and interaction with others may provide new perspectives in personalizing people's online shopping experience. For example, Figure 1 shows a personalized homepage that includes suggested products not only based on a user's individual behavior and history, but also his/her connections' activities (e.g. share, like, purchase, and recommend). Figure 2 shows another possibility, where users can contact their connections while using their favorite shopping website or application, as well as receiving recommendations from their connections' shopping activities.

From our findings, we aim to identify the major factors that negatively affect user participation in social shopping activities and decrease possibilities of subsequent interactions between users on shopping forums and between family and friends on social media. Interventions stemming from our findings may benefit users who seek more personalized online shopping experiences including actively engaging in social shopping interactions with others. Increased personalized information feeds based on one's social network and shopping activities may contribute to the formation of new social connections through sharing, recommending, and discussing shopping with other online shoppers. These personalized social shopping experiences may also help to reinforce existing connections on social media platform by creating additional opportunities for family and friends to see and interact with one's shopping activities, sharing, and suggestions.

Our findings may also be relevant to social media marketing. By having identified personalized social shopping communities, advertisers could place personalized advertisements not only on individual's social media interfaces, but also among groups of people with similar shopping interests. With more micro-targeting strategies available to influence social shopping communities (e.g., consumers discovering new and relevant products related to their interests and their networks' interests), advertisers may experience more efficient and effective marketing investments.

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