When Online Visibility Deters Social Interaction: The Case of Digital Gifts

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Abstract

One of the defining features of online social networks is that users' actions are visible to other users. In this paper, we argue that such visibility can have a detrimental effect on users' willingness to exchange digital gifts. Gift giving is an intimate activity that comes with social risk, and the public nature of online environments can deter interactions that usually occur in smaller, more intimate settings. To study the effects of online visibility on the decision to give, we analyze a unique dataset from a large online social network that offers users the option of buying a digital gifting service. We find that purchase rates of the service increased with the number of ties that users kept on the network, but decreased with the extent to which those ties were connected to each other. We argue that the latter effect is due to the fact that, when a user's ties are connected, any gift sent between the user and one tie is visible to their mutual contacts. We explore how characteristics of users' networks moderate the effect of online visibility, and argue that firms should take consumer network structure into account when designing digital products and promoting engagement online.
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Introduction

In August of 2014, Facebook shut down a service called Gifts, which allowed users to send digital gift cards to one another over its online social network. The move surprised Wall Street investors and online commentators alike, who only two years earlier had heralded the service as a potential threat to the dominance of the popular online retailer Amazon.[2] Because the gift cards that Facebook sold were digital, not physical, users did not need to know a gift receiver's home address to send a gift. Moreover, since the production and distribution of digital goods take little money or time (Lambrecht et al. 2014), Facebook's service was ideal for last minute gifting. So why was it unsuccessful?

One of the defining features of online social networks is that users' actions are visible to other users (Wang, Yu, and Wei 2012; Yadav et al. 2013). Rhue and Sundararajan (2014) show that such visibility can alter users' purchasing decisions and, in particular, make them conform to the expectations of others. Of course, gifts are inherently socially visible to the extent that receivers see their gifts. However, in an online social network, there is an additional layer of visibility not often present in the offline world — gifts sent between two users are visible to any mutual contacts they share. The degree to which a gift conforms to the expectations of this audience constitutes what Yadav et al. (2013) call "social risk." Given that there is already substantial anxiety surrounding the gifting process (Sherry, McGrath, and Levy 1993; Wooten 2000), we argue that such "third-party" visibility increases social risk, which can exacerbate the anxiety and deter users from gifting through online social networks.

If the presence of third-parties can deter gift exchange, then services like Facebook Gifts will be less successful in dense social networks — wherein users' friends are friends with each

other. When users' friends are friends themselves, gifts sent to one friend will be visible to mutual friends. On the other hand, in networks where users' friends are not friends, gifts will only be visible to their intended recipients. In fact, in 2008, Facebook introduced a feature called People You May Know, which encouraged users to form connections with friends of their existing friends.[3] While the feature may have increased the number of connections users had on Facebook, it likely also increased the density of these connections. The feature may thus have had the unintended effect of increasing third-party visibility on Facebook, rendering the gifting service unappealing from the moment it launched.

To study how online visibility affects digital gifting, we analyze data from a large online social network that sells a service which lets users send electronic greeting cards to one another. We find that purchase rates of the service increased with the number of ties that users kept on the network, but decreased with the density of these ties. The negative effect of density was stronger for users in larger, less intimate, and categorically diverse networks. Moreover, in the time span of our study, the social network introduced its own People You May Know feature, and we show that the feature increased the density of users' networks. Platforms should thus think strategically about how they motivate connections between their users, as these decisions can have long-term effects on the success of their offerings.

In the next section, we relate online visibility to network theory and motivate our hypotheses about the effects of visibility on digital gifting. In the Empirical Setting section, we introduce our unique empirical setting — an online social network that offers users the option of buying a digital gifting service. We model users' decisions to purchase this service in the Methodology section, and discuss the estimates of our model in the Results section. In the Discussion section, we show that the platform's connectivity algorithm increased social visibility on the network, and conclude with a discussion of how our theory generalizes to inform firms about engaging with consumers in increasingly public, online environments.

Theoretical Development

The behavior of individuals under surveillance, whether social (like users' friends on Facebook) or institutional (like Facebook the company or the NSA) is gaining popularity as a topic of scholarly attention. Raynes-Goldie (2010) argues that Facebook users are more concerned about privacy from their connections than from Facebook itself or affiliated businesses. Brandtzæg, Lüders, and Skjetne (2010) find that Facebook users with many friends feel more pressure to conform when posting information on the platform. Indeed, Rhue and Sundararajan (2014) show that users of a social shopping website even alter their buying habits in order to conform to comments they have received about previous purchases.

Social visibility can also have implications for how users interact with each other online. Gross and Acquisti (2005) argue

that online social networks breed new forms of intimacy. Lambert (2013) calls the intimacy generated through online social networks as "group intimacy," and suggests that it may be replacing traditional notions of intimacy — which are more interpersonal in nature. Geser (2008) goes further and argues that intimacy is completely destroyed in most online settings, because individuals are discouraged from revealing information privately to their close social ties. As Gerstein (1978) suggests, it is precisely these private disclosures of information that separate intimate relationships from those more casual in nature.

We follow Wilson, Proudfoot, and Valacich (2014) and others in taking the view that users of online social networks typically consider the privacy of an interaction before choosing to disclose information. Dinev and Hart (2006) refer to the trade-off between the benefits of information disclosure and the costs to privacy as a "privacy calculus." We apply their framework to the context of gift giving, and show how social network theory can be used to quantify the potential threats to privacy that result from digital gift exchange. We believe that gift exchange is a natural setting to study privacy concerns because, as others have pointed out, gift giving is often the subject of substantial social scrutiny (Sherry 1983; Wooten 2000).

Before developing our hypotheses, we present a conceptual model of our theory in Fig. 1. The main effect we study is that of social visibility on the adoption of a digital gifting service. Social visibility constitutes the potential that gifting between two individuals will be observed by third-parties not directly involved in the exchange. We propose that the effect of social visibility depends on a giver's perceptions of social risk (Wooten 2000; Yadav et al. 2013), and that the magnitude of this risk varies with characteristics of the audience that can observe the interaction. We argue that audience size, type (e.g., personal or business), and categorical (e.g., gender and nationality) diversity moderate the relationship between social visibility and digital gift exchange. We also control for a number of other factors that could affect the decision to purchase a gifting service, such as social influence and various user demographics.
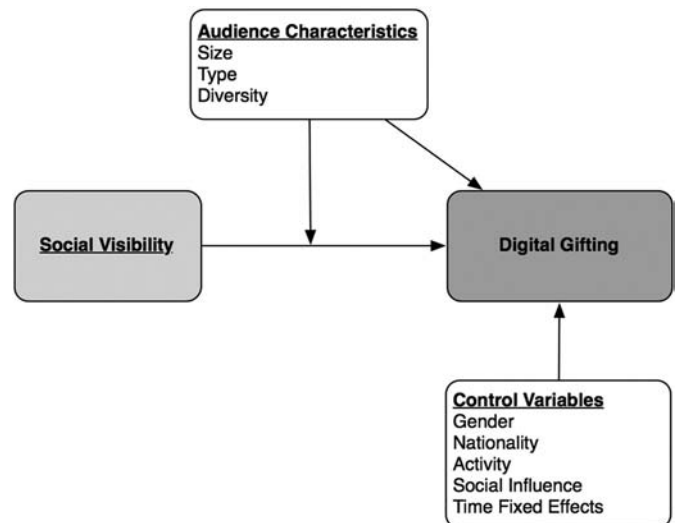

Fig. 1. Conceptual model.

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[3] People You May Know, Facebook, May 2008.