Chapter 1

Introduction and Dissertation Outline
The visual web

The Internet today is a richly visual space. The production, publication and consumption of images have become core characteristics of the Internet economy. Both brands and consumers equally participate in the creation and publication of vast quantities of imagery online, from photographs and videos, to memes and gifs (Kane & Pear, 2014). Social media have also shifted towards the visual, as exemplified by the most successful entrants into the social media landscape in recent years. Platforms like Instagram (800 million monthly active users in 2017), Pinterest (150 million active users in 2017), and Snapchat (173 million active users in 2017) have two things in common: they revolve around the creation and sharing of visuals, and they have experienced rapid growth since their launch (Instagram, 2017; Statista, 2017).

These developments have shaped the role the Internet has come to play in everyday life. The screen has essentially become a window on the world, a glass through which we view places, people, and things, or, perhaps more accurately, a looking glass that reflects images of those places, people, and things back at us. As many of our interactions, be they with brands and products or with other people, are now taking place predominantly or even solely via the screen, what we see there is likely to have a profound impact on our behavior as consumers (Schroeder, 2002). With this in mind, one would expect a significant body of academic research to be dedicated to this phenomenon. However, with a few notable exceptions (McQuarrie, Miller, & Phillips, 2012; Megehee & Spake, 2012), marketing and consumer research has thus far largely overlooked the visual side of the Internet.

This lack of research is understandable when considering the origins and subsequent development of the Internet over the past two decades. The World Wide Web, the information-sharing model by which the Internet is accessible, is based on the linking of hypertext documents, and the very first web page ever created clearly reflects that (see Figure 1). Looking at this page, created and published by Tim Berners-Lee at CERN in 1990, we see only text. Without any images, colors, and barely any lay out, the page is a visual wasteland.

Figure 1. A recreation of what the first web page, created in 1990 by Tim Berners-Lee at CERN, looked like in the line-mode browser
The earliest versions of Hypertext Markup Language (HTML), the standard markup language used to create web pages, provided limited design capabilities. Visual considerations such as typography, imagery, and even basic page layout were therefore largely absent in early web pages. Furthermore, dial-up modems and slow connection speeds forced website designers to build websites that were as light as possible.

The digital revolution that has unfolded since the publication of that first webpage has transformed the World Wide Web from a text based communication network to the image-dominated environment it is today.

Over time, new technologies, such as Javascript, Flash, and CSS have introduced structure, graphical design elements and lay out possibilities, making the inclusion of audio, photos, graphic design, and videos possible. Technological constraints regarding connection speed and costs have been largely attenuated, allowing users to access media rich websites speedily.

These technological changes have paved the way for the maturation of web design. Comparing early versions of the homepage of well-known companies to their current-day counterparts illustrates the striking transformation. For example, the homepage of Apple from 1996 (see Figure 2), although a considerable improvement over the text only CERN web page, is still quite text heavy, seeming first and foremost a vehicle for textual product information. In contrast, a 2017 version of Apple’s homepage (see Figure 2) shows a sleek, minimalist vision aligned with the brand’s design philosophy and image. Visuals have, quite literally, taken center stage.

Similarly, the evolution of the homepage of online retailer Amazon shows a significant decrease of textual information in favor of visuals (See Figure 3). Comparable with contemporary advertising, the current Amazon home page emphasizes product visualization, in the form of high quality images and colorful icons, over verbal brand information or product descriptions. These examples demonstrate that companies have embraced visuals to build their brands, communicate corporate values, and sell products online.

Like businesses and brands, consumers have also taken to creating and sharing visual content online, especially via social media. The meteoric rise of visual based social media platforms, such
as Instagram and Snapchat, has been facilitated by developments in photography technology. Digital photography, which has rapidly replaced analogue photography since its introduction in the 1990s, has revolutionized the creation, reproduction, and duplication of photographic imagery, eliminating the process of development in dark rooms and chemical baths, and allowing consumers to create and store large volumes of pictures on their computers or online. Mobile phone camera technology has further democratized photography, due to two characteristics. First, it has made the camera omnipresent; people tend to carry their phones with them wherever they go. Second, the fact that cameras are now integrated in devices that also provide Internet access makes the publishing of images unprecedentedly easy. These developments have made the production and sharing of imagery an integral part of consumers’ everyday lives. As a result, the production of photographic images has seen an explosive growth; an estimated 1.2 trillion digital photographs were taken in 2017, 85 percent of which will likely have been taken on smartphones (Richter, 2017).

A large number of these photos is published online, an estimated 3.5 million every minute in 2016 (Deloitte, 2016), especially on social media. For example, 95 million Instagram posts were shared per day in 2016, a number that has likely grown along with the growth of the platform’s user base (Instagram, 2016). A relatively large group of consumers have thus become active co-creators in the online consumer space (Deuze, 2007), able to communicate in a visual modality that, until recently, was the domain of professionals (Van Dijck, 2008, 2009). Social media platforms have drastically expanded the reach of consumer-generated visuals, as an image shared on social media has the potential to reach, and thus affect, millions of other consumers.

Together, these developments have transformed the Internet into a place where consumers encounter at least as much imagery as text. How this abundance of visual information may affect consumers’ behavior is the overarching question that guides this dissertation research.

RQ: “How do visuals online affect consumer behavior?”

Figure 3: Screenshots of the homepage of Amazon circa 1997 (left) and the homepage of Amazon on June 26, 2017 (right)
Research on visuals and consumer behavior

The relative lack of attention for the visual aspects of the online consumer space is indicative of a larger lacuna in marketing and consumer research, which has yet to fully explore the processing and impact of imagery at large. The old idiom “a picture paints a thousand words”, which reflects the cultural belief that imagery can convey complex information and that a picture of an object may express its essence more effectively than a description can, appears not to resonate strongly in consumer research (Joffe, 2015; Scott, 1994).

An area where visuals have received at least a modest amount of attention is advertising research. Research on the creation and impact of advertising visuals can be roughly divided into two categories. The first treats visuals as sensory data that may affect consumers via emotion or sensation (Mitchell, 1980; Scott, 1994). This research has often conceptualized images in opposition to verbal information. In contrast with verbal information, visuals are presumed to be non-informational, providing merely sensory input or serving as a representation of reality.

However, a more recent stream of research has deemed this sensory approach to imagery overly simplistic, and has adopted a rhetorical approach, conceptualizing images as being able to communicate ideas in a manner similar to writing systems. These studies have mostly aimed to identify or classify the rhetorical figures advertisers use to convey persuasive messages in advertising images (e.g., McQuarrie & Mick, 1999, 2003; McQuarrie et al., 2012; Messaris, 1994; Schroeder, 2002; Scott, 1994; Scott & Vargas, 2007). The work of Phillips and McQuarrie (2002) suggests that consumers have learned to “read” advertising images, and decode the meaning advertisers have embedded in them.

The abovementioned research, although informative, has several limitations. Firstly, it mostly pertains to traditional advertising efforts, leaving other types of brand-generated visuals out of its scope. It is therefore not applicable to, for example, study the effects of online product visualization technologies. Secondly, this research leaves the creation and effects of consumer-generated imagery, which has become increasingly prevalent and important with the rise of the Internet (Deuze, 2007; Galvagno & Dalli, 2014), completely unaddressed.

Visual aspects of consumer-to-consumer communication, both in online and offline contexts, have been touched upon in several strands of research. The three streams most relevant to marketing and consumer research will be briefly discussed below. The first stream is conspicuous consumption literature, which deals with consumption as a means to signal status. This research has implicitly focused on visual displays of brands and products, although mainly in the context of offline and face-to-face communication (Berger & Ward, 2010; Han, Nunes, & Drèze, 2010). The one study that does investigate conspicuous consumption in an online context (Ferraro, Kirmani, & Matherly, 2013) seems to treat this context as merely a convenient research platform, without delving into the specifics of how visuals are created and interpreted online.

Secondly, in acknowledgment of the growing importance of consumers as active sources of brand and product information, a considerable body of research has been dedicated to the study of consumer-generated content online. This research has primarily centered on the - by definition text-based - phenomenon of online Word-of-Mouth, mostly in the shape of brand and product reviews (Berger, 2014). Recently, several studies that have taken a broader perspective on consumer generated content, examining other brand-related activities on social media (Bernritter, Verlegh, & Smith, 2016; Muntinga, Moorman, & Smit, 2011), online brand communities (Adjie, Noble, & Noble, 2009), and online brand publics (Arvidsson & Caliandro, 2016). However, this research has not yet explicitly focused on the visuals consumers create in these contexts.

A third stream of literature, namely literature on online self-presentation and identity, has thus far paid the closest attention to consumer created visuals (Belk, 2013). Particularly, the creation and sharing of selfies has garnered attention (Fox & Vendemia, 2016; Kedzior, Allen, & Schroeder, 2016). However, these studies have mostly focused on issues regarding appearance, body image and
personal characteristics such as narcissism and self-esteem, rather than on the use and display of brands and products.

As it stands, extant marketing and consumer behavior literature does not provide the insights into both brand and consumer-generated online visuals that their ubiquity and importance online seem to warrant.

This dissertation: Aims and positioning

This dissertation aims to investigate how online visuals shape consumer behavior. It will thereby focus on two major sources of visual online content: brands and consumers. Both brand and consumer-generated imagery is abundant online, and both sources have been facilitated by recent developments in visualization technologies. Furthermore, for both sources, online visualization technologies may provide a way to overcome some of the constraints associated with computer-mediated communication. Communication research has well documented that a large part of communication is in fact non-verbal. In offline situations, visual, auditory, haptic and even olfactory information (Hold & Schleidt, 1977) tends to be interrelated, and interpreted simultaneously to create a multimodal communication experience (Jones & LeBaron, 2002). In comparison, computer-mediated communication, with its emphasis on textual information, tends to suffer from a lack of non-verbal information and well-integrated communication modalities (Walther, 1996).

Drawing on literature from communication science and information systems research, the first part of this dissertation will assess how visualizations in web stores may provide consumers with a more naturalistic product experience. To complement this marketer-side perspective, the second part of this dissertation will draw on literature on self-presentation, conspicuous consumption, and persuasion knowledge to evaluate the creation and effects of consumer-generated imagery on social media.

PART 1: Brand-generated visuals online

Brands are built on imagery, and visuals can be considered the foundation for corporate communication, both offline and online (Schroeder, 2008). Websites are a visual representation of a company, designed to capture attention and engage consumers, and many companies have realized that a successful website should contain attractive visuals. A major challenge, specifically for companies that use their website to sell physical products, is how to present those products to consumers in a persuasive manner. One of the major drawbacks of online shopping is that consumers cannot physically inspect, touch and try products before buying them. This problematic because direct, tactile interactions with products are an important part of consumers’ product experience (Hamilton & Thompson, 2007), influencing product evaluations, as well as generating excitement and desire in consumers (Shiv & Fedorikhin, 1999). In online stores, images of products are the most important substitute for direct product experience, and various technologies have been developed to improve online product visualizations.

The first part of this dissertation will examine the extent to which online product visualization technologies may provide a solution to the limitations of the screen. The research will draw on presence literature to explain how certain product presentation technologies may provide consumers with an experience as if products presented online are present with them in their own, offline environment. Furthermore, it will examine via which psychological mechanisms this experience of presence may affect purchase behavior, including impulsive purchase behavior. With this approach, the first part of this dissertation aims to contribute to literature on presence, as well as to literature on online product presentation and online consumer decision-making. This part consists of two empirical chapters: Chapter two presents the results of the first empirical study, which investigates how online product visualization tools affect consumers' product evaluations and purchase intentions. Chapter three presents the findings of a second empirical study, which has focused on the effects of the mechanisms underlying product visualization technologies on impulsive purchase behavior.
PART 2: Consumer-generated images online

Face-to-face interpersonal communication is characterized by the dissemination of information via different modalities (Jones & LeBaron, 2002). When interacting with others, humans not only take into account what a person is saying, but also their gestures, facial expressions, assumed postures, and the way they direct their eyes. Furthermore, a person’s dress, hairstyle, surroundings, and other environmental aspects contribute to whatever is communicated to the outside world. All this information is, consciously or unconsciously, integrated when interpreting communications (e.g., Goffman, 1959).

In contrast, online communication has long been characterized by more limited, and often disintegrated modalities, with text being the predominant mode in the digital context (Walther, 1996). However, technological developments have added the visual firmly to the repertoire of online interpersonal communication. Specifically the camera, which has been called a defining technology of the internet age (Schroeder, 2002), has transformed from a tool to capture and document memories to a communication device that enables users to instantly share images with others online (Van Dijck, 2008). It is, therefore, not surprising that photography has become one of the preferred ways for consumers to express their experiences and identity to others (Harrison, 2002; Heisley & Levy, 1991; Van Dijck, 2008). Furthermore, the increased malleability of photographic images, facilitated by easy to use editing software and in-app filters, caters to consumers’ need to self-enhance (Van Dijck, 2008) and has made digital photography an ideal medium for presenting the self to others, especially in social media.

The second part of this dissertation research (Chapter 4) explores both the sender (“poster”) and receiver (“audience”) side of visual self-presentation behavior in social media. This chapter describes three empirical studies (one content analysis and two experiments) on consumer-generated visuals regarding brands in social media. The chapter has two main goals: First, it will empirically demonstrate how consumers use photography for self-presentation purposes in social media. It will focus on the use of brands, drawing on literature on status brands (O’Cass & McEwen, 2006) and self-presentation (Goffman, 1959) to explain how consumers strategically display brands and products when trying to make a positive impression on others online. Secondly, this research will assess viewers’ interpretation of, and response to, such self-presentation visuals. If consumers are sharing images with the intention of communicating specific things about themselves to others, it is relevant to understand how these images are interpreted, and how they affect viewers’ actual impression formation. As such, this research contributes to literature on (online) self-presentation and conspicuous consumption. The final chapter of this dissertation (Chapter 5) provides a summary of the research and discusses its broader implications.
References


