8-2021

Necessitation through Growing Entanglements: Why We "Can't Live Without" Some Products

Jakob Braun
The University of Texas Rio Grande Valley

NECESSITATION THROUGH GROWING ENTANGLEMENTS:

WHY WE "CAN'T LIVE WITHOUT" SOME PRODUCTS

A Dissertation

by

JAKOB BRAUN

Submitted to the Graduate College of
The University of Texas Rio Grande Valley
In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2021

Major Subject: Business Administration

NECESSITATION THROUGH GROWING ENTANGLEMENTS:

WHY WE "CAN'T LIVE WITHOUT" SOME PRODUCTS

A Dissertation
by
JAKOB BRAUN

COMMITTEE MEMBERS

Dr. A. Fuat Firat
Chair of Committee

Dr. Reto Felix
Committee Member

Dr. Mohammadali Zolfagharian
Committee Member

Dr. Russell W. Belk
Committee Member

August 2021

ABSTRACT

Braun, Jakob, <u>Necessitation Through Growing Entanglements: Why We "Can't Live Without"</u> <u>Some Products</u>. Doctor of Philosophy (PhD), August, 2021, 196 pp., 1 table, 2 figures, 339 references, 47 titles.

Much research has been concerned with what constitute necessities and how they are related to pertinent concepts, such as needs, wants, desires, and luxuries (Belk, Ger, and Askegaard 2003; Duncan 2002; Fraser 1998, Hoyer and MacInnis 2004; Kerin, Hartley and Rudelius 2004; Sheth and Mittal 2004). Using thing-focused approaches, earlier studies are primarily concerned with classification schemes using dichotomies such as need-want and necessity-luxury. Studies that employ a human-focused perspective challenge these divisions and argue that necessities cannot be studied without considering the social and historical contexts (e.g., Buttle 1989; Firat 1987). Notwithstanding the important contributions that these studies have made, they have often explored necessities and necessitation primarily from the perspective of a dominant human subject (i.e., the consumer), where things (i.e., products) primarily serve as vehicles for consumer meaning.

The contribution of this research is two-fold. First, a macro narrative that identifies five stages of smartphone necessitation in news consumption is derived from a narrative analysis of consumer texts, in order to better understand how consumers experience product necessitation. These stages are familiarization, transformation, memorialization, (re)integration and

reconstruction, and solidification. Necessitation is achieved when consumers come to feel that they cannot live without this product.

Second, entanglement theory (Hodder 2012) with its accentuation of dependences is employed. Hodder (2012) argues against the symmetrical nature of relations suggesting that they are often asymmetrical. This observation translates into the concept of entanglement, which is "the dialectic of dependence and dependency between humans and things" (Hodder 2012, p. 89). Dependence occurs when the use of things is something enabling, while dependency is to be understood as occurring when their use imposes a constraint on humans (Hodder 2012). Tracing the historical increase of entanglements of news consumption leading to the necessitation of the smartphone, this study finds that necessitation emerges as a result of numerous small changes within entanglements over time, which, in turn, produce unexpected problems that need fixing. The solutions further increase entanglements and lead humans and things down the pathway of product necessitation. As the affordances of a product are gradually exploited they fully entangle with a wide range of humans and things. Eventually a level of entanglements is reached that makes it difficult and expensive to turn back or disentangle, making the product come to be near-universally perceived as necessary.

DEDICATION

Completing my doctoral studies would not have been possible without the unconditional love (#forevernovios) and support of my wife, Citlalli Rojas. You were always there during the highs and lows and pushed me to complete this dissertation. There will never be enough words to express how grateful I am to have you in my life. Thank you! The birth of our daughter gave me additional energy and motivation during the final stretch of my studies. Maya, your happiness and endless love have given me so much strength. Thank you for your patience when research time needed to cut into playtime.

To my parents, Katharina and Johann Braun, I am grateful that you always encouraged me to do well in school and to pursue higher education. You inspired me to go after my doctorate. Thank you to Lida and Lisa for being amazing older sisters who have cheered me on throughout my life. To my extended family, I truly appreciate your continuous encouragement and support.

Thank you to all the friends that I have made during my studies in the Rio Grande Valley. I am appreciative of all of you. A special thanks goes out Mohammad Jafarinejad and Muratcan Erkul. You were not only close confidants during the program but remain very close friends even though we live in three different states. Looking forward to the many more memories we will create together.

ACKNOWLEDGMENTS

I will always be grateful to Dr. Mohammadali Zolfagharian for taking me under his wing during my doctoral studies. I am blessed to have been able to learn from you during my assistantship, in the classroom, as my initial dissertation chair, at conferences, over some fantastic Persian food, and occasionally on the soccer field. I do not only see you as my advisor but as a friend who never gave up on me and provided words of encouragement and wisdom when I expressed concerns. I am also appreciative of you staying on my committee after moving to another university. Thank you for everything!

My gratitude also goes to my other dissertation committee members: Dr. A. Fuat Firat, Dr. Reto Felix, and Dr. Russell W. Belk. Your guidance, constructive feedback, and unwavering support have allowed me to arrive at this point. Thank you for everything you have done for me. A special thanks goes to Dr. Firat for filling in for Dr. Zolfagharian as dissertation chair and providing additional guidance towards graduation. Finally, I am grateful for all the wonderful faculty at UTRGV. I am thankful to have been able to learn from you during my graduate studies.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

INTRODUCTION

"The smartphone revolution is under-hyped; more people have access to phones

than access to running water. We've never had anything like this before since the

beginning of the planet."

(Marc Andreessen, Inventor of Mosaic, the First Web Browser)

This quote illustrates the ubiquity of the mobile phone and, at the same time, challenges

our colloquial understanding of a necessity as something a person must have in order to survive.

The smartphone is an example of many products that are coming to be universally perceived as

things that one cannot live without. Tracing a typical day of interactions with the smartphone

illustrates how much a person – let's call her Grace – may feel dependent on it. Grace's day

starts with her ringing phone alarm making the device the first thing she sees in the morning.

Before even leaving her bed, she checks the weather, scans the headlines on her favorite news

app, and browses Twitter.

On the bus to the gym, she listens to her favorite pop music playlist on Spotify. Once she

arrives at the gym, Grace checks in with the barcode saved on her phone and uses a fitness app to

track burned calories and walked steps. After completing a longer than usual workout, Grace

uploads a picture from the gym to Instagram and hails an Uber with her phone to arrive at work

on time. The smartphone stays on her desk throughout the morning as she occasionally responds

to text messages and tracks breaking news through push notifications. For lunch Grace walks to a nearby sandwich place, where she uses her phone to pay for her order and receives a free drink by checking in on Yelp.

After working a few more hours at the office, she drives with a co-worker to a client meeting. Because the co-worker's phone battery runs out Grace offers her smartphone for turn-by-turn navigation via a maps app. They can avoid traffic jams because the app uses real-time traffic data. As the client meeting concludes, she uses her smartphone to coordinate a follow-up meeting in the calendar app. Once Grace arrives home, she video chats with her parents over dinner. As she unwinds for the night, she plays music and scrolls through Facebook and news headlines, before starting her white noise app and setting the alarm for the next morning.

Products like the smartphone liberate us by allowing us to be, live, and socialize. At the same time, they entrap us by placing constraints and limitations on us that slow our development as individuals and as societies. A typical relationship of Western consumers like Grace with their smartphones is both liberating and constraining at the same time. On the one hand, their devices allow them to be always connected and reachable. Consumers can store important memories in form of pictures, listen to music that provides them peace and comfort, or utilize the GPS function of the phone to navigate to destinations. On the other hand, smartphones limit consumers in many ways. For instance, they require regular battery charging and software updates. When the battery fails, consumers seem to be unable to go on with their routine. Furthermore, smartphones are dependent on other things and entrap consumers in such dependences. For example, if a consumer moves out of reach of cell towers, the phone will not work as desired. In the future, the Internet of Things will increase such dependences when any

product with an on and off switch will be connected to the Internet and to some extent will be communicating with other products and people (Morgan 2014).

The notion that products are both liberating and constraining for humans and that these things are connected to other things is not new nor exclusive to smartphones. Other creations changed how humans lived their lives, as well. However, with each new human creation there are increased entanglements with other human-made things, and humans become more entrapped. For instance, horse domestication allowed the animals to be used for riding and as a food source, while entrapping humans in the care of the animals. They had to be watched, herded, and their breeding controlled. Similarly, the rifle facilitated hunting and putting food on the table for humans. The rifle's relatively high accuracy and range entrapped its owners in high maintenance and long hours of practice to gain the necessary skills to properly use it.

The webs of dependences as a result of horse domestication and the introduction of the rifle are relatively easy to conceive of. However, the introductions of both the automobile and the smartphone have implications reaching beyond more obvious dependences. For instance, cars offer increased freedom and mobility while entrapping humans in their production, maintenance, and care. At the same time, there are less obvious societal and economic consequences. Humans depend on cars to live, work, and shop because we live in cities that were built for cars (e.g., widely dispersed shopping areas) and/or because we cannot afford to live near where we work. Our use of the car contributes to pollution and global warming.

Smartphones draw us in the direction of even greater entanglements. It is easy to understand the benefits of connectivity and constant access to information compared to regular battery charging and software updates. However, it is more difficult to conceive of the smartphone's connection to pollution, global warming, low-paid labor, and challenging work

conditions as a result of its manufacturing and the systems (e.g., servers, networks) that need to be constantly run to sustain it. We do not see such environmental and societal costs of smartphones because the effects are distant from us (e.g., in other countries) and/or because they are less visible (e.g., smartphone's versus car's contribution to pollution). Hence, it is important to study the roles new technologies such as the smartphone play in the lives of humans.

Grace's account is just a small insight into the world of relationships that consumers have with their products in general and smartphones in particular. Consumers vary in their daily routines and these practices may involve very different dependences each day. For instance, while consumers may use their phone daily to make phone calls, they will perform software updates less frequently. Nonetheless, these insights suggest that many Western consumers are highly dependent on a range of products, with the smartphone being one of them. Variations in what consumers deem important can arise for different reasons. For instance, consumers are faced with trade-offs when considering how to spend their disposable income. This economic pressure is further complicated by the fierce competition among marketers for consumer dollars. Thus, generally consumers vary in which products they see as necessities, which is defined as what the individual proclaims not to be able to live without.

While individuals may thus vary in their perceived necessities, there is evidence that certain products or product categories are viewed as indispensable by different segments of consumers. At the same time, the consumption of certain products is crossing segments with very large proportions of consumer populations embracing them. For instance, in recent years spending on smartphone services in the United States has increased significantly. Specifically, the Bureau of Labor Statistics' Consumer Expenditure Survey indicates that spending for wireless services per consumer increased from $608 in 2007 to $963 in 2014. In the same time

frame, expenditures for residential phone services decreased from $502 to $353. Interestingly, 2007 was the year when consumers on average spent more money on cellular phone services than on residential phone services for the first time and this trend seems to have escalated through the present time (Creech 2016). Elsewhere in the world, the ubiquity of cell phones can be observed, as well. UN statistics show that a larger portion of the world population has access to cell phones (6 billion) than to working toilets (4.5 billion; Wang 2013). While these numbers are only partially an indication of the smartphone being a necessity, there are other observations that support this notion. First, smartphones are replacing an increasing number of functions initially performed by other products, thus making those products less commonplace if not obsolete. For instance, the city of New York is replacing most of its phone booths with Wi-Fi hot spots because many consumers possess wireless devices with Wi-Fi capability and do not use phone booths anymore (Penn 2016). Second, the usage of smartphones is frequent throughout the day as the above example of Grace illustrates. In the United States, the ordinary consumer daily uses a mobile device for three hours and checks it for 60 to 125 times (King 2015); data that underline the dependence of Western consumers on smartphones. Third, assistance programs for vulnerable groups in the United States have been helping, amongst others, low-income families (including the homeless) by covering products and services that are considered life necessities. In addition to food, mortgage/rent, home improvement, energy, water services, telephone services, medical and dental care, legal advice, job training, and childcare, their baskets of necessities now include cell phones with Internet access and texting (Bach 2014; Tumulty 2013).

Observations such as these not only show that there are products that are regarded as essential by consumers from different segments, but that the understanding of what products constitute necessities has shifted as well. Products that are associated with basic needs do not

seem to be prioritized by consumers more than other products. This is counterintuitive to thing-focused research concerned with the study of necessities (e.g., Arndt 1978; Kemp 1998). Researchers using such approaches engage in classifications of products into needs and wants, necessities and luxuries, amongst others. They assume that needs and necessities are predetermined and universal. In order to understand how products become necessities, the purpose of this dissertation is to move beyond classification.

Human-focused approaches partially offer a solution. They emphasize that necessities are socially and historically contingent and derive their findings from consumer perspectives (e.g., Alvesson and Sköldberg 2009; Berger and Luckmann 1966; Buttle 1989). For instance, Firat (1987) introduces the Structure of Available Alternatives of Consumption (SAAC) and suggests that the SAAC along with underlying systems (including housing, transportation, shopping, and health) determine what consumers perceive as necessities and which products are considered necessities to satisfy them. Firat's (1987) research encourages us to take a different approach in studying necessitation, the movement of products from not being necessities to being such over time. In this dissertation this is done in two ways. First, I present a consumer perspective identifying a macro narrative of product necessitation based on the analysis of consumer stories, in order to gain a better understanding of how consumers experience and tell stories of products becoming necessities.

In the next step, I aim to move beyond the consumer perspective and provide a more comprehensive account (e.g., including both human and thing perspectives) of product necessitation across consumer segments by addressing the following question: How is it that at this point in time certain products have come to be near-universally perceived as necessary? Specifically, I aim to leave behind the understanding of the dominant and active meaning-

6

making consumption subject and a passive consumption object. Thing-focused and human-focused approaches tend to overlook the importance of things in the unfolding of consumption phenomena. I wish to bring the role of things to the foreground by building on recent developments in consumer research that are increasingly emphasizing a "return to things." Perspectives such as Actor Network Theory (ANT, e.g., Latour 1988, 2005), assemblage theory (e.g., Deleuze and Guattari 1987), and entanglement theory (Hodder 2012) consider things as important as humans in shaping behavior and consumption phenomena. These theories exemplify material relationality, where humans and things are not defined *a priori*, but rather emerge as effects of their relations with each other (e.g., Canniford and Bajde 2016).

Hodder's (2012) entanglement theory proves particularly useful in addressing the relationships between consumers and their products outlined above. He defines entanglement as "the dialectic of dependence and dependency between humans and things" (Hodder 2012, p. 89). His theory thus emphasizes the asymmetry of dependences, where at times humans may be in command of things, and at other times things may have the upper hand. While many products are perceived necessities across different consumer segments, the context of this research is the necessitation of the smartphone in news consumption. Taking a historical approach (Karababa and Ger 2011; Schouten, Martin, Blakaj, and Botez 2016; Witkowski and Jones 2006), I study the evolving consumption entanglements and lay out how product necessitation emerges as an unintended consequence of the daily unfolding of human-thing entanglements.

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL DEVELOPMENT:

FROM NECESSITIES TO NECESSITATION

From the onset of this research one of the essential questions has been how to study product necessitation for two reasons. First, there is no established research stream for product necessitation as there is, for instance, for pricing, loyalty, or service recovery, with dominant *modi operandi* to address research questions. Hence, this research needs to turn to other research streams for ontological and epistemological guidance. Second, in doing so I turn to literature on the roles things play in the lives of humans. Examining this eclectic research stream highlights how the knowledge we gather about human-thing relationships is strongly guided by the lens through which they are studied. Therefore, the following review discusses the contributions and shortcomings of thing-focused, human-focused, and material relationality approaches in consumer research in general and in research pertaining to necessitation in particular. Then, a conceptual argument is put forth based on entanglement theory (Hodder 2012), a material relationality approach, offering a path toward a more holistic understanding of necessitation.

Thing-focused and Human-focused Approaches

Marketing and consumer researchers have long strived to increase our understanding of the role that things (i.e., products) play in human consumption. They have approached this task

through different lenses, some of which have primarily highlighted either things or humans. Thing-focused perspectives are determined by the essential characteristics of products. For example, studying purchase decisions, initial consumption models (e.g., Burke and Edell 1989; Cohen, Fishbein, and Ahtola 1972; Zajonc and Hazel 1982) based on traditional economic analysis ("economic man") suggest that consumers strive to maximize their utility. Specifically, engaging in a cognitive process, they evaluate a product's attributes, rank the significance of each attribute, and select the product with the highest utilitarian benefits. Similarly, an early symbolic perspective (e.g., Levy 1959) views things as "vessels of meaning that signify similarly across all consumers" (Holt 1995, p. 1), suggesting that there is no variation among consumers and the meaning they attach to certain products.

Other researchers question the adequacy of thing-focused approaches to studying consumption phenomena. Therefore, in contrast to such approaches and providing a human-focused perspective, "Consumer Culture Theory" (CCT) was shaped by Arnould and Thompson (2005). CCT groups and identifies a set of studies utilizing a multi-disciplinary *modus operandi* to study consumer behavior. The distinctiveness of CCT lies in its implementation of "a distributed view of cultural meaning" (Hannerz 1992, p. 16), which is created, maintained, and reshaped by cultural instruments like myths, narratives, and ideologies. As such, CCT emphasizes "the dynamics of fragmentation, plurality, fluidity, and the intermingling (or hybridization) of consumption traditions and ways of life" (Arnould and Thompson 2005, p. 869).

As outlined by Arnould and Thompson (2005), in its initial presentation (later extended; see below under *Material Relationality Approaches in Consumer Research*), the focus of CCT is on shifting the analytical focus towards contextual, symbolic, and experiential consumption

characteristics. As such, a social constructionist perspective is adopted (e.g., Berger and Luckmann 1966). Thus, in earlier CCT research as opposed to thing-focused approaches, the subject (i.e., the human) becomes the ontological basis. On the other hand, the thing is reduced to being used by groups to construct practices, identities, and meanings "to make collective sense of their environment and to orient their members' experiences and lives" (Arnould and Thompson 2005, p. 869). As a result of this orientation, according to Arnould and Thompson (2005), consumer issues studied early on in CCT can be attributed to one of four research programs: *consumer identity projects*, *marketplace cultures*, *the sociohistorical patterning of consumption*, and *mass-mediated marketplace ideologies and consumers' interpretive strategies*. Things receive some attention in the *marketplace cultures* domain when studying brand communities and their associated collective value creation processes (e.g., Schau, Muñiz, and Arnould 2009). However, most early contributions that pertain to things and in general within CCT can be found in the *consumer identity projects* domain. Various studies have addressed the symbolic characteristics of things (e.g., Belk 1976; Joy 2001; Mick and DeMoss 1990), identity construction at an individual level (e.g., Belk 1988; Holt 2002; Ozanne, Brucks, and Grewal 1992), identity construction at the group level through the symbolization of relationships (e.g., Mehta and Belk 1991), ideological issues (e.g., Murray 2002; Thompson and Hirschman 1995), emotional connections with things (e.g., Holbrook 1993), and how individuals consume (e.g., Holt 1995).

At the heart of the *consumer identity projects* literature is the notion of symbolic consumption and the view of consumers extending their self to something (i.e., things). Emphasizing this notion of the extended self, Belk (1988, p. 139) argues that fundamental to understanding consumption is "first gaining some understanding of the meanings that consumers

10

attach to possessions." The extended self has been greatly discussed and built upon (e.g., Belk 1985; Belk 1988; Belk 2013; Fennis, Pruyn, and Maasland 2005; Tian and Belk 2005). For instance, Mittal (2006) outlines why certain products become part of our extended selves by detailing the components of the self. Similarly, Fournier (1991) introduces a typology of consumers' relations with certain products ingrained in the meaning they give the product and particularly to its symbolic components desired by the consumer to create or represent his or her identity. Fournier (1991) lists as examples the ownership of bicycling gear as a reflection of goals and interests or using books on sailing as symbols of aspiration. Generally, the congruence of product and consumer identities is also of interest to researchers (e.g., Sirgy 1982; Sirgy 1985; Wright, Claiborne, and Sirgy 1992). It is suggested that reaching congruity is indicative of a positive attitude, purchase intention, and loyalty toward products or brands (e.g., Helgeson and Supphellen 2004; Parker 2009).

Human-focused and thing-focused approaches differ in that "[the former] does not mean that a particular object holds a particular intrinsic meaning" (Wattanasuwan 2005, p. 181). Rather, meanings fluctuate across individuals and cultures. Furthermore, the same consumer may attach different meanings to the same product across time and space (e.g., Fournier and Guiry 1993). Moreover, some products "are better able than others to communicate something about the person using them" (Escalas and Bettman 2005, p. 380), thus carrying higher symbolic value (Bhat and Reddy 1998). The notion of value is an important one here. In symbolic consumption consumers are considered producers of something valuable for them. The *homo faber* is the maker and user of things (Solomon 1983). When consuming a product, consumers create symbolic value, hence enabling themselves to build or express personal identity. As such, consumers "are not passively but actively engaged in a meaning-making process" (Smith 2007,

11

p. 325), which is coherent with the postmodern idea of consumption as producing and not destroying value (Firat and Venkatesh 1995). Consumers are constantly deliberating about who they are and who they strive to be (Mittal 2006). "Products that we buy, activities that we do and philosophies or beliefs that we pursue tell stories about who we are and with whom we identify" (Wattanasuwan 2005, p. 179). In short, consumers are defined by their consumption (Belk 1988; Schau 2000). In this interaction with symbols and products that best represent them, consumers may be free or constrained (Murray 2002). They are influenced by reference groups important to them and against which they compare themselves (e.g., Escalas and Bettman 2003; Leigh and Gabel 1992). While the product is not the focal point anymore in such constellations, its importance manifests in that it "permits and supports social interaction of the communal type" (Cova 1997, p. 307). Social contexts of analysis include but are not limited to families (e.g., Epp and Price 2008), cultural circles (e.g., Pritchard, Morgan, and Sedgley 2002), and sports groups (e.g., Cova and Cova 2001).

Thing-focused and Human-focused Approaches in Necessitation Research

Much research has been concerned with what constitutes necessities and how these are related to pertinent concepts, such as needs, wants, and luxuries. Extending upon the juxtaposition presented above, such research has been approached through thing- and human-focused lenses, as well.

Thing-focused Approaches

In line with the approaches presented above, thing-focused studies pertaining to necessitation are primarily concerned with classification schemes using dichotomies such as need-want and necessity-luxury. These studies see needs as given basic human requirements (e.g., air, water, food, clothing, and shelter), which transform into wants when directed to specific products capable of satisfying the need (e.g., Arndt 1978). As such, needs remain stable, while wants and desires are culturally determined.

Similarly, many fields accept the necessity-luxury dichotomy arguing that all products can be classified into either of these two categories. Economists have used such schemes to describe concepts such as elasticity of demand. For instance, when prices of necessities rise, the demand does not decrease. On the contrary, when prices increase for luxuries, the purchases decline sharply (e.g., Kemp 1998). Psychologists have also emphasized dichotomous thinking, with Maslow's (1970) hierarchy of needs as the most prominent theory. In the order of needs Maslow (1970) differentiates basic physiological needs such as breathing, food, water, and sleep from needs of self-actualization that, amongst others, include creativity, spontaneity, and problem solving. The basic principle suggested by Maslow (1970) is that lower-level needs must be satisfied before those on the next level become the predominant basis of motivation. For instance, to him, a starving person has no interest in a higher order social need before the physiological need for food is satisfied. Thus, Maslow's (1970) theory suggests a continuum between necessity and luxury and different products associated with the different levels in the hierarchy of needs could be placed along this continuum. Similarly, Csikszentmihalyi and Rochberg-Halton (1981) associate various psychological functions (e.g., self-expression, making a personal history, and providing security) to middle-class consumer goods.

Overall, the nature of necessity is contingent on a purpose that defines what is necessary. Without a purpose it ceases to be considered a necessity. For example, drinking water is a necessity for the purpose of surviving. In these classificatory studies the determination of what constitutes a necessity is thought to be driven by rational individual consumer choices. Specifically, they see consumption as needs-driven behavior, where needs are developed through internal psychological and cognitive processes. There is no variation among consumers when it comes to necessities and their purposes. Despite their importance in increasing our understanding of necessities the approaches outlined above have received substantial criticism (Belk 1999; Venkatesh 1995; Wahba and Bridwell 1976). For instance, Belk (1999, p. 39) posits that "the logical premise [of the hierarchy of needs] is countered by early human propensities for making art, assembling collections, and burying our dead with ornaments, armaments, and floral bouquets." Belk (1999) continues to show how luxuries are highly sought after even in places where this would not be expected. Specifically, in transitional economies where most people struggle to satisfy basic necessities the demand for luxurious products exists not only among a few rich people but is present among consumers of all classes. The primary driver of this demand lies in the increased visibility of enhanced lifestyles in other countries.

Veblen's (1899) account of conspicuous consumption also stands in similar opposition to the needs hierarchy. Veblen (1899) perceives the higher strata to acquire products simply for purposes of "show" and "status." This conspicuous consumption behavior is perceived to have an impact on the lower strata, which acquires the consumption patterns of the higher strata through emulation (Firat and Dholakia 1998). "The members of each stratum accept as their ideal of decency the scheme of life in vogue in the next higher stratum and bend their energies to live up to that ideal" (Veblen 1899, p. 59). This suggests that what the lower class perceives to

14

be necessities is solely determined by observing and emulating the upper class. Firat and Dholakia (1998) point out correctly, however, that Veblen (1899) fails to provide an explanation of how necessity perceptions of the upper strata are determined. Nonetheless, it shows again that people who struggle with satisfying bare necessities do not limit themselves to such presumably lower order needs.

In summary, thing-focused approaches have serious shortcomings. Arnould and Thompson (2005) and others contend that such foci on rationality and/or cognitive information processing constrain the individual consumer from an ontological perspective to a narrow universe. In addition, market conditions are said to have changed since the introduction of such perspectives in the literature. For instance, consumers are experiencing a greater range of product offerings and price competition between providers (among other things) because of globalization and streamlined supply chains. In addition, marketers encounter more informed and demanding consumers, which is to a great extent facilitated by improved communication techniques and greater availability of information sources (Schmitt 1999). Moreover, consumers are deemed less stable and predictable. Their behavior is characterized by inconsistency and contradiction in more fragmented markets (Firat, Dholakia, and Venkatesh 1995; Firat and Venkatesh 1995; Firat and Schultz 1997).

Human-focused Approaches

Given the challenges to thing-focused approaches researchers studying necessities have tried to escape dichotomous thinking and theorizing by adopting human-focused perspectives. For instance, rather than focusing on needs and wants, Belk, Ger, and Askegaard (2003, p. 328) explore desire as "a more useful and conceptually rich construct for understanding contemporary

consumer behavior" (Kozinets, Patterson, and Ashman 2016). They see it as "an embodied

passion involving a quest for otherness, sociality, danger, and inaccessibility" (Belk et al. 2003,

p. 326). As such, desire is contingent on social and historical contextualization. The passionate

consumption associated with desire is characteristic of an individual's experiences and

exchanges in society.

Studies such as Belk et al. (2003) are consistent with early CCT research (see Arnould

and Thompson 2005) or research that CCT builds upon. These studies challenge dichotomous

thinking and charge that necessities cannot be studied without considering their social and

historical contexts. Thus, they subscribe to social constructionism, which purports that

knowledge and other aspects of life are not real in and of themselves. They only exist due to the

reality attributed to them through social agreement. To say of something (e.g., necessity) that it is

socially constructed is to emphasize its dependence on historical and social contexts. Thus,

reality and other aspects of life are not naturally given, but rather socially and historically

produced (Alvesson and Sköldberg 2009; Berger and Luckmann 1966; Buttle 1989). Studies

with an ontological footing in social constructionism are "principally concerned with elucidating

the processes by which people come to describe, explain, or otherwise account for the world in

which they live in" (Gergen 1985, p. 3-4).

These ideas are also echoed in the postmodernist paradigm (e.g., Baudrillard 1993),

where the focus is on

> *"difference as difference rather than in terms of superiority or inferiority.*
>
> *In this vein, the postmodern sensibility allows difference and the*
>
> *experience of different ways of being, living, looking, and acting"* (Firat
>
> and Dholakia 1998, p. 74).

This implies also the difference in perceiving what constitutes a necessity. In line with postmodernist thinking Firat and Dholakia (1998) add to the debate by suggesting that dichotomizing does not account for a consumer's individual situation. They support this with the following example: "A young woman consuming extravagant items may have to do so in order to keep her daily job that provides her with one meal a day" (Firat and Dholakia 1998, p. 23). While thing-focused researchers would have classified these products as wants, a consideration of the young woman's personal situation leads to a different conclusion. Likewise, Belk (2009, p. 286) notes, "We can expect to see few snow skis in Fiji and few surfboards in Nepal." These two examples underline that the social and historical context are important when analyzing consumption phenomena. For instance, what products are considered necessities will highly depend on differences in religion, gender, taste, culture, and language, amongst others. All of these determine the choices that consumers make. Similarly, different consumers may have different purposes associated with their different necessities. However, thing-focused studies classify products, for instance, as either needs or wants without considering social and historical circumstances.

Buttle (1989) approaches the study of necessities from an anthropological viewpoint and opposes the innateness and universality of necessities. Rather, he posits that necessities are a result of community discourse. Anthropologists view necessities as "the requirements of a social life" (Buttle 1989, p. 205). In order to become a member of a community one must recognize its necessities and acceptable ways of satisfying them. Such necessities "are sociocultural constructions and can be shown to vary across both time and space" (Buttle 1989, p. 197). In line with this thinking Buttle (1989, p. 206) calls for rephrasing our questions about necessities and asking: "[W]hat does a person require to live the life of a liberal, middle-class, American male in

the late 20th century?" rather than "[W]hat does a person require to live the life of an American?" (Buttle 1989, p. 206). With this reformulation, Buttle (1989) renders an *a priori* determination of which products constitute necessities impossible.

I touched upon the idea of luxuries when considering thing-focused research on necessities. However, it deserves further elaboration here because it has also attracted interest in studies employing human-focused perspectives. For instance, Sombart (1913) introduces luxury and necessity as relational concepts (*Relationsbegriffe*). A luxury is then "anything that goes beyond the necessary" (Sombart 1913, p. 71). He puts forth the idea that in society necessities are determined first and this establishment is historically contingent. Necessities can be determined objectively or subjectively. The former approach builds on aesthetic, ethical, and other criteria, while the latter derives from either basic physiological needs (*Notdurft*) or "cultural necessity" (*Kulturnotdurft*).

Sombart (1913) does not explicate the nature of "cultural necessities," which appear to be closely related to Berry's (1994) concept of "social necessities." These are products that are deemed necessary to maintain a decent life in a particular place and at a given time. It is fair to make this leap between cultural and social necessity because like Sombart (1913) Berry (1994, p. 40) sees luxury and necessity as relational concepts: Luxuries can be "defined negatively by their not being goods that are deemed socially necessary, nor utilitarian instruments, necessary means to an end; nor objects of fervent desire; nor cherished possessions."

Berry (1994) adds that what constitutes luxury is dynamic, which he refers to as the "transience of luxury." As luxuries become ordinary, they change to social necessities. Thus, this idea of relationality between luxury and necessity underlines the human-focused view of necessities as being in constant flux and historically and socially contingent.

Similar ideas are echoed in the writings in *Capital* by Karl Marx (1976, 1978). He identifies three forms of need: "natural," "necessary," and "luxury." Writing about the worker, Marx (1976, p. 171) elaborates:

> *"His natural needs such as food, clothing, fuel and housing vary*
>
> *according to the climatic and other physical conditions of his country. On*
>
> *the other hand, the number and extent of his so-called necessary needs, as*
>
> *also the modes of satisfying them, are themselves the product of historical*
>
> *development, and depend therefore to a great extent on the degree of*
>
> *civilization of a country, more particularly on the conditions under which,*
>
> *and consequently on the habits and degree of comfort in which, the class*
>
> *of free laborers has been formed."*

There are two different interpretations of these notions. On the one hand, natural needs can be said to be closely linked to pure survival, while necessary needs are contingent on "belonging to a particular class in a given society" (Heller 1974, p. 33). Thus, for Heller (1974) natural needs are universally determined, and necessary needs are socially constructed. On the other hand, Fraser's (1998) interpretation of these forms of needs derives from Marx' (1976) discourse on labor power. In capitalistic societies workers sell their labor power in exchange for wages. With these wages they first attend to their natural needs. If those wages are higher necessary needs may expand and cause new forms of luxury needs to surface. These luxury needs are "new needs," which are "socially created through developments in the production process" (Fraser 1998, p. 138). Thus, Fraser (1998) interprets needs to be under continuous transformation between natural, necessary, and luxury forms, depending on wages and societal changes. Contingent on the nature of the changes necessary needs may turn into both natural and

luxury needs, and vice versa. Therefore, while in Heller's (1974) account only necessary needs are socially determined, Fraser (1998) sees all three forms as historically and socially contingent.

In his comprehensive investigation into the concept of luxury Berry (1994) also devotes a chapter to what he labels the "historicity of needs." Here, he further elaborates on Marx' (1939, 1976) notion (articulated on a number of occasions) that "new needs" are developed over time. In particular, Berry (1994) engages in a similar exploration as Heller (1974) and Fraser (1998), in that he explores which forms of needs are socially and historically determined and hence subject to change and which, if any, are stable over time. To this end, Berry (1994) invokes the concepts of basic and instrumental needs and explores their treatments by Adam Smith and Georg Wilhelm Friedrich Hegel. *Basic needs* are understood here as universal and non-intentional features of life, including sustenance, shelter, clothing, and leisure. On the other hand, *instrumental needs* are goods that are "needed as an instrumental means to an end" (Berry 1994, p. 10). As opposed to basic needs these are completely reducible to purposive or intentional goals; they subserve basic needs.

Berry's (1994) investigation begins with the interpretation of needs studied by Smith (1776) in *An Inquiry into the Nature and Causes of the Wealth of Nations*. To Berry, Smith's (1776) exploration is not a history of needs but a history of the mode of satisfaction of needs. Specifically, it is the history of the more effective meeting of needs. While in the hunting age humans provided everything for themselves, the commercial age is characterized by the growth of markets and division of labor. Thus, many occupations are involved in the satisfaction of the need for a warm coat. This move toward specialization results in the diffusion through society and the needs of people in the commercial age are better met than before. Berry (1994) contends that Smith (1776) makes a fundamental distinction between need-bearers and needed objects.

Needed objects are equivalent to instrumental needs presented above. As such, they serve the ends of the need-bearer, whose needs are persistent and universal in the sense of basic needs. Therefore, Smith (1776) suggests that the demands of need-bearers do not change over time. Rather, the history of the growth of opulence (i.e., luxury) is the history of the expansion of means in which those needs can be satisfied (i.e., needed objects). Thus, Berry understands Smith (1776) as suggesting that only instrumental needs are socially and historically conditioned, and basic needs of need-bearers are predetermined and universal.

In the next step of his analysis, Berry (1994) explores needs in the work of Hegel (1821) in his *Elements of the Philosophy of Right*. Hegel's (1821) account is fundamentally based on the distinction between animal and human needs. He suggests the former to be fixed, while the latter are not. As such, human needs transcend animal needs and are historically shaped. Over time they multiply and are differentiated. While similarities to Smith (1776) arise, Berry (1994) sees Hegel's (1821) account of needs differently. For Hegel (1821), needs move from being concrete to being abstract and in this process become both social and mental. First, needs can only be satisfied in conjunction with others. For instance, for a Jew the need for food is not natural and unmediated, because he or she requires a specific diet based on culturally given requirements. Second, this cultural connectedness makes the need also a mental one, because it is inspired by human thought and not just a natural drive. Therefore, according to Berry (1994), Hegel's (1821) history of needs is a history of the need-bearer rather than of needed objects. It is a history of changes in basic needs rather than of instrumental needs.

Berry's (1994) purpose in elaborating on these two accounts is to see which of these contradicting perspectives (history of need-bearers versus history of needed objects) emerges in the writings of Marx. Berry (1994) finds Marx closer to the Hegelian (1821) reading of history.

Specifically, he refers to a quote in *Grundrisse: Outlines of the Critique of Political Economy* (Marx 1939, p. 325): Capitalism has established the "material elements," so that labor can become a need "above and beyond necessity." And, as such, it "appears no longer as labour but as the full development of activity itself in which natural necessity in its direct form has disappeared; because a historically created need has taken the place of a natural one." Berry (1994) associates this observation with Marx' (1976) writings in *Capital*, where he advances the idea that labor is a "liberating activity" and an act of "self-realization." For Marx (1976, p. 179), over time, "we are not now dealing with those primitive instinctive forms of labour that remind us of the mere animal." The human worker "by thus acting on the external world and changing it, he at the same time changes his own nature." For Berry (1994) these quotes are evidence that Marx' (1939, 1976) idea of the development of "new needs" does not merely reflect a quantitative increase in needed objects (i.e., instrumental needs) but depicts the Hegelian (1821) emphasis on changes in need-bearers (i.e., basic needs).

Based on the observations above, Berry (1982, 1986, 1994) advances *contextualism*, the idea that the social and the physical are inevitably interlocked. Specifically, socially necessary instrumental needs affect the constitution of the need-bearer. As such, contextualism "is an attack on dualistic abstraction; an attack on the view that human nature is comprehensible independently of its particular socio-cultural context" (Berry 1994, p. 179). It is a reminder that the question of how products that were not perceived as necessities and become viewed as such over time is also a question of how necessities of humans change over time.

Notwithstanding the valuable insights provided by all the works described above, scholars "need to break away from just identifying needs and must try to understand them" (Firat 1987, p 265). Thing-focused research has fallen short in doing so by focusing on classificatory

studies. At the same time, studies with human-focused perspectives have rarely gone beyond documenting the movement of products from not being necessities to becoming such over time. For instance, Sombart (1913) suggests that certain products can be placed in different categories (i.e., necessity and luxury) at different times, but does not provide a detailed account of such transformations.

There have been a few initial attempts to providing insights into movements of products from nonnecessary to necessary (e.g., Firat 1987; Wilk 2006). For instance, Firat's (1987) exploration of why certain products have become commonplace traces back to the consumer and the meaning that can be ascribed to products. Specifically, he suggests that certain products come to be diffused because they represent the dominant consumption pattern to which most consumers come to conform. This consumption pattern is determined by four different dimensions which, depending on some socio-historical phenomena, come to be sought after by consumers. The social relationship dimension (ranging from individual to collective) is concerned with a consumer's connections with other consumers during the consumption act. The availability dimension (private to public) is interested in the accessibility of members of a society to a particular product. The participation dimension (alienated to synergistic) is a consumer's level of involvement in product development and production. Finally, the human activity dimension (passive to active) is the physical level of activity exerted by a consumer during a consumption act (Firat 1987).

Firat (1987) observes a trend toward an individual-private-alienated-passive consumption pattern. It follows that most consumers in a given society adhere to the dominant consumption pattern or at least aspire to it if they do not have the products that represent this consumption pattern. The constellation of a consumption pattern, along with the question of which products

23

come to represent it, is largely determined by consumers with high buying power who control the importance, visibility, complementarity, and advantageousness of product availability in what Firat (1987) terms the Structure of Available Alternatives of Consumption (SAAC). It follows that consumers with low buying power will be influenced by those with high buying power. However, Firat (1987, p. 256) also suggests a preliminary explanation as to how preferences of consumers with high buying power are formed that lies in their domination of both production and consumption:

> *"Because of their relations and interest in the productive units, the preferences of powerful consumers are biased towards the [consumption pattern] that satisfies the needs and efficiency criteria of the productive organization."*

Firat (1987) does not see this behavior as purposive, but rather as an innate tendency derived from continuous social interactions. When it comes to necessities, Firat (1987) argues that the SAAC and the underlying subsystems, including housing, transportation, shopping, and health, control what consumers perceive as necessities and which products are deemed acceptable to satisfy them. These insights into the social construction of consumption patterns are important because they move away from a preoccupation with the individual consumer in the field. Firat (1987) encourages us to look at consumption phenomena (e.g., necessitation) from a macro perspective, which is interested in investigating the interactions between society as a whole and its social units (e.g., individuals and institutions): "To *understand*, we must look at the forces behind the changes that creep in or sometimes seem to suddenly take over" (Firat 1987, p. 265). Otherwise, underlying structures of society are only reinforced rather than questioned.

24

In a further analysis of products that have become commonplace in contemporary era Wilk (2006) zooms in on bottled water. He notes that bottled water consumption still grows in regions where clean tap water is accessible for free or at a minimal cost. Wilk (2006) emphasizes that an explanation of such a pervasiveness of this product based on practicality falls short of understanding this phenomenon. He thus suggests that consumers are attributing meanings to water that go far beyond satisfying thirst and attributes this to "the power of branding to make commodities a meaningful part of daily life" (Wilk 2006, p. 305).

Consumers come to perceive bottled water as a necessity due to cultural meanings that are derived from associations with nature, purity, health, and safety. First, water, regardless of whether from the tap or from the bottle, is seen as the very substance of nature. As such, it is historically linked to the magical power to heal and grant vitality. This religious power is established through sourcing water from sacred springs and wells. What adds to the cultural significance of bottled water is the opportunity to exercise the human attempt to control the powers of nature: "[E]very bottle of water is a visual metaphor for control and at the same time a reminder that without water, people cannot exist" (Wilk 2006, p. 308). This connection to nature is why most waters on the market continue to identify places and natural origins such as glaciers or springs.

Second, the association of bottled water and purity is attributed to the increasingly popular perception of public water as dangerous and dirty. Specifically, because consumers think of the home as an extension of their bodies, then anything that enters the world from the public domain is perceived as potentially dangerous and impure (Douglas 1966; Wilk 2006). These sentiments may be intensified during public health crises such as the COVID-19 global pandemic that infected hundreds of millions and killed millions of people worldwide. In this

pandemic, bottled water was perceived as an absolute necessity as consuming drinking water from public outlets was equated with contracting COVID-19. Moreover, people in areas with potentially unsafe tap water may have found themselves with a difficult choice: wash their hands more frequently and potentially be exposed to toxic chemicals, or limit handwashing and increase the risk of being infected with a virus (Secon, Cooper, and Jiang 2020). Because consumers often do not know where tap water is coming from, they associate a higher level of purity with bottled water.

Third, despite increasing concerns about plastic leaching from bottles (e.g., Hawkins 2009) health is often closely related to nature and purity aspects. For instance, natural sources often serve as an indication of well-being. However, bottled water is also often perceived as healthy because of claims advertisers make based on scientific additives. Finally, tap water is often equated with a human intrusion of nature that constitutes uncontrollable risks. Bottled water, on the other hand, serves as more of a safety net, where the purity of the water is assured. In summary, Wilk (2006, p. 307) suggests that

> *"[b]ottled water is a form of cultural consumption driven by everything from status competition to a belief in magical curing, in short the full complex cultural terrain explored by the recent generation of scholars of consumption and marketing."*

The foregoing is an overview of the consumer research employing human-focused perspectives pertaining to necessitation. However, the overview serves the purpose of illuminating strengths compared to thing-focused approaches and some of the shortcomings of the initial approach to studying consumption within the CCT tradition, as reflected in the four domains presented by Arnould and Thompson (2005). Notwithstanding the important

contributions that these necessitation studies have made, they have explored necessities and necessitation primarily from the perspective of a dominant human subject, where things (i.e. products) primarily serve as vehicles for consumer meaning. Therefore, further work is needed to go beyond the limits of perception-based research and develop a socio-historically rich understanding of how products move from being nonnecessary to necessary over time.

Material Relationality Approaches

While acknowledging the contributions human-focused approaches in general and early CCT studies in particular have made to our understanding of consumption, recent criticism has emerged of their treatment of things, leading to a rethinking of these approaches. For instance, Bettany (2007, p. 44) suggests that CCT "has exchanged one deterministic analysis for another, in earlier consumer work overdetermined by the object, the object determined the social and in current CCT the opposite is true, the object is under determined, that is the social (largely) determines the object." Calls to "'recover' the 'agentic capability' of things" (Lai and Dermody 2009, p. 177) have been echoed by other consumer researchers who encourage the study of an object's "capacity to facilitate alteration" (Borgerson 2005, p. 440) and an exploration of "what things do" (Parsons 2009, p. 177).

Appeals to explore the agency of things are not new. Earlier studies have pointed to the "social life of things." This perspective is shaped by Appadurai's (1986) and Kopytoff's (1986) seminal works. Appadurai (1986) argues that things (i.e., commodities) have social lives and go through transformations. They acquire and lose value, change meaning, become non-exchangeable, and possibly return back to commodity status. Thus, this perspective emphasizes a

27

thing's role in exerting weight and authority in a consumer's life. The focus is on the movement of the thing from one status to another. According to Appadurai (1986, p. 5), "even though from a theoretical point of view human actors encode things with a significance, from a methodological point of view it is the things-in-motion that illuminate their human and social context." Expanding on Appadurai's (1986) ideas, Kopytoff (1986) lays out a theoretical framework: the cultural biography of things. He is interested in tracing the histories that things accumulate from the various social interactions they are tied up in. Specifically, he highlights the need to trace their various singularizations: "An eventful biography of a thing becomes a story of the various singularizations of it" (Kopytoff 1986, p. 90). These are decommoditization rituals, where consumers bring things into their lives. Consumers attach use-value to things and strip them of their exchange value, which is associated with commoditization (e.g., Belk 2020; Belk, Wallendorf, and Sherry 1989; Kopytoff 1986; Miller 1987; Wallendorf and Arnould 1988).

What Appadurai (1986) and Kopytoff (1986) allude to are essentially processes of commodification, decommodification, and recommodification. Today, consumers can buy almost anything, as everything becomes objectified and commodified (e.g., Kuttner 1997; Agnew 2003). For instance, scholars have studied the commodification of sex and human intimacy (e.g., Bernstein 2007; Constable 2009; Huff 2011), the self (e.g., Belk 2014; Coupland 1996), childhood (e.g., Cook 2004; Zelizer 1985), tourism (e.g., Greenwood 1996; Swanson and Timothy 2012), and religion (e.g., Miller 2005a; Taylor 2005). All these examples were once solely valued for their role in identity construction, cultural practices, and social relationships, but have been turned into commodities by various parties capitalizing on their exchange values. Decommodification is the reverse of commodification and more relevant to the study of material things, as is the purpose of this research. Here, through singularizations consumers bring

commodities into their lives and apply them in purposive identity efforts (Arnould and Thompson 2005; Douglas and Isherwood 1979; Epp and Price 2010). When circumstances change, consumers may choose to return material things to commodity status, which is understood as recommodification. This is, for instance, a common occurrence when consumers sell valued possessions in garage sales and online auctions (e.g., Giesler 2006; Herrmann 1997; Lastovicka and Fernandez 2005).

The research stream advanced by Appadurai (1986) and Kopytoff (1986) offers invaluable contributions to our understanding of consumer culture. For instance, it underlines the need to trace the movement of material things, because they have a "social life," thus problematizing the exclusive focus on the consuming subject (e.g., in early CCT research). However, there are also shortcomings in this research stream. First, these studies primarily examine singularized individual possessions (e.g., heirloom, family table) rather than product categories (e.g., cell phones, cars). Second, Epp and Price (2010, p. 822) argue that "Kopytoff's theory of singularization is limited by his failure to directly consider the role of object agency." They particularly refer to things as active elements of a network consisting of humans, things, and practices (Gosden and Marshall 1999; Miller 2005b; Preda 1999; Türe and Ger 2016).

Actor Network Theory (ANT) and Assemblage Theory

While the preceding paragraphs show that the idea of turning attention to things is not new, it was incorporated into CCT research at a later time. CCT has been extended to not only focus on individual possessions, but to acknowledge things as agentic elements in networks.

Arnould and Thompson (2015, p. 6) conclude in their second review of CCT research that early studies in this realm overlooked

> *"more theoretically innovative implications of a distributed view of*
>
> *culture, such as the fluidity among cultural categories and classifications,*
>
> *the heterogeneous and contingent quality of cultural formations, and flat*
>
> *ontologies whereby dispersed actants come into contingent alignments*
>
> *through self-organizing, reconfiguring, and reciprocal processes."*

They essentially acknowledge that the infusion of ANT (e.g., Callon 1986; Latour 1988, 2005; Law 2009) and assemblage theory (DeLanda 2006; Deleuze and Guattari 1987) into CCT research addresses a felt theoretical shortcoming of the tradition.

Before I expand on the contributions of these perspectives to consumer research, we need to understand their origin. ANT and assemblage theory are said to view society from a rhizomatic perspective. Introduced by Deleuze and Guattari (1987), the *rhizome* concept describes a network of multiple and non-hierarchical connections between all sorts of entities. Deleuze and Guattari (1987) present rhizome in contrast to the more linear concept of a tree (i.e., arborescent model). Specifically, a tree has a point of origin and develops in a set sequential manner. The roots are extending into the ground, a trunk is coming out of this ground, and branches grow into the sky. As such, the tree stands symbolically for the divide between subject and object and is representative of a dualistic logic that builds the understanding of phenomena on hierarchies and categorizations. The rhizome, on the other hand, has no evident origin or end. Rather, "a rhizome can be connected to anything other" (Deleuze and Guattari 1987, p. 7). This notion suggests much less order than is associated with the concept of a tree. Bulbs and tubers, for instance, are rhizomes, where each point is necessarily connected to each other point, where

30

no location represents beginning or an end but the whole is heterogeneous. Overall, Deleuze and Guattari (1987, p. 8) suggest abandoning arborescent thinking because it leads us to perceive the world in hierarchies and structures of domination concealing the rhizomatic nature of the world: "We should stop believing in trees, roots, and radicles. They've made us suffer too much."

This notion based on the biological idea of the rhizome calls attention to the complexity of social phenomena, which prompted the emergence of two approaches to study it: First, sociologists conducting research on science and technology have formalized ANT (e.g., Callon 1986; Latour 1988, 2005; Law 2009). Second, Deleuze and Guattari's (1987) assemblage theory was adopted and expanded into a social theory by other scholars (e.g., Anderson and McFarlane 2011; DeLanda 2006). While ANT and assemblage theory are not entirely commensurable and ANT provides more tangible conceptual and methodological frameworks to be used in research (Müller 2015), they share several points of consensus that underline their contributions to consumer research. Both employ

> *"conceptions of the world as constituted from more or less temporary*
>
> *amalgamations of heterogeneous material and semiotic elements, amongst*
>
> *which capacities and actions emerge not as properties of individual*
>
> *elements, but through the relationships established between them"*
>
> (Canniford and Bajde 2016, p. 14).

There are three points of agreement between these two perspectives that can be derived from this understanding of the world: heterogeneity, relationality, and distributed agency. First, the principle of *heterogeneity* outlines that assemblages and actor networks consist of diverse types of active elements: material, cultural (e.g., symbols), social, or technological. As such, the theories account for both human and thing elements (i.e., things). At the same time,

heterogeneity implies a variation in scales of things (Canniford and Bajde 2016). For instance, all social formations are either actor networks or assemblages without a ranking between micro and macro levels. The idea of context vanishes and with it concepts such as global and local are flattened. They can only be interpreted as traceable connections between various actors. Thrift (2008, pp. 174–175) underlines this thinking:

> *"Space is no longer seen as a nested hierarchy moving from 'global' to 'local.' This absurd scale-dependent notion is replaced by the notion that what counts is connectivity and that the social is only a tiny set of narrow, standardized connections out of many others."*

This accentuation of connectivity leads us to the second principle of *relationality*. Both theories refute a preexisting order of things or *a priori* divisions, such as civilization and nature, truth and lie, human and non-human, micro and macro, knowledge and power, and so on. Rather, ANT and assemblage theory "treat everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located", assuming that "nothing has reality or form outside the enactment of those relations" (Law 2009, p. 141). In so doing, they acknowledge the unpredictability and contingency of events. Thus, ANT and assemblage theory promote a relational materiality, the material extension of semiotics, which posits that all elements come to be relevant only in relation to other elements. In other words, both human and thing elements have no *a priori* substance or essence and are thus foundationally indeterminate. Their nature is derived through the networks or assemblages that encompass and tangle them in relations with one another. At the same time, relationality requires a constant re-articulation of associations between elements. Relationality reveals a similarity between actor network and assemblage: both are precarious and depend on the recurrence of events and processes. They do

not represent stable relations or static structures (e.g., DeLanda 2006; Latour 2005; Law 1999). For instance, to maintain a network or an assemblage such as a company employees must attend work on a consistent basis and engage in producing outcomes mutually. While doing so they need to be able to utilize buildings and computers (amongst others) that contribute to their work. The network perishes if one or more of such processes or events discontinue. This process of step-by-step developments that lead to the success or failure in establishing valuable and stabilized assemblages or actor networks is referred to as translation (Callon 1986; Latour 1988). Failure is often attributed to betrayals, which are the various ways in which diverse elements may be unsuccessful in harmonizing in relational networks or assemblages (Callon 1986).

Third, because of the subscription to relationality ANT and assemblage theory advocate *distributed agency*, in which humans should not be understood as natural sources of action but rather as an effect of the relations that elements engage in. This does not mean that humans are never agents but that their agency is an effect of their relationships with other elements. For instance, in consumer behavior

> *"there is no 'finished', durable 'consumer' that can exist outside of*
> *patterned relations between people, objects and meanings that construct*
> *particular subjects, objects, devices, spaces and times"* (Bajde 2013, p.
> 229).

Agency is distributed among multiple elements, which work in concert to create effects. Thus, the human-centered ontology in early CCT work is challenged and things are considered as important as humans in forming behavior, history, technology, and identity. Hence, these perspectives advocate for a flat ontology and a return to things treating humans and things the same ontologically. This is not to say that things act intentionally. As Latour (1999, p. 192)

33

contends, "purposeful action and intentionality may not be properties of objects, but they are also not properties of humans either. They are properties of institutions" (i.e., combinations of humans and things). Agency emerges when multiple, heterogeneous actants come together. This is also not to suggest that consumer and consumption object conceptions are not helpful. For instance, Müller (2015, p. 31) posits that "the component parts of an assemblage can have intrinsic qualities outside associations that impact on and shape the assemblage." The point is rather that establishing an *a priori* division of consuming subjects and consumption objects limits the availability of alternative explanations of consumption phenomena (Kjellberg 2008). Adopting such an emergent ontology, on the other hand, abandons the view of "the consumption object as something which is acted on" (Bettany and Kerrane 2011, p. 1746) by an agential consumer, while at the same time avoiding overdetermination of either subject or object (Bettany 2007).

The strength of ANT and assemblage theory lies in their "insistence on tracing action and relations beyond human-centered perspectives, and beyond present-times or localized spaces of inquiry in order to acknowledge the historical shaping of assemblages, as well as intersections with broader institutions and processes" (Canniford and Bajde 2016, p. 20). The purpose of ANT and assemblage theory is to understand how assemblages become stable or fail to do so by tracing the development of such networks or assemblages (Bajde 2013; Latour 2005). Hence, Latour (2005, p. 144) prefers to "just describe the state of affairs at hand." As such, these perspectives do not subscribe to objectivism or social constructionism (as done in early CCT studies), but to material relationality.

Various approaches to "recovering" objects in marketing research (Bettany 2007) have utilized assemblage thinking, for example: Bettany (2007) explores the active role of a manual

grooming device used in Afghan hound breeding groups; Epp and Price's (2010) investigation highlights the agency of a table in domestic practices; Bettany and Kerrane (2011) explore how chickens, chicken coops, and chicken owners come to form and maintain lifestyle identities; Giesler (2012) explores the role of doppelgänger brand images in market creation processes; Hui (2012) explores mobile practice assemblages of people and bird-watching. Canniford and Shankar (2013) explore how consumers use purifying practices in assembling romantic experiences of nature in surfing groups; Thomas, Price, and Schau (2013) study the interaction of heterogeneous actors in the distance running community; Bettany, Kerrane, and Hogg (2014) investigate the role of caring technologies in the transition to new fatherhood; Martin and Schouten (2014) show how humans and things co-constitute products, practices, and infrastructures towards new market emergence; Epp, Schau, and Price (2014) examine the role of brands and technologies in dispersed families; and Parmentier and Fischer (2015) position brands as assemblages of diverse elements and explore how fans partake in the destabilization of a brand's identity. More recently, a book on "Assembling Consumption: Researching Actors, Networks and Markets" (Canniford and Bajde 2016) has been published. Many authors listed above have contributed to this edited volume that is replete with further applications of assemblage thinking in the consumer sphere. Amongst others, Schouten, Martin, Blakaj, and Botez (2016) outline how supply chains, legal work, restauranteurs, certification schemes, and brands helped create the organic food market/culture in California; Figueiredo (2016) shows how, for people who move often, home is an assemblage that is continuously recreated by various heterogeneous actors; and Smith (2016) shows that a horse-assisted leadership assemblage consists of managers, horses, stories, equipment, coaches, and corporations.

While all these studies offer important contributions, some criticism related to the application of ANT and assemblage theory in the CCT realm has emerged. For instance, Hill, Canniford, and Mol (2014, p. 380) particularly criticize the adaptation of representational network theories, as what they understand "methodological and epistemological characteristics of representational modes of theorising." Representation is the reproduction of established structures, orders, and norms (Firat and Dholakia 2006). Hence, representational studies replicate existing knowledge of markets and consumption, rather than allowing new ways of thinking and ontologies to emerge (Bajde 2013; Hill et al. 2014; Latour 2005). Hill et al. (2014) refer to two ways in which representation occurs in marketing and consumer research that utilize ANT and assemblage theory. First, representational research often focuses on certain kinds of accounts and data by predominantly utilizing and prioritizing consumer narratives in analysis (Hill et al. 2014). In so doing, researchers attribute to consumers the ability to provide an accurate recollection of their experiences. The intended "recovery of the object," therefore, is merely explored through the eyes of the consumer. This tendency is not surprising given the ontological tradition in CCT research of ascribing agency to self-reflexive human subjects (i.e., consumers) (e.g., Tadajewski 2006; Thompson, Arnould, and Giesler 2013). However, it stands in sharp contrast to the distributed agency that is advocated by the relational materialism of ANT and assemblage theory (Bajde 2013; Hill et al. 2014). Second, representational studies in this realm often rely on representational categories. By explaining events through pre-existing language and understanding researchers tend to be "relatively quick in 'cutting off' their network tracing" (Bajde 2013, p. 235). They tend to "rebuild the social" (Latour 2005) by manifesting established ways of thinking. Again, this is not consistent with emergent ontologies and theories in material relationality built upon in these studies.

36

Hill et al. (2014) feel the need to turn to a complementary mode of relational theorizing obtained from non-representational theory (NRT) grounded in the work of Thrift (1996, 2000, 2008). Specifically, using NRT researchers can examine "the often 'unrepresentable' details or minutiae of life" (Hill et al. 2014, p. 378) through contemporary and inventive methods. In CCT applications of ANT and assemblage theory this "continual movement and processes of everyday life" (Hill et al. 2014, p. 384) are often obscured or given less priority. NRT is not to be understood as a theory per se. It is rather a mode of thinking that values practice (Thrift 2000) and "a work of description of the bare bones of actual occasions" (Thrift 2008, p. 2). There are a few characteristics that can help overcome the two shortcomings of representational theorizing in CCT research presented above.

First, NRT attempts to take into consideration the "onflow" of everyday life (Thrift 2008) such as ongoing performances of consumer culture. In so doing it offers a "highly detailed rendition of experience from within" (Pred 2005, p. 1) and addresses the limitations of consciousness. As Foucault (2002, p. 10) points out, "it is vain that we say what we see; what we see never resides in what we say." Rather than only employing retrospective accounts NRT accounts for events as they develop and thus allow researchers to shift their attention during this unfolding toward material objects and flows that require a closer look. Therefore, NRT does not solely focus on representing pre-existing orders and structures. Rather, Thrift (2008, p. 7) emphasizes the need to explore the automatic, the "roiling mass of nerve volleys [which] prepare the body for action in such a way that intentions or decisions are made before the conscious self is even aware of them." It is not concerned with subject-based perception or subjects, but with "practices of subjectification" (Thrift 2008). This is in line with the principle of relationality of ANT and assemblage theory, where the subject emerges out of its relations with other elements.

37

As such, NRT opposes the "classical human subject, which is transparent, rational and continuous" (Thrift 2008, p. 14).

Second, NRT is also striving to "get in touch with the full range of registers of thought by stressing affect and sensation" (Thrift 2008, p. 12). Affect is not related to a personal emotion, but to a "pre-personal intensity corresponding to the passage from one experiential state of the body to another and implies an augmentation or diminution in that body's capacity to act" (Massumi 2004, p. xvii). Thus, affect comes before emotion and is concerned with the atmospherics of a particular situation. It refers to embodied forces moving between humans and objects, which generates changes that initiate the motion of assemblages.

It should be added that NRT is not intended to replace representational network theory and should be more appropriately labeled "more-than-representational theory" (Lorimer 2005). As such it just extends the contributions of prior studies by expanding personal consumer accounts to include "new actors, forces and entities" (Anderson and Harrison 2010, p. 2) that would have gone otherwise unnoticed. Hill et al.'s (2014) NRT-inspired approach is mainly of methodological nature. For instance, they invite future studies to investigate everyday life by widening ethnographies to more sites, contexts, and samples, and looking for new ways of describing and tracing consumption assemblages. NRT thinking provides the opportunity to look for automatic, atmospheric, and affective aspects in consumption spaces by employing videographic and audiencing methods, amongst others. While NRT's focus is more on events as they unfold, its insights are also useful in a historical account of phenomena that have already occurred. For instance, NRT's attention to sensitivities and details of events when examining primary historical sources stresses the senses of the researcher to look for actors that may have been previously overlooked.

Interestingly, Hill et al.'s (2014) criticism of representational studies is one about asymmetries. First, they point out that "our applications of ANT tell us a lot about the construction of things, but less about the construction of the people who use those things" (Hill et al. 2014, p. 383). As such, they suggest a preoccupation of ANT and assemblage theory with things and consequently a lack of attention to human *action* (not humans per se). Second, the simultaneous focus on human accounts of consumption assemblages implies that things are underrepresented. This asymmetry in favor of humans rather than things is echoed by others. For instance, in their exploration of the extended object, Belk and Humayun (2015, p. 22) reiterate that the post-structural preoccupation with consumer texts has led to the ignorance of things: "Words do not trip us, cut us, or feed us; *things* do." Barad (2003, p. 801) suggests: "Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter." Entanglement theory (Hodder 2012) seeks to address these shortcomings.

Entanglement Theory

Assemblage theory and ANT are built on the principle of material relationality, where humans and things are not defined *a priori* but rather emerge as effects of their relations with each other. Specifically, human existence and social life are closely tied to material things (e.g., Canniford and Bajde 2016). Material relationality approaches assume relational symmetry, which gives humans and things the same ontological footing. Rather than promoting a dominant human subject, these theories concentrate on the dispersed networks or *meshworks* (Ingold 2010) through which actors reach form and come to act.

Hodder (2012) supports the notion that humans and things are relationally produced. However, he posits that relational approaches with their focus on distributed agency or symmetry overlook (1) constraining associations between humans and things and (2) any kind of association among things themselves. First, relational studies frequently miss that "our relations with things are often asymmetrical, leading to entrapments in particular pathways from which it is difficult to escape" (Hodder 2014, p. 19). Hodder (2012) shows that studies built on ANT and assemblage theory are replete with notions of dependence, which can occur in two forms. On the one hand, *dependence* ("reliance on") occurs when the use of things is something enabling and permits humans to be, survive, think, and be social. On the other hand, *dependency* is to be understood as when their use imposes a constraint on humans, limiting their ability to develop individually or as a society (Hodder 2012).[1] Hodder (2012) also refers to this contrast as the distinction between entanglement and entrapment. For instance, Hodder (2012) underlines the presence of dependences in Latour's (1988) research on the "pasteurization of France," which introduces the microbe as an essential actor in lives of humans:

> *"Microbes as things connect people and they connect people and things.*
> *Those in our guts connect us to what we eat. […] We depend on the*
> *microbes that pasteurize beer in order to have economic relations between*
> *brewers and customers. We depend on sterilizing milk in order to be able*
> *to feed our children milk products"* (Hodder 2012, p. 91).

---

[1] Adopting Hodder's (2012) approach I use "dependence(s)" where I talk of both forms but specify difference where necessary.

Additionally, Hodder (2012, 2014) emphasizes the overlooked "brute matter" of things and the forces that they can impose upon human beings (Hodder 2012, 2014). At times, he suggests, humans may have the upper hand but there are also times when things are in control:

"The things seem to have taken us over; at least our relationship with

digital things has become asymmetrical—we need Christmas tree lights

and smartphones (or think we do) and depend on them, even if they lead

us further towards greater global inequalities and global warming"

(Hodder 2014, p. 27).

Emphasizing such dependences Hodder (2012) concludes that the notion of a complete mixing of humans and things (i.e., networks) advanced in relational approaches does not give adequate attention to how humans and things entrap each other. He thus promotes the need to study this constraining nature of relations.

Second, Hodder (2012) also suggests that the focus on symmetry between humans and things tends to overlook relations among things themselves, which is confirmed by Latour (2005, p. 85) in reference to ANT: "Objects are never assembled together to form some other realm anyhow." Hodder (2012) goes on to provide the ice melting at the end of the Pleistocene as an example of an event that had widespread implications for human society without actual human involvement in this global warming event:

"There are many changes in natural cycles, in daily, monthly, annual,

decadal, millennial rhythms. There are many processes of decay and loss

and depletion that impinge on human society and in which things have

unacknowledged and unforeseen effects" (Hodder 2012, p. 93).

Hodder (2012) thus puts forward that those relationships of things with each other are an important "motor of change" that influences human society.

Overall, while Hodder (2012, 2014) acknowledges that humans and things are relationally created, he advances that the relations with humans and things do not only include a mixing of humans and things or a symmetry of relations as promoted in relational approaches (i.e., assemblage theory, ANT). Those relations are often asymmetrical leading to dependences – both positive and negative – in human-thing and thing-thing connections.

To overcome these shortcomings of relational theories such as ANT Hodder (2012, p. 89) introduces the concept of entanglement, which emphasizes the "stickiness" between humans and things. Entanglement is not to be conceived of as "simply co-dependence or mutualism or co-evolution or systems feedback between humans and things. Rather, it tries to capture various forms of being caught up" (Hodder 2011, p. 163-164). Hodder (2011) suggests that the degree of entanglement could be measured by the length of connected yet invisible links between humans and things. Those links should not only be conceived of as strands but rather as cables that are multi-stranded to reflect material, biological, social, cultural, psychological, and cognitive means in which humans and things are linked. This complexity further leads to entrapment.

While I will address problems with this definition below, in its initial conceptualization, Hodder (2012) describes entanglement as the total of four sets of dependences: humans depend on things (HT), humans depend on humans (HH), things depend on things (TT), and things depend on humans (TH). Prior marketing research has predominantly accounted for two of these sets, namely HT and HH, while not providing sufficient attention to TH and TT relations. Humans rely on things in various ways. First, their dependence can be derived from the things' utilitarian, practical, or hedonistic functions. Research focusing on this can be found within the

thing-focused approaches outlined above (e.g., Burke and Edell 1989; Cohen, Fishbein, and Ahtola 1972; Zajonc and Hazel 1982). CCT research, on the other hand, primarily explores the meanings that consumers attach to things and from which human reliance of things derives (e.g., Belk 1988; Fennis, Pruyn, and Maasland 2005; Tian and Belk 2005). This research stream also accounts for humans' dependence on each other with a focus on reference groups they use for comparison (e.g., Escalas and Bettman 2003; Leigh and Gabel 1992).

Thus, the overall less addressed TH and TT relations are the driving forces of entanglement. On the one hand, TH stresses that "things cannot exist for humans, in the ways that humans want, without human intervention" (Hodder 2012, p. 69). This dependence may extend to production, manufacturing, exchange, use, maintenance, and discarding. Hence, humans are trapped in the care for things if they want them to remain in the desired form (Hodder 2012). TT, on the other hand, indicates that things themselves are strongly tied to other things in dependences. They can stick to each other or be tied together and "flow into other things, always transforming and being transformed" (Hodder 2012, p. 41). This dependence among things gives them agency. Refocusing on things themselves, Hodder (2012, p. 59) wants to emphasize that it is not enough to say that "humans depend on things, give meaning to things, use things, gain identities from things, own things." At the same time, he stresses that dependences among things are never independent of humans. Because of their dependence on things, humans will always be drawn into these dependences, which may also derive their agency because of what they represent in culture that coalesces them into agent things (Hodder 2016).

Therefore, Hodder (2016) acknowledges the difficulty to isolate HT, TH, TT, HH dependences from entanglements because humans are already spread into the world. There is no context separate from human culture. Thus, one cannot think about TT relations without human

43

involvement, or of HH relations exclusive of things. Entanglement, then, is "the dialectic of dependence and dependency" (Hodder 2016, p. 5), which emphasizes the ongoing pull between positive dependence and negative dependency rather than promoting the long-criticized separation of subject and object advanced in the four sets of dependences (i.e., HT, TH, TT, HH). Hodder's (2018) work on evolution from an entanglement perspective leads to a further development of this entanglement definition that is grounded in Hodder's (2018) expanded definition of humans and things.

While Hodder (2012) focuses more narrowly on material things in his initial work on entanglement theory, he later expands this definition. Following Heidegger (1971) he defines a thing as "an entity that draws other entities together" (Hodder 2018, p. 55). Therefore, things also include words and ideas and larger-scale human groups (i.e., nations, institutions, and bureaucracies). Specifically, humans get entrapped in various ways in words and ideas. Sentences, for instance, can only be built in predetermined ways given the historical entanglements of words in meanings and grammatical structures. Likewise, humans may get entrapped by ideas they hold deeply (e.g., religious, political) to define their actions.

Equally, larger-scale human groups are considered things because they connect other entities. As such, humans are considered things, as well. Overall, then, a more suitable definition of entanglement is "that it captures the messiness of the flows and counterflows that produce, enchain, and encompass all entities: humans, animals, things, ideas, social institutions" (Hodder 2018, p. 91). This definition acknowledges that all those entities are created from flows. For instance, a brick wall may appear stable, sturdy, and static, but it gradually decays and crumbles. In focusing on dependences entanglement allows us to identify the flows that constitute the entities in question. A given entity is always the result of specific conditions, and it comes in and

out of existence by the flows in which it is emerged (Hodder 2018). Overall, then, entanglements are not simply networks. Rather, they are webs of dependency that not only track flows between a diverse set of entities but also the flows that produce those entities. Contrariwise, the idea of networks captures a total mixing of humans and things and understands them as more stable nodes (Hodder 2018).

Another point of departure from networks and a driving force in entanglements is the notion of *affordances*, which are an object's "potentialities for a particular set of actions" derived from its properties (Hodder 2012, p. 49), that are continuous from context to context. Thus, for instance, one could recognize the potential of an object for sitting on it without the cultural knowledge necessary to categorize it as a chair. The concept of affordances thus posits that things have certain properties that afford or make possible certain outcomes. It is suggested that these properties can be attributed to things regardless of their relations with humans and/or other things, they exist outside of these relationships and may be missed in a purely relational view of humans and things such as in ANT (Gibson 1986; Hodder 2012). Using the wheel, Hodder (2018) demonstrates how humans have gradually capitalized on its various affordances, which in turn has led to increased dependences with an increased number of entities. In short, making more use of the wheel's affordances has increased its number of entanglements. The wheel has become commonplace in transport, energy production, tools, and many other places.

The increased entanglements of the wheel made it impossible to imagine a world without it, which Hodder (2012, 2018) discusses as *path dependency*. Once a certain level of entanglements is reached it becomes very challenging and expensive to turn back. For instance, humans have become so invested economically, socially, and culturally in entanglements surrounding the wheel that a disentanglement is not a considerable option. On the contrary, while

local disentanglements are attainable, entanglements tend to grow exponentially. For instance, lighting a fire may involve a comprehensible set of entanglements. However, over centuries the use of fire has spread into many different domains, so that its number of entanglements makes it impossible to envision a life without it. Fire, for example, has improved the worth of food, which in turn has drawn humans into dependences affecting how they live and socialize (Hodder 2018; Wrangham 2009). Path dependency highlights that things are so interwoven among themselves and with other human-thing dependences that daily practices are directed down certain pathways and that humans are moved in ways that produce more entanglements.

Overall, Hodder's (2012) entanglement theory focuses on the sticky entanglements among a diverse set of entities, which are broadly grouped into humans and things but include humans, things, animals, ideas, social institutions, and so forth. These entanglements do not just represent a total of mixing of entities as in networks and assemblages but rather are webs of dependences. Thus, Hodder (2012), offers a theoretical framework that does not discount previous relational approaches like ANT and assemblage theory. He does not refute their principle of relationality but rather shifts the focus toward positive dependences and negative dependencies showing that humans and things do not merely relate to each other. Their relations are rather entrapping and asymmetrical, so that humans are directed down particular pathways in their daily practices, from which it is difficult to turn back. In an additional departure from relationality, Hodder (2012) posits that things have context- and relationship-independent affordances that fuel the exponential growth of entanglements once those affordances are increasingly appropriated.

Because of the principles of relationality and distributed agency ANT and assemblage theory have fallen short in exploring asymmetric relations. Nonetheless, there are notions of

dependences in CCT research utilizing assemblage thinking. For example, the work of Epp and Price (2010) shows that consumers may depend on a table because it enables family interaction, while being entrapped in the caring of the table so it can continue serving a key role. Moreover, Canniford and Shankar (2013, p. 1057) study purifying practices and posit that when consumers assemble romantic experiences "the magical union with nature […] depends on the flowing material qualities and unpredictability of the ocean environment." At the same time, their study shows signs of entrapment when technology utilized by surfers negatively affects the nature that surfers seek to preserve.

Nevertheless, because ANT and assemblage theory emphasize symmetry rather than asymmetry of relations, these dependences are not the foci of the analyses and are only alluded to. Entanglement theory is relatively new to marketing and consumer research and thus has only rarely been applied. For instance, Belk (2014) reviews entanglement theory and its potential in reexamining the extended self-construct. Masset and Decrop (2016) utilize it as a theoretical framework in their study of tourist souvenirs as special possessions and suggest that the relationships with them vary depending on whether they are in entangled or entrapped situations.

Material Relationality Approaches and Necessitation

Necessitation research can also benefit from material relationality approaches. By subscribing to a social constructionist perspective, various studies (e.g., Firat 1987; Wilk 2006) have gone beyond thing-focused approaches, which advance classification. From the presented movement towards the "return of things," a further shift is necessary to increase our understanding of product necessitation. This requires that we not only study necessitation from the perspectives of consumers, but also consider these ongoing changes in the field of consumer

behavior and give voices to other entities. This shift needs to be a movement towards material relationality, where the world is constituted of heterogeneous actors that emerge through their relationships with each other (e.g., Canniford and Bajde 2016; Deleuze and Guattari 1987; Latour 1988, 2005). It underlines the understanding that there are no *a priori* structures in the order of things, thus defying objectivist thinking (e.g., Deleuze and Guattari 1987). As such, there are no *a priori* definitions of what constitutes necessities. At the same time, material relationality approaches go beyond a social constructionist perspective that suggests that necessities are socially and historically contingent (e.g., Alvesson and Sköldberg 2009; Berger and Luckmann 1966; Buttle 1989). These approaches are built on the principles of heterogeneity, relationality, and distributed agency and thus emphasize an equal ontological footing for subjects (i.e., humans) and objects (i.e., things). Therefore, studies that assume an active subject and "acted-upon object" don't give the same attention to things as they give to humans (e.g., Bettany 2007; Bettany and Kerrane 2011).

While no previous study has addressed necessities or necessitation through a material relationality approach, the reviewed literature provides insights as to which elements might be involved in contributing to the necessitation of products. For instance, Firat's (1987) analysis speaks of powerful consumers, poor consumers, meanings, entrepreneurs, producers, and products. Furthermore, from Wilk (2006) we learn that potential actors are consumers, institutions, organizations, brands, meanings, and activists. When looking at this incomplete list of potential actors in producing necessities, a preoccupation with human actors can be noticed. This observation is not surprising given the favoring of the human subject, either ontologically or epistemologically, in previous works.

We must break away from approaches that are either thing- or human focused. Therefore, we shall turn our attention to material relationality. Given its advantages over other material relationality approaches presented above, I turn to entanglement theory (Hodder 2012) as a theoretical framework to arrive at a more holistic account of product necessitation. Entanglement provides an opportunity to analyze large-scale and long-term concerns grounded in the socio-material practices of everyday lives. Specifically, entanglement asserts that things are so strongly tied with other things and human-thing dependences that daily practices are moved in certain directions and humans are pushed toward further entanglements.

In addition to its benefits over other material relationality approaches, Hodder's (2018, p. 78) assessment of human-thing relationships underlines the relevance of entanglement theory for understanding human necessities:

> *"Humans rely on tools, machines, and buildings. They rely on words and symbols to communicate. But they also depend on them in the sense of being unable to exist without them. Humans cannot be independent of things. Certainly, we depend on food and water. We would not last in severe cold or heat without clothes or shelter. We cannot feel without things to feel; we cannot desire without things or people or ideas to desire; we cannot think without words or symbols; we cannot love or hate without things, people, or institutions to love or hate."*

Hodder (2018) identifies things like food and water that would have been categorized as basic necessities in thing-based approaches, but he also shows the importance of things like words and symbols that are more relevant to a broader comprehension of what it is to be human

(i.e., to feel, desire, think, love, hate). Thus, Hodder (2018) concludes that humans depend on a plethora of things, without which they cannot continue to live.

In addition to its applicability to understanding necessities, entanglement theory offers a pathway into studying necessitation or how products come to be necessities over time:

"Increases occur as the affordances of things are gradually realized, and decreases occur as entanglements change and the thing loses its role. The rise and fall are entirely dependent on the entanglements. There is no inherent adoption-to-rejection process. All depends on the particular thing and its affordances, and on the surrounding entanglements. Cotton and poppies, for instance, are both difficult crops to harvest and process, and their use through time depended on the gradual accumulation of new techniques within new imperial strategies. The interaction between the affordances of things and the entanglements within which they are realized leads to particular pathways being taken at particular historical moments. Once takeoff occurs, there is more lock-in, and greater difficulty in turning back, because so much has become entangled" (Hodder 2018, p. 124).

Thus, necessitation appears to be fueled by realizing the affordances of a product and the inherent path dependency of the growing entanglements surrounding a product. It is attained when entanglements reach a level, where it becomes too challenging to return and disentangle. In addition to the cotton and poppy examples in the quote above, Hodder (2018) illustrates how the car has come to be a product people cannot live without. While some may be able to get by without cars, the entanglements surrounding cars are too complex to allow most people to

manage without one. Internal combustion cars are entangled in a web of manufacturers, oil

companies, and the whole social and economic system. Most American cities, for instance, are

built for people in cars with widely separated houses and widely scattered places for working and

shopping divided by large parking lots. Many people also cannot afford living where they work

and thus need their cars to commute. Solutions focused on walking and using public

transportation are often not feasible or impossible due to a lack of public transportation.

Therefore, the car is an example of a circumstance where "the entanglements of things and the

amount invested in them make 'going back' and disentangling very difficult" (Hodder 2018, p.

117), making it a necessity.

While it may be challenging it is not impossible for a product to lose its status as a

necessity. Such a disentangling is often associated with increasing entanglements around another

product. For example, the "decline in horse-drawn transport was linked to the rise of engines

with horsepower but no horses. Entanglements increased dramatically as a result. The shift from

gas to electric cars is creating new entanglements" (Hodder 2018, p. 2018).

Studying necessitation through an entanglement lens also allows us to understand the

entrapments associated with necessities. Negative dependencies grow as entanglements expand.

For instance, countering global warming by disposing of cars may seem a sensible solution yet

turns out to be an impossible one because an existing city cannot run without them. So, rather

than removing cars humans find other solutions, which often only lead to greater entanglements,

as evidenced by large battery factories being constructed by Tesla as a result of an effort to limit

the impact of cars on climate change. Thus, the entanglement lens exposes our lack of control

over things and shows how much we are dominated by them (Hodder 2018).

In addition to Hodder's (2018) notions of necessities and necessitation in his research on humans and things, there are studies of necessities that allude to entanglement thinking. For instance, Johnson (2014, p. 64) suggests growing entanglements in his research on refrigeration:

> *"It's not just a matter of a solitary genius coming up with a brilliant invention because he or she is smarter than everyone else. And that's because ideas are fundamentally networks of other ideas. We take the tools and metaphors and concepts and scientific understanding of our time, and we remix them into something new. But if you don't have the right building blocks, you can't make the breakthrough, however brilliant you might be. The smartest mind in the world couldn't invent a refrigerator in the middle of seventeenth century. It simply wasn't part of the adjacent possible at that moment. But by 1850, the pieces had come together."*

The quote illustrates the path toward increasing entanglements and a gradual realization of affordances that made the invention of the refrigerator possible and would eventually result in its necessitation.

Additionally, studying the history of caffeine and how coffee became a modern necessity despite being viewed with confusion, suspicion, and disgust for much of its 500-year history, Pollan (2020) posits:

> *"Caffeine is a curse addicting us to a regime that makes us more tractable and productive workers, speeding us up so that we might better keep pace with the manmade machinery of modern life. The Ancient Greeks gave us another way to look at something like coffee or tea. Each of these plants is*

a pharmakon, a word that can mean either a poison or a remedy, or it can

be both at once depending on how the substance is used. A pharmakon can

also be a scapegoat something on which people can blame things.

Caffeine is poison insofar as it undermines our usual bodily and mental

rhythms, our nature. And at the same time, it can be a blessing insofar as

it frees us from those rhythms. Caffeine equips us to cope with the world

caffeine helped us to create."

Describing it as a pharmakon, both poison and blessing, Pollan's (2020) assessment of

caffeine is congruent with Hodder's (2012) description of human-thing relationships as positive

dependences (e.g., allowing humans to stay awake and be more productive) and negative

dependencies (e.g., affecting bodily rhythms). As its entanglements grew "caffeine went on to

influence everything from global trade to imperialism to slave trade, the workplace, the sciences,

politics, social relations, arguably even the rhythms of English prose" (Pollan 2020).

Finally, Wilk (2006, p. 319) alludes to entanglements and dependences in his exploration

of bottled water:

"We can decipher the historical and cultural logic, and the various

collusions and conflicts between buyers and sellers that make bottled

water a plausible, and perhaps even inevitable, product of our times. At

some level, we can use all the tools of social science to make sense and

reason out of bottled water. But in doing so I do not want to lose sight of

the ultimate absurdity: the waste and inequality of the bottled-water trade.

Here we have a world with acknowledged ecological problems, rising

energy prices, and global climate change, where a significant amount of

53

energy and materials are being expended to transport water to places that

already have plenty of it, freely available. Then there are the billions of

plastic bottles manufactured and then discarded, littering the land and

ocean, or being buried in landfills or incinerated at public expense. Here

we have a world economy in which more than a billion people do not have

access to any kind of regular clean water supply, while another billion are

spending huge amounts of money on water that provides only a tiny

marginal benefit in their lives."

In his assessment Wilk (2006) is capturing the complex entanglements of bottled water at a moment in time. It would require a deeper examination of their historical development leading up to the necessitation of bottled water. In general, all of the above examples call for studying necessitation through the entanglement lens. Thus, using entanglement theory (Hodder 2012), this dissertation is an exploratory research that will provide a rich account of product necessitation. This research is seeking to answer the following questions: (1) How do consumers perceive necessitation of a product? (2) How is it that at this point in time certain products have come to be near-universally perceived as necessary? To address the first question I employ a consumer perspective and study consumer narratives of products they have come to perceive as necessities over time. To answer the second question I study product necessitation from an entanglement perspective and seek to answer the following questions: (3) What emerging entanglements have contributed to the necessitation of specific products? (4) What role do path dependency and affordances play in product necessitation?

In the next chapter, the method along with sources, analysis, and research context are described for both consumer and entanglement perspectives.

CHAPTER III

METHOD

"It may be more intuitive to keep historical narratives on the scale of individuals or nations, but on some fundamental level, it is not accurate to remain between those boundaries. History happens on the level of atoms, the level of planetary climate change, and all the levels in between. If we are trying to get the story right, we need an interpretative approach that can do justice to all those different levels" (Johnson 2014, p. 9).

The purpose of this exploratory research necessitates a dual approach. First, a narrative analysis is conducted to understand the unfolding of necessitation as perceived by consumers. Second, from the entanglement perspective, a historical approach is used to further understand how products come to be near-universally perceived as necessities. Historical research allows us to capitalize on the theoretical lens of entanglement (Hodder 2012) and consider the various human and thing elements and their dependences contributing to near-collectively perceived product necessitation. Below I present the research context and research process.

Research Context

Identifying the causes of product necessitation is not the same as explaining why it happened. Causal explanations remain at too abstract and general a level. One can always ask

why things did not turn out differently. Thus, there is a need to shift from abstract models to practical everyday events and to explore why people were set to act in the way they did (Hodder 2016, 2018). Entanglement theory (Hodder 2012) advances that directional change is being constantly generated because of how humans and things are caught up in each other. Therefore, after conducting a consumer perception-based narrative analysis in this dissertation, I study the historical evolution of entanglements in daily practices to understand how products come to be near-universally perceived as necessities.

Because of the exploratory nature of this study and because I want to develop an in-depth understanding of a phenomenon, the research context is the necessitation of the smartphone in news consumption in the United States. I acknowledge that it is impossible to disentangle news consumption from other uses or functions. However, a narrower focus on news is warranted to have a more manageable collection and analysis of data.

Smartphones have evolved into multi-media devices with a variety of communication and multi-media functions. Having a smartphone uninterruptedly within an arm's reach has impacted everyday life (Ling 2012). The smartphone has broadly diffused in Western society during the 2000s, making mobile communication possible at any time and any place. Until recently, smartphone diffusion was higher than the diffusion of Internet access. However, with smartphones acquiring Internet functionality the relevance of this difference has become obsolete (Pew Research Center 2019).

This rapid diffusion has also transformed and continues to change other industries including music, retail, and, as relevant for our context, news media. Traditional news organizations (e.g., New York Times, USA Today, Los Angeles Times) and web-only news organizations (e.g., Buzzfeed, Vox Media, Vice Media) are now mostly distributing their content

56

in feeds that are received on smartphones in the United States (Chan 2015; Newman and Levy 2014; Schroder 2015; Westlund and Färdigh 2015). News outlets orient their content production for phones adjusting to more consumers shifting to their mobile devices (Nel and Westlund 2012; Sasseen, Olmstaed, and Mitchell 2013; Westlund 2011). The abundance of smartphones is giving rise to new cross-media consumers, who access content through a combination of various devices and sources (Sasseen, Olmstaed, and Mitchell 2013). Markedly, consumption of news on smartphones does not only take place in mobile instances of everyday life. Rather, they are used for news consumption in non-mobile situations, such as when sitting on the couch at home (Dimmick, Feaster, and Hoplamanzian 2010; Dimmick et al. 2011). Overall, these observations show that smartphones have become necessary in news consumption providing a fruitful research context for this study.

In order to understand how the smartphone has gained this status I study historical developments of mainstream news in the United States. In particular, I focus on discerning shifts in news consumption and production. While I do not limit myself to one particular news domain, I focus on national news that is of greater interest to the broader American population.

Research Process: Consumer Perspective

As stories of the past, narratives are stories that grant the opportunity to better understand humans and the world they live in (McAdams 1993; Riessman 1993). Therefore, narrative analysis can be understood as "opening a window" (Cortazzi 1993, p. 2) on the culture and practices of a given group of people. As such, narratives have been established as an asset in shedding light on consumer experiences (e.g., Brown and Patterson 2010; Megehee and Woodside 2010; Shankar, Elliott, and Goulding 2001). Narrative analysis elicits an in-depth

57

understanding from the consumer's own viewpoint rather than relying on the description of an independent party. In addition, the analysis allows for an understanding of each consumer's individual circumstances and associated limitations. Overall, narrative analysis is suited to study the perceptions of consumers related to how the smartphone moves from not being regarded as a necessity in news consumption to being perceived as such over time.

I collected texts in three different ways from consumers in the Southwest United States. First, 37 open-ended, in-depth consumer interviews were conducted with help of graduate consumer behavior students. After being trained, they interviewed nonstudent adults (between 22 and 61 with an average age of 41) from their social networks about products of their choice they claimed not to be able to live without. Second, additional texts were generated from 130 undergraduate and graduate students (between age 21 and 61, average of 25) asked to write about a product that had grown to be a necessity in their lives. Third, 36 (between age 21 and 42, average of 22) undergraduate students who described their smartphone as a necessity for their news consumption were asked to write essays recounting how their smartphone news consumption evolved over time. Overall, the texts consisting of transcribed interviews and essays added up to over 700 single-spaced pages and were used for analysis, as commonly established types of text in consumer research (Arnold and Fischer 1994).

To elicit "free-form consumer-driven text" (Stern, Thompson, and Arnould 1998, p. 197) and for them to express their opinions, feelings, and experiences, each interview began with grand-tour questions about the participants' experiences with products. Interviewers used follow-up questions and probes in order to assist the participants in building a rich and complete story (Rubin and Rubin 2005). Similarly, each participant writing an essay was encouraged to carefully select a product that he or she had come to see as a necessity over time and to detail

58

such transformation in their writing. They were asked to offer comprehensive and thorough descriptions utilizing an inward-looking and creative process.

The research uses a hermeneutic approach (Arnold and Fischer 1994; Thompson 1997), where the researchers engage in a continuous back and forth between individual texts and the evolving understanding of the complete data set. As a result, an interpretation of meanings emerges. This comprehension is first developed, challenged, and modified until a dependable framework is developed. Hence, each individual narrative is first considered as a separate instance with its own pertinent meanings. As the analysis proceeds each instance is juxtaposed with the complete set of texts permitting commonalities in the data set to emerge. Cultural meanings can then be derived from these commonalities. Therefore, every consumer story is not only an individual subject's account. It is considered to be impacted by shared cultural beliefs and meanings.

To ascertain trustworthiness or credibility of the interpretation (Lincoln and Guba 1985; Wallendorf and Belk 1989), triangulation across several sources was used (e.g., multiple participants). Additionally, debriefing by peers (i.e., peers examined transcripts, final report, general methodology, and gave feedback) and member checks (i.e., data, analytic categories, interpretations, conclusions tested with informants) were conducted. Confirmability was secured by audio recording and transcribing the interviews and securing duplicates of the essays, which offered a check on what happened and what was discussed. Building rapport and trust and securing the participants' identities (names were changed) underscored integrity. Even though necessitation resulted from the entire data set, I present the most prominent macro narrative of necessitation observed here. In the following chapter I focus on a smaller subset of consumers meant to be representative of the findings across the entire set of texts. Specifically, I illustrate

the transformation with excerpts from consumers who have come to perceive their smartphone as a necessity in news consumption over time.

Research Process: Entanglement Perspective

To address the methodological and theory-building challenges in this research I follow the guidance of Giesler and Thompson (2016). With their interpretive toolkit for theorizing change from qualitative data Giesler and Thompson (2016) propose four concurrent analytical workbench modes to address the different challenges: data collection, analytical bracketing, theoretical focusing, and consumer enrollment (Figure 1). Since this research set out to move beyond thing-focused and human-focused approaches in understanding necessitation, I sought sources to help us explore both human and thing elements. Having established that the smartphone was a necessity, understanding its role in news consumption served as the starting point in data collection.

Figure 1. Research Process Based on Giesler and Thompson (2016)
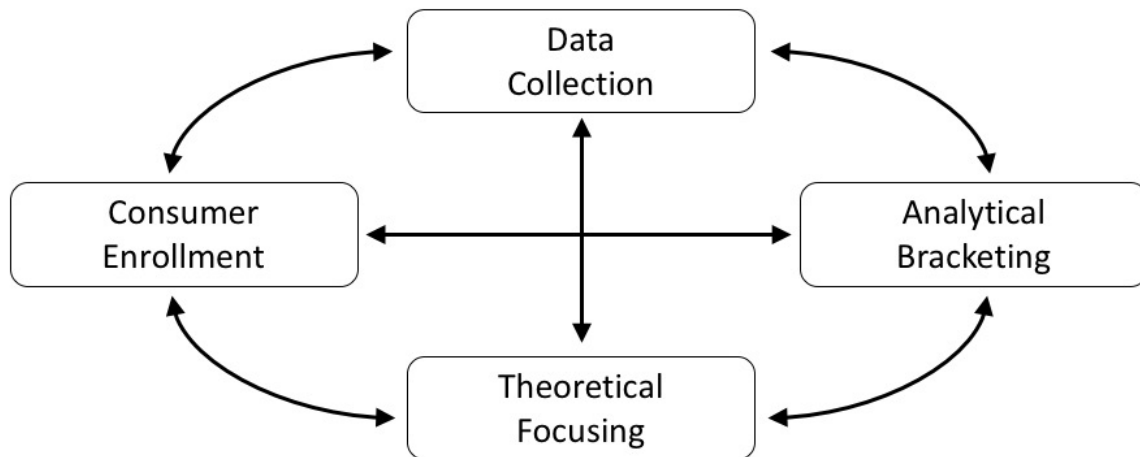
Data Collection

Theorizing change such as necessitation requires the researcher to identify relations among events over time. Giesler and Thompson (2016, p. 499) define an event as "an occurrence

that has some kind of reverberations in a network of sociocultural relationships" (ranging from a few hours, days, months, to years). Events vary in scale and their significance to different actors, but event length is not as important as identifying movements between events. To this end, data collection focused on identifying sources covering precipitating and secondary events in news consumption. Precipitating events are macro-scale events that are collectively shared (e.g., the rise of Apple's iPhone), while secondary events are their contingent consequences or reactions to them (e.g., changes in consumer habits; Giesler and Thompson 2016). Given the process-based nature of necessitation I sought to obtain a sufficiently comprehensive data set to underpin the emerging interpretation.

To first gain deep insights about news consumption on the smartphone I initially turned to four types of sources (see Table 1). First, I studied academic articles in the communications field pertaining to smartphone news consumption in the journals *Digital Journalism, Information*, *Communication & Society*, *Journalism*, *Journalism Practice*, *Journalism Studies*, *Mobile Media & Communication*, and *New Media & Society*.

Second, I supplemented academic articles with newspaper and magazine articles. The regular press has consistently reflected on the challenges and opportunities the news media and journalism have faced. I searched articles pertaining to these topics in the databases of five newspapers (*USA Today*, *New York Times*, *Los Angeles Times*, *Washington Post*, and *Chicago Tribune*) and five magazines (*Time Magazine*, *The Nation*, *The New Yorker*, *The Atlantic*, and *Forbes Magazine*). Accounts in the regular press did not only provide journalists' perspectives but also extended to printed interviews with key figures in the news industry.

Third, there are various prolific institutes that have studied journalism and/or mobile and digital news consumption over many years. Some of these institutes include the *Nieman*

Journalism Lab at Harvard, the *American Press Institute*, the *Poynter Institute*, the *Reuters Institute for the Study of Journalism*, and the *Pew Research Center*. I studied the regular reports on the state of journalism and news consumption that many of them provide. For instance, Reuters has been producing the annual digital news report focusing on the changing environment around news since 2012. Over the years the report has grown to survey more than 50,000 people in 26 countries. Among others the comprehensive survey addresses sources of news, how audiences discover news online, trust in news, distinctions between hard and soft news, participation and online news, and willingness to pay for news content. The key data points are supplemented with essays from key players of the news industry to add depth and context to the findings from the survey. Additionally, the Pew Research Center provides annual reports with its Project for Excellence in Journalism (since 1998) and its associated Internet and American Life Project (since 2000). The comprehensive and independent annual report on the State of the News Media highlights changes in news consumption from year to year for different news media.

Fourth, I interviewed five industry experts working in news organizations including a Director of Product at a newspaper legacy organization, a co-founder of a news media startup, a Chief Product Officer at a web-only news organization, a Project Manager at a news institute, and an Editor and Product Manager at a digital news company. The interviews ranged in length from one hour to two and a half hours. I presented the topic broadly as an interest in the role of the smartphone in news consumption.

After collecting and analyzing (see Analytical Bracketing below) these four initial sources of data it became apparent that I needed to expand the selection of data sources further to be able to study a longer time period of news consumption (i.e., older events). For instance, learning that legacy or traditional news organizations were experiencing challenges in their

business models as the smartphone was gaining more traction in news consumption, I needed to

seek data on the history of such organizations to be able to arrive at a more holistic

understanding of necessitation in news consumption.

Thus, continuous data collection focused on identifying additional historical and archival

materials. Table 1 offers an overview of all the types of data sources used in this research.

Table 1. Types of Data Sources

Sources/Types (Time Period)	Purpose of Usage
Historical and archival materials	• Understanding role of the smartphone in news consumption
• History books and chronicles (accounts of historical events) on news consumption in general (United States and United Kingdom, 1923-2019)	
• History books and chronicles on different media used in news consumption, including newspaper, radio, television, smartphone (United States and United Kingdom, 1947-2019)	• Understanding changes in news consumption over time that led to necessitation of smartphone
• Historiographies (scholarly research on history, English):	
o *Digital Journalism (2013-2016)*	
o *Information, Communication & Society (2011-2016)*	
o *Journalism (2008-2015)*	
o *Journalism Practice (2010-2016)*	
o *Journalism Studies (2011-2015)*	
o *Mobile Media & Communication (2013-2016)*	
o *New Media & Society (2011-2015)*	
• Reports by journalistic/news institutes (online, United States, if not noted otherwise):	
o *Nieman Journalism Lab at Harvard (2010-2016)*	
o *American Press Institute (2014-2016)*	
o *Poynter Institute (2011)*	
o *Reuters Institute for the Study of Journalism (online, United Kingdom, 2012-2016)*	
o *Pew Research Center (2004-2018)*	
• Internal reports of news organizations, leaked or freely publicly available (online, United States, 2017-2020)	
• Magazine articles (online, United States):	
o *Time Magazine (1940-2018)*	
o *The Nation (1980-2018)*	
o *The New Yorker (1950-2018)*	
o *The Atlantic (1940-2020)*	
o *Forbes Magazine (1980-2018)*	
• Newspaper articles (online, United States):	
o *USA Today (2018)*	
o *New York Times (1950-2018)*	
o *Los Angeles Times (1985-2018)*	
o *Washington Post (1950-2021)*	
o *Chicago Tribune (1950-2018)*	
• Interviews and keynotes of important figures (e.g., CEOs of news organizations) available on YouTube (online, United States, 2011-2016)	
• News organization websites (including policies and guidelines, United States):	
o *Buzzfeed (2006-2018)*	
o *CNN (1995-2018)*	
o *Fox News (1995-2018)*	
o *MSNBC (1996-2018)*	
o *Vice (2000-2018)*	
o *Vox Media (2011-2018)*	
• Government websites: Federal Communications Commission, FCC, (United States, 2016)	
• Press releases/statements (online, United States, 1980-2017)	
Interviews (in-depth, semistructured)	• Understanding role of the smartphone in news consumption
• Five expert interviews (ranging between 1 and 2.5 hours)	
• *Expert 1*: Director of Product at newspaper legacy organization	
• *Expert 2*: Co-founder of news media startup	• Suggestions and feedback on analysis
• *Expert 3*: Chief Product Officer at a web-only news organization	
• *Expert 4*: Project Manager at news institute	
• *Expert 5*: Editor and Product Manager at digital news company	

Historical research requires continuous back and forth among data sources and literature during the research process as well as juxtaposition and contrasting of varying sources (Karababa and Ger 2011; Schouten, Martin, Blakaj, and Botez 2016; Witkowski and Jones 2006). I critically assessed and contrasted the materials on the history of news consumption in the United States considering the variation in theoretical and scholarly perspectives as well as contextual disparities. In historical research I am limited by the accessibility and availability of data sources and thus considered the variation of chronological accessibility for different events (Tosh 2006). To achieve trustworthiness, I relied on diverse data sources. I sought sources to help us identify different human and thing elements and events in news consumption over time that contributed to the necessitation of the smartphone. In addition to searching for older newspaper and magazine articles and older reports by news institutes I added the following sources.

First, I examined history books, chronicles (accounts of historical events), and historiographies (scholarly research on history). These can be found about news consumption in general and about histories of different news media (e.g., newspaper, radio, television, smartphone).

Second, I examined internal reports of news organizations. Some of them were made available publicly by news organizations, others were leaked online on platforms like Reddit. For instance, these materials included internal strategy memos from Buzzfeed and the leaked New York Times Innovation Report from 2014, which is an internal document that presents a situational analysis of the news organization and outlines proposals and directions for the future. The form and content of such reports themselves were reflective of changes that occurred in news consumption over the years.

Third, YouTube was a vital source for interviews and keynotes of key figures in the news industry. For example, there over 100 videos featuring Buzzfeed CEO Jonah Peretti dating back to 2010 and at least 50 videos featuring former New York Times CEO Mark Thomson since he assumed his role in 2012. These videos are valuable sources because they reflect industry developments at a particular point in time from both a news consumption and production perspective, but also because they represent accounts of oral histories of these key figures about the changes that had occurred in the news industry.

Moreover, I examined the websites for different news organizations (including their policies and guidelines) and studied press releases and statements pertaining to events identified in the sources above. Data collection ended when additional data was unlikely to change my interpretations. To manage the complexity of the data and to understand product necessitation I turned to analytical bracketing (Giesler and Thompson 2016; Langley 1999).

Analytical Bracketing

Analytical bracketing is defined as "the act of translating empirical change into analytical change, or a sequence of events into a more systematic interplay of meaningful analytical categories, by grouping event data into 'bracketing units' – interpretive lenses through which the complexity in the data is meaningfully understood" (Giesler and Thompson 2016, p. 502). To identify these analytically useful brackets I turned to historical methods that follow transformations in both discursive and structural relations. In line with Karababa and Ger's (2011, p. 740) approach to historical research I utilized textual and discourse analysis to critically consider "the background of the author, the audience of the text, and the cultural context in which the text was produced." Specifically, a hermeneutic approach (Arnold and Fischer 1994;

66

Thompson 1997) was used to analyze the texts generated from the different sources. I continuously moved between individual texts and the formative understanding of the entire data set while an interpretation of meanings emerged. The interpretation was first developed, challenged, and altered until a consistent framework was reached. Therefore, each initially separately viewed case was contrasted with the entire set of texts throughout the analysis allowing to highlight commonalities and to arrive at *how* necessitation happens. For instance, it emerged from the data that the necessitation of the smartphone could not be isolated from the necessitation of other news media. Identifiable shifts in the necessity statuses of existing media occurred each time a new medium was introduced. For instance, the introduction of cable television challenged the necessity status of newspapers. However, with the changes it introduced (e.g., 24-hour news cycle) it also laid the foundation for news consumption on the world wide web and the smartphone, thus impacting their necessitation. Therefore, the predominant media during different time periods (i.e., newspaper, radio and television, world wide web, and smartphone) emerged as bracketing units in my analysis. To understand the shifts between those brackets and to lower the number of theoretical possibilities I turned to theoretical focusing tackling *why* change happens (Giesler and Thompson 2016).

Theoretical Focusing and Consumer Enrollment

Theoretical focusing is concerned with why change happens in data, allowing us to mobilize a theory that addresses product necessitation. Additionally, Giesler and Thompson's (2016) fourth workbench mode, consumer enrollment, seeks to understand the theoretically relevant roles of consumers in change-oriented research.

Mapping consumer enrollment styles against the theoretical focusing styles places the present study in the genre of *recursive transformation* (Giesler and Thompson 2016). In this genre history follows a continuous path organized by a structural logic. In this conceptualization of history change (i.e., necessitation) is a process of adaptive reactions to contextual demands and influences, which in turn stand for differences on these historical structures. These historical forces operate as a system of path dependencies. The temporal brackets (i.e., newspaper, radio and television, world wide web, and smartphone) that emerged from my analysis point to a transformative conceptualization of history. Additionally, in analyzing the role of the smartphone in news consumption it became apparent that its necessitation was closely tied to the de-necessitation of other media. The foundation for the smartphone becoming a necessity was laid before it was even invented. In other words, my findings reveal that the smartphone becoming a necessity over time was not surprising. Thus, adopting entanglement theory (Hodder 2012) for our understanding of product necessitation is congruent with the *transformative perspective* (Giesler and Thompson 2016). In entanglement theory, path dependency emphasizes that things are so interweaved with other things and with other human-thing dependences that daily practices are drawn toward specific pathways and that humans are pulled in certain ways until a level of entanglements is reached until it is difficult to turn back (i.e., necessity status).

Through consumer enrollment we can locate the consumer in the story when applying entanglement theory from archaeology to necessitation. The theory moves beyond human- and thing-focused approaches to give voice to both elements. Thus, consumers actively contribute to necessitation and are affected by the change they helped create. For instance, news consumption is connected to consumer habits and such habits evolve based on changes in the behavior of consumers but also based on the evolution of how news is delivered to them.

Finally, it is important to note that the four analytical workbench modes of process theorization were not exercised as stages in a progressive sequence. Rather, the research process was replete with multitasking constantly moving between these four modes and striving to underline the interpretive consistency in comparison to new insights arising in each mode. Thus, I engaged in all four workbench modes simultaneously throughout the entire research process. Next, the findings of the narrative analysis are presented to account for the consumer perspective.

CHAPTER IV

FINDINGS: ANALYSIS OF NECESSITATION NARRATIVES – A CONSUMER

PERSPECTIVE[2]

From the data analysis and interpretation emerges a macro narrative with five different

stages through which smartphones come to be perceived as necessities in news consumption by

consumers. The analysis and resulting macro narrative are based on inquiries about a finite but

broad set of products selected by the participants of this study (Braun, Zolfagharian, and Belk

2016), which included a subset of probes with a narrower focus on participants recounting their

smartphone news consumption experiences. Thus, further examination and corroboration are

needed in future research. As shown in Figure 1, the different stages can be seen as a sequence of

possible turning points in the necessitation of smartphones in news consumption. While these

stages emerged, in part or whole, in narratives to different products, they are exemplified below

using accounts focusing on smartphone news consumption. While a majority of narratives are

replete with rich and in-depth descriptions of most stages, a few thoroughly underscore all stages

of the perceived necessitation of smartphones. At each stage the remarks of at least one

participant are supplemented with comments and experiences of other consumers to show the

breadth and variability in the movement of smartphones through the stages.

---

[2] This chapter is adapted from Braun, Zolfagharian, and Belk (2016) to capture smartphone necessitation in
news consumption rather than product necessitation in general.

Figure 2. The Smartphone News Necessitation Macro Narrative
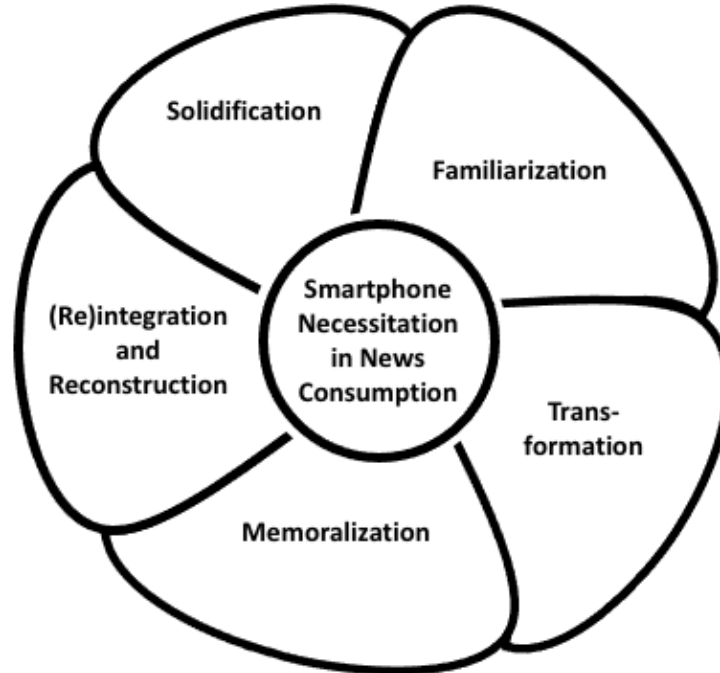
The necessitation starts with familiarization, for which smartphone acquisition is not a necessary pre-condition. Thereafter, a transformative event takes place as either contamination or redemption (McAdams and Bowman 2001; Pals 2006). Memorialization succeeds such transformative encounters and moves to (re)integration and reconstruction of the smartphone in news consumption. At that point the smartphone comes closer to being perceived as a necessity by consumers in the solidification stage.

Familiarization

Familiarization is the initial encounter of the smartphone in the consumer's news consumption. It is accompanied by a lower level of strangeness or novelty during this experience. According to the findings, consumers may become familiar with smartphone news consumption in three distinct ways: existential (the presence of the smartphone in a consumer's

news consumption experience), functional (the range of capabilities or modes of usage supported by the smartphone), or symbolic (the role the smartphone plays in a consumer's self-perception and identity negotiation).

Moreover, the stories of the participants show that a smartphone does not need to be utilized for news consumption by themselves in order for the consumers to become (more) familiar with it. One can simply become acquainted with it because members of one's social environment speak about, own, or use such mobile devices for news consumption. Thus, using a smartphone for news is not a necessary condition. This becomes clear in the case of Frank who had friends using smartphones for news before he did:

> *"It wasn't until high school when I got my first smartphone. When I finally*
> *got it, I was still relying on the local news and newspapers to supply me*
> *with my source of news information. I mostly used my phone for text*
> *messages and phone calls. I wasn't into social media even though it was*
> *very popular and common in my generation to stay on top of things. This*
> *lasted for a year until my junior year of high school."* (Frank)

Frank's familiarization can be described as merely existential because it initiates his familiarity through continuous exposure to smartphone news consumption that simply exists around him and is used by people he knows. Moreover, Frank's experience is exemplary of consumers' initial resistance to smartphone usage for news prior to necessitation even though people from his generation may see it as indispensable. Other consumers echo similar experiences. For instance, Ellen constantly observed both of her parents discussing news they were receiving on their phones when the "family was out and about" for years before she was even allowed to have a phone. Similarly, Richard recounts the experience of his grandmother

72

who "used to have her schedule where she used to sit down and watch a certain channel to watch her news" as she got continuously introduced to smartphone news consumption by her children and grandchildren.

Daniel, very conscious about the initial meaning of his mobile device, reiterates these sentiments:

"I received a smartphone on my tenth birthday much to my surprise. My

desire for one developed when my friends all began to receive one. This

phone came preloaded with a set of apps just like any other with a few

news apps on there as well. At the beginning my interest in the news was

almost nonexistent, and I received most of it from my parents and school,

so I did not take advantage of any of them at first." (Daniel)

What Daniel's narrative has in common with others' experiences is that he found out about his smartphones' news consumption possibilities without his direct or active involvement in it. The smartphone is utilized by friends and family members and makes a discreet first appearance in the consumer's environment, where it might remain unnoticed for a longer period of time before it is utilized for news consumption.

The smartphone may also enter the consumer's news consumption realm for a function it carries out. For instance, Joe's experience was shaped by the immediacy the smartphone provided in news consumption:

"I got the Yahoo Finance app and agreed to notifications, so that it would

alert me on important news in the world of finance. I would turn on

notifications for a certain IPO or initial public offering and when it had

major news for it or a big movement happened for that specific stock, I

could get notified giving me new updates." (Joe)

Instead of existential familiarization Joe highlights functional familiarization. This type of accustomization occurs through active news consumption engagement of the consumer with the smartphone. For Robert, familiarization began as he realized that there were times where he was not in front of a television to watch his favorite sports news program: "But the YouTube app gives me the option to watch the entire show or certain clips of my choosing wherever I am" (Robert). Similarly, Pam sought out her smartphone for its easy access to social media and came to realize its potential to consume news: "Aside from Facebook, Twitter has a section where you can see what is trending worldwide, or within your country. Sometimes I check it and find out about stuff I wouldn't have known if I had not checked the trending section" (Pam).

Lastly, the micro narratives show that consumers may also become acquainted with smartphone news consumption at a symbolic level. In other words, the smartphone may connect to the consumer's self-perception and the consumer may turn to it during identity negotiations (Kleine, Kleine, and Kernan 1993). This is evident in Heidi's story about using Facebook on her smartphone:

"I have never really been into politics. I actually have never even voted,

so I was very unsure as to where I stood on the spectrum. Was I a

Democrat or was I was I a Republican? […] It's a little scary to say but I

feel like Facebook knew me better than I knew myself! By knowing what I

click on, what articles I read, what I have posted, what I have liked,

Facebook gave me what it felt I would like. So, I noticed Facebook was

constantly giving me good stories about what Trump was doing,

74

constantly giving business articles, which it knew I loved, and just

constantly giving me articles that aligned with the Republican side. So, I

figured maybe I'm a Republican [...]. The more I looked into it, the more I

felt like a Republican." (Heidi)

Like others, Heidi tells the story of how she became more familiar and increased news consumption on the Facebook application, but there is a difference in how her smartphone moves into and through the familiarity stage. Her case is an example that it's possible that the higher awareness of the device primarily can be driven by its symbolic meaning (i.e., aligning yourself with a political party) rather than its functional value (e.g., receiving most up-to-date notifications) or mere existence. The desire to be a member of a given group or to enhance how we are being perceived by others is part of the symbolic realm of identity negotiation. Specifically, supporters of self-categorization and appraisal effects put forth that people are inclined to redefining themselves when they are being scrutinized by a group they want to be part of (e.g., Hogg 1996; Shrauger and Schoeneman 1979; Swann, Milton, and Polzer 2000). Consumers may conclude this may be the only way to achieve such goals (Kleine et al. 1993). Gabriela's story is similar to Heidi's:

"In my sophomore year of college, I lived in the dorms and was very close

with my roommate. We would always talk about what was happening

newsworthy. But she always knew information that I didn't even know of

or would hear about a week later. The reason she knew a lot more news

than I did was because she was constantly on her iPhone checking social

media" (Gabriela).

Consumers may not use their phones for social media because they do not see its function as necessary. Yet, they grow more familiar with it because of the ongoing exposure and eventually succumb to peer pressure and start utilizing it. In like manner, Mark chose to consume news more frequently during his commute to work in order "to participate in watercooler talks" with his co-workers.

Heidi, Gabriela, and Mark became more familiar with smartphone news consumption because symbolically it helped them within their social environments. Thus, the phone was chosen for getting the news for what it meant and not for what it was able to do. In sum, consumers familiarize themselves with smartphone news on existential, functional, or symbolic levels, and the familiarization stage results in an understanding of the product over time. It provides the foundation for the next stages in necessitation. It is important to note that none of the narratives descried the smartphone as a necessity in news consumption at this stage.

Transformation

Transformation is a pivotal stage in smartphone necessitation in news consumption. It is important in the change of the necessitation status of the smartphone in consumer narratives. While not yet perceived as a necessity it proceeds toward being regarded as such. The understanding of the phone as a nonnecessity is transformed. The adjustment is prompted by a critical event that alters how a consumer sees and connects with the smartphone in news consumption. Even though the smartphone or the lack of it is a crucial part in the narration of such events, access to the smartphone or the lack thereof might or might not be associated with the trigger event. The transformative experience urges consumers to attribute more importance to and more strongly engage with their mobile device for getting news.

Transformation can occur in two different ways. First, change can begin through contamination. This can be explained as a transition in life storytelling from an emotionally positive or good experience to an emotionally negative or bad scene (McAdams and Bowman 2001). Second, change can occur via redemption, a transition in life storytelling from an emotionally negative or bad experience to an emotionally positive or good experience (McAdams and Bowman 2001; Pals 2006). There are numerous examples of transformative events in the data, which underline the importance of such experiences for necessitation.

Karen's narrative exhibits contaminating events. She describes how a government shutdown changed her relationship with her smartphone:

"It personally affected me because I am a federally funded employee through my county. Besides that, I handle a federal grant that could have been terminated. Scary as it sounds, my job would have been jeopardized. It was important for me to receive these alerts from the live news updates to see what the outcome would be. My smartphone became my best friend since using my desktop at work for news was never acceptable." (Karen)

Her story shows that consumers often do not fully understand and appreciate the extent of their reliance on their phone until a transformative event lays out the depth and nature of that dependence.

Such a change can also be prompted by losing access to the smartphone or news on the smartphone. The routine of certain activities is interrupted, which leads to unpleasant reactions that continuously occupy the consumer mind. This is evident in the narrative of Paul who describes his experience with Hurricane Maria that "almost wiped off the entire state." His

reliance on the smartphone for news was underlined because damaged cellphone towers were out of service for an extended period disconnecting him from important sources of information.

Ally provided a story related to her personal well-being and how it was affected by continuous news consumption through social media on her smartphone:

> *"I remember a time back in 2017 when a lot of natural disasters were happening. I was really afraid and had to close all my social media because I just did not like looking at this kind of news. It made me scared […] I felt a little better by not looking at posts making it look like we are all about to die for some time, but it didn't last very long. I wanted to know what was happening."* (Ally)

Ally's narrative exemplifies a contamination event. The positive scene of good welfare turned to the negative experience of fear. Life events such as hers led to a different perception concerning smartphone news consumption, which had been introduced into the consumers' lives before. It was not news consumption on the smartphone that led to the contamination event, but rather the nature of the news itself. The transformative event does not necessarily require the presence or absence of smartphone news consumption. To put it another way, a cause–effect relationship with the event is possible but not needed. Once transformation occurs, the consumer may revisit the meaning of their smartphone in news consumption, which can alter its necessitation status. Where the presence or absence of the smartphone causes the crucial event, the transformative experience often strengthens, easing the move toward product necessitation.

Similarly, Connie's experience constitutes a contamination. Her smartphone came to take a more important role during a difficult move to a boarding school:

"I remember every morning, before going to school, watching the news on TV while brushing my teeth, listening to them while I was getting ready, and so on. But that stopped when my parents made me move to a boarding school and we weren't allowed to have televisions in our dorm rooms. I needed to look for other sources of information." (Connie)

Connie's narrative is characterized by the negative feelings associated with the move (i.e., did not have a choice), which makes up the contamination aspect of the experience. Again, the smartphone did not cause the negative experience. Rather, the incident altered the necessitation status of the smartphone for her. The network of product, people, and events resulted in bringing about the change in the perceived status of the smartphone.

Connie's narrative further exemplifies that using a smartphone for news consumption is not a necessary precondition for product necessitation to begin. As shown above, this can take place before or during familiarization. Starting to use the smartphone for news takes place during transformation and makes it the latest possible stage in necessitation for a product to be attained.

These narratives reveal contamination experiences that cause differences in how consumers view the smartphone. New regard for, or a changed perspective on, the smartphone as a source of news consumption can be brought about by contamination experiences of longing, suffering, or pain due to death, illness, injury, abandonment, poverty, or economic downturn (Pals 2006).

The second transformative path is the reverse sequence. Redemption is a transition in life storytelling from an emotionally bad experience to an emotionally positive or good experience (McAdams and Bowman 2001). Daniel's narrative constitutes a good example:

"At first, my interest in the news was almost nonexistent, and I received

most of it from my parents and school. This drastically changed when I

began to get push notifications from CNN and the New York Times. I

specifically remember when former President Barack Obama announced

the end of the Iraq war. I had a general idea of what it meant, but I read

the article regardless due to my piqued interest. It was at this point I

realized ending a war is more complex than I initially thought, and it takes

a developed plan with lots of time to achieve." (Daniel)

Daniel's story shows a redemption sequence, going from not being interested in the news at first to an increased interest in current events. Ending a war is a move toward a more positive scene. Likewise, Daniel's learning of the involved complexities shows his move toward realizing his appreciation for news. Unlike prior examples, the product here is closely tied to the event that causes the transformation.

Steve describes changes in his social environment resulting in a transformation of how he views the smartphone. Specifically, he attributes a better relationship with his father to his recommendation to use the Yahoo News app: "I now converse with him during or after a meal about articles we have read about, and this usually leads to a great conversation between us."

Other consumers remember experiences that saved them from trouble. For instance, Stacy recalls a situation where she was able to avoid traffic:

"There was a traffic jam that lasted over four hours, I thank God for my

smartphone because without it I probably would have gotten stuck in that

situation. I was notified about the traffic jam through my Facebook app. I

80

work for an in-store and online company that encourages us to use our

smartphones and stay on top of the news." (Stacy)

As can be seen in the stories of Daniel, Steve, and Stacy, a redemption sequence concludes with a positive scene, such as learning about a historic milestone, improved relationships with a loved one, or avoiding a bad situation. As such, redemption is replete with positive sentiments such as "great conversation" or "I thank God."

In sum, different events can initiate transformation in smartphone necessitation. This transition can either happen through a contamination or redemption sequence. The former is a movement from a negative to a positive experience, while the latter stands for a transition in the reverse. Guided by this event, consumers fundamentally alter their perceptions regarding the product.

Memorialization

After the crucial event in the transformation stage consumers undertake or produce something that will assist them in remembering their transformational experiences. This stage is referred to as memorialization. It is relatively shorter because it is highly contingent and builds upon the transformation stage and accentuates its outcome. The change that takes place here concludes with either a negative or a positive scene, which is noted as an important development in forming the continuous necessitation.

Given the outcome of the transformation stage the nature of the memorialization can be either punitive or celebratory. The former is the case when transformation occurs through a contamination sequence. The latter is linked to a redemption sequence. The micro narratives identify various ways in which products move through memorialization. Because Ally's

narrative about trying to disconnect from news due to a series of negative events revolves around a contamination sequence, the memorialization is punitive:

> *"After not being able to be without checking news on my phone, I think I really like to know what the world is going through, what kind of protests are happening where, what kind of rights are being given or taken away, what is happening outside the world's atmosphere, what new planets are being discovered, how a black hole picture was captured, and so on."*
>
> (Ally)

Ally mulls over her inability to avoid checking the news regardless of the negative feelings of fear it causes her, and she comes to conclude that she values being informed more than being negatively affected by news stories. Thus, memorialization can be seen as a ceremony of passage: a custom that underlines the end of a developmental stage, highlights a recent transformation, or designates entry into a new developmental stage (Hatcher 1994; Van Gennep 1908). This concludes the end of the pre-transformation evaluation of the smartphone and its role in news consumption by the consumer and raises it to a new level.

Similarly, Karen who follows important news updates that could affect her job, feels confirmed in her decision to use her smartphone for continuous news consumption: "It is nerve wrecking, but I rather be informed than not" (Karen).

Additionally, Paul digests his experience with Hurricane Maria by acknowledging the role of his smartphone as a double-edged sword: "It was very hard on me because of the fact of not knowing if your family was alive or dead. Phones are a big part of our everyday lives. However, we cannot rely on them."

Other stories show that consumers memorialize the changes from a redemption sequence in a celebratory manner. Aaron recounts his experience of receiving his smartphone back from the repair shop:

> *"I was so excited when I got my phone back. I caught myself checking the trending section on Twitter first to see what was happening out there. In that moment I realized that what I was missing the most during the hours without my phone wasn't the pictures my friends would post or anything else on my phone. I just wanted to be informed. I know appreciate the ability to check news on Twitter even more."* (Aaron)

The celebratory nature of the transformation is apparent in Aaron's story. Consumers who experience positive changes communicate their emotions in terms that reflect their positive feelings. They express satisfaction and enthusiasm about their future engagement with the product.

Pam describes how she acknowledges and memorializes her newly developed perception of the smartphone as a news source because of its Twitter application. Reflecting on the #metoo movement she states that it "was a big topic because people used that social media to raise their voice and tell the world what they went through." Understanding its capability for receiving and spreading information marks the commencement of a more intense and serious view of the smartphone as a news consumption medium.

In sum, memorialization builds on the transformation stage as the consumer recounts and concludes his/her respective experiences in the transformation stage. This can happen in either a punitive or celebratory way. In addition to showing how consumers absorb the past, these narratives give a preview of the ongoing necessitation.

(Re)integration and Reconstruction

The memorialization stage can be seen as a bridge to (re)integration and reconstruction, the next stage in necessitation. The consumer creates a new view toward the smartphone in news consumption as a result of transformative events. Regardless of whether transformation followed redemption or contamination, the new view is expressed in positive terms. The smartphone takes a more palpable role in the life of the consumer. The narratives provide rich descriptions of (re)integration and reconstruction, heightening its role in necessitation. Seeking to satisfy his increased interest in news and current events through his smartphone, Daniel starts to make changes:

> *"I subscribed to news-oriented YouTube channels, specific subreddits, and*
>
> *consistently read the New York Times. It was something that was*
>
> *becoming a daily routine for me. When I woke up, I would read a daily*
>
> *brief, and in school if I had time, I would surf through different subreddits.*
>
> *When I got home, I would make food and then watch the different YouTube*
>
> *videos of that day."* (Daniel)

At this point, consumers move past a particular attribute and change their outlook toward the smartphone. They now exhibit a greater involvement with it in news consumption, giving them the chance to value its increased role in their lives. After memorialization, consumers better understand the functions and meanings of the smartphone. For instance, with his usage of more apps (e.g., YouTube, Reddit), the smartphone plays a more essential role in Daniel's life.

This is also true of Connie who appreciates that she can "conveniently access news with the press of a button," especially when you do not have access to a television at all or at any

given time: "Smartphones allow us to stay updated at any time of the day regardless of where we are" (Connie).

Frank describes his new appreciation for the different types of news he could access once he expanded his smartphone use:

> *"You could find news on just about anything. There were news outlets for*
> *celebrities, wildlife animals, the weather, your own pets and many more!*
> *There are pages on social media that allow you to share news about your*
> *missing dogs. Like this, millions of eyes are able to look out for your pet*
> *and bring it home if found. Back in the day if you were ever caught in a*
> *situation like this, your only option would be to print out flyers and hope*
> *that the person who finds your dog sees you and notifies you."* (Frank)

Frank's story is exemplary of how perceptions of the product can change over time. While consumers may first be opposed to using a smartphone for news, a (re)integration of the product into their lives occurs here. They eventually may spend more time interacting with the device.

In sum, in the (re)integration and reconstruction stage the smartphone connects to other dominant thoughts or needs in the consumer mind. With these increased connections the smartphone reaches a new definition in the way news is consumed. The new definition and set of connections are characterized by the transformation that consumers experience. Consumers are more actively engaged with the devices and are clearly aware of the roles they play in their news consumption.

Solidification

The changed role of the smartphone in the consumer experiences with news is cemented in the solidification stage. This is the point where the consumer decisively sees the smartphone as a necessity, a product he or she cannot live without. This point is emphasized with participants' narratives. Karen remembers:

"I do admit that now my smartphone can consume a good amount of time during my day when I am home. There are so many articles to read from and many videos to see that it is impossible to disregard them. For instance, when the president had the State of the Union Address at the House Chamber a couple of months ago, I wanted to be able to hear the speech of course, but also be able to observe all expressions, reactions, behavior from everyone invited. During that time, I did not answer my phone, nor did I reply to any text messages. I strictly had my phone set in the center of my table and watch the address." (Karen)

A product that has achieved necessity status is one that occupies a permanent presence mentally and/or physically such as is the case with Karen's smartphone, whose other functions become less important when she is following an important news event.

A feeling of indispensability can also be seen in other consumer stories. Scott concludes that "in the end, the smartphone gives me access at all times. It allows me to be connected to any news that may come up at any time. I am always in the know. I am always aware of what news stories are trending." Likewise, Steve acknowledges that the "over usage of [his] phone increased news consumption." Underlining the ubiquitous presence of news on the smartphone

Ally feels "a little ashamed" that she has found out about major events through memes rather than traditional news outlets.

In yet another example, Anna is inseparable from her smartphone:

"You can practically say I am glued to my smartphone. As a full-time student and part-time employee, with two jobs my schedule is so crazy. I am constantly in and out of my house and hardly have time to sit down and learn about the current world news. Due to the fact that I am always on the run, I rely on my phone for my everyday news. Whether it is world news or family news, I gather it all through my iPhone. I am a busy girl and am constantly on the run trying to do homework, take exams, and go to my daily job." (Anna)

The latter case shows an increased level of reliance. The smartphone has become a natural part of Anna's daily routine.

In sum, at this point of necessitation the smartphone comes to be perceived as a necessity in news consumption. Consumers now see it as an indispensable requirement to stay up to date. Put differently, they feel they can no longer live without it. The solidification stage does not necessarily conclude necessitation as more transformative events and subsequent stages can come after it. These consistently strengthen the new view of the smartphone. Furthermore, the smartphone does not necessarily pass every stage for each consumer in the process of becoming a necessity, and in some instances certain stages (e.g., transformation, memorialization) occur several times before the next stage begins. Therefore, only one macro narrative of necessitation is presented here (Bruner 1991; Riessman 1993; Webster and Mertova 2007).

At the conclusion of this analysis, it is crucial to recognize an important issue regarding the consistency of the stories as told. The links I have made between participants and their necessities are tidy ones. Working through the data the idea was to uncover uniting themes most suited to sort an extensive and varying portfolio of smartphone necessitation, not to explicitly consider each uncovered instance. Evidence of incongruity and instability can be found in the data.

In addition, the findings presented in this chapter are based upon interview and essay data and show perception-based necessitation of the smartphone in news consumption. In order to understand how the smartphone has become near-universally seen as a necessity in this domain, we need to move beyond perceptions. A historical approach combined with the theoretical lens of entanglement (Hodder 2012) allows us to account for a more complete set of human and thing elements and their dependences that lead to near-collectively regarded necessitation. The findings from an entanglement perspective are presented in the next chapter.

CHAPTER V

FINDINGS: NECESSITATION THROUGH GROWING DEPENDENCES – AN

ENTANGLEMENT PERSECTIVE

The below findings illustrate the historical transformation of news consumption

entanglements. In particular, I identify a growing number of both human and thing elements and

their associated dependences directing humans down particular pathways from which it is

difficult to escape. Necessity status is shown to be reached once a certain level of entanglements

is achieved and it becomes very challenging and expensive to turn back and disentangle. Overall,

four broad time periods have emerged from the analysis based on the predominant news medium

during that time with sizeable shifts in news consumption entanglements between them:

newspapers, radio and television, world wide web, and smartphones. Each of the four sections

below begins with a brief history of the prevalent medium to provide a context for better

understanding shifts in entanglements and is followed by an assessment of the news consumption

elements and their associated dependences. The purpose is to identify not a complete but a

comprehensive set of elements and dependences to trace the historical path dependency and

realization of affordances, which show why the smartphone becoming a necessity was not

surprising (i.e., path dependency) and how an increased realization of its affordances cemented

its status as a necessity.

The Golden Age of Newspapers

The Ancient Romans are commonly recognized for publishing the first newspaper named Acta Diurna (daily doings) in 59 BCE. Information scrolls were hung daily at central locations throughout Rome for all those who were able to read. In China, first traces of the newspaper can be found during the Tang dynasty (618 A.D. to 907 A.D.). The bao was a court report that was compiled to keep government officials informed of significant events. Another predecessor of the modern newspaper, the avisi (gazettes), was published in Venice, Italy, in 1566 and specialized in politics and military conflicts. The disadvantage that all of the above newspaper pioneers shared was that they were written by hand, which limited their circulation (Pettegree 2014; Wallace 2005).

This limitation in magnitude and reach of newspapers changed with Gutenberg's invention of the printing press in 1440. By lowering the costs of printed materials, the invention made them available to the mass market, thus laying the foundation of the modern-day newspaper. However, it would still take several centuries for the newspaper to grow into the main means of consuming the news. News continued to spread predominantly through people gossiping, singing songs, and spreading rumors. For instance, in the early information society of pre-revolutionary Paris people gathered under the *Tree of Cracow* to talk and create stories about French elites (Hamilton and Tworek 2016).

With a strong dominance of word of mouth, the first printed newspaper for public consumption was not published until 1609 in Germany. The first English language paper, the *Weekly Newes*, was first released in 1622 and the first daily publication, the *Daily Courant*, did not make its debut until 1702 (Pettegree 2014; Shaaber 1932). In the American colonies, the earliest regularly published newspaper was *Publick Occurrences, Both Foreign and Domestick* in

Boston in 1690 but quickly ceded publication due to political challenges. Overall, in the late 17th and early 18th centuries, public bars, churches, and public criers were distributing news they were gathering from other colonies or European papers through handwritten wall posts or verbally. Only in 1704 did *The Boston News-Letter* emerge as a daily newspaper utilizing the printing press. While it allowed access to a broader readership, circulation numbers remained low. Printing was still slow and labor intensive, which did not make papers affordable enough for the masses. Instead, newspapers were primarily the organs of political factions throughout the early 1800s, with most notably Alexander Hamilton founding the *New York Post*. These political papers mostly carried opinions of politicians allowing them to communicate with constituents and voters (Douglas 1999; Ford and Emery 1954; Wallace 2005).

With continuous improvement in printing technology newspapers started expanding their offerings in the 1830s. Content went beyond political topics to include news of current events. Writers were being hired for news gathering around cities allowing newspapers in major cities and large towns to flourish in the era leading up to the Civil War. With literacy increasing, two innovations made newspapers accessible to a wider readership including immigrants and working people. First, *The Sun* became the first paper to be offered for a penny after employing the new steam-driven two-cylinder press allowing for more papers to be printed in the same timeframe, making it the cheapest paper available. *The Sun* became the first representative of what came to be known as the *penny press* and had its motto printed on every paper: "The object of this paper is to lay before the public, at a price within the means of everyone, all the news of the day, and at the same time offer an advantageous medium for advertisements" (Starr 2004, p. 131). Second, the telegraph began to be widely used in the mid-1840s making it easier to communicate across vast distances. To reduce the cost of receiving current news briefs from

telegraph companies in different cities major New York newspapers formed the Associated Press (AP) in 1846. Its success enabled the formation of wire services (or news agencies) in major American cities. Given these developments, for the first time, many Americans developed the routine of reading the paper every morning (Douglas 1999; Lee 1923; Pettegree 2014).

While the content had grown to be beyond-political, major political topics continued to be focal points of papers. For instance, during his presidential campaign in 1860 Abraham Lincoln made sure that his Cooper Union address made its way into the major New York City newspapers. During the Civil War writers de facto became war correspondents following troops and newspapers provided a public service by releasing casualty lists identifying killed and wounded soldiers (Pettegree 2014; Wallace 2005).

Following the Civil War further technological improvements continued advancing newspaper publication. Distributing telegraph cables through the oceans connected the continents and allowed news to travel at a high speed. In addition, the invention of the linotype machine by German immigrant Ottmar Mergenthaler in the late 19th century expedited the printing process. Instead of having to set type for one character at a time, printers were now able to set complete lines of type. The linotype allowed larger amounts of news to be included in papers, so that, for instance, popular topics such as sports started to be added. It also allowed a circulation war to emerge. The *New York World* led by Joseph Pulitzer and *New York Journal* led by William Hearst set out to appeal to a broader audience with stories focused on crime, violence, feelings, and sex. This new journalistic approach heavily relied on *sensationalism* (Fang 1997). These papers went on to include comics (e.g., Yellow Kid) in order to appeal to non-English speaking immigrants (Yaszek 1994). Stunt journalism, where journalists take risks to get a story, was dominated by women reporters and helped to increase readership among

women (Lutes 2002). The rivalry between Pulitzer and Hearst went on to be known as *Yellow Journalism* and helped newspapers to become a fundamental part of everyday American life. Even when not consumed individually newspapers were posted or distributed daily in cafes, barbershops, and other places where people waited (Hamilton and Tworek 2016; Wallace 2005).

By the 1920s Hearst was the owner of the largest American media-holding company with over 30 daily and Sunday papers. In the first half of the 20th century "print media became one of the most profitable businesses in the developed world" (Picard 2003, p. 113) leading to this period being described as the golden age of newspapers (Hamilton and Tworek 2016; Picard 2003).

Elements and Dependences in Newspaper News Consumption

The purpose of the above brief historic review of the newspaper is not to only provide an overview of how it grew to be the dominant medium for news distribution for a certain period of time. It primarily serves to show the growing number of elements involved in news consumption and with that an exponentially rising number of dependences that contributed to the necessitation of the newspaper. In the next step, a snapshot of these complex entanglements derived from analyzing historic and archival sources is provided identifying elements and dependences in news consumption during the golden age of newspapers. I review those entanglements from the perspective of how a news story travels from occurrence to being read about by someone who purchases the newspaper. Given the advanced definition of entanglement (Hodder 2016, 2018) the purpose here and equally in the sections that follow is not to identify HT, TH, HH, or TT relations because HH relations rarely exist without things and humans are usually involved in TT relations. Rather, the goal is to describe the overall emerging complexity of dependences and to

understand how humans have become so invested in entanglements surrounding the newspaper that it became a necessity.

In the early days, news traveled between individuals, whether it was sending a message via dove or carrier or gathering in the marketplace to listen to the town crier, the number of elements involved in news consumption was limited. By the time we arrived in the golden age of newspapers in the first half of the 20th century the number of elements and thus the complexity of entanglements had grown (Douglas 1999). Cultural historians and media scholars alike look at newspapers during that period as necessities at the center of consuming news and as the watchdogs for the public largely controlling the flow of information (Hughes 1968; Lee 1923). The impact of newspapers during this golden age can be exemplified by the coverage of United States senator Joseph McCarthy in the early 1950s. McCarthy became infamous for falsely claiming that 200 Communists had been working at the State Department. Washington Post reporter Murrey Marder who was tasked with full-time coverage of the senator investigated and debunked his accusations against Army personnel posted at Fort Monmouth in New Jersey. Political historians determined that interest from other news media such as television was only generated as a result of the newspaper coverage (Caute 1978). Remembering his McCarthy investigation in an interview (Lewis 2013), Marder recalled how he responded to early resistance to his reporting underlining the watchdog function of the newspaper:

> *"Well, I have to operate on the premise, the only premise I know of, that if you keep putting enough light on a situation, then you'll hopefully have some consequence. [...] That is the only journalistic premise that I know that has some effect. If it doesn't have an effect, we should all be in the bottling business or something."*

94

The case of McCarthy also illustrates the elements in newspaper entanglements. For instance, news started with newsmakers like the senator – the newsworthy persons or events. Relevant information around such newsmakers was either directly gathered by reporters in the field such as Washington Post reporter Marder or was received from wire services (e.g., Associated Press) or a newspaper's state, national, or foreign bureaus. Such a structure meant that newspapers needed newsmakers for content and reporters to gather information and write articles. At the same time, newsmakers like politicians such as McCarthy were said to largely rely on those papers and reporters to reach their audience (i.e., constituents) to spread (mis)information such as the untruthful accusations of communist spies in the State Department. Once a news story was compiled by the reporter and enhanced with pictures provided by a photographer it went through an iterative and subjective editorial process before making it into the newspaper in the next day(s) (Gelsanliter 1995; Nerone and Barnhurst 2003; Sylvie and Witherspoon 2001).

Gathering news became increasingly expensive as interest in news was growing. While they were valuable sources of information, it became costly to operate state, national, and foreign news bureaus. In addition, having investigative reporting such as with Marder's full-time assignment to cover senator McCarthy and dedicated reporting on health, science, and business increased costs. Examining newspaper histories showed that American newspapers developed a web of complex subsidies to manage higher costs. First, readers were said to depend on other readers to receive the content they desired. Someone interested in political news or baseball was making more expensive news like investigative reporting available to those not concerned with politics or sports by paying for the paper (John and Silberstein-Loeb 2015). This meant that one news story would not reach readers without other news stories and its gathering involving

newsmakers, reporters, bureaus, wire services, and more. Newspapers were collections of news stories. Second, newspapers were described as being largely funded by advertisers to reach the mass consumer market, as evidenced by Hamilton and Tworek (2016, p. 401):

> *"Advertisers subsidized American newspapers to reach the mass market of consumers that arose in the late 19th century. By the mid-20th century, advertisements covered about 80 percent of newspaper operating costs. Readers paid the remaining 20 percent, which roughly equaled the cost of delivery, so advertisers subsidized readers as well. The resulting news product was relatively cheap and thus attractive to the great mass of potential consumers."*

The above excerpt posits that because of their affordability the papers provided the best possible access for advertisers to a mass of potential buyers for their products and services. In other words, both newspapers and advertisers depended on each other for profitability. It can be concluded that this set of subsidies advanced the necessitation of the newspaper. It increased both human and thing elements and dependences around the medium, cementing its dominant position. At the same time, it would later contribute to the de-necessitation (i.e., continuously lower degree of necessity status) of the newspaper as it facilitated increasing entanglements around other media such as television, the world wide web, and the smartphone, effectively decreasing entanglements around newspapers (see below).

Newspaper histories are replete with human and thing elements not only at the level of business strategies of these organizations and news gathering, but also in the process of printing papers. Newspaper organizations were generating their papers in their own printing plants. Historic accounts of these facilities account for machines and technology on the one hand and

the humans that run these facilities on the other hand. First, the highlighted focal point of any plant was the printing press, which applied pressure to an inked surface resting upon paper. The inked surface in newspaper printing was a set of metal type plates that were created with a Linotype machine at the time. Additional items needed to print newspapers included things like electricity, replacement parts for the printing press, tools, and many more. Second, the descriptions of the human elements of the production process included Linotype machine operators, machinists, quality control personnel, and other plant employees. The printing process was driven by a detailed schedule to make sure that papers got out to readers on time (Gelsanliter 1995; Picard and Brody 1997).

Overall, accounts of the printing process were replete with multi-element dependences. To illustrate, a more elaborate but still simplified entanglement (TTTTTHH) shows that newspaper organizations (T) depended on the printing press (T) to produce a physical paper (T), while the press required ink (T), rolls of paper (T), machinists (H), and quality control personnel (H) to properly operate it. I can conclude that the advancement of the printing process over several centuries to arrive at a complex web of humans and things had helped to propel the newspaper to necessity status. The newspaper had notable advantages over previously existing forms of news distribution like being a more permanent medium and allowing for a timely and more flexible news consumption, but it did not immediately become a necessity. Those affordances were only realized with things like the printing press and Linotype machine. They made the paper more accessible connecting more people to the newspaper and helped making it a widely available necessity.

Studying chronicles of the distribution of newspapers in the next step, we can also identify various elements. The printed newspapers were loaded on trucks and transported to

places where they were sold. These were newsstands and any other outlets where the paper was being sold to readers. Newspaper hawkers were selling the paper in the streets and subscribers received their newspapers from paperboys and papergirls at their doorstep. As with their printing plants, trucks enabled the dissemination of papers, but news organizations and particularly their workers were also caught up in their maintenance and care.

When reviewing the entanglements surrounding news gathering, editing, and printing, it can be noted that the relations among the various elements were the result of newspaper publishers striving to capture readership by fitting into their habits that they themselves had helped create:

> *"Newspapers also began to build in their readers a habit of news. Great events would still unleash a storm of pamphlets, full of engaged advocacy, but in quieter times readers came to value the steady miscellany of information that arrived with the newspaper. For many in the seventeenth century, and for the price of two pence a week, it was an affordable habit. In the years ahead, it would increasingly become an addiction"* (Pettegree 2014, p. 207).

For instance, per historical and archival materials, morning newspapers were favored by white collar workers reading over breakfast. Evening papers' readership included factory workers reading after their shifts and stay-at-home moms studying the news in their free time. Weekend papers were said to enjoy a broader readership as people were at home (Pew Research Center 2004). Such an integration into consumer habits was emblematic for the necessity status the newspaper had achieved. So, while readers largely depended on newspaper organizations to receive news because of a lack of alternative mediums, newspapers also depended on retaining

readers and increasing circulation in order to secure (growing) revenues from advertisers. Not fitting into readers' habits put publishers at risk of losing readers to local and national newspaper competitors. Newspaper publishers build strong local and/or national brands and most became highly profitable businesses. Some papers were privately owned but a large share of organizations were publicly traded companies and attached to media holding companies. As such, their owners and/or investors had a large interest in continuously growing profits and in how they were measuring up against competitors. Introducing daily newspapers as opposed to weekly ones is a reflection of this desire. Moreover, during the golden age of newspapers and the years leading up to them, newspaper circulation was growing as a result of population growth. However, once an organization became a publicly traded company it was caught up in investor expectations of permanent circulation growth and making a profit (Douglas 1999; Sylvie and Witherspoon 2001; Wallace 2005).

Path Dependency: News Consumption With(out) Newspaper

The above is an indication for the breadth and variety of the elements and dependences involved in news consumption. In entanglement one could always continue identifying more elements. For instance, I could pursue with identifying the entanglements around producing electricity, around running advertising companies, around operating newsstands, and others. The purpose of this section is to assess the standing of newspapers in news consumption entanglements. At first glance, given the large number of entanglements surrounding the newspaper outlined above, it would be difficult to imagine news consumption without the newspaper. Hodder's (2012, 2018) notion of path dependency suggests that once a certain level

of entanglements is reached, turning back becomes challenging and expensive and humans are pulled toward certain pathways generating even more entanglements.

However, a closer analysis reveals a more fragile position of the newspaper in news consumption entanglements. Elements (e.g., innovations such as printing press, Linotype) that were added over the years and helped to move the newspaper toward necessity status improved news gathering but were primarily concerned with the newspaper production and distribution capabilities. These elements connected more people to news than was previously possible. However, they also entrapped newspaper organizations and especially their workers in their continued care and maintenance locking newspaper organizations into a business structure that would prioritize a printed end product for decades to come. At the same time, news consumers, newsmakers, and advertisers were not invested as much in the production and distribution process specific to newspapers. In particular, consumers depended on papers because they had limited alternative sources to receive their news, while newsmakers and advertisers depended on them due to finite options to reach the masses. Introducing other options for the needs of these groups (i.e., other news media and other sources for large audiences) would allow for a disentanglement of these groups from newspaper entanglements. Such a development would negatively affect the newspaper business model that heavily depended on subsidies from readers and advertisers. Aside of local news, cartoons, puzzles, sports, and other non-news content, newspapers were not deeply entangled in parts of daily life other than news. It would leave them vulnerable for de-necessitation through disentanglement.

The focus in this section is on the newspaper because it was the predominant medium to follow the news before others emerged. While magazine and radio news existed, and television started to emerge during the golden age of the newspaper, these mediums had not established

themselves as considerable news outlets (yet). I go on to show in the next sections how adding some of these elements into news consumption entanglements created more complex webs of dependences that would help those media necessitate in the news consumption domain in their own right and shift elements away from the newspaper.

Rising Popularity of Radio and Television News

Newspapers were the prevalent medium and a necessity in news consumption throughout the first half of the 20th century, but radio and television were set to play a more significant role in news in the following decades. As with newspapers, below I present a brief history of the two mediums to offer a context for the subsequent analysis of how their emergence changed news consumption entanglements contributing to the necessitation of television.

History of Radio and Television News

The technological origins of radio were more dispersed than the roots of newspapers. Wireless communication originated in the late 1800s with the work of different scientists and inventors. It reached a high point with the Italian Guglielmo Marconi creating a wireless system that was sending and detecting signals. Marconi went on to promote radio as a wireless telegraph and led the way in wireless communication in England and the United States until after World War I (Douglas 1987a; Douglas 1987b; Lewis 1991).

During the war all radio stations were controlled by the United States Navy, while after the war General Electric (GE) ended up acquiring a controlling majority of American Marconi in 1919 due to concerns of a foreign company dominating wireless communications in the United States. The company's assets were then passed on to the Radio Corporation of America (RCA),

which would mass produce radio receiving sets. Radio allowed for the first time for content to be broadcast simultaneously to numerous receivers. Radio evolved from a medium of messages and communication to the broadcasting of music and other forms of entertainment in great part due to the activity of "radio boys." This large but disorganized group of amateur radio enthusiasts started out by listening to and communicating brief messages with their home-built devices. Soon these amateurs began distributing other content through the airwaves. One of them was Frank Conrad, an engineer for Westinghouse Electric, who began to transmit music concerts on a regular schedule. The popularity of such broadcasts helped his employer and other companies realize that broadcasts could curb demand for radio sets, so they invested in more professional broadcasts (Gitelman 2006; Spar 2001). American consumers embraced the new technology, which resulted in rapidly increasing radio receiving set sales and a growing number of stations. Issues started to emerge when too many stations broadcasted on the same frequency leading to interference and interruptions in service. Initially regulated by the United States Secretary of Commerce, the Radio Act of 1927 established the Federal Radio Commission (FRC) to decrease the amount of stations in a re-licensing process and to encourage the formation of high-power stations. The FRC was absorbed by the Federal Communications Commission (FCC) in 1934 to regulate both wired and wireless communication (Creech 1996; Douglas 1987; Lewis 1991; White 1947).

Initially, radio programming was created with the purpose of driving equipment sales. When companies started to recognize the potential of advertising sales, it led to the development of radio networks – often national groups of radio stations airing content from a central source. Among the first networks were RCA's National Broadcasting Company (NBC) with the Red Network and the Blue Network in 1926, as well as the Columbia Phonograph Broadcasting

System (later Columbia Broadcasting System, CBS) in 1927. During this time, programming mostly featured live and recorded concerts and later featured drama. As networks were reaching the broad American population radio became a low-cost platform for advertisers to reach consumers (Barnouw 1966; Barnouw 1968; Sterling 1990; Whetmore 1981).

News did not start to emerge as one of radio's strongest offerings until the early 1930s. In the 1920s radio served as a promotional tool of newspapers with radio hosts reading newspaper headlines over the air. A conflict emerged when the Associated Press supplied radio networks with presidential election bulletins in 1932 and radio programs started to incorporate them as news updates. In fear of being bypassed in news consumption and declining circulation, newspaper publishers pressured all wire services into not supplying radio with bulletins. In response, NBC and CBS founded their own news divisions in 1933 to independently gather news (Culbert 1976; Horten 2002).

After fighting political, economic, and legal battles the Biltmore Agreement was signed limiting networks to two five-minute newscasts per day and without advertisements. Radio broadcasters started to work with newly established news gathering agencies like the Transradio Press Services and found creative ways to circumvent the restrictions. For instance, in 1933 President Roosevelt addressed the nation in four "fireside chats," which enabled him to get public support for his New Deal. Not able to control radio broadcasters, newspaper publishers shifted their strategy toward owning radio stations instead of fighting them. During World War II radio was reaffirmed as a news medium by live bombing reports from CBS reporter Edward Murrow in London (McChesney 1993; Perry 2004).

Things changed for radio after the war as television sets entered the market. All-electronic television transmission had its origin in the 1920s with inventors Zworkyn (hired by

RCA) and Farnsworth independently contributing to the development of image broadcasting. Farnsworth's system captured images with a beam of electrons, coded them onto radio waves, and converted them back into an image on a screen. After a slowdown in development during the Great Depression RCA, which owned NBC, purchased a license for Farnsworth's technology and introduced the first television set during the 1939 World Fair (Blanchard 1998; Greenfield 1977).

World War II halted the spread of television as factories were repurposed for military production. In addition, the introduction of FM radio started conflicts over wavelength allocations. Government regulation further affected television when the FCC ruled in 1941 (confirmed by Supreme Court in 1943) that NBC had to sell one of its radio networks, which resulted in the founding of the American Broadcasting Company (ABC). In the meantime, only six stations operated during the war. In 1941, CBS started experimenting with news programming by introducing two 15-minute newscasts per day on a station in New York (Bliss 1991; Stephens 1993, 1996).

After the war in 1946, consumers were buying television sets with access to a limited number of stations. Within two years over one million households had televisions and nationwide there were 108 licensed stations. After a brief halt in licensing by the FCC due to the Korean War television went on to gradually capture radio listeners. By 1953 roughly half of American households would have television sets and by 1965 over 94 percent of households (Barnouw 1968, 1970; Watson 1997). The entanglements surrounding radio and television were very similar, including the same consumers, similar technologies, and with the major networks the same producers of news. Due to this similarity television quickly replaced radio in news consumption without allowing it to reach necessity status in this domain.

NBC, CBS, and ABC established themselves as the dominating forces in network television in the 1950s and financed their endeavors with profits from radio before television became highly lucrative. Their initial programming came from radio and included situation comedies, variety shows, dramas, and newscasts. The two-a-day 15-minute newscasts featured Douglas Edwards on CBS (CBS TV News) and John Cameron Swayze on NBC (Camel News Caravan). News programs mostly consisted of talking heads reading the news supported by video footage obtained from newsreel companies. As content moved from radio to television networks, so did the newscasters. For instance, the above-mentioned reputable Edward Murrow moved from radio to television in the 1950s. He went on to be widely recognized for helping to expose McCarthyism (Bliss 1991; Stephens 1996, 1998).

CBS newscaster Walter Cronkite emerged as a central figure in the coverage of the Democratic and Republican national conventions in 1952 and was labeled as *anchorman*, a term that became common language in news coverage thereafter. Network television news continued raising their profile with the introduction of *The Huntley-Brinkley Report* on NBC in 1956. Networks began recording their own video footage and slowly started to challenge newspapers as Americans' preferred news medium (Frank 1991; Matusow 1983; Ponce de Leon 2015).

Through the 1960s and 1970s the three major networks CBS, NBC, and ABC continued their dominance designing their programming for a mass audience and competing for viewers and advertising dollars. Advertisers were increasingly interested in reaching the mass consumer market because the United States economy increasingly established itself as consumer based. Families typically owned a house in the suburbs, a car, and a television set. To counter their dominance and reach less densely populated areas in the United States Congress created the noncommercial Public Broadcasting System (PBS) that year bundling existing educational

nonprofit stations around the country. However, the three commercial networks would not be challenged until cable television started to emerge. Its rise started in remote areas of the country where CATV (community antenna television) systems had been built in high places to be able to receive the channels in nearby cities. By 1960 there were over 600 such large antennas spread over the country. It soon emerged as an alternative system to network television and Americans started to access hundreds new channels. During the 1970s outlets like ESPN for sports and HBO for entertainment started to emerge. The introduction of the Cable-Satellite Public Affairs Network (C-SPAN) to broadcast live from the House of Representatives in 1979 and the Cable News Network (CNN) in 1980 were significant milestones for news consumption (Bliss 1991; Frank 1991; Stephens 1996).

The number of cable channels continued to grow through the 1980s and accelerated in the 1990s. Improvements in cable technology and the introduction of satellite technology, which allowed live broadcasts, expedited this development. While new broadcast networks were introduced, as well, the market share of network television fell from over 90 percent in the early 1980s to below 50 percent by 1997.

The above brief history of radio and television alludes to a continuously increasing complexity of news consumption entanglements as more elements and dependences emerged with the commercialization of these technologies. While initially enabling newspaper organizations to sell more papers, radio's shift to more news reporting and own news gathering changed news consumption without radio news becoming indispensable for most American consumers. In turn, in the decades thereafter, radio news was largely overtaken by television news. In the second half of the twentieth century, television started competing with the dominance of newspapers in news consumption becoming a necessity in its own right, while

106

contributing to a decreased necessity status of the old print medium (Ponce de Leon 2015; Stephens 1998). In the next step, a snapshot of the more complex entanglements is provided in order to identify the changing elements and dependences in news consumption, which have led humans to be more invested in entanglements surrounding television news. The purpose is to highlight the resulting changes in the necessity statuses of both newspapers and television toward the end of the 20th century.

Elements and Dependences in Television News Consumption

Analyzing historical and archival materials suggests that at the end of the 20th century there were different dynamics involved in news consumption, because consumers had different options to receive their news: newspapers, news magazines, radio, and television. Because television was built on radio technology and went on to capture most of radio's audience, the focus below is on television news entanglements and its necessitation during a time when television news emerged as a challenger to newspapers.

While the dependences surrounding newspapers were more complex than in interpersonal communication of news, the web of dependences became exponentially more intertwined with the introduction of television news. As with newspapers, the news story still originated with a newsmaker – the newsworthy person or event. However, newsmakers such as politicians became television experts. For instance, the Reagan administration staged the President in favorable settings and mastered crafting and releasing messages to generate positive coverage on news programs (Ponce de Leon 2015). Such an emphasis on mastering the visual medium highlights a mutually increasing dependence of newsmakers and television news programs. On the one hand, newsmakers like Reagan needed the (positive) coverage to disseminate their ideas. On the other

hand, news programs were looking for video footage of these persons for or to supplement content.

How the news traveled from occurrence to consumption thereafter depended on the nature of the news and the type of delivery system it would be distributed through. Television histories differentiate between broadcast television and cable television. Network broadcasting (ABC, CBS, FOX, and NBC) emerged before cable and focused on scheduled newscasts with morning and evening formats. The news was either gathered directly by reporters in the field who traveled with a camera crew and filming equipment, or it was received by wire services and processed by reporters in the newsroom (Bliss 1991; Karnick 1988; MacDonald 1994).

Producing a newscast and thus getting the news story on the television screens of the news consumers, involved a complex web of humans and things, which varied depending on the length and content of the newscast. For instance, the program needed to be produced in a physical location – a studio, but many humans were involved in the process. A plethora of historical accounts focuses on the news anchors (often one or two) leading through the news programs. News anchors were new elements in the entanglements and became for their audiences the faces of news. Media archives are rife with memoirs of news anchors including personalities like Edward Murrow, who brought the Washington Post reports of McCarthyism to television, or Walter Cronkite, the "most trusted man in America," who is recalled by many Americans for delivering the news of the death of President John F. Kennedy in 1963. In a media project about the 1960s by the University of Oregon his coverage of the assassination is recounted as follows:

> "*At the time, there was [sic] no standards in place about how to report*
>
> *such a sensitive news story, as Television news was still very young as a*

108

journalistic medium. Cronkite's exhaustive coverage would forever alter

the way that Americans came to expect to receive news. People were no

longer willing to wait until tomorrow's newspaper in order to read the

latest updates about world events, especially about the assassination of

the President of the United States."

The above quote underlines the immediacy advantage that television had over newspapers contributing to its entrapment and accentuating the diminishing importance of the printed medium as a result of it. It also underscores the dependence of television news on a central figure reporting the news, which was a departure from newspapers where individual contributions were not at the center. Cronkite was the focal figure of another powerful news moment. When reporting from Vietnam he turned against the war and suggested that negotiations would be the only solution. Reporters covering these events and others later including the Civil Rights Movement, the moon landing, and the Watergate scandal propelled television news into a new era separating it from the newspaper (Ponce de Leon 2015; Roman 1996; Stephens 1993).

While they were delivering the news, anchors and reporters are also described in historical materials to have relied heavily on other humans and were connected (via earpieces) with many of them during the newscast. Executive producers assigned news stories or areas to producers and oversaw the production and general direction of a show. Depending on the newscast there would be different producers and associate producers for timeslots or areas such as traffic or weather. In most cases writers developed copy for the anchors who followed a teleprompter in their delivery of the news. Anchors were taking cues from directors on the floor and in the control rooms. Other personnel in the control rooms included media managers

109

organizing film for the news stories and editors modifying graphics, video footage, and audio materials increasingly using computers. Journalists were reporting both from the field and from the studio. Studios were filled with technology such as cameras, screens, and lights, which all needed wiring and electricity (Bliss 1991; Ponce de Leon 2015; Trundle 1996). The above is representative of the plethora of human and thing elements and their mutual dependences in creating a news program. Being involved in the care of so many thing elements for television news production suggests a greater investment of humans in television as a medium, helping to make it a necessity in news consumption.

To understand content distribution of broadcasting networks as opposed to cable television histories provide technical insights into a complex web of dependences. Getting the news from the studio to the consumer required an intricate web including technology and licensing agreements. In network broadcasting the television signal was transmitted over the air by radio waves and originally received by antenna connected to television sets. In the 1970s and 1980s network programming also started being distributed via cable and satellite television (see below). For distribution over the air networks relied on local television stations who owned the licenses to the airwaves allocated by the government in most of the country to distribute their content because they mostly just owned stations in large metropolitan areas like Los Angeles and New York City. To secure large audiences networks offered affiliate agreements to local stations and paid them fees for distributing their content. The networks' goal was to gather larger audiences, which resulted in higher advertising revenues. At the same time, local news stations had their own news programs during times not purchased by networks (Bliss 1991; MacDonald 1994; Trundle 1996).

Studying these television histories that focused on more technical aspects of the medium shows that news consumption on television had grown to involve increasingly more elements (especially things) and more complex webs of dependences than there were surrounding newspapers. On the one hand, in producing the news various technologies in the studio were adding more dependences to news consumption. On the other hand, consumers receiving their news through their television had made a substantial investment (television and the associated equipment), as well. Television rapidly gained importance not only in news, as summarized by Edgerton (2007, p. 308-309) in a cultural history of the television:

> *"By 1962, 90 percent of the country, or almost forty-nine million*
>
> *television households, owned their own sets. Significantly, these family*
>
> *units kept their TVs turned on for more than five hours a day on average.*
>
> *In less than a generation, television had emerged as the national pastime*
>
> *for the vast majority of people across the United States. The speed with*
>
> *which TV had penetrated the very fabric of American life was beyond*
>
> *anyone's wildest dream."*

Television was spreading into different public domains through diversified programming including sports, children programming, and films such as Western. The above quote shows that consumers were spending more time than before in front of the television every day. As a result, the growing web of entanglements involving the television outside of news made it very difficult to turn back contributing to it becoming a necessity for news consumption, as well.

At the same time, television news itself had a profound impact on life in America early. For instance, in the presidential election of 1960 Kennedy emerged as the winner over Vice President Nixon, which was attributed to his appearance during the first ever televised

presidential debate. While surveyed people who had followed the debate on radio saw Nixon ahead, the television audience saw Kennedy as the winner of the debate with his composure compared to Nixon's poor posture and shave. In addition, the reporting of the Persian Gulf War in 1991 was followed by many Americans and both Iraqi and American leaders who both admitted to watching CNN to follow news about the war (Ponce de Leon 2015; Roman 1996; Stephens 1993). These examples showed how both consumers and newsmakers grew to be more dependent on television news in order to stay informed.

Being able to generate large audiences, the focus of networks progressively shifted toward generating more advertising revenues in the mid-20th century. However, news divisions of networks were at first not viewed by executives as profit centers. Rather, delivering the news was seen as a public service. The networks were investing in news gathering and reporting even including foreign bureaus to cover international issues. Television news were positioned as delivering facts that Americans could discuss and debate about (Barkin 2003; Kiska 2009). However, there were early signs of the significance of news programs for advertisers, as can be evidenced by the Camel News Caravan anchored by John Cameron Swayze on NBC in the 1950s. Sponsored by the tobacco company, the occasional smoking cigarette was used during the broadcast and Swayze acted as a spokesperson for the brand through advertisements posing as a news anchor. At the same time, advertisers impacted news. For instance, John Cameron Swayze would not have delivered a story about the dangers of cigarette smoking because he was sponsored by a tobacco company.

Cultural and media histories reveal that these dependences between news programs and advertisers became more prevalent in the 1980s and 1990s as more profit-oriented large entertainment companies and conglomerates started acquiring media companies. For instance,

CBS was purchased by hotel and movie theater company Loews in the 1980s (Fabrikant 1985).

Such acquisitions meant that now even news divisions were required to generate profits for

shareholders, which could be achieved by increasing revenues through advertisements. As a

result, the entertainment value of news was given greater importance to attract more viewers, as

documented by Postman (1985, p. 87-88):

> "*Entertainment is the supra-ideology of all discourse on television. No*
>
> *matter what is depicted or from what point of view, the overarching*
>
> *presumption is that it is there for our amusement and pleasure. That is*
>
> *why even on news shows which provide us daily with fragments of tragedy*
>
> *and barbarism, we are urged by the newscasters to 'join them tomorrow.'*
>
> *What for? One would think that several minutes of murder and mayhem*
>
> *would suffice as material for a month of sleepless nights. We accept the*
>
> *newscasters' invitation because we know that the 'news' is not to be taken*
>
> *seriously, that it is all in fun, so to say. Everything about a news show tells*
>
> *us this – the good looks and amiability of the cast, their pleasant banter,*
>
> *the exciting music that opens and closes the show, the vivid film footage,*
>
> *the attractive commercials – all these and more suggest that what we have*
>
> *just seen is no cause for weeping. A news show, to put it plainly, is a*
>
> *format of entertainment, not for education, reflection or catharsis.*"

Postman's (1985) assessment posits that the entertainment value repeatedly drew

consumers to television news, making watching them a habit, and advancing its necessitation.

This described focus on entertainment in order to be more appealing for advertisers with a larger

audience is the result of the growing emphasis on profits in network television news

consumption. The pressure for network news divisions to generate income did not only come from shareholders but also from the introduction of cable television. Television and news histories alike conclude that cable allowed advertisers to reach desired niche audiences through targeted programming (e.g., CNN for news, CBN Satellite Service for Christian viewers) as opposed to the mass market that networks were appealing to. Being able to spend relatively less money (i.e., lower customer acquisition costs), many advertisers shifted their budgets away from networks to cable television and news increasingly became a commodity.

Further complexity was added to television news consumption entanglements, because revenues of cable channels did not only come from advertising but also from pay-TV providers including cable and satellite companies. Cable companies like Time Warner Cable were delivering the cable channel programs to consumers through radio frequency signals transmitted over coaxial cables feeding into a box connected to the television for a subscription fee. Satellite companies like DirecTV passed on television programming from satellites orbiting the Earth to satellite dishes installed on consumer roofs, which were connected via receiver boxes to television sets. Like cable companies they were charging consumers fees for their services. A portion of those subscription fees was passed on to the content providers – the cable channels (Eisenmann 2000; Herrick 2012).

While the programs of broadcasting networks were also included in pay-TV lineups, it can be derived from FCC records and news reporting on networks shifting business strategies in the 2010s that they were mostly not receiving payments from pay-TV companies. Since 1994, the FCC gave networks and their affiliates the opportunity to charge pay-TV providers for including their programming in the pay-TV offerings. However, when payments were flowing they were rather going to local network affiliates. Where the networks owned local stations (i.e.,

114

populous metropolitan areas) they could receive a portion of cable subscription fees. Nevertheless, the networks' strategy was to not charge pay-TV providers, but instead increase their audience by being included in pay-TV lineups to increase prices they could charge advertisers. In addition, they started forming their own cable stations (e.g., CNBC in 1989), which allowed them to collect fees from pay-TV companies (FCC 2015; McGrath 2013; Hagey 2014). In Hodder's (2012) entanglement theory more complexity is tantamount to greater entanglement. It follows that humans were more invested in sustaining television news entanglements than, for instance, newspaper entanglements.

When it came to news reporting, news divisions on cable were organized similarly to their network counterparts. Newsrooms, control rooms, and studios largely consisted of the same human and thing elements. The biggest point of departure from network broadcasting was that cable channels like CNN introduced a 24-hour news cycle and increased time pressures for everyone involved:

> *"Meanwhile, the cable channels continued their campaign to increase their popularity by assuming functions once performed by the networks. The most important was serving as the source of breaking news. This, of course, had been CNN's raison d'être from the moment of its birth in 1980. Yet CNN now had rivals, and this increased the pressure to be the first to report big stories – and to stay with them continuously [...]. Blockbuster stories [...] were the lifeblood of the cable news channels, producing spikes in ratings that could last for weeks."* (Ponce de Leon 2015, p. 242-423)

While network television led the way in television news, cable channels were the ones that realized the affordances of television. Broadcasting was presenting news on a fixed schedule. The news was immediate and impermanent. On the other hand, cable, as illustrated by the quote, offered channels tailored to news and provided the permanent coverage that television as a medium was capable of.

Viewers had the opportunity to see news unfold live on television, and the cable news channels were thriving because of that. The murder trial of former football player O.J. Simpson exemplified the strength of cable television as some stations covered the trial in its entirety and supplemented the coverage with evening talk shows (Consumer Electronics Manufacturers Association 1998; Ponce de Leon 2015; Stephens 1998). With live coverage, members of the newsrooms now had less time to create, edit, and scrutinize news stories before presenting them to viewers. Reporters started to cover events as they were happening, sometimes resulting in incomplete, inaccurate, or misleading coverage. The continuous coverage led to a decrease in actual news and increase in opinion and commentary, making it often difficult for viewers to distinguish facts from opinions, both of which were desired:

> *"In part it is to learn of facts that bear directly and immediately on their lives […] They also want to be entertained, and they find scandals, violence, crime, the foibles of celebrities and the antics of the powerful all mightily entertaining. And they want to be confirmed in their beliefs by seeing them echoed and elaborated by more articulate, authoritative and prestigious voices"* (Posner 2005).

In addition to the realization of television's immediacy affordance the above quote illustrates that cable television provided all viewers with the possibility of finding a news outlet

among polarizing options that would confirm their opinions, thus creating news echo chambers for consumers. Having a news outlet to regularly view strengthened the ties not only with any channel but also with television as a news medium. In turn, greater and stronger entanglements surrounding television made it difficult for consumers to turn back and live without it, resulting in its necessitation in news.

To conclude, the profit orientation in television described above is comparable to what newspapers prioritized in their business models. In particular, both news media were looking to generate income through advertising sales. However, the television news consumption entanglements were more complex, in that more elements were invested in these entanglements on the distribution side than in newspaper webs, thus contributing to its necessitation. Specifically, newspaper organizations were mostly the ones looking to preserve their entanglements, while on the television side broadcasting network stations, cable stations, network affiliates, pay-TV providers and many other elements were added. Nonetheless, because many dependences developed around advertisers in television news consumption, it would allow for humans to be pulled away from television news if advertisers were to generate stronger entanglements with other media. Because of social media, the Google search engine, and other apps and platforms who would build businesses around advertising revenues, this development would later contribute to consumers being drawn down a pathway toward the world wide web and the smartphone. Eventually, this would usher in what Zuboff (2015) calls "Surveillance Capitalism," further entangling consumers in custom-tailored news and personalized advertising.

On the one hand, television differentiated itself from newspapers by being an important element outside of news consumption and pulling humans toward generating additional entanglements. Overall, television transformed how news was consumed. By realizing its

affordances television introduced a faster way of receiving the news (i.e., immediacy), added opinion and commentary, and brought a focus on entertainment values. All of these would later pave the way for other media. Specifically, the world wide web and smartphone would further accelerate the speed at which news was received by consumers. The introduction of opinion and commentary allowed for the news echo chambers that were created on cable television to become common practice and be amplified on later platforms. Moreover, the entertainment value in news contributed for consumers to adopt these media.

On the other hand, consumers chose to turn away from other media and to the television because they preferred to be informed about events immediately (which was not possible with the newspaper) and because they appreciated the visual component of the coverage (which was not available with radio). Television was appealing to more of their senses. Watching television was seen by consumers as a way to relax and escape their daily lives and presented a cheap form of family entertainment. News offerings became a routine component of television watching.

Changes in Newspaper Entanglements

Newspaper organizations largely continued to operate with the same structures as through their golden age partially because the still preserved status of newspapers as a necessity did not call for innovation. Technologically there were improvements that came with the adoption of computers. Specifically, the work in the newsroom and typesetting for newspaper print were highly improved. From a consumption perspective, however, newspapers still reached consumers the same way they did before. They also did not see an immediate reduction in circulation when television started to achieve dominance, which had three reasons. First, newspaper publishers gained readers by including radio and television schedules in their papers, and those readers were

118

subsidizing readers interested in other content. Second, newspapers were still closely intertwined with consumer habits. Reading a newspaper provided more flexibility than broadcasting television and better-quality journalism than cable television for those who were looking for it. At the same time, evening papers were disappearing because more Americans were moving into suburbs adding commuting time and because "TV dinners" were entering American households – an indication that more limited evening hours were being spent in front of the TV. Finally, readers of these failing newspapers were absorbed by the surviving newspapers. Eventually it would have to become difficult for a newspaper to continue growing their readership if it was the only remaining newspaper in town and would not be able to absorb other papers (Hamilton and Tworek 2016).

While circulation of remaining newspapers did not drop immediately, publishers were affected by a decline in advertising revenues, as the following assessment by Richard Gingras, Senior Director of News and Social Products at Google, supports (Warsh 2013):

"[T]he newspaper business was a dog-eat-dog business, a very

competitive business. The newspaper with the leading position in the

market might do well. Number two and three might do okay, and everyone

else suffered. But then something happened in the late forties that changed

the world of newspapering, and that change was the introduction of

television… and it very quickly, within a few years, took about fifteen

percent of the advertising market…. That's a huge amount of money in a

very short period of time, and interestingly, it took it all out of

newspapers. It didn't take it out of direct mail, magazines, radio. It took it

out of newspapers."

The quote shows that the introduction of television exposed the dependence of newspapers on advertising revenues as a weakness in newspaper entanglements. Given that 80 percent of newspaper revenues were coming from advertising sales, the impact on news gathering was significant. Positions in the newsroom were reduced to save costs, thus eliminating human elements from the entanglement. In addition, newspapers had a difficult time innovating, finding themselves entrapped in the care of their printing plants and their business model was exposed as relying on advertising revenues.

Advertising revenues played such a central role in newspaper entanglements that along with associated entanglements they had contributed to newspaper necessitation. Newspapers were connecting anyone who wanted to sell something (e.g., marketers and politicians) with consumers because there was no better medium to do so at the time. As soon as television (especially cable television focusing on niche audiences) started attracting more and more of these advertising dollars, advertisers began generating innumerable and stronger dependences within television news consumption entanglements (e.g., with broadcasting network stations, cable stations, network affiliates, pay-TV providers). As a result, a disentangling from the newspaper occurred and facilitated the beginning of the decrease of the necessity status of newspapers. In turn, advertising helped increase entanglements around the television advancing its necessitation in news.

The developments in both newspapers and television news divisions (especially the growing emphasis on profits) had an impact on news consumers, as well. On the newspaper side, a decline in advertising revenue, the associated cost cutting in newsrooms, and single newspapers controlling their markets resulted in changes of reporting standards. Combined with cost cutting for profit and blurring the lines between opinion and facts led to a starting decline of

public trust in the news media paving the way for other technologies such as the world wide web and the smartphone to emerge as solutions to these problems challenging the status of existing necessities in news consumption (Pew Research Center 2005, 2007).

The Emergence of Online News

While television transformed news consumption entanglements towards greater connection between all their human and thing elements, the world wide web was set to add even more complexity to these relationships, making it increasingly challenging for newspapers to sustain their status as a necessity in news consumption and paving the path for other media to fill that role. As in the previous sections a history of online news is presented to offer a backdrop for the subsequent analysis of changing news consumption entanglements.

History of Online News

While the Internet is often understood as somewhat intangible, it does require a web of humans and technology to operate. The Internet has its origins in the 1960s when researchers from MIT and the United States Department of Defense Advanced Research Projects Agency (ARPA) created the ARPAnet, a computer network designed to maintain communication networks in the United States in case of foreign attacks. In the 1970s Robert Kahn and Vinton Cerf were credited with developing the Transmission Control Protocol/Internet Protocol (TCP/IP). This technology made it possible to connect multiple networks without disruption even when one network stopped working. During the same time period Ethernet was developed at Xerox and allowed larger amounts of data to be transferred over a network using cables. Simultaneously, Unix emerged as a popular system, a hypertext, to structure information on

TCP/IP networks. It linked topics on the computer screen to associated information and graphics utilizing a point-and-click method. Toward the end of the 1970s USENET was introduced and allowed the transfer of data using phone lines via dial-up connections. In the 1980s PhoneNet was established as an affordable variant of USENET and was connected to ARPAnet and Telenet, the first commercial network. PhoneNet allowed more people to be connected and introduced email service. At the same time, Ethernet achieved broader reach when 3Com developed products for computer workstations and personal computers permitting the formation of local area networks (LANs). To manage the growing number of internet users, the Domain Name System was introduced and symbolics.com became the first registered domain in 1985 (Leiner et al. 2009; Moschovitis, Poole, and Senft 1999; Ryan 2010).

In the 1990s the diffusion of the Internet accelerated with the introduction of the world wide web (also WWW) and its HyperText Transfer Protocol (HTTP) by Berners-Lee from CERN (European Organization for Nuclear Research). The WWW is different from the Internet. The latter is a network of computer networks covering the world with its hardware and software linking computers. The former is a service offered by the Internet that connects documents and resources in their specific locations via hyperlinks and Uniform Resource Locators (URLs) online. In 1993 the National Center for Supercomputing Applications (NCSA) at the University of Illinois-Urbana Champaign initiated the Mosaic web browser. It was the first browser displaying images in line with text and introduced many of today's graphical user interface norms including the URL address and back and forward navigation options for websites (Tikka 2009; Reid 2018; Vetter, Spell, and Ward 1994).

The creation of both the world wide web and the Mosaic browser enabled the first newspapers and television network sites to be published online with the *Palo Alto Weekly*

leading the way in January 1994. By the end of the next year, 150 newspapers had a website. News media alliances emerged trying to navigate the new medium and to develop a business strategy around it. For instance, browser company Netscape Communicator entered joint ventures with Reuters, the ABC Network, the New York Times, and others in 1996 (Diaz Noci 2013; Siapera and Veglis 2012).

The launch of Microsoft's Windows 95 along with the Internet Explorer browser brought personal computers into more households and facilitated online access for many Americans. With an increasing number of news media companies providing online content, news aggregators started to emerge. Sites like the America Online (AOL), Drudge Report, and Yahoo primarily consisted of links to news stories about politics, entertainment, and current events from other websites. In 1996 Hotmail (later purchased by Microsoft) started email services on the web and instant messaging services such as ICQ emerged. Google launched in 1998 with a more successful search algorithm than previous search engines better adopting to the growing web (Allan 2006; Patterson 2008).

The early 2000s highlighted the rise and fall of internet-based businesses in the bursting of the dotcom bubble. The September 11, 2001, attacks against the World Trade Center evidenced the demand for consuming news online while also showing a lack of a refined online business model. On that day, many news sites experienced technical difficulties. CNN.com and ABCNews.com were not able to display videos on their sites as online traffic was reaching unprecedented numbers. In addition, as part of the rise of the world wide web social networking sites including LinkedIn, MySpace, Facebook, Twitter, and YouTube started to emerge and were destined to impact the way news was consumed (Allan 2006; Hermida, Fletcher, Korell, and Logan 2012; Lee and Ma 2012).

Transforming News Consumption Entanglements

The above brief history of the Internet and the world wide web shows the introduction of a plethora of new human and thing elements into news consumption leading to "an epochal transformation, as momentous probably as the invention of the telegraph or television" (Pew Research Center 2004). While the entanglements seemed clearer in the predigital era of news consumption, the wide array of new elements in online news becomes apparent when tracing how consumers got their news. Archival materials show that in order to get access to the news online one needed a computer that was connected to a modem that, in turn, established a link with an Internet service provider (ISP) dialing up over a phone line or later via broadband access. Connecting to the ISP one's computer became part of that network, which was already part of other networks globally. In such a way the personal computer was accessing a web server. To surf the web the computer needed the appropriate software, mainly a browser like Internet Explorer. A browser accessed a web server and requested a news page on the Internet by interpreting a page's HTML tags and displaying it in a readable form. The requested information is found via URLs and IP addresses. In addition to the actual technology there were the people maintaining it including but not limited to engineers, programmers, designers, installers, and other technicians (Li 2017; Rehmeyer 2007; Shuler 2002).

The above description lays out in brief terms what and who was involved when a news website was accessed by a consumer. This comprehensive but incomplete list of elements necessarily meant that news consumption entanglements were becoming more complex at the dawn of the world wide web primarily for two reasons. First, the Internet further connected newspaper and television news entanglements because both of these types of traditional news organizations sought to provide content online. Second, the web expanded entanglements into

multiple domains outside of news. Most notably, to be available online news organizations depended on relationships with technology companies managing the infrastructure that was used to host and access the news on the web. Before the Internet news organizations largely controlled news gathering and distribution from beginning to end because they owned most of the infrastructure. While their dependence on others (e.g., pay-TV providers) increased with the introduction of cable television it can be said to have grown exponentially with the emergence of the web.

News and media histories reveal an initial lack of innovation by traditional news organizations (print and television) in offering content online. The following quote exemplifies the shortcomings of newspaper publishers:

"[M]ost newspapers rely on shovelware, a computer programmed to

convert print to Internet content. A story of a city council meeting goes up

in toto, a linear, hard-to-read document. What's needed is, in addition to

the print version: An audio/video Webcast of the meeting while it is in

progress, which can be edited and archived for later viewing whenever the

citizen likes. A bulletin board that will let readers sound off on what

happened at the meeting. A way to let readers send e-mail to the reporter

who wrote the story, which may produce leads and sources that will lead

to new and better stories. Have the reporter conduct a chat session in

evening prime time about a hot issue that may have come up at the

meeting or that is high on the community agenda. Provide e-mail links to

City Hall, to council members and city staff so that citizens can contact

them. Put up links to relevant documents, such as zoning ordinances,

courts cases and environmental impact statements. Create relevant maps

and graphics associated with topics that arose at the meeting. (This means

hiring a skillful designer.) Such a multimedia news presentation turns a 2-

D city council report into a 3-D experience in which readers can immerse

themselves." (Pryor 1999).

This example of city council reporting underlines the minimal engagement of newspaper organizations in the online platform during early days of the Internet. Specifically, it contrasts the actual use of "shovelware" with unexploited potential capabilities including audio, video, e-mail, and others. Hence, newspaper publishers were not realizing the affordances of the new medium. While television news organizations were able to offer more variation in content (e.g., text and video), they did not adjust to the online platform either. Such a lack of innovation at both print and television organizations can be attributed to them having thriving and established business models. In the two decades leading up to the commercialization of the Internet the news business had moved toward a focus on profitability. The newspaper was still a necessity although its necessity status was declining and both newspapers and television news remained profitable (Allan 2006; Klinenberg 2005; Siapera and Veglis 2012). Their disregard for innovation on the web, which was not yet profitable for them, allowed for others (see below) to become leaders on this platform by realizing the affordances it offered. News aggregators, for example, were able to establish strong dependences with other elements in news consumption entanglements.

Other than contributing to a lack of innovation, the focus on profitability also leads to a change in reporting standards, thus weakening the existing news entanglements. In their early days, newspaper and television news organizations had positioned themselves as providing a public service to the American people and held themselves to the highest possible journalistic

standards. When business structures started to change toward satisfying shareholders rather than readers and viewers in the 1980s and 1990s more news organizations changed their reporting standards in favor of short-term returns:

> *"While audiences are fragmenting, we have greater capacity than ever to come together as a nation in an instant – for September 11, the Super Bowl or watching soldiers live on the battlefield in Iraq. While Americans are turning to more and varied sources for news, the media that they are relying on increasingly tend to be owned by a few giant conglomerates competing to cover what seem to be at any moment a handful of major stories"* (Pew Research Center 2004).

The quote underlines that news content was increasingly controlled by fewer people and organizations. The same content was distributed across platforms of the same media families. In practice that meant that there was an increased reliance on press releases and publicity of newsmakers, a disproportionate coverage of marketable news, and a focus on sensationalism. Combined with a smaller and less diverse online, broadcast, and print newsroom staff to complete the same tasks there was less investigative reporting and foreign correspondence.

This is not to say that good journalism disappeared altogether, but rather that it was not the guiding force of news organizations anymore at the dawn of the Internet. News organizations were primarily driven by advertising sales, so that at times the lines between what was editorial and what was advertising were blurred. They went from serving the public to serving the public in a way that was profitable and assured to further increase returns. As a result, news organizations were generating profit margins of up to 30 percent (Pew Research Center 2004, 2005; Romenesko 2005). A spokesman for Knight Ridder, the second-largest newspaper

publisher in the United States until its sale in 2006 concluded: "I wish it were otherwise. I wish there were an identifiable and strong correlation between quality journalism as we all define it and strong and growing newspaper sales" (Romenesko 2005). His quote shows that news had never been a profitable business on its own. News organizations were essentially in the advertising business and built a natural monopoly with high barriers of entry. Their economies of scale and centralized news production and distribution could not be easily replicated until the arrival of the world wide web:

> *"The signs are clearer that advertising works differently online than in*
>
> *older media. Finding out about goods and services on the Web is an*
>
> *activity unto itself, like using the yellow pages, and less a byproduct of*
>
> *getting news, such as seeing a car ad during a newscast. The consequence*
>
> *is that advertisers may not need journalism as they once did, particularly*
>
> *online"* (Pew Research Center 2007).

This excerpt exemplifies the disappearance of high barriers of entry online. While advertisers had previously strongly depended on newspapers and television news to sell products and services, more and new ways to advertise were developing online. Thus, advertisers began disentangling from newspapers and television news, while there were growing dependences and entanglements in online news and with other elements outside of news altogether. Advertisers are one such element. The increased competition over advertising dollars for newspapers and television news organizations came from three sources. First, traditional news outlets went head-to-head on the new medium with newspapers and television fighting for the same audience. Second, the introduction of blogs allowed anyone to develop as a platform for news. Third, new

128

competitors emerged including web-only news organizations, news aggregators, search engines, social media companies, online classified advertisement companies (e.g., Craigslist).

As noted above, traditional news organizations had allowed these competitors to innovate in the online space and to capture new audiences because their offline profits were not immediately affected. However, these returns had been sustained by cutting costs making it more difficult for a diminished newsroom to create solutions for the web once circulation, revenues, and stock prices started declining. The financial crisis in 2008 accelerated the decline and traditional news organizations started to more seriously explore online revenue streams (Pew Research Center 2007, 2008, 2009, 2010):

> *"For newspapers, which still provide the largest share of reportorial*
>
> *journalism in the United States, the metaphor that comes to mind is sand*
>
> *in an hourglass. The shrinking money left in print, which still provides*
>
> *90% of the industry's funds, is the amount of time left to invent new*
>
> *revenue models online. The industry must find a new model before that*
>
> *money runs out"* (Pew Research Center 2010).

The quote illustrates the challenge of developing a model, in which news consumers were willing to pay for content despite a plethora of free news sources available online, while facing diminishing returns from their offline business. Especially the "sand in an hourglass" metaphor is exemplary for how little time was left for newspapers in 2010 to reinvent themselves. At the same time, it highlights a core competence of traditional news organizations that continued to be important online: They were still providing the most content on the web. Specifically, news aggregators still depended on news organizations. As some of the most visited sites on the web they were collecting and linking news from these traditional sources and organizing them into

categories like sports, entertainment, politics, etc. Some of those news aggregators had very

limited success in own news gathering (e.g., Yahoo, AOL) and others entirely avoided it and

instead focused on computers to source content (e.g., Google News). Newspapers were afforded

with an opportunity to build a new strategy around their content.

However, not all newspaper content was still desired by the different stakeholders:

"The old model of journalism involved news organizations taking revenue

from one social transaction – the selling of real estate, cars and groceries

or job hunting, for example, – and using it to monitor civic life – covering

city councils and zoning commissions and conducting watchdog

investigations. Editors assembled a wide range of news, but the popularity

of each story was subordinate to the value, and the aggregate audience, of

the whole. And the value of the story might be found in its consequence

rather than its popularity. That model is breaking down. Online, it is

becoming increasingly clear; consumers are not seeking out news

organizations for their full news agenda" (Pew Research Center 2010).

While television had exposed this weakness in newspapers, the arrival of the web led to

the unbundling of news from other news stories. Therefore, the finished product (i.e., newspaper)

was detached from advertising revenues. Consequently, each news story (e.g., article) competed

individually with other articles on the same topic for advertising dollars. At the same time, some

news topics were generating more interest than others. Thus, while news organizations had

previously covered a plethora of topics in a finished product like a newspaper, they were now

more focused on more profitable news stories. As a result, more news outlets were reporting on

fewer stories, as summarized by the Pew Research Center (2010): "In the meantime, perhaps one

concept identifies most clearly what is going on in journalism: Most news organizations – new or old – are becoming niche operations, more specific in focus, brand and appeal and narrower, necessarily, in ambition."

Generally, there was now a greater focus of news organizations on the distribution rather than news gathering because consumer habits were changing:

> "[A]udiences now consume news in new ways. They hunt and gather what they want when they want it, use search to comb among destinations and share what they find through a growing network of social media. And the news industry does not know – and has done less than it could to learn – how to convert this more active online audience into revenue" (Pew Research Center 2009).

On the one hand, the above excerpt illustrates how emerging dependences on the web afforded news consumers more control over the content they were accessing with search (e.g., Google) becoming the predominant paradigm and thus leading to a fragmentation of audiences. With each news story competing on its own on the web against content on the same topic on blogs, in emails, or appearing in searches, news organizations shifted towards helping consumers find their stories even though it meant sharing profits in some cases (e.g., Facebook, Google). Archival materials show that accelerating distribution involved placing content on more online platforms and making it easier for consumers to share content with others. On the one hand, the same content was made available on podcasts, RSS feeds, email newsletters, and social media platforms. Search engine optimization became a key in appearing in more search results. On the other hand, sharing the content on those platforms was facilitated by including links and share buttons with the stories (Pew Research Center 2009).

On the other hand, it also shows that consumers were consciously moving online and their preferences what content looked like and how they wanted to engage with it were changing. The following excerpt aptly describes the Mosaic browser (which later browsers were modeled after), which fascinated consumers:

"One of the early classic ways to demonstrate the web was to click onto the website for the Louvre, to watch grainy images of paintings slowly appear on the screen. This was not pleasurable so much in what it actually delivered – better versions of the same images generally could be found in any number of art books – but how the experience inspired the viewer to imagine what else might be delivered. Mosaic enacted a kind of hope; it did not deliver new things so much as a sense of the possibility of new things" (Streeter 2011, p. 127).

Consumers were drawn to the web and away from other media because it was new and allowed them to engage in a dreamlike anticipation of what is possible. They were fascinated by something they had not previously seen, and they wanted more.

Consequently, the shifting entanglements had an impact on the necessity status of both newspapers and the world wide web in news consumption. As elements (e.g., advertisers) in newspaper entanglements were becoming more connected with the world wide web, the overall entanglements were decreasing around the old and increasing around the new medium. Resources at newspaper publishers (e.g., reporters, budgets) that were previously used to produce a newspaper were now shifting from the increasingly less profitable print medium online. Growing entanglements around the web fostered its necessitation, while decreasing dependences

surrounding newspapers expedited their de-necessitation. More possibilities for consumers to access news made it easier for them to recognize that they were able to live without newspapers.

This de-necessitation of traditional news organizations was also spurred by changes of journalism models:

"The traditional press model – the journalism of verification – is one in which journalists are concerned first with trying to substantiate facts. It has ceded ground for years on talk shows and cable to a new journalism of assertion, where information is offered with little time and little attempt to independently verify its veracity. Consider the allegations by the 'Swift Boat Veterans for Truth,' and the weeks of reporting required to find that their claims were unsubstantiated" (Pew Research Center 2005).

Required to provide content with fewer resources available paired with a profit orientation resulted in decreased reporting quality. There was a shift from a journalism of verification towards journalism of assertion. In a culture of assertion news consumers often receive the information from news organizations with limited time to or no attempt to independently verify its accuracy (Kovach and Rosenstiel 2000; Marriott 2007; Pew Research Center 2005). While it had emerged with the rise of cable television, the 24-hour news cycle and variability of the web accelerated the move toward assertion journalism.

In its most extreme form assertion penetrated the blogosphere and later social media. For instance, to encourage citizen participation and interactions blogs were designed to allow anyone to post their point of view and reporting and verification of the information would be conducted by other bloggers. This allowed for both correct and incorrect information to spread. On the one hand, the blogs Power Line and Little Green Footballs helped uncover errors in CBS reports that

relied on falsified documents (Kurtz 2004). On the other hand, they helped spread

misinformation that the GOP had manipulated the Ohio presidential election in 2004 (Zeller

2004).

Additionally, newsmakers were capitalizing on this possibility to deliver messages

unchecked on the world wide web:

> *"A generation ago, the press was effectively a lone institution*
>
> *communicating between the citizenry and the newsmakers, whether*
>
> *corporations selling goods or politicians selling agendas, who wanted to*
>
> *shape public opinion for their own purposes. Today, a host of new forms*
>
> *of communication offer a way for newsmakers to reach the public. There*
>
> *are talk-show hosts, cable interview shows, corporate Web sites,*
>
> *government Web sites, Web sites that purport to be citizen blogs but are*
>
> *really something else, and more"* (Pew Research Center 2005).

The above quote illustrates a change in dependences in news consumption entanglements.

It is indicative of the end of news organizations as the public watchdogs and raises questions of

how information the consumers receive is accurate – a concern that would later be amplified

during the era of smartphones. Newsmakers used to depend on news organizations to reach their

audience. Now news organizations depended on newsmakers for content who had different

options to disseminate information. Specifically, they had the opportunity to control the initial

accounts of incidents through press conferences and press releases, which were passed on by

news organizations with little reporting or verification, leaving consumers exposed to potentially

false information. At the same time, they had the option to engage directly with their audience on

web sites they controlled and on social media platforms like Twitter entirely bypassing the news media.

Consumers often preferred hearing directly from newsmakers or individual voices they trusted because the erosion of public trust in news media that started in the 1980s reached new heights with the emergence of the world wide web, increasingly positioning the new medium as a trusted outlet:

> *"The Web is the only part of the mainstream news business that generally is seeing audiences grow, especially among the young. People like the convenience of the Web, it's availability at work, its speed for delivering breaking news, and increasingly they are coming to trust the accuracy of the information they receive there"* (Pew Research Center 2004).

The public stereotype that news media were financially motivated rather than by public interest was reinforced with the introduction of the world wide web, further disentangling consumers from newspapers and television news.

To address branding inconsistencies many news organizations started to restructure their brand around the changes in their content: hyper localism, personal involvement, involvement of everyday people, and personality and opinion:

> *"A growing pattern has news outlets, programs and journalists offering up solutions, crusades, certainty and the impression of putting all the blur of information in clear order for people. The tone may be just as extreme as before, but now the other side is not given equal play. In a sense, the debate in many venues is settled – at least for the host [...] The most popular show in cable has shifted from the questions of Larry King to the*

answers of Bill O'Reilly. On CNN his rival Anderson Cooper becomes

personally involved in stories. Lou Dobbs, also on CNN, rails against job

exportation" (Pew Research Center 2007).

Building news organizations around personality and opinion, in turn, led to the emergence of vastly dissimilar news agendas. Rather than presenting consumers with different sides of an argument, personalities were delivering only answers to their audiences. With the three cable news networks CNN, MSNBC, and Fox News appealing to vastly different audiences (e.g., liberal versus conservative), they contributed to the development of a journalism of affirmation, which builds an audience on attracting people seeking news to confirm their existing views and opinions, as opposed to verified and complete reporting (Carder 2008).

The proliferation of this model also raised the profiles of individual journalists (e.g., micro bloggers) and powerful influencers who were tied to "advertisers," while to some extent lowering profiles of news organizations online: "Through search, e-mail, blogs, social media and more, consumers are gravitating to the work of individual writers and voices, and away somewhat from institutional brands" (Pew Research Center 2009). These individual contributors became additional elements in news consumption entanglements on the web.

Overall, the (at least perceived) greater control experienced by both newsmakers and consumers who preferred hearing directly from newsmakers or voices they trusted is why both groups increasingly favored the world wide web for news. It led to stronger dependences with the platform and helped shift entanglements away from newspapers and to a lesser extent from television. Greater entanglements, in turn, meant that it was gradually more difficult for news consumers to avoid the web, contributing to it becoming a necessity in their news consumption over time.

In summary, the predominant observation in the era of the web is the unbundling of news and advertising dollars moving online. In their predigital business model, news organizations were able to fund more costly reporting with revenues generated from more profitable news stories. Editors were assembling these stories into a finished product like the newspaper, which had an aggregate value to its audience making it a necessity at the time. Online, however, news consumers did not visit news organizations for their complete news agenda. Instead, they searched for news by topic and events identifying multiple outlets via search. This fundamentally affected the finances and newsroom culture, as well as the entire business models of news organizations. While some newspaper publisher like the New York Times and Wall Street Journal developed paywall models, most outlets continued to prioritize a business model financed by advertising revenues online as opposed to charging news consumers for content. However, a large portion of advertising dollars was taken by technology companies like Google and Facebook, who were driving traffic to news sites. With a complicated system build around algorithms only the few news sites with enough traffic would make significant advertising revenues (Athey and Mobius 2017; Lee and Chyi 2015).

On television, cable networks lost people to the web because of a similar appeal of a 24-hour news cycle but continued to be a necessity partially because their revenues came from subscriptions in addition to advertising dollars. In addition, fewer consumers were willing to pay for cable because of the rise of streaming platforms like Netflix. Not having access to cable news channels further drew consumers to the web as a platform for news. Broadcasting networks diversified their news offerings where morning shows with lighter content supplemented the evening newscasts. The evening programs remained largely unchanged still focusing on reported-written-edited correspondent packages, which allowed them to position themselves as

more credible news outlets than their cable counterparts. However, given the decline of advertising dollars for broadcasting networks in general more of them started demanding a share of the subscription fees local stations were receiving from cable providers as opposed to paying them a fee to distribute their content in hopes for a larger advertising audience. This development was a sign of advertising dollars moving from television to the web (Pew Research Center 2010, 2011).

To conclude, shifts in entanglements led to changes in the necessity statuses of the different media. On the one hand, elements and associated dependences were increasing around the world wide web. On the other hand, they were decreasing around newspapers and television. As many elements that made up newspaper entanglements were shifting online, the de-necessitation of newspapers was accelerated. While television remained a necessity, it also started losing consumers to the world wide web, where its immediacy advantage over newspapers was rendered mute. The web was emerging as a faster and more controllable way to consume the news than newspapers and even television had allowed for, and the smartphone would further speed up news consumption.

Overall, we begin to see a disentangling around newspapers and television news consumption because consumers are moving away from these media, pulling advertisers along the path to the world wide web with them. The high barriers of entry created around news by newspaper organizations and television news were removed and technology companies were introduced to news consumption entanglements. Because traditional news organizations did not see an immediate impact on their profits, they lacked innovation on the world wide web allowing for those companies to innovate and draw more consumers down the path of using the web and later the smartphone for news.

The unbundling of news (i.e., disentangling news from other news stories) and detachment from news brands were additional signs that traditional news organizations would need assistance in generating audiences and readership, thus paving the way for tech companies to take a more dominate role in news consumption entanglements. The introduction of social media and topical blogs furthered the fragmentation of news audiences making news echo chambers even smaller. Smartphones would continue the path toward greater fragmentation of audiences down to one.

Smartphone Necessitation in News Consumption

With the world wide web many new human and thing elements became part of news consumption entanglements that led to fundamental changes in how news was produced and consumed. The smartphone becoming an indispensable part of news consumption marks the most recent transformation of these complex webs. A history of the smartphone is presented first to provide a backdrop for the subsequent analysis of changes in news consumption entanglements.

History of the Smartphone

In learning about the smartphone there is a tendency for people to associate former Apple CEO Steve Jobs with the beginning of its history. In 2007, Steve Jobs took the stage at the MacWorld expo to introduce the iPhone as "a revolutionary mobile phone, a widescreen iPod with touch controls, and a breakthrough Internet communications device with desktop-class email, web browsing, searching and maps" (Apple 2007). However, it is difficult to identify a single point in time as the moment the smartphone was invented. Just like with other

technologies that have transformed the news industry, it has rather emerged as a product of other

technological innovations and the entanglements associated with them. One could argue that

Graham Bell's "speaking phone" from 1876 laid the foundation for a mobile version of the

phone resulting in the development of the cell phone, which in turn resulted in different types of

phones with Internet capability and personal digital assistants (PDAs), eventually leading to the

introduction of the iPhone (Klemens 2010; Merchant 2017).

One could also further trace the entanglements surrounding the smartphone and would

discover that the different smartphone components have their own history and associated

entanglements. One could, for instance, trace the advancement of camera technology, GPS, and

infrastructure like cellular towers that the smartphone depends on. However, to not go beyond

the scope of this dissertation I want to just highlight a few of the milestones in smartphone

history. One of the first important markers to mass handheld communications devices was the

FCC agreeing to allocate bandwidth frequencies for the American cellular phone market

(Klemens 2010). Motorola's Martin Cooper is credited with the first cellular phone call with the

DynaTAC in 1973 (Klemens 2010). While first trials of cellular networks were conducted in

Chicago, IL, and Newark, NJ, in 1978, the first cellular network in the United States did not

launch until 1983. Consumers could use the service for a setup fee of $3,000 and recurring fee of

$45 monthly with further charges of 24 to 40 cents per minute (Reid 2018).

The first device to be marketed as a smartphone was IBM's Simon Personal

Communicator in 1992 combining the features of cell phones and PDAs (Tweedie 2015). Several

other devices emerged including the Hewlett-Packard OmniGo 700LX (running Windows),

Nokia 9000 Communicator (cellular PDA with Internet connectivity), and the Palm PDA in

1996, as well as PalmPilot Personal and PalmPilot Professional in 1997 (Reid 2018). In 1998,

InfoGear Technology (Later Cisco Systems) launched a mobile phone with a touch screen and Internet capability, which they called the "iPhone," but failed to protect the continued use of the name (Hogan 1998). None of the early smartphones were commercial successes until the introduction of the second-generation BlackBerry by Research in Motion (RIM) in 2002, with Internet access and productivity tools like email, notes, faxing, and text messaging. The BlackBerry came to be colloquially known as the "CrackBerry" because its users (primarily businessmen and businesswomen) came to increasingly depend on the device, which had the first push notification system that has become commonplace today (McNish and Silcoff 2015).

With the introduction of Apple's iPhone in 2007 and other smartphones being developed thereafter, the domination of the BlackBerry faded. Today, there are thousands of different smartphone devices. Apple (iOS) and Google (Android) have emerged as major competitors on the software operating the phone systems, while Apple is going head-to-head with Samsung on the hardware side. All devices are much more powerful than Apple's original iPhone including improved battery life, high powered cameras, and advanced applications (apps). With such power come large entanglements. For instance, smartphones are connected to wireless network servers and data centers, where apps and other data are accessed. Computers and servers connected to those networks operate 24 hours a day, seven days a week, and must be cooled with air conditioning systems. All of these systems including device manufacturing facilities require nonstop electricity, which means that an average iPhone uses more energy per year than a medium refrigerator with Energy Star rating. When focusing on the manufacturing process of a smartphone alone, it involves the sourcing of rare minerals through a complex process that creates a lot of waste with very few materials being recycled. Hence, the smartphone's carbon

footprint exceeds that of desktop computers, laptops, and monitors (Belkhir and Elmeligi 2018; Reid 2018).

When it comes to news, the smartphone has emerged as the primary device to consume news for most Americans having first surpassed newspapers in 2011 (Pew Research Center 2014). How news consumption entanglements unfolded with its introductions is presented below.

Changing News Consumption Entanglements

While the introduction of the world wide web led to more complex entanglements in news consumption this intricacy was compounded with the smartphone. One of the reasons for the exponential growth of dependences was that smartphones had necessitated in other parts of life outside of news consumption unlike any other medium. In general, as we move from newspapers (not a necessity outside of news consumption), television, and world wide web, toward the smartphone, the newer the medium the more it has necessitated outside of news consumption, as well. Hodder (2014, p. 26-27) illustrates the human commitment to smartphones:

> *"[R]egarding the new digital technologies we use terms such as "air"*
>
> *book, the "cloud," the "Web," all of which terms seem light and*
>
> *insubstantial, even though they describe technologies based on buildings*
>
> *full of wires, enormous use of energy, cheap labor, and toxic production*
>
> *and recycling processes. An average iPhone uses about 361 kilowatt-*
>
> *hours each year after factoring wireless connections, data usage, and*
>
> *battery charging. A medium-sized refrigerator with an Energy Star rating*

only uses about 322 kilowatt-hours a year. The main problem is not the

phone itself, but all the systems that run continuously to support it. There

are computers and servers that run twenty-four hours a day, seven days a

week. There are air-conditioning systems needed to keep the servers cool.

There are manufacturing centers to build the devices, and nonstop

electricity to power the broadband networks."

This quote provides an insight into the exponential growth of entanglements behind powering a smartphone and using the services it enables. It shows that the smartphone is caught up in a large number of entanglements and that humans have invested a lot to sustain these entanglements. Humans are entrapped in the continuous care of the described infrastructure – an indication for the asymmetrical relationship they have established with mobile devices. Most consumers cannot comprehend this extensive infrastructure that is required to power their devices, thus making it more difficult for them to evaluate the relationship with them more critically.

As a medium to consume news the smartphone enables news organizations to reach not only more but also new consumers. For instance, rural populations like Native Americans, who largely did not shift their news consumption online because of a lack of broadband access, now move directly to the smartphone as a solution (Pew Research Center 2012). Underlining the greater accessibility offered by the mobile devices, Expert 1 (Director of Product for Newspaper Legacy Organization) notes that "not everyone can afford a $1,000 MacBook computer but they can afford a $20 Android smartphone, which is their computer. That's their everything. Basically, smartphones are just replacing the PC market one-to-one over time."

These consumer-related observations show that more humans became part of news consumption entanglements with each of them forming dependences with various other human and thing elements. People are connected to the web via their smartphones anywhere they are throughout the day, thus increasing news consumption on the go in general and immersion in applications and platforms like Facebook in particular, as stated by one of our interviewees: "Smartphones also unlocked social media as a way of human connection and that's powerful in lots of ways. And one way in which it is powerful is that it accelerates the distribution of news" (Expert 3, Chief Product Officer at a web-only news organization).

In addition, smartphones have allowed citizens to play more active "produser" (producer and consumer) roles surrounding news events, as illustrated by Bruns (2011, p. 133):

"In Jay Rosen's famous formulation, citizen journalism is fueled by 'the

people formerly known as the audience' (2006) who now actively engage

in the journalistic process themselves. While media and cultural studies

have long established that even in previous times, audiences were never

merely passive and uncritical recipients of media messages, but already

actively engaged with what they read, heard, and saw, then, the main

difference is that now they are able to engage in the process itself: that

they have access to means of content creation and dissemination which no

longer necessarily constitute a system secondary to the technologies

available to mainstream media organizations."

The above excerpt emphasizes the new capabilities afforded to the consumers by devices like the smartphone to become engaged in the production of news, thus further penetrating entanglements of news organizations. One such form of participation is providing their own

accounts on social media sites like Twitter, which then are being shared by different news outlets. Ordinary consumers were provided with a mass online audience through this "megaphone effect" (McQuarrie, Miller, and Phillips 2013). While a possibility for more participation emerged with the introduction of online news, it improved with the smartphone's affordances of mobility and photo and video capabilities.

Traditional news organizations were also looking at the changes in news consumption with the introduction of the smartphone, as Expert 2, founder of a news media startup, recounts:

> *"I'd describe it as consumers moving over to smartphones as a primary habit, and the news industry following them over, trying to catch up with that trend. And that's a key part of the disruption we're seeing in news over the past 10 years. Consumers moved over from desktops, and media companies lost both top-of-mind as well as attention. In many ways, the shift to smartphones was the real killer of traditional news and not just a generic shift to digital. The shift to digital tore down pricing models, costs and monetization. The shift to mobile ended the direct connection between people and news brands. That connection is now delivered through intermediaries – the Apple App Store, Facebook, Android Play Store, and so on."*

The above quote reiterates the financial challenges that news organizations experienced with the introduction of the world wide web. Traditional news organizations were losing their advertising revenues in their core business but were not able to generate the same revenues online. Overall, technology companies were driving traffic to news websites and, in turn, were

receiving a large share of advertising revenues from search and display ads, signaling a mutual

dependence. This dominance of technology companies is reinforced on mobile devices:

>*"Improved geo-targeting is allowing many national advertisers to turn to*
>
>*Google, Facebook and other large networks to buy ads that once might*
>
>*have gone to local media. In addition, Google and Facebook are also*
>
>*improving their ability to sell ad space to smaller, truly local, advertisers,*
>
>*again taking business that once went to local media. It is hard to see how*
>
>*news organizations will secure anything like their traditional share.*
>
>*Google is now the ad leader in search, display, and mobile. Once again,*
>
>*in key revenue areas, it appears the news industry may have been*
>
>*outflanked by technology giants"* (Pew Research Center 2013).

The above quote casts doubt on the ability of traditional news organizations to be able to

generate a notable amount of advertising revenues because of the dominance of technology

companies now able to offer location-based ads on mobile devices. One of the interviewees aptly

describes the increasing disparity in how advertising revenues are divided as "trading print

dollars for digital dimes for mobile pennies" (Expert 3). A smaller share of advertising dollars

from established advertising categories like search and display forces news organizations to

identify other streams of income. For instance, many news websites now carry sponsorship ads

posted between news headlines and linking to other websites. In addition, there are growing

experiments with native advertising, which is "website content that is paid for by commercial

advertisers – but often written by journalists on staff – and placed on a news publishers' page in

a way that sometimes makes it indistinguishable from a news story" (Pew Research Center

2014).

Overall, as a result of the competitive environment in the advertising space both traditional and emerging web-only news organizations (e.g., Buzzfeed and Vox Media) are forced to look for new revenue models. Expert 1 gives insights into thought processes within traditional news organizations at the dawn of the smartphone:

> *"I think that newspapers got really good at honing the print product and doing product innovation there for so long and at a very high revenue rate that people got less innovative as a company culture. Then it was like when the Internet came you couldn't be lazy anymore with how you think about everything. How is your core business news distributed, who are your competitors? Competitors felt very limited until the Internet happened but now you were competing with the whole Internet. Mobile furthered that disruption as in 'Okay, guys! Don't screw this up twice.' When we redesigned our mobile app a few years ago it was like pulling teeth. I was like 'We have to do it now, we have to.' We pushed and did it and hard mobile traffic skyrocketed. It was just perfect timing: 'Everyone else has a crappy mobile website. Let's not have a crappy mobile website!' And it was great."*

The quote underlines the failure of traditional news organizations to realize the affordances of the world wide web and the subsequent pressure to innovate on the smartphone, which was attempted through mobile applications. Apps allowed the user to create digital experiences more conducive to the smartphone as a medium rather than just reusing shovelware on mobile websites from other platforms. It was also a departure from the focus on the printed newspaper as the primary product, thus slowly disentangling it from news consumption. In

addition to their previously existing and growing dependence on aggregators like Google and social networks such as Facebook, they now also must adhere to standards dictated by device makers (e.g., Apple, Samsung) and software developers (e.g., Apple, Google's Android) to be able to distribute their content on their devices.

Rather than focusing on competing for advertising dollars with others many traditional news organizations are shifting their priorities toward consumer experiences, as smartphones allow for stronger connections:

> *"Consumers are reading more immersively on [mobile] devices than on earlier technology. New survey data released here add to that. And these mobile news consumers are even more likely to turn to news organizations directly, through apps and home pages, rather than search or recommendations – strengthening the bond with traditional brands. The evidence also suggests mobile is adding to, rather than replacing, people's that news consumption"* (Pew Research Center 2012).

The process described here involves more immersive experiences that often contribute to consumers visiting news outlets directly through their applications, websites, or social media accounts rather than using search engines (Pew Research Center 2012). Thus, the smartphone enables news organizations to minimize their dependences on intermediaries to be connected with consumers. In turn, stronger bonds are possible between consumers and news brands. Consequently, consumers can grow dependent on them, which allows news organizations to offer services that consumers are willing to pay for via subscriptions, thus contributing to smartphone necessitation. At the same time, it becomes very important to provide a high-quality experience to sustain a paying customer: "People don't want to pay for a subpar product. And if

you miss the opportunity to carry habit with the same current reader, then you have lost that customer forever. Very low probability of winning them back" (Expert 1).

Despite of the possibility for stronger direct connections with consumers through the smartphone it must also be noted that the future of news organizations is nonetheless dictated by technology companies:

> *"[W]ell-reported news stories are not worth much without the power of strong distribution and curation channels. What is less clear is how the tug and pull between tech and journalism companies will evolve to support each other as necessary parts of the whole, and what this rebuilt industry will ultimately mean for the public's ability to stay informed"*
> (Pew Research Center 2016).

The dominance of the news industry by technology companies is not only a consequence of their control over the advertising market. For instance, digital assistants like Siri can present news orally rather than in written form. Long searches for alternate sources to compare are not possible. Thus, being first or last in a search result provides an advantage, which is entirely controlled by technology companies. In addition, as demonstrated in the quote above, technology companies are supplying audiences for news organizations through their software and hardware. News organizations are still providing almost all original reporting and writing, and tech companies depend on these stories to be able to monetize the news business. However, while companies like Apple, Facebook, and Google have other revenue streams, especially traditional news organizations strongly depend on tech companies for the initial connection with consumers. Positioning themselves as intermediaries between news organizations and consumers technology companies have replaced news organizations as the connectors of anyone who needs to reach

consumers. Several technology companies have successfully built ecosystems that allow them the opportunity to manage the experiences of many consumers. For instance, Apple has created an ecosystem of devices and software. Many Mac users buy iPhones and vice versa because these devices work flawlessly with each other. To capitalize on this convenience consumers tend to buy multiple items from different product categories within that ecosystem. Not complying with Apple's requirements to be part of this ecosystem (therefore not offering applications in Apple App Store) would mean for news organizations to not have access to millions of consumers. In addition, consumers may be enticed or entrapped into using the ecosystems' own news services (i.e., Apple News app), thus limiting consumers access to news organizations not contributing to this app. Accordingly, news organizations may be entrapped into these asymmetric relationships with certain tech companies (Copeman 2019).

Additionally, technology companies may control what kind of content users are receiving. This becomes especially evident on social media platforms like Facebook where consumer news feeds are determined by complex computer algorithms:

> *"Facebook's News Feed has long prioritized the posts that users' friends interact with, but it also has displayed other content that Facebook expects users will find it interesting. This will still be true, but Facebook will weight material that comes from within users' social networks even more heavily than it has in the past. Unsaid, but rather obvious, is that social networks tend to comprise like-minded individuals, who tend to post items that fellow members agree with. The feelings of fulfillment and well-being that Facebook users experience could result from being told, over and over, 'You're right. You're right. You're right'"* (Borchers 2018).

This setup contributes to consumer entrapments in very small media echo chambers reaffirming their beliefs rather than allowing them to consider other viewpoints and fostering the creation of imagined communities. The next quote illustrates how laymen can drive news consumption for others:

> *"The News Feed's algorithmic ordering of content flattened the hierarchy*
>
> *of credibility. Any post by any producer could stick to the top of our feeds*
>
> *as long as it generated engagement. 'Fake news' would later flourish in*
>
> *this environment, as a personal blog post was given the same look and feel*
>
> *as a story from the New York Times"* (Haidt and Rose-Stockwell 2019).

Social media companies are motivated by engaging users, which has allowed for anyone to be able to compete with articles from traditional news organizations regardless of their level of credibility. The "fake news" problem is that an increasing number of consumers are seeing problematic, inaccurate, or outright false news. The problem has led to increased polarization of society (especially on political issues). Social media companies such as Facebook are being criticized for not doing enough to spread misinformation by many and for censorship by some. The lack of safety measures on these platforms has allowed for the uncontrollable spread of misinformation and conspiracy theories. An article in the Washington Post about the spread of COVID-19 misinformation demonstrates the proliferation of influencers on Twitter:

> *"The spread of this story demonstrates some common patterns. First, a*
>
> *small group of key social media influencers can amplify the spread of*
>
> *misleading information and boost the long-term profile of previously*
>
> *obscure authors. Second, social media platforms like Twitter interact*

quickly with other media like cable news; Fox News personalities played a

key role in spreading the story" (Starbird, Spiro, and West 2020).

Influencers are able to expose their large following to a news story and validate its content. In addition, entanglements with elements such as cable news personalities help to further rapidly spread the news. Particularly right-wing content thrives on platforms like Facebook. The algorithm's bias toward outrage ranks content that consumers are likely to react to emotionally higher, and thus provides more interactions with such messages with right-wing commentators, allowing for parallel news universes.

Overall, the above three quotes demonstrate the power of social media to entrap news consumers in small echo chambers where their beliefs are reaffirmed by peers and influencers through the use of algorithms. While social media emerged during the dominance of the world wide web in news consumption, the smartphone unlocked its full potential as noted above by Expert 3.

Another reason why news organizations will continue to depend on technology companies in the future is because those have become experts in gathering and monetizing consumer data, an increasingly valuable commodity, as emphasized by Expert 2:

"With traditional analogue media, we had no way of answering simple

questions like: Who's reading or watching my news? How many of them

got to page 5? How many of them stuck around throughout the show?

Digital lifted the lid on that — everything became measurable."

News organizations depend on data related to user experiences outlined in the previous quote to find and retain customers, making them dependent on tech companies. Putting financial interests first these companies are turning a blind eye on the spread of false information and

152

conspiracy theories. It seems more imperative for those organizations to retain users that prefer

to spread and engage with false content rather than losing the dollars generated from the use of

consumer data. While consumers are more aware of their digital footprint and the privacy issues

associated with that, they also depend on the "free" and resourceful services (e.g., Facebook)

provided and/or supported by technology companies. News organizations find themselves in a

difficult situation trying to juggle their need for such data to effectively reach their audience, the

limited access to data provided by technology companies, and re-establishing trust with their

audience (Geslevich Packin 2020; Pew Research Center 2012). The importance for news

organizations to have information on news consumer behavior in creating content is supported

by Expert 3:

> *"Being an editor in the mobile app environment you find you have to shift*
>
> *your day differently. People obviously reach for their smartphone*
>
> *sometimes before they reach for their partner in the morning. We find that*
>
> *our traffic starts to pick up around 5:30 in the morning meaning that we*
>
> *really have to be fresh. These are the same people that would check us out*
>
> *right before they went to sleep at 10:30 or 11:00 at night. So, we have to*
>
> *make sure the content is new and updated."*

The quote underpins the necessity status of the smartphone given that it is the first and

last thing consumers interact with every day. Additionally, it illustrates that news organizations

continue structuring their news offerings around consumer habits. Just like the morning paper

and the evening television newscasts were developed around daily routines, the smartphone

allows a deeper studying of these behaviors. The focus on habit is emphasized by Expert 1:

"How do we fit into someone's habit rather than changing their habit? It's

not just trying to force someone to subscribe. It's more like if you can

show clear habit over time then value is the natural understanding of that.

If you are going to be using it every day, then you'd probably would pay

for it. And where we are, that's how we think about things."

While news organizations are not trying to "force someone to subscribe," there is an

active approach in trying to influence the behavior of readers, as described by Expert 3:

"Habit is kind of the holy grail to success. Any news provider wants to be

essential in the eyes of its audience. When you can be consistently

excellent – and the bar is very, very high – to encourage habit amongst

your readers or watchers, that's a really, really powerful thing. I would

say that drives a lot of my work. We are trying to create experiences that

people want to spend time in."

The quotes above underline the dependence of news organization on data provided by

tech companies. They show the extent to which these news organizations are not only capable of

but required to satisfy individual consumers to gain and retain them as subscribers. They are now

more concerned with consumer preferences than they used during the height of the print

medium. At this point, news organizations are so invested in analyzing data for their success on

their applications, websites, and social media that turning back becomes difficult. The

smartphone is a device that is not commonly shared between humans, thus providing individual

consumer data for the analysis, contributing to the device being a necessity in news consumption.

Previous media simply did not offer such richness of data.

The importance of habit in news consumption is not new. However, now the entanglements surrounding news consumers are more complex involving more elements and dependences. For instance, during the golden age of newspapers publishers had a direct connection with readers and habits were easier to establish. Today, many human and thing elements are involved. To reach their audience news organizations have mutually dependent relationships with technology companies, computers, networks, engineers, and algorithms, to name just a few. Describing the above dependences, however, shows also that we cannot imagine news consumption without the smartphone because humans have invested so much in sustaining the surrounding entanglements, making it a necessity:

> *"A few years ago, there was still this whole movement around 'Mobile First.' I didn't want to hear anyone saying that because it's a given, and really, we should be thinking 'Mobile Only,' looking at whether stuff doesn't work on mobile. It's the new future"* (Expert 1).

Below, we recount the transformation of news consumption entanglements that have led to the necessitation of the smartphone in news consumption entanglements.

Smartphone Necessitation: Path Dependency and Realizing Affordances

Studying necessitation through the lens of entanglement theory allows us to identify both human and thing elements and how their dependences contribute to a product becoming near-universally perceived as a necessity. It especially permits us to address the question of why it was no surprise it this way. Path dependency captures the idea that humans and things are so intertwined with each other and with other human-thing dependences that daily practices are pulled toward specific directions and that humans are drawn in certain ways that produce

155

additional entanglements. Once a certain level of entanglements is reached it becomes very challenging and expensive to turn back (Hodder 2012, 2018).

Through a historical analysis of news consumption entanglements, I can infinitely continue exploring the question of why it was not unexpected that entanglements unfolded the way as described through the different sections. Tracing entanglements in news consumption enables us to understand why the smartphone became a necessity because of changing entanglements. The origins of its necessitation in news consumption are simply the unintentional consequences of the daily emergence of human-thing entanglements. In other words, necessitation emerges as a result of small changes within entanglements that produce unexpected issues that need fixing. The solutions to these problems, in turn, increase greater dependences and entanglement complexity.

When tracing news consumption entanglements we can see the unfolding path toward smartphone necessitation. Newspapers emerged from people's desire to inform and being informed. However, for papers to become a mass medium a lot needed to happen over the course of three centuries, including the invention of the printing press, the United States becoming a consumer economy, and so on. As the newspaper was moving towards a mass medium publishers were developing a business model around papers that started to more heavily rely on revenues from advertising. In order to grow profits they needed to increase circulation, which required content that was appealing to a more diverse group of readers. All these solutions toward a more profitable business model increased the number of elements involved in news consumption and the complexity of dependences between them.

Reading the newspaper became a habitual activity during the golden era of newspapers making the print medium a necessity. White collar workers were either receiving their papers on

156

their doorstep in the morning and were reading it over breakfast or they were buying them on their way to work at a newsstand. Factory workers were known to read the afternoon and evening papers after their shifts. What different readers had in common was that they were getting the news at the same time and/or during the same activity. Newspaper publishers were structuring their news production activities around consumer habits to retain those readers and grow their circulation. Revisiting the above-described newspaper entanglements we can see that different problems lead to different solutions, which in turn led to greater entanglements.

When the necessitation of television accelerated in news consumption, the entanglements increased exponentially. Television addressed different problems in news consumption. For instance, film footage allowed for a deeper experience with news than a newspaper could do. In addition, cable disrupted the news cycle significantly (i.e., reading the paper at a specific time of day) by allowing constant access to news. The resulting entanglements affected the role of newspapers in news consumption, but television did not replace them immediately. While some news publishers disappeared, most businesses lost some advertising sales, but maintained or grew circulation because their readers had established strong habits around reading the paper. Television became an additional necessity and helped viewers create habits around its usage, for instance, regular nightly newscasts. Overall, while differences existed for different types of news (e.g., sports, political, weather), news consumption continued to revolve around consumer habits.

During the height of television in the second half of the 20th century both newspaper and television news organizations found themselves entrapped in a business model that forced them to prioritize profits, which came mostly from advertising sales, over quality journalism. As a consequence, there was a desire in consumers for higher quality reporting from different sources initiating the de-necessitation to a greater extent for newspapers and to a lesser extent for

157

television. The world wide web emerged as a solution to this problem and started to necessitate, because it provided access to a plethora of information for consumers to choose from. For example, it facilitated a direct connection to newsmakers without reporters serving as intermediaries.

Overall, the development of the world wide web marked a time period of a notable amount of problem solving in news consumption. For instance, newspaper publishers found themselves entrapped in a business model that had served them well for decades. They found it difficult to innovate on the new platform. Instead of realizing the web's affordance of immediacy newspaper publishers recycled articles from the print version online. Consumers' news habits were changing in part due to this use of shovelware, thus strengthening other elements like news aggregators in the entanglements. For instance, visiting portals like AOL for news naturally evolved into habitual behavior because it was the first page that appeared when opening the browser after connecting to the Internet. Overall, with changing habits for both newspaper and television news organizations the shift to the desktop tore down pricing models, costs, and monetization. It also ended the direct connection between consumers and news brands. However, the emerging news intermediaries still depended on news organizations to provide the content.

We can trace a continuous fragmentation of consumer habits in which types of news they accessed as more news outlets and mediums emerged and entanglements increased, while there was a consolidation in the channels and sources consumers use to access news. In the age of the newspaper habits revolved around professions and mainly focused on using the newspaper because of a lack of competition. Adding television news led to a first fragmentation because newspapers were not the only news medium anymore. With the introduction of the world wide web fragmentation increased exponentially. Some news consumers maintained strong habits

158

around newspapers, others were getting their news from television, and yet other consumers were favoring the web. However, many consumers were developing habits involving a mix of all these three platforms. As a result of this increase in news consumption entanglements the habits of one consumer were unlike the habits of any other. Such a fragmentation of habits down to the individual consumer created the problem for a lot of news organizations to establish an online audience. As more consumers were moving online news organizations were forced to change their business model, while being entrapped by their existing business structures. Technology companies had enabled them with access to a growing number of consumers, but at the same time limited them in reaching those audiences. The same technology companies, however, were facing the problem that they were not successful at creating their own news content. So, their success came at the expense of struggling news organizations, which were a crucial element in their business models.

Therefore, the introduction of the smartphone can be described as a solution to many of the problems that emerged as a result of the increasing complexity in news consumption entanglements. It offered both news organizations and technology companies a path for sustainable business strategies. The former are able to monetize their core competency, which is producing news content. The latter continue to successfully connect people with content (i.e., news) and advertisers without having to produce any of the content. For instance, while social media platforms like Facebook were created before, the smartphone unlocked social media for many consumers. It also resolved many of the problems that consumers were experiencing as a result of growing news consumption entanglements. For example, more people who had been increasingly disconnected from news (e.g., Americans in rural areas) now have access to it via their phones. Most importantly, the smartphone provides consumers with an individualized

consumer experience. They (feel they) have some control over what kind of news, from which outlets, when, and how often they consume.

The smartphone has become fully entangled with a wide range of elements and relationships because news organizations, technology companies, news consumers, and other elements in the news consumption entanglements have realized its affordances to such an extent that it is very difficult to live without it. For instance, with its mobility and immediacy no other device is better equipped to provide such individualized experiences as above. Consumers always have their phones with them and develop strong news consumption habits surrounding them. At the same time, news organizations and technology companies have the capability to track individual user behavior with the smartphone. It allows them to deliver such customized experiences and to facilitate habit creation. After all, their success hinges and has always hinged on habitual news consumption.

Overall, after studying the increasing complexity in news consumption from the dominance of the newspaper to the prevalence of the smartphone, it can be concluded that the smartphone has become a necessity. Necessitation emerged as a result of numerous small changes within entanglements over time, which, in turn, produced unexpected problems that needed fixing. The solutions further increased entanglements and led humans and things down a pathway toward smartphone necessitation. As the affordances of smartphones were gradually exploited they fully entangled with a wide range of humans and things. Eventually a level of entanglements was reached that made it difficult and expensive to turn back or disentangle, making the smartphone a necessity in news consumption.

CHAPTER VI

DISCUSSION AND CONCLUSION

Much research has been concerned with what constitutes necessities and how these are

related to pertinent concepts, such as needs, wants, desires, and luxuries (Duncan 2002; Fraser

1998, Hoyer and MacInnis 2004; Kerin, Hartley and Rudelius 2004; Sheth and Mittal 2004).

Using thing-focused approaches, earlier studies are primarily concerned with classification

schemes using dichotomies such as need-want and necessity-luxury. These studies see needs as

given basic human requirements (e.g., air, water, food, clothing, and shelter), which transform

into wants when directed to specific products capable of satisfying the need (e.g., Arndt 1978).

To move beyond thing-focused approaches, this research first provides a consumer perspective

and then offers a more comprehensive investigation of necessitation through the lens of

entanglements.

First, I have presented a consumer perspective that employs a human-focused viewpoint

and challenges divisions in thing-focused approaches. It supports other research in arguing that

necessities cannot be studied without considering the social and historical contexts (e.g., Buttle

1989; Firat 1987). How consumers perceive the increasing necessity status of the smartphone in

news consumption is characterized by their own experiences and personal historical

circumstances. This perspective expands our understanding of how consumers live through and

remember sentimental occurrences through which products move from not being seen as

161

necessities to being perceived as such over time. The consumer perspective thus moves beyond classification and positions product necessitation as consumer lived experiences and life narratives. In doing so, the consumer perspective contributes to the theoretical understanding of established dichotomies, such as need-want or necessity-luxury. Considering the scarcity of research on the movement of products in such dichotomies the offered consumer perspective moves toward better understanding necessities and the shifts leading up to this status. It presents the turning points along the road through which consumers come to see products as necessities. The result of analysis and interpretation of individual stories is a macro narrative of product necessitation, highlighting perception-based shifts in the status of products from nonnecessary to necessary. Product necessitation is comprised of five stages: familiarization, transformation, memorialization, (re)integration and reconstruction, and solidification. In summary, necessitation begins for most consumers with their initial familiarization with the product. Next, a relevant event transforms his or her perception of the product. This transformation is then memorialized in a celebratory or punitive way. Thereafter, the product is reintegrated and reconstructed within the life of the individual. Eventually, the product comes to be perceived by the consumer as a necessity in the solidification stage. However, this stage does not necessarily conclude necessitation. Additional transformative events may happen and aid in strengthening necessitation.

Notwithstanding its contributions, the consumer perspective is derived from the individual's perception (i.e., what a particular individual perceives as a necessity) and does not explore what constitutes a necessity at the collective level. The purpose of the entanglement perspective outlined above is to break away from the limitations that both thing-focused and human-focused perspectives impose upon understanding necessitation. This requires that we not

only study this collective transformation of consumer perceptions from the perspectives of consumers, but also consider the ongoing changes in the field of consumer behavior and give a voice to things.

As outlined in the theoretical development, entanglement theory (Hodder 2012) with its accentuation of dependences is found to be best suited to do so. While Hodder (2012) does not dispute relationality per se, his entanglement theory argues against the symmetrical nature of such relations, suggesting that they are often asymmetrical. This observation translates into the concept of entanglement, which is "the dialectic of dependence and dependency between humans and things" (Hodder 2012, p. 89). Dependence occurs when the use of things is something enabling, while dependency is to be understood as when their use imposes a constraint on humans (Hodder 2012). In Hodder's (2012) theory path dependency highlights that things are so intertwined with other things and with other human-thing dependences that daily practices are drawn toward specific pathways and that humans are pulled in certain ways that generate additional entanglements. At the same time, affordances of things are being gradually realized until it is fully intertwined with a plethora of elements.

The historical developments in the depth, breadth, intensity, and novelty of the entanglements involved in news production and consumption have inescapably led to the necessitation of the smartphone. Once we realize that the smartphone has necessitated in news consumption, thanks in major part to entanglements in news production/consumption, we begin to appreciate the immeasurable power of entanglements— along with the ensuing dependences, affordances, and entrapments— and recognize that necessitation is a result of numerous small changes within and among entanglements over time, which, in turn, produce unexpected problems that need fixing, which in turn lead to additional changes within and among

163

entanglements. Such developments in entanglements can lead humans and things down the pathway of product necessitation. As the affordances of a product are gradually exploited, they fully entangle with a wide range of humans and things. Eventually a level is reached that makes it difficult and expensive to turn back or disentangle, making the product to be near-universally perceived as necessary.

Studying the necessitation of the smartphone in news has also uncovered the dark side of entrapment. Humans are entrapped in their relationship with the smartphone, which has been achieved at the expense of the environment and certain groups of people. For instance, the environmental cost of regularly producing new devices and maintaining the systems (e.g., servers) in the background needed for them to run properly is immense. It continues to increase as technology companies like Apple continue entrapping often unsuspecting consumers in their ecosystems to sell more and different devices. The results are increased pollution and global warming. In addition, related to the production are low-paid labor and challenging work conditions.

Moreover, smartphone necessitation in news consumption is also accompanied by the increased spread of fake news, conspiracy theories, racism, sexism, agism, Islamophobia, hatred, bigotry, echo chambers, and xenophobia. Technology companies like Facebook, which are controlling the flow of content online, have failed to monitor and act on such vicious acts. Their inaction suggests that the different affected groups are accepted by them as collateral damage in order to maintain their monetization of data for continuously increasing profits. Such negative effects of entrapment call for increased regulation to better protect consumers and to improve the society we live in for future generations to come.

Implications and Further Research

Such an undertaking has important implications. Theoretically, this research not only moves past the classification of products advanced in thing-focused studies (e.g., Arndt 1987, Kemp 1998; Maslow 1979). It also progresses beyond human-focused perspectives that do not account for the active roles that things play in the collective shift within a society towards necessitation of a particular product (e.g., Firat 1987; Wilk 2006). As such, the analytical focus shifts from the first presented lived experiences of consumers towards a focus on the dependences that characterize the relationships between humans and things and the role such entanglements and entrapments play in product necessitation. Therefore, a more holistic account of product necessitation is provided.

This research is positioned to serve as a foundation to further understand the historical formations of necessities through gradually increasing entanglements. Future researchers are invited to broaden and deepen the examination of product necessitation as perceived collectively. The consistent concern with the necessity-luxury and need-want dichotomies and with classifications has marketing and consumer researchers focused on the dynamic and lived experiences of consumers with products and markets (Firat 1988; Venkatesh 1995). In addition to asking whether a given product is a necessity or luxury, we should continue studying cultural and historical components of consumption to better understand why a given group at a certain point in time in a given space (physical or virtual) may feel their social lives hinge on a number of products. Significant insights can emerge from further investigating how, when, where, for whom and why certain products gain necessity (or luxury) status. In addition, it is of interest to study how a product that is considered a necessity by one group at a particular point in time may not be viewed by another group as equally necessary.

Considering how and why a product moves on the necessity–luxury continuum can help enrich extant theories of consumer behavior and models of product strategy. For instance, an avenue to consider for further research is studying consumer habits and how they relate to product necessitation. There is a growing number of studies advocating that the sustained use of products can be attributed to their integration into habitual behavior and consequently and increased number of entanglements of those products. For example, it is suggested that the rise of bottled water has been matched with decreased purchases of sugar-sweetened soda, proposing that one is substituting the other as consumers have become conscious of soda's links to obesity (Sanger-Katz 2015). Most importantly, the similar marketing and packaging of these two products are said to have facilitated the success of water, because consumers did not have to radically change their habitual behavior to make the transition (Labrecque et al. 2017). Habits are "learned dispositions to repeat past responses. They are triggered by features of the context that have covaried frequently with past performance" (Wood and Neal 2007, p. 843). Such features or cues include sounds, textures, tastes, objects, times of day, emotional or bodily states, preceding actions in a sequence, or other people (e.g., Wood, Quinn, and Kashy 2002; Neal, Wood, and Quinn 2006). By extension, habitual behavior can be understood as "any act, choice, or state that is elicited by the retrieval of a learned cue-response association from memory" (Best and Papies 2017, p. 335).

The bottled water example is not the only indication of habit's relevance for product necessitation. When Riesman and Roseborough (1955) studied the careers and consumer behavior of the American middle class they centered their investigation on the interactions of its members with products on a daily basis. As a result of their inquiry, they introduced the standard package of consumer goods – the bundle of products assumed as indispensable for the middle-

class standard of life. That bundle, among others, included a car, a television set, and a refrigerator. For Riesman and Roseborough (1955), each product in this package derived its importance in consumers' lives precisely from this involvement in their everyday habits thus connecting necessities and these routine behaviors.

To further help understand how habitual behavior contributes to necessitation, we can turn to its importance in the diffusion of innovations – a further direction to explore by future researchers. Product adoption and necessitation are different yet related constructs. While adoption is the process by which consumers become users of a product, necessitation can be described as addressing why consumers remain users of one and cannot see themselves living without it. Nonetheless, exploring habits in future studies could increase our understanding of how adoption and necessitation are related.

Understanding the necessitation status of products and how shifts in entanglements contribute to necessitation can also assist marketers, who may wish to use this knowledge both as a response to the market or influencing the market. Knowing whether or not the market or specific customers see a particular product as indispensable can help marketers with their activities. This understanding can help marketers to better customize their strategies in order to improve customer satisfaction and firm profitability. For example, the necessitation status of products serves as a precursor to price elasticity of demand, which in turn determines pricing strategies and promotional activities. The choice and importance of distribution channels is also partially impacted by whether the product at hand is a necessity or a luxury.

Marketers can also use insights gained from necessitation research in trying to influence the market. For example, advertising and promotion campaigns can draw on their understanding of necessitation through increased entanglements. For instance, knowing that increased

167

entanglements are conducive to product necessitation, marketers could try and influence the

number of dependences around consumers and the products they want to necessitate. However,

such assistance for marketers is a risk to further create consumer entrapments for profitability.

The news experts in this research have described the focus of their work as creating consumer

habits around their news platforms. For them and other marketers the BJ Fogg Lab at Stanford is

a popular destination to learn how to win users and influence behavior. Smartphone applications

are designed to entrap consumers in continuous use of the application.

An example of increasing entanglements around products are the above discussed

ecosystems of companies like Apple that foster continued use of multiple of their products. It

entraps consumers in buying updated versions of existing and newly created devices to keep

generating revenues from a loyal group of customers.

Thus, such market driving behaviors of marketers also have public policy implications.

For instance, there is an increased attention around the dominant impact of technology

companies on how we live and how we think. Organizations such as the Center of Humane

Technology are concerned with issues around developing technology that encourages users to

spend more time on mobile devices rather than spending less and better-quality time. For

instance, one critique is that apps and websites are engineered to get us scrolling as frequently as

possible. In a similar vein, National Day of Unplugging is an awareness campaign that

encourages a 24-hour break from technology that is observed once a year. There is a need for

more regulation of technology companies and how they engage consumers and the harmful

content they allow to be distributed online.

Additionally, how the basket of life necessities varies over time is important to federal

and state governments that fund assistance programs for vulnerable populations such as low-

income families. These programs have addressed areas such as food, mortgage/rent, home improvement, energy, water services, telephone connections, medical and dental care, legal advice, job training, and childcare. For instance, telephone assistance programs such as Lifetime and Link-up were added to such assistance programs after governments at different levels concluded telephone services represented a necessity in modern society. These programs have now come to include smartphones with Internet access and texting capabilities. Considering that the cost of covering basic needs has been increasing faster than wages in most states (Bach 2014), it is detrimental for public policy makers to regularly determine whether and how the basket of necessities has changed and to make contingent adjustments to their programs.

REFERENCES

Allan, Stuart (2006), *Online News: Journalism and the Internet*, London, UK: McGraw-Hill Education.

Alvesson, Mats, and Kaj Sköldberg (2009), *Reflexive Methodology: New Vistas for Qualitative Research*, London: Sage Publications.

Agnew, Jean-Christophe (2003), "The Give-and-Take of Consumer Culture," in *Commodifying Everything: Relationships of the Market*, ed. Susan Strasser, New York, NY: Routledge, 11–39.

Anderson, Ben, and Paul Harrison (2010), "The Promise of Non-representational Theories," in *Taking-place: Non-representational Theories and Geography*, eds. Ben Anderson and Paul Harrison, Farnham, UK: Ashgate, 1–36.

Anderson, Ben, and Colin McFarlane (2011), "Assemblage and Geography," *Area*, 43 (2), 124–127.

Appadurai, Arjun (1986), "Introduction: Commodities and the Politics of Value," in *The Social Life of Things: Commodities in Cultural Perspective*, ed. Arjun Appadurai, Cambridge, England: Cambridge University Press, 3–63.

Apple (2007), "Apple Reinvents the Phone with iPhone," Available at: https://www.apple.com/newsroom/2007/01/09Apple-Reinvents-the-Phone-with-iPhone, Retrieved on: March 23rd, 2020.

Arndt, Johan (1978), "How Broad Should the Marketing Concept Be?," *Journal of Marketing*, 42 (1), 101–103.

Arnold, Stephen J., and Eileen Fischer (1994), "Hermeneutics and Consumer Research," *Journal of Consumer Research*, 21, 55–70.

Arnould, Eric J., and Craig J. Thompson (2005), "Consumer Culture Theory (CCT): Twenty Years of Research," *Journal of Consumer Research*, 31 (4), 868–882.

Arnould, Eric J., and Craig J. Thompson (2015), "Introduction: Consumer Culture Theory: Ten Years Gone (and Beyond)," *Research in Consumer Behavior,* 17, 1–21.

Athey, Susan, Markus M. Mobius, and Jenő Pál (2017), "The Impact of Aggregators on Internet News Consumption," *Stanford University Graduate School of Business Research*, 17 (8), 1–6.

Bach, Deborah (2014), "Cost of Meeting Basic Needs Rising Faster than Wages in Washington State," Available at: http://www.washington.edu/news/2014/11/20/cost-of-meeting-basic-needs-rising-faster-than-wages-in-washington-state/, Retrieved: June 1st, 2016.

Bajde, Domen (2013), "Consumer Culture Theory (Re)visits Actor-Network Theory: Flattening Consumption Studies," *Marketing Theory*, 13 (2), 227–242.

Barad, Karen (2003), "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs*, 28 (3), 801–831.

Barkin, Steve Michael (2003), *American Television News: The Media Marketplace and the Public Interest*, Armonk, NY: M.E. Sharpe.

Barnouw, Erik (1966), *A Tower of Babel: A History of Broadcasting in the United States*, New York, NY: Oxford University Press.

Barnouw, Erik (1968), *The Golden Web*, New York, NY: Oxford University Press.

Barnouw, Erik (1970), *The Image Empire*, New York, NY: Oxford University Press.

Baudrillard, Jean (1993), *Symbolic Exchange and Death*, London: Sage Publications.

Belk, Russell W. (1976), "It's the Thought that Counts: A Signed Digraph Analysis of Gift-Giving," *Journal of Consumer Research*, 3 (3), 155–162.

Belk, Russell W. (1985), "Materialism: Trait Aspects of Living in the Material World," *Journal of Consumer Research*, 12 (3), 265–280.

Belk, Russell W. (1988), "Possessions and the Extended Self," *Journal of Consumer Research*, 15 (2), 139–168.

Belk, Russell W. (1999), "Leaping Luxuries and Transitional Consumers," in *Marketing Issues in Transitional Economies*, ed. Rajeev Batra, Norwell, MA: Kluwer, 39–54.

Belk, Russell W. (2009), "Representing Global Consumers: Desire, Possession, and Identity, in *SAGE Handbook of Marketing Theory*, eds. Pauline Maclaren, Michael Saren, Barbara Stern, and Mark Tadajewski, Los Angeles, CA: Sage Publications, 283–298.

Belk, Russell W. (2013), "Extended Self in a Digital World," *Journal of Consumer Research*, 40 (October), 477–500.

Belk, Russell W. (2014), "Objectification and Anthropomorphism of the Self," in *Brand Mascots and Other Marketing Animals*, eds. Stephen Brown and Sharon Ponsonby-McCabe, New York: Routledge, 19–34.

Belk, Russell W. (2020), "Commodification as a Part of Marketization," in *Marketization: Theory and Evidence from Emerging Markets*, eds. Himadri Roy Chaudhuri and Russell Belk, Singapore: Springer, 31–72.

Belk, Russell W., Güliz Ger, and Søren Askegaard (2003), "The Fire of Desire: A Multisited Inquiry into Consumer Passion," *Journal of Consumer Research*, 30 (3), 326–351.

Belk, Russell W., Melanie Wallendorf, and John F. Sherry (1989), "The Sacred and the Profane in Consumer Behavior: Theodicy on the Odyssey," *Journal of Consumer Research*, 16 (1), 1–38.

Belk, Russell W., and Mariam Humayun (2015), "Object Agency and the Extended Object," *Asia-Pacific Advances in Consumer Research*, 11, 21–23.

Belkhir, Lotfi, and Ahmed Elmeligi (2018), "Assessing ICT Global Emissions Footprint: Trends to 2040 & Recommendations," *Journal of Cleaner Production*, 177, 448–463.

Berger, Peter L., and Thomas Luckmann (1966), *The Social Construction of Reality: A Treatise on the Sociology of Knowledge*, New York, NY: Anchor Books.

Bernstein, Elizabeth (2007), *Temporarily Yours: Intimacy, Authenticity, and the Commerce of Sex*, Chicago: University of Chicago Press.

Berry, Christopher (1994), *The Idea of Luxury: A Conceptual and Historical Investigation*, Cambridge: Cambridge University Press.

Best, Maisy, and Esther K. Papies (2017), "Right Here, Right Now: Situated Interventions to Change Consumer Habits," *Journal of the Association for Consumer Research*, 2 (3), 333–358.

Bettany, Shona (2007), "The Material Semiotics of consumption or Where (and What) are the Objects in Consumer Culture Theory?," *Research in Consumer Behavior*, 11 (2007): 41–56.

Bettany, Shona, and Ben Kerrane (2011), "The (Post-Human) Consumer, the (Post-Avian) Chicken and the (Post-Object) Eglu: Towards a Material-Semiotics of Anti-Consumption," *European Journal of Marketing*, 45 (11/12), 1746–1756.

Bettany, Shona, Ben Kerrane, and Margaret K. Hogg (2014), "The Material-semiotics of Fatherhood: The Co-emergence of Technology and Contemporary Fatherhood," *Journal of Business Research*, 67 (7), 1544–1551.

Bhat, Subodh, and Srinivas K. Reddy (1998), "Symbolic and Functional Positioning of Brands," *Journal of Consumer Marketing*, 15 (1), 32–43.

Blanchard, Margaret A. (1998), *A History of the Mass Media in the United States*, Chicago, IL: Fitzroy Dearborn.

Bliss, Edward, Jr. (1991), *Now the News: The Story of Broadcast Journalism*, New York, NY: Columbia University Press.

Borchers, Callum (2018), "Facebook Invites You to Live in a Bubble Where You Are Always Right," Available at: https://www.washingtonpost.com/news/the-fix/wp/2018/01/14/facebook-invites-you-to-live-in-a-bubble-where-you-are-always-right, Retrieved on: April 1st, 2021.

Borgerson, Janet L. (2005), "Materiality, Agency, and the Constitution of Consuming Subjects: Insights for Consumer Research," *Advances in Consumer Research*, 32, 439–443.

Braun, Jakob, Mohammadali Zolfagharian, and Russell W. Belk (2016), "How Does a Product Gain the Status of a Necessity? An Analysis of Necessitation Narratives," *Psychology & Marketing*, 33 (3), 209–222.

Brown, Shona L., and Kathleen M. Eisenhardt (1995), "Product Development: Past Research, Present Findings, and Future Directions," *Academy of Management Review*, 20 (2), 343–378.

Brown, Stephen, and Anthony Patterson (2010), "Selling Stories: Harry Potter and the Marketing Plot," *Psychology & Marketing*, 27, 541–556.

Brügger, Niels (2010), "Introduction: Web History, an Emerging Field of Study," in *Web History*, ed. Niels Brügger, New York, NY: Peter Lang, 1–25.

Bruner, Jerome (1991), "The Narrative Construction of Reality," *Critical Inquiry*, 18, 1–21.

Burke, Marian Chapman, and Julie A. Edell (1989), "The Impact of Feelings on Ad-based Affect and Cognition," *Journal of Marketing Research*, 26 (1), 69–83.

Buttle, Francis (1989), "The Social Construction of Needs," *Psychology & Marketing*, 6 (3), 197–210.

Bruns, Axel (2011), "News Produsage in a Pro-am Mediasphere: Why Citizen Journalism Matters," in *News Online: Transformations and Continuities*, eds. Graham Meikle and Guy Redden, United Kingdom: Palgrave Macmillan, 132–147.

Callon, Michel (1986), "The Sociology of an Actor-Network: The Case of the Electric Vehicle," in *Mapping the Dynamics of Science and Technology: Sociology of Science in the Real World*, eds. Michel Callon, John Law, and Arie Rip, London: Macmillan Press, 19–34.

Canniford, Robin, and Avi Shankar (2013), "Purifying Practices: How Consumers Assemble Romantic Experiences of Nature," *Journal of Consumer Research*, 39 (5), 1051–1069.

Canniford, Robin, and Domen Bajde (2016), "Assembling Consumption," in *Assembling Consumption: Researching Actors, Networks and Markets*, eds. Robin Canniford and Domen Bajde, New York, NY: Routledge, 14–36.

Carden, Lucas, Wendy Wood, David T. Neal, and Anthony Pascoe (2017), "Incentives Activate a Control Mind-set: Good for Deliberate Behaviors, Bad for Habit Performance," *Journal of the Association for Consumer Research*, 2 (3), 279–290.

Caute, David (1978), *The Great Fear*, New York, NY: Simon & Schuster.

Carder, Ben (2008), "Journalism of affirmation?," Master's Theses and Capstones, 96, Available at: https://scholars.unh.edu/thesis/96, Retrieved on: March 22nd, 2020.

Chan, Michael (2015), "Examining the Influences of News Use Patterns, Motivations, and Age Cohort on Mobile News Use: The Case of Hong Kong," *Mobile Media & Communication*, *3* (2), 179–195.

Cohen, Joel B., Martin Fishbein, and Olli T. Ahtola (1972), "The Nature and Uses of Expectancy-value Models in Consumer Attitude Research," *Journal of Marketing Research*, 9 (4), 456–460.

Constable, Nicole (2009), "The Commodification of Intimacy: Marriage, Sex, and Reproductive Labor," *Annual Review of Anthropology*, 38, 49–64.

Consumer Electronics Manufacturers Association (1998), *U.S. Consumer Electronics Sales & Forecasts, 1994-1999*, Arlington, VA: Consumer Electronics Manufacturers Association.

Cook, Daniel (2004), *The Commodification of Childhood: The Children's Clothing Industry and the Rise of the Child Consumer*, Chapel Hill, NC: Duke University Press.

Copeman, Anyron (2019), "The Irresistible Lure of the Apple Ecosystem," Available at: https://medium.com/swlh/the-irresistible-lure-of-the-apple-ecosystem-81bf8d66294a, Retrieved on: March 16th, 2021.

Cortazzi, Martin (1993), *Narrative Analysis*. London, UK: Falmer Press.

Coupland, Justine (1996), "Dating Advertisements: Discourses of the Commodified Self," *Discourse and Society*, 7 (2), 187–207.

Cova, Bernard (1997), "Community and Consumption: Towards a Definition of the 'Linking Value' of Product or Services," *European Journal of Marketing*, 31 (3/4), 297–316.

Cova, Bernard, and Veronique Cova (2001), "Tribal Aspects of Postmodern consumption Research: The Case of French In-Line Roller Skaters," *Journal of Consumer Behaviour*, 1 (1), 67–76.

Creech, Brett (2016), "Expenditures on cellular phone services have increased significantly since 2007," Available at: http://www.bls.gov/opub/btn/volume-5/pdf/expenditures-on-celluar-phone-services-have-increased-significantly-since-2007.pdf, Retrieved on: June 1st, 2016.

Creech, Kenneth C. (1996), *Electronic Media Law and Regulation*, Boston, MA: Focal Press.

Csikszentmihalyi, Mihaly, and Eugene Halton (1981), *The Meaning of Things: Domestic Symbols and the Self*, Cambridge, UK: Cambridge University Press.

Culbert, David Holbrook (1976), *News for Everyman: Radio and Foreign Affairs in Thirties America*, Westport, CT: Greenwood Press.

DeLanda, Manuel (2005), "Matter matters," *Domus Magazine*, 884-897.

DeLanda, Manuel (2006), *A New Philosophy of Society: Assemblage Theory and Social Complexity*, London: Continuum.

Deleuze, Gilles, and Felix Guattari (1987), *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis: University of Minnesota Press.

Diaz Noci, Javier (2013), "A History of Journalism on the Internet: A State of the Art and Some Methodological Trends," *RIHC: Revista Internacional de Historia de la Comunicación*, 1 (1), 253–272.

Dimmick, John, John Christian Feaster, and Gregory J. Hoplamazian (2011), "News in the Interstices: The Niches of Mobile Media in Space and Time," *New Media and Society*, *13* (1), 23–39.

Dimmick, John, Angela Powers, S. Mwangi, and E. Stoycheff (2011), "The Fragmenting Mass Media Marketplace," in *Changing the News: The Forces Shaping Journalism in Uncertain Times,* eds. Wilson Lowrey and Peter J. Gade, London, UK: Routledge, 177–192.

Douglas, George. (1987a), *The Early Days of Radio Broadcasting*, Jefferson, NC: McFarland.

Douglas, George H. (1999), *The Golden Age of the Newspaper*, Westport, CT: Greenwood Publishing Group.

Douglas, Mary, and Baron Isherwood (1979), *The World of Goods*, New York: Basic Books.

Douglas, Susan J. (1987b), *Inventing American Broadcasting, 1899-1922*, Baltimore, MD: Johns Hopkins University Press.

Drolet, Aimee, and Wendy Wood (2017), "Introduction to Special Issue: The Habit-Driven Consumer," *Journal of the Association for Consumer Research*, 2 (3), 275–278.

Edgerton, Gary (2007), *The Columbia History of American Television*, New York, NY: Columbia University Press.

Eisenmann, Thomas R. (2000), "Cable TV: From Community Antennas to Wired Cities," Available at: https://hbswk.hbs.edu/item/cable-tv-from-community-antennas-to-wired-cities, Retrieved on: May 2nd, 2020.

Elliott, Richard, and Andrea Davies (2006) "Using Oral History Methods in Consumer Research," in *Handbook of Qualitative Research Methods in Marketing*, ed. Russell W. Belk, Cheltenham: Edward Elgar Publishing, 244–254.

Epp, Amber M., and Linda L. Price (2008), "Family Identity: A Framework of Identity Interplay in Consumption Practices," *Journal of Consumer Research*, 35 (1), 50–70.

Epp, Amber M., and Linda L. Price (2010), "The Storied Life of Singularized Objects: Forces of Agency and Network Transformation," *Journal of Consumer Research*, 36 (5), 820–837.

Epp, Amber M., Hope Jensen Schau, and Linda L. Price (2014), "The Role of Brands and Mediating Technologies in Assembling Long-distance Family Practices," *Journal of Marketing*, 78 (3), 81–101.

Escalas, Jennifer Edson, and James R. Bettman (2005), "Self-Construal, Reference Groups, and Brand Meaning," *Journal of Consumer Research*, 32 (3), 378–389.

Fabrikant, Geraldine (1985), "Loews Plans to Buy up to 25% of CBS; Gets a Seat on Board," Available at: https://www.nytimes.com/1985/10/17/business/loews-plans-to-buy-up-to-25-of-cbs-gets-a-seat-on-board.html, Retrieved on: March 23rd, 2020.

Fang, Irving E. (1997), *A History of Mass Communication: Six Information Revolutions*, Boston: Focal Press USA.

FCC (2015), "Retransmission Consent," Available at: https://www.fcc.gov/media/policy/retransmission-consent, Retrieved on: March 20th, 2020.

Fennis, Bob M., Ad Th H. Pruyn, and Mascha Maasland (2005), "Revisiting the Malleable Self: Brand Effects on Consumer Self-Perceptions of Personality Traits," *Advances in Consumer Research*, 32, 371–377.

Figueiredo, Bernardo (2016), "Home in Mobility: An Exercise in Assemblage Thinking," in *Assembling Consumption: Researching Actors, Networks and Markets*, eds. Robin Canniford and Domen Bajde, New York, NY: Routledge, 107–127.

Firat, A. Fuat (1987), "The Social Construction of Consumption Patterns: Understanding Macro Consumption Phenomena," in *Philosophical and Radical Thought in Marketing*, eds. A. Fuat Firat, Nikhilesh Dholakia, and Richard P. Bagozzi, Lanham, MD: Lexington Books, 251–267.

Firat, A. Fuat (1988), "A Critical Historical Perspective on Needs: The Macro or the Micro Rationale?" in *Marketing: A Return to the Broader Dimensions*, eds. Stanley Shapiro and A. H. Walle, Chicago, IL: American Marketing Association, 289–295.

Firat, A. Fuat, and Nikhilesh Dholakia (1998), *Consuming People: From Political Economy to Theaters of Consumption*, London, New York: Routledge.

Firat, A. Fuat, and Nikhilesh Dholakia (2006), "Theoretical and Philosophical Implications of Postmodern Debates: Some Challenges to Modern Marketing," *Marketing Theory*, 6 (2), 123–162.

Firat, A. Fuat, Nikhilesh Dholakia, and Alladi Venkatesh (1995), "Marketing in a Postmodern World," *European Journal of Marketing*, 29 (1), 40–56.

Firat, A. Fuat, and Alladi Venkatesh (1995), "Liberatory Postmodernism and the Reenchantment of Consumption," *Journal of Consumer Research*, 22 (3), 239–267.

Firat, A. Fuat, and Clifford J. Shultz (1997), "From Segmentation to Fragmentation: Markets and Marketing Strategy in the Postmodern Era," *European Journal of Marketing*, 31 (3/4), 183–207.

Ford, Edwin H., and Edwin Emery (1954), *Highlights in the History of the American Press: A Book of Readings, Minneapolis*, MN: University of Minnesota Press.

Foucault, Michel (2002), *The Order of Things: An Archaeology of the Human Sciences*, London, UK: Routledge.

Fournier, Susan (1991), "A Meaning-Based Framework for the Study of Consumer-Object Relations," *Advances in Consumer Research*, 18 (1), 736-742.

Fournier, Susan, and Michael Guiry (1993), "'An Emerald Green Jaguar, A House on Nantucket, and an African Safari:' Wish Lists and Consumption Dreams in Materialist Society," *Advances in Consumer Research*, 20 (1), 352–358.

Frank, Reuven (1991), *Out of Thin Air: The Brief Wonderful Life of Network News*, New York, NY: Simon & Schuster.

Fraser, Ian (1998), *Hegel and Marx: The Concept of Need*, Edinburgh: Edinburgh University Press.

Gelsanliter, David (1995), *Fresh Ink: Behind the Scenes at a Major Metropolitan Newspaper*, Denton, TX: University of North Texas Press.

Gergen, Kenneth J. (1985), "The Social Constructionist Movement in Modern Psychology," *American Psychologist*, 40 (3), 266–275.

Geslevich Packin, Nizan (2020), "Show Me The (Data About The) Money! What You Didn't Know About Data Aggregation Can Hurt You," Available at: https://www.forbes.com/sites/nizangpackin/2020/01/27/show-me-the-data-about-the-money-what-you-didnt-know-about-data-aggregation-can-hurt-you/#35474a4be92f, Retrieved on: March 23rd, 2020.

Giesler, Markus (2006), "Consumer Gift Systems," *Journal of Consumer Research*, 33 (September), 283–290.

Giesler, Markus (2012), "How Doppelgänger Brand Images Influence the Market Creation Process: Longitudinal Insights from the Rise of Botox Cosmetic," *Journal of Marketing*, 76 (6), 55–68.

Giesler, Markus, and Craig J. Thompson (2016), "A Tutorialmin Consumer Research: Process Theorization in Cultural Consumer Research," *Journal of Consumer Research*, 43, 497–508.

Gitelman, Lisa (2006), *Always Already New: Media, History, and the Data of Culture*, Cambridge, MA: MIT Press.

Gosden, Chris, and Yvonne Marshall (1999), "The Cultural Biography of Objects," *World Archaeology*, 31 (2), 169–178.

Greenfield, Jeff (1977), *Television: The First Fifty Years*, New York, NY: Harry N. Abrams.

Greenwood, Davydd (1989), "Culture by the Pound: An Anthropological Perspective on Tourism as Cultural Commoditization," in *Hosts and Guests: The Anthropology of Tourism*, 2nd ed., ed. Valene L. Smith, Philadelphia, PA: University of Pennsylvania Press, 171–186.

Hagey, Keach (2014), "CBS Plays Hardball as Affiliate Fees Pile Up: Network Seeks a Bigger Share of Pay-Television Revenue," Available at: https://www.wsj.com/articles/cbs-plays-hardball-as-affiliate-fees-pile-up-1408578087, Retrieved on: April 1st, 2020.

Haidt, Jonathan, and Tobias Rose-Stockwell (2019), "The Dark Psychology of Social Networks. Why it Feels Like Everything is Going Haywire," Available at: https://www.theatlantic.com/magazine/archive/2019/12/social-media-democracy/600763, Retrieved on: April 1st, 2021.

Hamilton, John Maxwell, and Heidi JS Tworek (2016), "The Natural History of the News: An Epigenetic Study," *Journalism*, 18 (4), 391–407.

Hannerz, Ulf (1992), *Cultural Complexity: Studies in the Social Organization of Meaning*, New York: Columbia University Press.

Hatcher, Sherry L. (1994), "Personal Rites of Passage: Stories of College Youth," in *The Narrative Study of Lives (2nd ed.)*, eds. Amia Lieblich and Ruthellen Josselson, Thousand Oaks, CA: Sage Publications, 169–194.

Hawkins, Gay (2009) "The Politics of Bottled Water: Assembling Bottled Water as Brand, Waste and Oil," Journal of Cultural Economy, 2 (1-2), 183–195.

Helgeson, James G., and Magne Supphellen (2004), "A Conceptual and Measurement Comparison of Self-Congruity and Brand Personality: The Impact of Socially Desirable Responding," *International Journal of Market Research*, 46 (2), 205–236.

Heller, Agnes (1974), *The Theory of Need in Marx*, London: Allison and Busby.

Hermann, Gretchen M. (1997), "Gift or Commodity: What Changes Hands in the U.S. Garage Sale?" *American Ethnologist*, 24 (4), 910–930.

Hermida, Alfred, Fred Fletcher, Darryl Korell, and Donna Logan (2012), "Share, Like, Recommend: Decoding the Social Media News Consumer," *Journalism Studies*, 13 (5–6), 815–824.

Herrick, Dennis F. (2012), *Media Management in the Age of Giants: Business Dynamics of Journalism*, Albuquerque, NM: UNM Press.

Hill, Tim, Robin Canniford, and Joeri Mol (2014), "Non-Representational Marketing Theory," *Marketing Theory*, 14 (4), 377–394.

Hodder, Ian (2012), *Entangled: An Archaeology of the Relationships between Humans and Things*, Oxford: Wiley-Blackwells.

Hodder, Ian (2014), "The Entanglements of Humans and Things: A Long-Term View," *New Literary History*, 45 (1), 19–36.

Hodder, Ian (2016), *Studies in Human-Thing Entanglement*, Open Access Book.

Hodder, Ian (2018), *Where are We Heading?: The Evolution of Humans and Things*, New Haven, CY: Yale University Press.

Hogan, Mike (1998), "Telephone meets touch-screen Internet appliance: iPhone is a desktop telephone married to an Internet browser," Available at: http://edition.cnn.com/TECH/computing/9811/02/netphone.idg, Retrieved on: March 20th, 2020.

Hogg, Michael A. (1996), "Social Identity, Self-categorization, and the Small Group," in *Understanding Group Behavior (Vol. 2)*, Erich H. Witte and James H. Davis, Mahwah, NJ: Erlbaum, 227–253.

Holbrook, Morris B. (1993), "Nostalgia and Consumption Preferences: Some Emerging Patterns of Consumer Tastes," *Journal of Consumer Research*, 20 (2), 245–256.

Holt, Douglas B. (1995), "How Consumers Consume: A Typology of Consumption Practices," *Journal of Consumer Research*, 22 (1), 1–16.

Holt, Douglas B. (2002), "Why Do Brands Cause Trouble? A Dialectical Theory of Consumer Culture and Branding," *Journal of Consumer Research*, 29 (1), 70–90.

Horten, Gerd (2002), *Radio Goes to War: The Cultural Politics of Propaganda During World War II*, Los Angeles, CA: University of California Press.

Huff, Aimee (2011), "Buying the Girlfriend Experience: An Exploration of the Consumption of Male Customers of Escorts," in *Research in Consumer Behavior*, 13, eds. Russell Belk, Kent Grayson, Albert Muñiz, and Hope Schau, Bingley, UK: Emerald, 111–126.

Hughes, Helen MacGill (1968), *News and the Human Interest Story*, New York, NY: Greenwood Press.

Hui, Allison (2012), "Things in Motion, Things in Practices: How Mobile Practice Networks Facilitate the Travel and Use of Leisure Objects," *Journal of Consumer Culture*, 12 (2), 195–215.

John, Richard R., and Jonathan Silberstein-Loeb (2015), *Making News: The Political Economy of Journalism in Britain and America from the Glorious Revolution to the Internet*, Oxford, UK: Oxford University Press.

Johnson, Steven (2014), *How We Got to Now: Six Innovations that Made the Modern World*, New York, NY: Penguin.

Joy, Annamma (2001), "Gift Giving in Hong Kong and the Continuum of Social Ties," *Journal of Consumer Research*, 28 (2), 239–256.

Karababa, Emınegül, and Gülız Ger (2011), "Early Modern Ottoman Coffeehouse Culture and the Formation of the Consumer Subject," *Journal of Consumer Research*, 37 (5) 737–760.

Karnick, Kristine Brunovska (1988), "NBC and the Innovation of Television News, 1945-1953," *Journalism History*, 15 (1): 26–34.

Kauffman, George B. (1997), "Tube: The Invention of Television," *American Scientist*, 85 (1), 87–89.

Kemp, Simon (1998), "Perceiving Luxury and Necessity," *Journal of Economic Psychology*, 19 (5), 591–606.

Khare, Adwait, and J. Jeffrey Inman (2006), "Habitual Behavior in American Eating Patterns: The Role of Meal Occasions," *Journal of Consumer Research*, 32 (4), 567–575.

King, Hope (2015), "I lived without a cell phone for 135 days," Available at: http://money.cnn.com/2015/02/12/technology/living-without-cell-phone/, Retrieved: June 1st, 2016.

Kiska, Tim (2009), *A Newscast for the Masses: The History of Detroit Television News*, Detroit, MI: Wayne State University Press.

Kjellberg, Hans (2008), "Market Practices and Over-consumption," *Consumption, Markets and Culture*, 11 (2), 151–167.

Kleine, Robert E., Susan Schultz Kleine, and Jerome B. Kernan (1993), "Mundane Consumption and the Self: A Social-identity Perspective," *Journal of Consumer Psychology*, 2, 209–235.

Klemens, Guy (2010), *The Cellphone: The History and Technology of the Gadget That Changed the Word*, London, UK: McFarland & Company.

Klinenberg, Eric (2005), "Convergence: News Production in a Digital Age," *The Annals of the American Academy of Political and Social Science*, 597 (1), 48–64.

Kopytoff, Igor (1986), "The Cultural Biography of Things: Commoditization as Process," in *The Social Life of Things: Commodities in Cultural Perspective*, ed. Arjun Appadurai, Cambridge, England: Cambridge University Press, 64–91.

Kovach, Bill, and Tom Rosenstiel (2000), "Warp Speed: American in the Age of Mixed Media," Available at: https://pdfs.semanticscholar.org/a440/09f61fbed03aa821157e27ba4afa98ed4dda.pdf, Retrieved on: March 21st, 2020.

Kozinets, Robert, Anthony Patterson, and Rachel Ashman (2016), "Networks of Desire: How Technology Increases our Passion to Consume," *Journal of Consumer Research*, *43* (5), 659–682.

Kurtz, Howard (2004), "After Blogs Got Hits, CBS Got a Black Eye," Available at: https://www.washingtonpost.com/wp-dyn/articles/A34153-2004Sep19.html, Retrieved: March 22nd, 2020.

Kuttner, Robert (1997), *Everything for Sale: The Virtues and Limits of Markets*, New York: Alfred A. Knopf.

Labrecque, Jennifer S., Wendy Wood, David T. Neal, and Nick Harrington (2017), "Habit Slips: When Consumers Unintentionally Resist New Products," *Journal of the Academy of Marketing Science*, 45 (1), 119–133.

Lai, Ai-Ling, and Janine Dermody (2009), "Cannibal or Commodity Fetish: Body as Material Interaction," *Advances in Consumer Research*, 36, 339–347.

Langley, Ann (1999), "Strategies for Theorizing from Process Data," *Academy of Management Review*, 24 (October), 691–710.

Lastovicka, John L., and Karen V. Fernandez (2005), "Three Paths to Disposition: The Movement of Meaningful Possessions to Strangers," *Journal of Consumer Research*, 31 (March), 813–823.

Latour, Bruno (1988), *The Pasteurization of France*, London: Harvard University Press.

Latour, Bruno (1993), *We Have Never Been Modern*, London: Harvard University Press.

Latour, Bruno (1999). *Pandora's Hope. Essays on the Reality of Science Studies*, Cambridge, MA: Harvard University.

Latour, Bruno (2005), *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford: Oxford University Press.

Law, John (1999), "After ANT: Complexity, Naming and Topology," in *Actor Network Theory and After*, eds. John Law and John Hassard, Malden: Wiley-Blackwell, 1–14.

Law, John (2009), "Actor-Network Theory and Material Semiotics," in *The New Blackwell Companion to Social Theory (3rd ed.)*, ed. Bryan S. Turner, Chichester: Wiley-Blackwell, 141–158.

Lee, Angela M., and Hsiang Iris Chyi (2015), "The Rise of Online News Aggregators: Consumption and Competition," *International Journal on Media Management*, 17 (1), 3–24.

Lee, Chei Sian, and Long Ma (2012), "News Sharing in Social Media: The Effect of Gratifications and Prior Experience," Computers in Human Behavior, 28 (2), 331–339.

Lee, James Melvin (1923), *History of American Journalism*, Garden City, NY: Garden City Press.

Leigh, James H., and Terrance G. Gabel (1992), "Symbolic Interactionism: Its Effects on Consumer Behavior and Implications for Marketing Strategy," *Journal of Consumer Marketing*, 9 (1), 27–38.

Leiner, Barry M., Vinton G. Cerf, David D. Clark, Robert E. Kahn, Leonard Kleinrock, Daniel C. Lynch, Jon Postel, Larry G. Roberts, and Stephen Wolff (2009), "A Brief History of the Internet," *ACM SIGCOMM Computer Communication Review*, 39 (5), 22–31.

Levy, Sidney J. (1959), "Symbols for Sale," *Harvard Business Review*, 37 (4), 117–124.

Lewis, Tom (1991), *Empire of the Air: The Men Who Made Radio*, New York, NY: HarperCollins.

Lewis, Cahrles (2013), "Murrey Marder: 'Utterly Tenacious About the Truth,' Available at: https://niemanreports.org/articles/murrey-marder-utterly-tenacious-about-the-truth/, Retrieved on: March 12th, 2021.

Lincoln, Yvonna S., and Egon G. Guba (1985), *Naturalistic Inquiry*, Beverly Hills, CA: Sage Publications.

Lorimer, Hayden (2005), "Cultural Geography: The Busyness of Being 'More-than-representational'," *Progress in Human Geography*, 29 (1), 83–94.

Li, Steven (2017), "How Does The Internet Work?," Available at: https://medium.com/@User3141592/how-does-the-internet-work-edc2e22e7eb8, Retrieved on: March 27th, 2020.

Ling, R. (2012). *Taken for Grantedness: The Embedding of Mobile Communication into Society*. Cambridge, MA: MIT Press.

MacDonald, J. Fred (1994), *One Nation Under Television: The Rise and Decline of Network TV*, Belmont, CA: Wadsworth Publishing Company.

Marriott, Stephanie (2007), "American Election Night and the Journalism of Assertion," *Journalism*, 8 (6), 698–717.

Martin, Diane M., and John W. Schouten (2014), "Consumption-driven Market Emergence," *Journal of Consumer Research*, 40 (5), 855–870.

Marx, Karl (1976), *Capital, Volume I*, London: Penguin Books.

Marx, Karl (1978), *Capital, Volume II*, London: Penguin Books.

Maslow, Abraham H. (1970), *Motivation and Personality (2nd ed.)*, New York, NY: Harper & Row.

Massumi, Brian (2002), *Parables of the Virtual: Movement, Affect, Sensation*, London, UK: Duke University Press.

Matusow, Barbara (1983), *The Evening Stars: The Making of the Network News Anchor*, Boston, MA: Houghton Mifflin Company.

McAdams, Dan P. (1993), *The Stories We Live by: Personal Myths and the Making of the Self*, New York, NY: Guilford.

McAdams, Dan P., and Philip J. Bowman (2001), "Narrating Life's Turning Points: Redemption and Contamination," in *Turns in the Road: Narrative Studies of Lives in Transition*, eds. Dan P. McAdams, Ruthellen Ed Josselson, and Amia Ed Lieblich, Washington, D.C.: American Psychological Association, 3–34.

McChesney, Robert W. (1993), *Telecommunications, Mass Media, and Democracy*, New York, NY: Oxford University Press.

McCracken, Grant (1987), "Culture and Consumption Among the Elderly: Research Objectives for the Study of Person-Object Relations in An Aging Population," *Ageing and Society*, 7 (2), 203–224.

McGrath, Rita Gunther (2013), "Broadcast TV Needs a New Business Model," Available at: https://hbr.org/2013/04/watching-broadcast-tv-for-a-ne, Retrieved on: March 19th, 2020.

McNish, Jacquie, and Sean Silcoff (2015), *Losing the Signal: The Untold Story Behind the Extraordinary Rise and Spectacular Fall of Blackberry*, New York, NY: Flat Iron Books.

McQuarrie, Edward F., Jessica Miller, and Barbara J. Phillips (2013), "The Megaphone Effect: Taste and Audience in Fashion Blogging," *Journal of Consumer Research*, 40 (1), 136–158.

Megehee, Carol M., and Arch G. Woodside (2010), "Creating Visual Narrative Art for Decoding Stories that Consumers and Brands Tell," *Psychology & Marketing*, 27 (6), 603–622.

Mehta, Raj, and Russell W. Belk (1991), "Artifacts, Identity, and Transition: Favorite Possessions of Indians and Indian Immigrants to the United States," *Journal of Consumer Research*, 17 (4), 398–411.

Merchant, Brian (2017), *The One Device: The Secret History of the iPhone*. Hachette UK: Bantam Press.

Mick, David Glen, and Michelle DeMoss (1990), "Self-Gifts: Phenomenological Insights from Four Contexts," *Journal of Consumer Research*, 17 (3), 322–332.

Miller, Daniel (1987), *Material Culture and Mass Consumption*, New York: Blackwell.

Miller, Vincent J. (2005a), *Consuming Religion: Christian Faith and Practice in a Consumer Culture*, New York/London: Continuum.

Miller, Daniel (2005b), *Materiality*, Durham, NC: Duke University Press.

Mittal, Banwari (2006), "I, Me, and Mine: How Products Become Consumers' Extended Selves," *Journal of Consumer Behaviour*, 5 (6), 550–562.

Mol, Annemarie (2010), "Actor-Network Theory: Sensitive Terms and Enduring Tensions," *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 50, 253–269.

Morgan, Jacob (2014), "A Simple Explanation Of 'The Internet Of Things'," Avalaible at: http://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#4cc2bdb96828, Retrieved on: June 1st, 2016.

Moschovitis, Christos J., Hilary Poole, and Theresa M. Senft (1999), *History of the Internet: A Chronology, 1843 to the Present*, Santa Barbara, CA: AB C-CLIO.

Müller, Martin (2015), "Assemblages and Actor-Networks: Rethinking Socio-Material Power, Politics and Space," *Geography Compass*, 9 (1): 27–41.

Muraven, Mark, and Roy F. Baumeister (2000), "Self-regulation and Depletion of Limited Resources: Does Self-control Resemble a Muscle?," *Psychological Bulletin*, 126 (2), 247–259.

Murray, Jeff B. (2002), "The Politics of Consumption: A Re-Inquiry on Thompson and Haytko's (1997) 'Speaking of Fashion'," *Journal of Consumer Research*, 29 (3), 427–440.

Neal, David T., Wendy Wood, Phillippa Lally, and Mengju Wu (2009), "Do Habits Depend on Goals? Perceived Versus Actual Role of Goals in Habit Performance," Manuscript under review, University of Southern California.

Nel, François and Oscar Westlund (2012), "The 4C's of Mobile News: Channels, Conversation, Content and Commerce," *Journalism Practice*, 6, 744–753.

Nerone, John, and Kevin G. Barnhurst (2003), "US Newspaper Types, the Newsroom, and the Division of Labor, 1750–2000," *Journalism Studies*, 4 (4), 435–449.

Newman, Nic, and David A. L. Levy (2013), *Reuters Institute Digital News Report 2013 – Tracking the Future of News*, Oxford, UK: Reuters Institute for the Study of Journalism, University of Oxford.

Ozanne, Julie L., Merrie Brucks, and Dhruv Grewal (1992), "A Study of Information Search Behavior During the Categorization of New Products," *Journal of Consumer Research*, 18 (4), 452–463.

Pals, Jennifer L. (2006), "Constructing the 'Springboard Effect': Causal Connections, Self-making, and Growth Within the Life Story," in *Turns in the Road: Narrative Studies of Lives in Transition*, eds. Dan P. McAdams, Ruthellen Ed Josselson, and Amia Ed Lieblich, Washington, D.C.: American Psychological Association, 175–199.

Parker, Brian T. (2009), "A Comparison of Brand Personality and Brand User-Imagery Congruence," *Journal of Consumer Marketing*, 26 (3), 175–184.

Parmentier, Marie-Agnès, and Eileen Fischer (2015), "Things Fall Apart: The Dynamics of Brand Audience Dissipation," *Journal of Consumer Research*, 41 (5), 1228–1251.

Parsons, Elizabeth (2009), "'What Things Do': Examining Things That 'Matter' in Consumer Research," *Advances in Consumer Research*, 36, 177–180.

Patterson, David A (2008), "Technical Perspective: The Data Center is the Computer," *Communications of the ACM*, 51(1), 105.

Penn, Alyson (2016), "WiFi in NYC," Available at: http://www.nycgo.com/articles/wifi-in-nyc, Retrieved on: June 1st, 2016.

Perry, Stephen D. (2004), *A Consolidated History of Media*, Bloomington, IL: Epistelogic Publishing.

Pettegree, Andrew (2014), *The Invention of News*, London, UK: Yale University Press.

Pew Research Center (2004), "State of the News Media 2004," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/State-of-the-News-Media-Report-2004-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2005), "State of the News Media 2005," Available at: https://assets.pewresearch.org/files/journalism/State-of-the-News-Media-Report-2005-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2006), "State of the News Media 2006," Available at: https://assets.pewresearch.org/files/journalism/State-of-the-News-Media-Report-2006-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2007), "State of the News Media 2007," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/State-of-the-News-Media-Report-2007-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2008), "State of the News Media 2008," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/State-of-the-News-Media-Report-2008-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2009), "State of the News Media 2009," Available at: https://assets.pewresearch.org/files/journalism/State-of-the-News-Media-Report-2009-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2010), "State of the News Media 2010," Available at: https://assets.pewresearch.org/files/journalism/State-of-the-News-Media-Report-2010-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2011), "State of the News Media 2011," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/State-of-the-News-Media-Report-2011-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2012), "State of the News Media 2012," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/State-of-the-News-Media-Report-2012-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2013), "State of the News Media 2013," Available at: https://assets.pewresearch.org/files/journalism/State-of-the-News-Media-Report-2013-FINAL.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2014), "State of the News Media 2014," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/state-of-the-news-media-report-2014-final.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2015), "State of the News Media 2015," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2017/05/state-of-the-news-media-report-2015-final.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2016), "State of the News Media 2016," Available at: https://www.pewresearch.org/wp-content/uploads/sites/8/2016/06/state-of-the-news-media-report-2016-final.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2017), "State of the News Media 2017," Available at: https://www.journalism.org/wp-content/uploads/sites/8/2019/06/State-of-the-News-Media_2017-Archive-2.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2018), "State of the News Media 2018," Available at: https://www.journalism.org/wp-content/uploads/sites/8/2019/06/Pew-Research-Center_State-of-the-News-Media-2018_06-25-2019-2.pdf, Retrieved on: September 15th, 2019.

Pew Research Center (2019), "Smartphone Ownership Is Growing Rapidly Around the World, but Not Always Equally," Available at: https://www.pewresearch.org/global/2019/02/05/smartphone-ownership-is-growing-rapidly-around-the-world-but-not-always-equally/, Retrieved on: July 22nd, 2020.

187

Picard, Rosalind W. (2003), "Affective Computing: Challenges," *International Journal of Human-Computer Studies*, 59 (1-2), 55–64.

Picard, Robert G., and Jeffrey H. Brody (1997), *The Newspaper Publishing Industry*, Boston, MA: Allyn and Bacon.

Pollan, Michael (2020), *Caffeine: How Caffeine Created the Modern World*, Audiobook: Audible.

Ponce de Leon, Charles L. (2015), *That's the Way It Is: A History of Television News in America*, Chicago, IL: University of Chicago Press.

Posner, Richard A. (2005), "Bad News," Available at: https://www.nytimes.com/2005/07/21/books/review/bad-news.html, Retrieved on: March 25th, 2020.

Postman, Neil (2006), *Amusing Ourselves to Death: Public Discourse in The Age of Show Business*, New York, NY: Viking Penguin Inc.

Pred, Ralph (2005), *Onflow: Dynamics of Consciousness and Experience*, Cambridge, MA: The MIT Press.

Preda, Alex (1999), "The Turn to Things: Arguments for a Socio- logical Theory of Things," *Sociological Quarterly*, 40 (Spring), 347–366.

Pritchard, Annette, Nigel Morgan, and Diane Sedgley (2002), "In Search of Lesbian Space? The Experience of Manchester's Gay Village," *Leisure Studies*, 21 (2), 105–123.

Pryor, Larry (1999), "Old Media Firms Dig a Grave with Shovelware," Online Journalism Review, Available at: http://www.ojr.org/ojr/technology/1017969861, Retrieved on: March 16th, 2021.

Rehmeyer, Julie (2007), "The Internet Spreads its Tentacles," *Science News*, 171 (25), 387–388.

Reid, Alan J. (2018), *The Smartphone Paradox: Our Ruinous Dependency in the Device Age*, London, UK: Palgrave Macmillan.

Riesman, David, and Howard Roseborough (1955), "Careers and Consumer Behavior," in *Consumer Behavior, Vol. II, The Life Cycle and Consumer Behavior*, ed. Lincoln Clark, New York: New York University Press, 1–18.

Riessman, Catherine Kohler (1993), *Narrative Analysis, Qualitative Research Methods Series*. Newbury Park, CA: Sage Publications.

Roman, James (1996), *Love, Light, and a Dream: Television's Past, Present, and Future*, Westport, CT: Praeger.

Rogers, Everett M. (1962), *Diffusion of Innovations (1st ed.)*, New York, NY: Free Press.

Rogers, Everett M., and F. Floyd Shoemaker (1971), *Communication of Innovations: A Cross-Cultural Approach*, New York, NY: Free Press.

Romenesko, Jim (2005), "KR Says Alums' Effort is Well-intentioned but Not Practical," Available at: https://www.poynter.org/reporting-editing/2005/kr-says-alums-effort-is-well-intentioned-but-not-practical, Retrieved on: March 25th, 2020.

Ryan, Johnny (2010), *A History of the Internet and the Digital Future*, London, UK: Reaktion Books.

Sanger-Katz, Margot (2015), "The decline of 'big soda'," Available at: http://www. nytimes.com/2015/10/04/upshot/soda-industry-struggles-as-consumer-tastes-change.html, Retrieved on: July 22nd, 2020.

Sasseen, Jane, Kenny Olmstead, and Amy Mitchell (2013), *Digital: As Mobile Grows Rapidly, the Pressures on News Intensify. The State of the News Media 2013: An Annual Report on American Journalism*, Washington, DC: Pew Research Center's Project for Excellence in Journalism.

Schau, Hope Jensen (2000), "Consumer Imagination, Identity and Self-expression," *Advances in Consumer Research*, 27 (1), 50–56.

Schau, Hope Jensen, Albert M. Muñiz Jr, and Eric J. Arnould (2009), "How Brand Community Practices Create Value," *Journal of Marketing*, 73 (5), 30–51.

Schmitt, Bernd (1999), "Experiential Marketing," *Journal of Marketing Management*, 15 (1-3), 53–67.

Schouten, John W., Diane M. Martin, Hedon Blakaj, and Andrei Botez (2016), "From Counterculture Movement to Mainstream Market: Emergence of the U.S. Organic Food Industry," in *Assembling Consumption: Researching Actors, Networks and Markets*, eds. Robin Canniford and Domen Bajde, New York, NY: Routledge, 38–51.

Schroder, K. C. (2015), "News Media Old and New: Fluctuating Audiences, News Repertoires and Locations of Consumption," *Journalism Studies*, 16 (1), 60–78.

Secon, Holly, Havovi Cooper, and Hannah Jiang (2020), "21 Million Americans Didn't Have Access to Safe Drinking Water in 2015. A Lack of Clean Water Can Put People at Higher Risk of Getting COVID-19," Available at: https://www.businessinsider.com/without-clean-safe-water-coronavirus-threatens-communities-2020-7, Retrieved on: May 22nd, 2020.

Seetharaman, P. B. (2004), "Modeling Multiple Sources of State Dependence in Random Utility Models: A Distributed Lag Approach," *Marketing Science*, 23 (2), 263–271.

Shaaber, Matthias A. (1932), "The History of the First English Newspaper," *Studies in Philology*, 29 (4), 551–587.

Shankar, Avi, Richard Elliott, and Christina Goulding (2001), "Understanding Consumption: Contributions From a Narrative Perspective," *Journal of Marketing Management*, 17, 429–453.

Shrauger, J. Sidney, and Thomas J. Schoeneman (1979), "Symbolic Interactionist View of Self-concept: Through the Looking Glass Darkly," *Psychological Bulletin*, 86, 549–573.

Shuler, Rus (2002), "How Does the Internet Work?," Available at: https://web.stanford.edu/class/msande91si/www-spr04/readings/week1/InternetWhitepaper.htm, Retrieved on: March 25th, 2020.

Siapera, Eugenia, and Andreas Veglis (2012), "Introduction: The Evolution of Online Journalism," in *The Handbook of Global Online Journalism*, eds. Eugenia Siapera and Andreas Veglis, Hoboken, NJ: John Wiley & Sons, Inc, 1–17.

Sirgy, M. Joseph (1982), "Self-Concept in Consumer Behavior: A Critical Review," *Journal of Consumer Research*, 9 (3), 287–300.

Sirgy, M. Joseph (1985), "Using Self-Congruity and Ideal Congruity to Predict Purchase Motivation," *Journal of Business Research*, 13 (3), 195–206.

Smith, Adam (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations (1st ed.)*, London: W. Strahan.

Smith, Terry (2007), "The Existential Consumption Paradox: An Exploration of Meaning in Marketing," *The Marketing Review*, 7 (4), 325–341.

Smith, Aja (2016), "Empathetic Engagements and Authentic Detachments: On Horses, Leaders and Interspecies Becomings," in *Assembling Consumption: Researching Actors, Networks and Markets*, eds. Robin Canniford and Domen Bajde, New York, NY: Routledge, 145–164.

Solomon, Michael R. (1983), "The Role of Products as Social Stimuli: A Symbolic Interactionism Perspective," *Journal of Consumer Research*, 10 (3), 319–329.

Sombart, Werner (1913), *Luxus und Kapitalismus*. Leipzig: Duncker & Humblot.

Spar, Debora L. (2001), *Ruling the Waves: Cycles of Discovery, Chaos, and Wealth From the Compass to the Internet*, New York, NY: Harcourt.

Starr, Paul (2004), *The Creation of the Media: Political Origins of Modern Communications*, New York, NY: Basic Books.

Starbird Kate, Emma Spiro and Jevin West (2020), "This Covid-19 Misinformation Went Viral. Here's What We Learned," Available at: https://www.washingtonpost.com/politics/2020/05/08/this-covid-19-misinformation-went-viral-heres-what-we-learned, Retrieved on: April 1st, 2021.

Sterling, Christopher, and John M. Kittross (1990), *Stay Tuned: A Concise History of American Broadcasting*, Belmont, CA: Wadsworth.

Stern, Barbara B., Craig J. Thompson, and Eric J. Arnould, (1998), "Narrative Analysis of a Marketing Relationship: The Consumer's Perspective," *Psychology & Marketing*, 15, 195–215.

Stephens, Mitchell (1993), *Broadcast News (3rd ed.)*, New York, NY: Rinehart & Winston.

Stephens, Mitchell (1996), *A History of News*, New York, NY: Oxford University Press.

Stephens, Mitchell (1998), *The Rise of the Image, the Fall of the Word*, New York, NY: Oxford University Press.

Streeter, Thomas (2011), *The Net Effect: Romanticism, Capitalism, and the Internet*, New York, NY: New York University Press.

Swann, William B., Laurie P. Milton, and Jeffrey T. Polzer (2000), "Should We Create a Niche or Fall in Line? Identity Negotiation and Small Group Effectiveness," *Journal of Personality and Social Psychology*, 79, 238–250.

Swanson, Kristen, and Dallen Timothy (2012), "Souvenirs: Icons of Meaning, Commercialization and Commoditization," *Tourism Management*, 33 (June), 489–499.

Sylvie, George, and Patricia D. Witherspoon (2001), *Time, Change, and the American Newspaper*, Mahwah, NJ: Routledge.

Tadajewski, Mark (2006), "Remembering Motivation Research: Toward an Alternative Genealogy of Interpretive Consumer Research," *Marketing Theory*, 6 (4), 429–466.

Taylor, James (2005), *Stakes and Kidneys: Why Markets in Human Body Parts are Morally Imperative*, Aldershot, UK: Ashgate.

Thomas, Tandy Chalmers, Linda L. Price, and Hope Jensen Schau (2013), "When Differences Unite: Resource Dependence in Heterogeneous Consumption Communities," *Journal of Consumer Research*, 39 (5), 1010–1033.

Thompson, Craig J. (1997), "Interpreting Consumers. A Hermeneutical Framework for Deriving Marketing Insights from the Texts of Consumers' Consumption Stories," *Journal of Marketing Research*, 34, 438–455.

Thompson, Craig J., and Elizabeth C. Hirschman (1995), "Understanding the Socialized Body: A Poststructuralist Analysis of Consumers' Self-Conceptions, Body Images, and Self-Care Practices," *Journal of Consumer Research*, 22 (2), 139–153.

Thompson, Craig J., Eric Arnould, and Markus Giesler (2013), "Discursivity, Difference, and Disruption: Genealogical Reflections on the Consumer Culture Theory Heteroglossia," *Marketing Theory*, 13 (2), 149–174.

Thrift, Nigel (1996), *Spatial Formations*, London: Sage.

Thrift, Nigel (2000), "Afterwords," *Environment and Planning*, 35, 2019–2024.

Thrift, Nigel (2008), *Non-representational Theory: Space, Politics, Affect*, London and New York: Routledge.

Tian, Kelly, and Russell W. Belk (2005), "Extended Self and Possessions in the Workplace," *Journal of Consumer Research*, 32 (2), 297–310.

Tikka, Juha-Pekka (2009), "The Greatest Internet Pioneers You Never Heard Of: The Story of Erwise and Four Finns Who Showed the Way to the Web Browser," Available at: https://xconomy.com/national/2009/03/03/the-greatest-internet-pioneers-you-never-heard-of-the-story-of-erwise-and-four-finns-who-showed-the-way-to-the-web-browser, Retrieved on: April 22nd, 2016.

Trundle, Eugene (1996), *Guide to TV and Video Technology (2nd ed.)*, Boston, MA: Newnes.

Tumulty, Karen (2013), "'Obama Phones' Subsidy Program Draws New Scrutiny on the Hill," Available at: https://www.washingtonpost.com/politics/obama-phones-subsidy-program-draws-new-scrutiny-on-the-hill/2013/04/09/50699d04-a061-11e2-be47-b44febada3a8_story.html, Retrieved on: March 23rd, 2020.

Türe, Meltem, and Güliz Ger (2016), "Continuity Through Change: Navigating Temporalities Through Heirloom Rejuvenation," *Journal of Consumer Research*, 43 (1), 1–25.

Tweedie, Steven (2015), "The World's First Smartphone, Simon, Was Created 15 Years Before the iPhone," Available at: https://www.businessinsider.com/worlds-first-smartphone-simon-launched-before-iphone-2015-6, Retrieved on: March 25th, 2020.

Van Gennep, Arnold (1908). *The Rites of Passage (English translation 1960 by Monika B. Vizedom and Gabrielle L. Caffee)*. London: Routledge & Kegan Paul.

Veblen, Thorstein (1899), *The Theory of Leisure Class: An Economic Study of Institutions*, New York, NY: The MacMillan Company.

Venkatesh, Alladi (1995), "Ethnoconsumerism: A New Paradigm to Study Cultural and Cross-cultural Consumer Behavior," in *Marketing in a Multicultural World: Ethnicity, Nationalism, and Cultural Identity*, eds. Janeen Arnold Costa and Gary J. Bamossy, Thousand Oaks, CA: Sage Publications, 26–67.

Vetter, Ronald J., Chris Spell, and Charles Ward (1994), "Mosaic and the World Wide Web," *Computer*, 27 (10), 49–57.

Vogel, Verena, Heiner Evanschitzky, and Balasubramani Ramaseshan (2008), "Customer Equity Drivers and Future Sales," *Journal of Marketing*, 72 (6), 98–108.

Vriens, Marco, and Frenkel Ter Hofstede (2000), "Linking Attribute, Benefits, and Consumer Values," *Marketing Research*, 12 (3), 4–10.

Wahba, Mahmoud A., and Lawrence G. Bridwell (1976), "Maslow Reconsidered: A Review of Research on the Need Hierarchy Theory," *Organizational Behavior and Human Performance*, 15, 212–240.

Wallace, Aurora (2005), *Newspapers and the Making of Modern America: A History*, Westport, CT: Greenwood Press.

Wallendorf, Melanie, and Eric J. Arnould (1988), "'My Favorite Things': A Cross-Cultural Inquiry into Object Attachment, Possessiveness, and Social Linkage," *Journal of Consumer Research*, 14 (4), 531–547.

Wallendorf, Melanie, and Russell W. Belk (1989), "Assessing Trustworthiness in Interpretive Consumer Research, in *Interpretive Consumer Research*, ed. Elizabeth C. Hirschman, Provo, UT: Association for Consumer Research, 69–84.

Wang, Yue (2013), "More People Have Cell Phones Than Toilets, U.N. Study Shows," Available at: http://newsfeed.time.com/2013/03/25/more-people-have-cell-phones-than-toilets-u-n-study-shows/, Retrieved on: June 1st, 2016.

Warsh, David (2013), "The Golden Age of Newspapers: A Short History," Available at: http://www.economicprincipals.com/issues/2013.08.12/1528.html, Retrieved on: March 18th, 2020.

Watson, Mary A. (1997), *Defining Visions: Television and the American Experience since 1945*, Fort Worth, TX: Harcourt Brace.

Wattanasuwan, Kritsadarat (2005), "The Self and Symbolic Consumption," *Journal of American Academy of Business*, 6 (1), 179–184.

Webster, Leonard, and Patricie Mertova (2007), *Using Narrative Inquiry as a Research Method: An Introduction to Using a Critical Event Narrative Analysis in Research on Learning and Teaching*, Abingdon, UK: Routledge Falmer.

Westlund, Oscar (2011), *Cross-media News Work: Sensemaking of the Mobile Media (R)evolution*, Gothenburg, Sweden: University of Gothenburg.

Westlund, Oscar, and Mathia A. Färdigh (2015), "Accessing the News in an Age of Mobile Media," *Mobile Media & Communication*, *3* (1), 53–74.

Whetmore, Edward J. (1981), *The Magic Medium: An Introduction to Radio in America*, Belmont, CA: Wadsworth.

White, Llewellyn (1947), *The American Radio: A Report on the Broadcasting Industry in the United States from The Commission on Freedom of the Press*, Chicago, IL: University of Chicago Press.

Wilk, Richard (2006), "Bottled Water: The Pure Commodity In the Age of Branding," *Journal of Consumer Culture*, 6 (3), 303–325.

Witkowski, Terrence H., and D. G. Brian Jones (2006), "Qualitative Historical Research in Marketing," in *Handbook of Qualitative Research Methods in Marketing*, ed. Russell W. Belk, Cheltenham: Edward Elgar Publishing, 70–82.

Wood, Wendy, and David T. Neal (2007), "A New Look at Habits and The Habit-Goal Interface," *Psychological Review*, 114 (4), 843–863.

Wood, Wendy, Jeffrey M. Quinn, and Deborah A. Kashy (2002), "Habits in Everyday Life: Thought, Emotion, and Action," *Journal of Personality and Social Psychology*, 83 (6), 1281–1297.

Wright, Newell D., C. B. Claiborne, and M. Joseph Sirgy (1992), "The Effects of Product Symbolism on Consumer Self-Concept," *Advances in Consumer Research*, 19 (1), 311–318.

Yaszek, Lisa, (1994), "'Them Damn Pictures': Americanization and the Comic Strip in the Progressive Era," *Journal of American Studies*, 28 (1): 23–38.

Zajonc, Robert B., and Hazel Markus (1982), "Affective and Cognitive Factors in Preferences," *Journal of Consumer Research*, 9 (2), 123–131.

Zelizer, Viviana (1985), *Pricing the Priceless Child: The Changing Social Value of Children*, Princeton, NJ: Princeton University Press.

Zeller, Tom (2004), "Vote Fraud Theories, Spread by Blogs, Are Quickly Buried," Available at: https://www.nytimes.com/2004/11/12/politics/vote-fraud-theories-spread-by-blogs-are-quickly-buried.html, Retrieved: March 20th, 2020.

Zuboff, Shoshana (2015) "Big Other: Surveillance Capitalism and the Prospects of an Information Civilization," *Journal of Information Technology*, 30 (1), 75–89.

BIOGRAPHICAL SKETCH

Jakob Braun earned a PhD in Business Administration with emphasis in Marketing from the University of Texas Rio Grande Valley in 2021. He previously completed his MBA at the University of Texas – Pan American in 2014 and his Bachelor of Law (LL.B.) at the Leuphana University of Lüneburg in Germany in 2010.

During his studies at the University of Texas Rio Grande Valley while working towards his doctoral degree, Jakob became a published author, assistant instructor, and lecturer. He presented his research at numerous national, international, and regional conferences. Among others, Jakob was recognized with the Outstanding PhD Student Department of Marketing Award (2016), Outstanding PhD Student Robert C. Vackar College of Business and Entrepreneurship Award (2016), and with a fellowship in the Academy of Marketing Science (AMS) Doctoral Consortium.

Jakob can be reached at jakob.braun@aol.com.