As Seen on Screen: An Virtual Ethnographic Study of Children's Screen Time

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Abstract

Children's screen time is a cultural construct, a worldwide issue, and a highly controversial subject that separates people in ideological groups over the perceived impact that media and technology have on children. Screen time is a phenomenon, a discourse, an object, and a thing. It is a slippery, flexible, and complex issue that is constantly evolving, which only intensifies the debate over whether children's screen time is positive *or* negative. Using virtual ethnography, I examined a number of field sites including academic journals, Twitter, LexisNexis, Reddit and The Bump to uncover the sentiments that scholars, media and parents form about children's screen time. These sentiments often mirror the media harm debate, which positions children as vulnerable or competent. The media report on academic research, which is then discussed by parents. Groups form around the affective dimension of the debate (emotional ideologies), which only perpetuates the idea that children's screen time is positive *or* negative (rather than both). This either-or proposition is unhelpful for the creation of management strategies that assist children in using screen-based devices in a healthy, balanced and productive way that doesn't create a division in class structures.

Keywords: children's media; screen time; cultural studies; media harm; virtual ethnography

Dedication

To my husband, Aniz Alani, and my children, Flynn Sullivan and Isla Elizabeth, who have supported and inspired my work.

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List of Acronyms

Term	Initial components of the term (examples are below)
AAP	American Academy of Pediatrics
CMC	Computer Mediated Communication
CRT	Cathode-Ray Tube
SFU	Simon Fraser University
STS	Science, technology and society

Chapter 1.

Introduction

In today's world everyone has something to say about children's screen time. Screen time has become an intensely social, political and cultural issue rife with disagreement over the impact that screens have on the human condition. Yet despite these disagreements, screens now play an integral role in everyday life. People engage with screens to complete daily tasks for work, leisure and connection. Similarly, screens have become a regular staple in a child's media diet, ranging from reading and homework to play.

The ubiquitous nature of screens for children is an urgent concern for parents who are trying to navigate the best way to introduce, use and manage their child's screen time. The work that follows attempts to answer the question "What is children's screen time?" It looks at questions like: "How is children's screen time defined by academics, media and parents?" and "How is children's screen time socially and culturally constructed?"

When people talk about screen time, they are talking about television, smartphones, tablets and computers. In this thesis, I will argue that screen time is a complicated, flexible, ever-changing thing that is difficult to define because of its multidimensionality. So how can such a thing be defined? In its most basic form, children's screen time is the time that children spend in front of screen-based devices; however, this definition is oversimplified and does not tackle the nuances of such a dynamic and layered subject.

Screen time is a phenomenon, a discourse, an object and a thing. As a phenomenon, screen time is an observable situation, where we can see an increased tendency of people to spend time in front of screens. We can also think of screen time as an object to be touched through various screen-based devices like computers, tablets, smartphones and televisions. As a thing, screen time is an inanimate material, separate from the user, but also so integrated into everyday life that it is barely noticeable. This domestication of screens is evident in the parental sentiments extracted from discussion boards, which is discussed more in sections 2.6 and 6.10. As a discourse, screen time is a way to define what we are doing, how we are doing it, and to denote the amount of time that is spent in front of screens. Discourse also provides a format for various types of people to form thoughts, ideas, and beliefs about children's screen time, and to connect with social groups formed around these likeminded ideologies.

Screen time is a cultural construct. It is a part of the popular *and* popular culture, which is why Stuart Hall's seminal piece, "Notes on Deconstructing 'The Popular'" provides a useful way to deconstruct and uncover the meaning of screen time. Screen time is embedded into the ideological systems of society. Social groups form around these systems of ideas and ideals. There are two group levels that require attention in order to fully understand screen time – the macro group and the micro group. The macro groups are various types of people or professions with a vested interest in screen time. Because screen time is such a complex thing, examining various groups becomes necessary in an effort to paint a clear picture of what screen time is. Within this thesis, I chose to look at three separate but interconnected groups: scholars, media and parents. The micro groups, which are subgroups within the macro groups, denote the various ideologies and discourses that the macro groups adopt. Within this research, the micro group formations followed the affective dimensions of the debate, which mirror the media harm debate that views children as competent or vulnerable. The macro and micro groups are examined within chapters four, five and six.

The final but important point about screen time is that it is fluid. Screen time is a flexible, moving thing. Within Hall's definition of the popular, there is an understanding that popular culture evolves and changes over time. Screen time changes because

technical capacities change, social expectations change, definitions change, and ideologies change. This flexible, changing nature of screen time is one reason why screen time is such a complex thing to study. What screen time was is no longer what it is or what it will be. There is no single definition that fully captures what screen time is without looking at all of the dimensions and groups attached to the subject. This thesis attempts to partially answer what children's screen time is through the examination of three field sites: academic research, media and parental sentiments.

The flexible, moving, complex nature of screen time lends itself well to an ethnographic approach. It is necessary to examine screen time in various field sites to provide a fuller definition of screen time. By looking at scholars, media and parents, there are similarities and differences in the way screen time is defined, discussed, and disseminated.

Below are summaries for each chapter within this thesis. Chapter two outlines the epistemological framework, virtual ethnography, and the research methods, content analysis and frame analysis. In chapter three, I provide a rationale for using a cultural studies framework and how screen time can be understood better through Stuart Hall's concept of the popular. In chapter four, I examine how academics have positioned screen time, which leads into chapter five, where I look at how new and traditional media circulate academic findings to the public. The same issues, arguments, and affective dimensions highlighted by scholars and the media come through in the parental sentiments and social groups that form, which is examined in chapter six.

1.1. Chapter two: virtual ethnography, content analysis and frame theory

The overall epistemological and ontological framework that informs the research within this thesis is virtual ethnography within a cultural studies paradigm. Virtual ethnography provides a way to understand "the technology and the cultures which enable it and are enabled by it" (Hine, 2000, p. 8). Cyberspace has unlocked a host of

"new ethnographic field sites" (Hine, 2000, p. 14). Within this thesis, I explored academics papers, tweets on Twitter, newspapers indexed within LexisNexis, and social networking sites Reddit and The Bump. The Internet is a culture in its own right (Hine, 2000, p. 14), complete with communication, social structures, social groups and communities. Cyberspace is an ideal field site for ethnographers because it is possible to study social, cultural, and political formations (Hine, 2000, p. 17). Ethnographic researchers attempt to deeply understand "the cultural foundations" of online groups (Hine, 2000, p. 21). Virtual ethnography is accessible and allows researchers to analyze a discussion or event, even if they weren't physically present when it occurred (Hine, 2000, p. 23).

The process of uncovering the sentiments that surround children's screen time was an ethnographic endeavour. I examined how scholars, media and parents frame or discuss screen time as a phenomenon, discourse and thing. How children's screen time is understood in today's society is uncovered through the following field sites: academic journal articles, LexisNexis, Twitter, Reddit and The Bump. It is necessary to examine various groups because screen time is a complex, moving thing, which means it is not sufficient to only look at one group or field site.

Two research methods were used to collect and analyze the data for this qualitative research: content analysis and frame analysis. Content analysis uses descriptive frames to determine textual meaning (Entman, 1993, p. 57) and is a growing tool for the "analysis of message characteristics" (Neuendorf, 2002, p. 1). Content analysis is an appropriate research tool for media and social network analysis and has been used in other similarly designed research projects, which is outlined in chapter two (Babbie, 2014; Busher, 2006; Cissel, 2012; Chew and Eysenbach, 2010).

In chapter five, frame analysis is used to explore worldwide framing of children's screen time. According to Erving Goffman (1974, p. 11) frame analysis is used to identify key elements of any rhetorical tool. Frame analysis looks at what information has salience, the information that is most noticeable or dominant within a text (Entman, 1993, p. 52). Within culture, there are demonstrable frames that exist within social

groups (Entman, 1993, p. 53). The use of frame analysis is useful for decoding the dominant frames around the globe about children's screen time. It provides a useful way to understand the key themes that surround screen time as a phenomenon, discourse and thing. It is also a useful way to see how the culture of screen time impacts the debate and narratives that shape worldwide sentiments around children's screen time.

1.2. Chapter three: theorizing screen time using cultural studies

Chapter three tackles three key points: why the philosophy of technology was not used in the analysis of this project, the historical and tangible benefits of a cultural studies approach, and uncovering screen time as a matter of culture through Stuart Hall's analysis of the popular. Theorists within the philosophy of technology like Martin Heidegger, Herbert Marcuse, Don Ihde, Trevor Pinch, Wiebe Bijker and Andrew Feenberg provide critical viewpoints that work for an analysis of screen time, but I argue there are limitations to using each and advantages to inserting a discussion of class structure, ideology, national distinctions, and situating the discussion within a cultural framework. A cultural studies framework affords a greater opportunity to examine the social, political, and economic systems of society as it pertains to children's screen time, which is discussed through scholars like Stuart Hall (1980), Douglas Kellner (n.d.), and Slavjov Zizek (2006) in sections 3.3 to 3.6.

Within the third part of chapter three, screen time is historicized and culturalized using the theoretical tradition of cultural studies. In particular, the concept of screen time is examined using Stuart Hall's (1998) analysis of the popular. The objective of chapter three is to understand the development of screens, the current use of screens and the evolution of the term "screen time." Stuart Hall's (1998) seminal article "Notes on Deconstructing the Popular" is a useful framework for addressing these key points, which help explain how we got to a state where screen time is situated within the media harm debate. Within the article, Hall (1998) looks at three definitions of the popular, including the circulation and commerciality of objects or texts, an activity of the people,

and an ongoing process, similar to Gramsci's concept of hegemony. Within the chapter, each definition is broken up to examine how screens and screen time fit within the popular. The historical evolution of screens and marketplace statistics of screen-based sales provide a useful framework to analyze the commerciality of circulation of screens and screen time. Within the second definition of the popular, screens are examined as a cultural activity of the people. The research suggests that screen time is a popular activity among the people. The way people spend their time in front of screens – as well as the amount of time people spend in front of screens – is a useful tool to quantify whether screen time fits within the standards of popular culture. The third definition, invented by Hall, looks at screen time as an evolving cultural phenomenon. The meaning of the term "screen time" has evolved over time, which is proof of how culture shifts within society and the larger relational tensions that emerge between class and culture as well as "the people" and "the power bloc."

1.3. Chapter four: an analysis of how academics have constructed screen time within a media harm debate

Chapter four situates screen time within the media harm debate, which views children as vulnerable or competent. While the media harm debate tends to belong to the tradition of media effects, this chapter simply borrows the framework for media harm as a way to situate how academics often define children's screen time.

Culture and academia have a mutually beneficial relationship: culture shapes scholars and scholars shape culture. Scientists and psychologists position children's screen time as a phenomenon and a thing. Communication, media and cultural scholars tend to situate children's screen time as a discourse.

The term "effect" is used within this chapter but not to indicate a media effects tradition. Within media effects, the word "effect" is used to describe the measurable influence of the media. I use the term the same as impact or what follows screen usage. There is a great deal of division within academia over the word "effect" but I argue this

only perpetuates the idea among all macro groups that screen time is positive *or* negative. But, children's screen time is not positive *or* negative. Children's screen time has the potential to have positive *and* negative impacts. Academics, media and parents must recognize the good and the bad in order to come to a clearer consensus of how to manage screen time risks and maximize screen time potential for children.

Incidentally, the effect that media has on children is an issue that has repeatedly resurfaced since the advent of mass media and has only accelerated in the information society (Drotner & Livingstone, 2008, p. 2). The AAP (2016) notes that screen-based media should not be used with children under the age of two and should be limited for children under the age of four. That data suggests that parents widely ignore the AAP's screen time recommendations (Guersney, 2007); and, by age one, one in three babies has used a tablet or smartphone (Relaxnews, 2015).

The "vulnerable" side of the media harm debate argues that screens disrupt the cognitive, emotional and physical well being of children. Issues like obesity, sleep disturbance, poor social skills, decreased learning capabilities and increased exposure to the consumer culture are some of the commonly cited effects.

The positive impact side of the media harm debate argues that children are competent and should be allowed to engage with screens in order to build digital literacies, empower children, and encourage cultural participation.

Situating screen time within the media harm debate is important because there is data on both sides, making children's screen time an intensely controversial issue. The media harm debate provides a framework through which one may understand how screen time is framed within society and the public sentiments that are shaped as a result of news articles and discussions about the topic.

A key problem that arises from the analysis is that much of the research published about children's screen time is affective in nature and is typically one-sided. There is a tendency for scholars to conclude that children's screen time is *either* positive

or negative. This either-or perspective is unhelpful to understanding the full implications that screen time has on children and counterproductive to the development of management strategies to help children use screen-based devices in a healthy, balanced and productive way.

1.4. Chapter five: an analysis of children's screen time in the media

Chapter five examines children's screen time within the media. The analysis of academic research in chapter four provides a historical framework to understand the screen time debate and its key themes and issues. The same ideologies, themes and debates that emerged from academic research also resurface in media around the world, illustrating that screen time is also a global debate.

The two field sites used for this analysis include news articles and tweets extracted from LexisNexis and Twitter. Two field sites were necessary in order to present a clear and complete concept of how the media frame screen time. News articles written by journalists represent traditional media and tweets shared by citizen journalists represent newer, digital media. The two field studies come together to add greater clarity to how news articles about children's screen time are emotionally framed and shared. The data was analyzed using framing as a theory of media effects.

The traditional media field site identified the tone (positive, negative or neutral) and continent of 500 global news articles – all sourced from the LexisNexis database. The news articles were separated by continent (South America was not represented in the sample). The news articles about children's screen time were primarily positive in Africa and negative in North America, Europe, Australasia and Oceania, and Asia.

Australasia and Oceania had the most visually descriptive headlines designed to alert the reader. Screen addiction, obesity and the link between children's screen time and class structures were important within the continent. Asia was concerned about the

physical effects of screen time, like language delays, eyesight issues, and mental illness. European articles were family-focused and largely encouraged parents to put their devices down and to play with their kids. North America had the largest number of positive *and* negative articles. The focus of the articles was on making screen time interactive for babies and toddlers rather than passive and the negative consequence of screen time from a quantified perspective. Thus, the focus was on the time. Africa was a small sample size, but presented screen time as a positive learning tool.

The digital media field site examined fifty tweets about children's screen time, ninety-eight percent of which were shared news articles. The tone of the shared news articles about children's screen time was primarily neutral. Negative articles were the second most shared. Positive articles about children's screen time were rarely shared. In both case studies, hand-selected articles were chosen to illustrate how framing is used within news articles about screen time for kids.

The main take-away from the research within these field sites is that traditional and digital media present children's screen time as an emotional topic, which presents an affective dimension to the debate. Emotional content is more likely to be shared, which may be one reason that children's screen time is such a newsworthy issue around the world.

1.5. Chapter six: parental sentiments about children's screen time

Chapter four uses academic research to situate screen time within the media harm debate. Chapter five argues that the same issues that academics write about transcend to how media around the world frame children's screen time. The findings in chapter five illustrate that screen time is not only a cultural issue but also an emotional one, which leads to chapter six. In chapter six, I examine the public sentiments of parents on two social networking sites: Reddit and The Bump. Forums from each platform were used to analyze discussions about children's screen time. The findings

indicate that social groups form online around the affective dimensions of children's screen time; effectively, whether screen time has a positive, negative, neutral or mixed impact on children. When parents discussed types of screens used for screen time they referred to television, smartphones, tablets and computers. Television was frequently used for entertainment and education. It was the only device that was routinely used as a "babysitter" so that parents could sleep in or get work done. Tablets and smartphones were used in an active and passive manner. Smartphones and tablets were often used outside of the home to entertain children, such as on long car rides or at restaurants. Smartphones and tablets were also used actively, often with parents, for educational purposes like playing interactive games or using the Internet for research. Screens have become a fixture in the home, which has shifted the structure of the family dynamic within the home. Each household has different rules with respect to children's screen time but most users did agree that limiting screen time to some degree was helpful and that children and parents should not follow the same rules (screen time rules should be age appropriate).

1.6. Future research

Future research is required to examine parental screen time management strategies, how young children use screens to build digital skills and competencies, and how child influencers (parents, educators, tech companies and media producers) can maximize the benefits of screen time for children.

1.7. Chapter summary

The ideological issues that surround screen time are framed by academics who publish research and articles, which largely follow the media harm debate, and position children as vulnerable or competent in relation to their media consumption. The default of many scholars is to construct children's screen time as either positive *or* negative. The either-or (negative or positive) proposition that scholars use to construct children's

screen time creates an ideological system that encourages media and parents to take a side, rather than to simply acknowledge that screen time has advantages *and* drawbacks. Traditional media routinely report on academic findings, often preferring to frame the issue in a negative manner to make it more salient. Children's screen time is an issue that is covered by media around the globe, which is shared and discussed by citizen journalists – as defined in Chapter 5 -- and the public on digital media.

Concerned about the binary arguments presented about children's screen time, parents seek out social networks to discuss what screen time is, the types of screen-based devices that children use, the type of media that children (and parents) use on screen devices, management strategies and overall parental sentiment's about the issue. An ideological cycle emerges around children's screen time where scholars, media and parents form social groups around the affective dimension of the debate, framing children's screen time as negative, positive, neutral, or a mix between positive and negative.

As parents form sentiments about children's screen time, how they manage the use, content, and time their children spend in front of screen-based devices is influenced by the media, the people they spend their time with, and the social groups they belong to online and off. Within this thesis, I will argue that children's screen time is socially constructed through culture.

Because screen time is a cultural construct it is a constantly evolving thing. It is examined and discussed as a phenomenon, discourse, object and thing. It's shifting and flexible nature is what causes the subject to be such an intensely emotional, controversial and urgent topic for scholars, media and parents. How screen time is treated changes but the fact that it is an evolving cultural construct remains steady. Additionally, while the treatment of screen time as a phenomenon, discourse, object and thing varies, the themes, ideologies and class issues exist in every treatment of screen time.

Children's screen time is saddled with one crutch: the framing of the topic as positive or negative. The either-or proposition used by macro groups to define children's screen time only leads to more division rather than discussion about how to create management strategies to help children use screens while minimizing risks and maximizing rewards.

Chapter 2.

A Mixed-Methods Approach: Virtual Ethnography, Content Analysis and Frame Theory as a Way to Navigate Children's Screen Time

In this chapter, I outline the epistemological framework for the thesis as virtual ethnography and the research methods as content analysis and frame theory. The ontological framework for this thesis is a cultural studies paradigm, which is discussed in chapter three. Using virtual ethnography and research methods like content analysis and frame theory is an ideal way to examine such a slippery, complex issue. The fact that screen time is a flexible and moving thing means it is necessary to examine various field sites to uncover a fuller understanding of what screen time is.

In section 2.1, I provide a reflexive description of why I selected children's screen time. In section 2.2, I ask the research question: "What is children's screen time?" Here, I outline children's screen time as a slippery, flexible subject. Screen time is defined in its various forms: as a phenomenon, discourse, object and thing. In sections 2.3 and 2.4, I define ethnography and discuss the benefits of new field sites that have opened up to ethnographers in the advent of cyberspace. In section 2.5, I compare the differences between ethnography that is online versus offline. The biggest differences are that virtual ethnographers are not limited to time and place, which means children's media practices can be examined from a cultural, historical and institutional context (Aarsand, 2016, p. 90-92). In section 2.6 I look at how David Morley has used audience ethnography to examine issues like cultural consumption, global media, essentialism and domestication. In section 2.7, I examine the ethnographic field sites for this project: academic journals, Reddit, The Bump, Twitter, and LexisNexis. In section 2.8, I outline the research process for this thesis, which included uncovering how academics, media and parents define,

discuss, and manage screen time for children. Sections 2.9 and 2.10 outline the research methods used in this project: content analysis and frame analysis.

2.1. Why children's screen time?

I became a mom for the first time in 2014. Like many new parents, I prepared the best I could. I read dozens of books, listened to experts and sought advice from friends who were already parents. I expected sleepless nights but what I wasn't prepared for was the sheer volume of conflicting advice strewn at parents-to-be, ranging from everything from sleep to feeding and play.

Children's screen time was one issue that continuously surfaced with friends, in online forums, and news articles. It concerned me that I was seeing such contradictory information coming from news outlets. One week I would read about how tablets made a toddler a genius and the next week tablets were written about like poison. It was confusing, which led me down a path of trying to uncover as much information as I could about screen time.

Now as a mother of two young children, it is clear to me that the lack of agreement about whether screen time is good or bad has a lot to do with the slippery state that screen time is situated within. I care deeply about helping my children (and others) use screens in a way that is beneficial and minimizing uses that have greater risks. In order to help parents find useful management strategies for children's screen time we must first endeavour to understand this vast and complex issue.

2.2. What is screen time?

The overarching research question is: "What is children's screen time?" In order to answer this question, we must first consider what "screen time" is within its own right. At the outset of this project I thought about "screen time" primarily as a phenomenon but

over the course of the project it became clear that screen time is a phenomenon, a discourse, an object and a thing.

Screen time is a phenomenon (i.e. an observable occurrence). Screen time can be observed on the streets, in workplaces, in the home and in schools. Screen time is something that happens and often its cause is put into question. As Meeker (2014) illustrates in her work, each year people use screens more often and the time people spend throughout a day is increasingly in front of screens.

We can also think about screen time as an object to be touched. Screen time can only happen with the object itself. Screens are virtually everywhere from billboards and ATMs to the home use of computers, televisions, smartphones and tablets. The screen as an artifact is of cultural interest. The increasing use of and interest in screens is a culture in its own right. There is a distinct culture of screen time whereby people use screens within the culture, creating a culture of screen usage. This leads to screen time as a thing, an inanimate material separate from the user but so fully integrated into the user's life that it isn't noticeable anymore, which helps situate the AAP's recent statement that "screen time" as a concept is now simply "time" (Hill, 2015, para. 7). The domestication of screen-based artifacts in households plays an important role in this integration of devices into family life, which is discussed more in chapter six.

As a discourse, screen time is a way to define what we are doing, how we are doing it, and to denote the amount of time that is spent in front of screens. Discourse also provides a format to discuss the language and narratives that form around children's screen time.

Screen time is a cultural construct – it is part of the popular and popular culture. Uncovering screen time is made possible through Stuart Hall's article, "Notes on Deconstructing 'The Popular," which is discussed in chapter three and lays out cultural studies as the theoretical framework for this thesis. Screen time is culturally constructed through the commercialization and circulation of both screens and "screen time," it is

popular because it is an activity of the people, and it is an evolving construct tangled up in class structures, national identity and ideology.

As a cultural construct, social groups form around children's screen time based on ideology (a system of ideas and ideals). There are two group levels that require attention in order to fully understand screen time – the macro group and the micro group. The macro groups are various types of people or professions with a vested interest in screen time. Because screen time is such a complex thing, examining various groups becomes necessary to painting a clearer picture of what screen time is. Within this thesis, I chose to look at three separate but interconnected groups: scholars, media and parents. The micro groups, which are subgroups within the macro groups, denote the various ideologies and discourses that the macro group adopts. Within this research, the micro group formations followed the affective dimensions of the debate, which mirror the media harm debate, which views children as competent or vulnerable in their media and technology usage. The macro and micro groups are examined within chapters four, five and six.

The most important point that must be stressed about screen time is that it is malleable. It is a shifting, flexible, moving thing that has layered meanings. In different social groups it is primarily discussed as a phenomenon and in others as a discourse or thing. This shifting definitional practice makes it necessary to examine screen time from various field sites in order to uncover a fuller picture of what screen time is. Thus, an ethnographic approach allows for the flexibility required to visit various field sites to uncover a much larger and more accurate picture of screen time.

The sub research questions address a number of issues that help address the main research question. Some of these questions are as follows: What impact, if any, does this emotional dimension have on the way children's screen time is discussed and managed? How do academics position screen time? Do scholars look at the advantages and disadvantages of screen time? What are some of the key themes that emerge from academic literature on children's screen time? What type of stories do the media print about children's screen time? Are the media more inclined to print positive,

negative or neutral stories about children's screen time? What news articles are shared on social networking sites? How do parents define screen time? How do parents describe children's screen-based uses as well as their own management strategies? What, if any, link exists between these macro groups?

2.3. Defining ethnography

Ethnography is a research technique that uses the personal experiences of individuals to uncover the "power relations that structure and govern their experiences" (Babbie and Benaquisto, 2014, p. 312). Ethnography involves researcher participation, "overtly or covertly," in people's daily lives (Hammersley & Atkinson, 2007, p. 3). Virtual ethnography, also known as cyber ethnography, online ethnography and netnography is a version of ethnography that has been adapted to meet the demands of online communities and cultures. In *Virtual Ethnography*, Christine Hine (2000) argues that ethnography is a useful way to "develop an enriched sense of the meanings of the technology and the cultures which enable it and are enabled by it."

2.4. Cyberspace provides new field sites for ethnographers

From traditional ethnography to virtual ethnography, field sites remain important to ethnographic research. Technological developments, like the Internet, "represent relatively new sources of data, and ethnographers have made increasing use of them" (Hammersley et al., 2007, p. 140). Virtual ethnographic field sites provide great epistemological possibilities.

Hine (2000, p. 8) questions how users understand Internet capabilities, how the Internet affects the organization of social relationships in time and space, the implications of the Internet for authenticity, authority and identity, as well as the problems that arise from the division of space (real versus virtual) and the boundary of online versus offline. For the purpose of this research, I borrow Hine's (2000, p. 8) theoretical

projections about the Internet, transferred to the subject of screens and screen time, to ethnographically explore questions about how users understand the capacity of screens, the significance screen time has for users, and how people understand the capability of screens as a medium of communication.

Cyberspace has unlocked a host of "new ethnographic field sites", and Hine (2000, p. 14) argues that there are two ways to understand the Internet, which easily extends to screens and screen time: "as a culture in its own right, and as a cultural artifact." The Internet as a culture in its own right is the definition selected for this study so the Internet as a cultural artifact will be intentionally excluded from this analysis.

Internet as a culture in its own right is concerned about the effects that CMC has on the communication process (Hine, 2000, p. 14). Early scholars suggested that "computers could not support the same richness of communication" as face-to-face contact (Hine, 2000, p. 14). For these academics, face-to-face contact became the standard according to which all other communication was based. Media effects research was one theory that was also "motivated by concerns with problems of management" (Hine, 2000, p. 15). The reduced social cues model within technology-based approaches spent time comparing face-to-face interactions versus the computer-mediated equivalent (Hine, 2000, p. 16). The reduced social cues model was attacked by context-based approaches that refuted the idea that that CMC was an inferior model of communication from the outset (Hine, 2000, p. 16). Rheingold is one example of a scholar who established the view that CMC was "providing a community in its own right" (Hine, 2000, p.p. 16-17). Researchers wrote about the social structures of online environments and argued that online communication "was far from inimical to the formation of social relationships" (Hine, 2000, p. 17). The basic idea was that online environments form virtual communities as illustrated by newsgroups, bulletin boards and role-playing platforms (Hine, 2000, p. 17).

Hine (2000, p. 17) argues:

> This work proved highly influential in shaping the development of research agendas focused on the actual uses of the technology rather than its hypothetical potential or its effects in experimental settings.

> Researchers moved on from the observation that CMC felt like a community to its participants and began to pay detailed attention to the ways in which that perception was created and sustained (Jones, 1995; McLaughlin et al., 1995; Kollock and Smith, 1999).

The end result is that CMC "was conceptualized as culture" fit for analysis through many different disciplines, including sociology and cultural studies (Hine, 2000, p. 17). Cyberspace became a place for researchers to study social, cultural and political formations (Hine, 2000, p. 17). "Stone observes that cyberspace is now crowded with 'researchers swarming over the virtual landscape, peering around at virtual natives and writing busily in their virtual field notes' (1995: 243)" (Hine, 2000, p.p. 17-18).

2.5. The difference between online and offline ethnography

"Ethnography holds particular appeal for studying 'what people actually do' with the technology" (Hine, 2000, p. 21). The methodological practices of ethnography have necessarily shifted to account for the differences between online versus offline research (Hine, 2000, p. 21). Hine (2000, p. 21) expands:

> In an offline setting we might expect an ethnographer to have spent a prolonged period living or working in their field site. We would expect them to have observed, asked questions, interviewed people, drawn maps and taken photographs, learnt techniques and done what they could to find out how life was lived from the point of view of participants.

In an online approach, ethnography has shifted to encompass the analysis of pre-existing newsgroup archives and visiting online settings and environments at periodic intervals – referred to as snapshot approaches (Hine, 2000, p. 21). The selective approach allows researchers to go into depth on a particular topic without being "overwhelmed by the sheer mass of words that some newsgroups produce" (Hine, 2000, p. 21).

Ethnography offers an opportunity to "see" through the eyes of the participants (Hine, 2000, p. 20). A grounded approach allows researchers to extract a "deep understanding of the cultural foundations of the group" (Hine, 2000, p. 21). Ethnography has become a popular approach for online phenomena (Hine, 2000, p. 22). Virtual ethnography is accessible to researchers, presents the ability to go back in time, and the material is often recorded in real time, which means the researcher does not have to be 'there' in the moment of a situation (Hine, 2000, p. 23).

Ethnography used to assume a physical travel and face-to-face communication but in online environments the social interaction is different (Hine, 2000, p. 27). Rather than being interactive, "cyberspace as composed of texts;" however, some argue the Internet is both (Hine, 2000, p. 50). Virtual ethnography requires "combining a view of texts… with understandings of the situationality of those texts," described as mediated quasi-interaction (Hine, 2000, p. 51). In mediated quasi-interactions, the mobility of texts results "in a separation in space and time of producers and consumers" – a key way to examine the "social effects of the mass media" (Hine, 2000, p. 51).

Ethnography is an "important methodological" approach in the "study of children's media practices" because it is "dedicated to participant perspectives and focus[es] on everyday routines, cultural practices, the organisation of activities and the pattern of communication in children's media practices" (Aarsand, 2016, p. 90). As a result of technological innovations, researchers of children's media practices "are no longer restricted to time and place" (Aarsand, 2016, p. 91). Now, children's media practices can be examined "in their full range of contexts: cultural, historical and institutional" (Aarsand, 2016, p. 92).

2.6. Audience ethnography, cultural consumption, global media, essentialism and domestication

In the paper, "Unanswered Questions in Audience Research," audience ethnographer David Morley (2006, p. 116-117) addresses the longstanding debate about

whether audiences are passive or active. Passivity and activity refers to the degree that the audience can interpret the content of the media they experience as an audience in their own terms. Morley (2006, p. 110-112) suggests that the power of audiences over the ideology of the media has, at times, been exaggerated. The work on the active audience is too strong to revert back to a passive audience model, which views the public as passive and unable to resist the presented ideology (Morley, 2006, p. 111). The scholars who prefer the passive model tend to take a "gendered" view of the audience, with such classifications as the news as male and entertainment media as female, thus perpetuating the stereotype that "female" media is less important (Morley, 2006, p. 103). There is value in seeing audiences as "pre-political," where people are afforded a space that allows the development of a more sophisticated view of the world (Morley, 2006, p. 104).

According to Morley (2006, p. 104), Herbert Schiller's model of "cultural imperialism" affords too much power to the media over the power that people have. "[The] simple-minded theories of North American cultural imperialism… are inadequate—not least because they were premised on an inadequate hypodermic model of media effects on their international audiences" (Morley, 2006, p. 104). As such the "cultural imperialism" model is akin to the "strong effects" hypodermic needle model of media influence. While some models of "cultural imperialism" credit media with too much power over the shaping of people and culture, media power is still visible (Morley, 2006, p. 104). The power of media and culture in a globalized world has transcended the mega-Western corporation phase in favour of glocalization, a phenomenon where large corporations use their power to appear local – and less Western – in order to appeal to the local culture. Audience research in this area has largely examined how non-Western audiences interpret Western television programs (Morley, 2006, p. 105). "We should remember that these models of audience activity were not initially designed… to make us forget the question of media power, but rather to be able to reconceptualize it in more complex and adequate ways" (Morley, 2006, p. 105-106).

Morley (2006, p. 107) argues that essentialism is the tendency of society to reduce "individuals to the status of mere members of a social category of class or gender or race." Essentialism is the basis for most racism, sexism, classism, sexual

orientation and judgments about groups. In the 1970 Nationwide Study about audience research, Morley (1996, p. 107) found that socio-economic class was not the primary way people interpret the media and audiences are able to interpret media content according to their own will. However, people do look to media as a way to identify or form their identity – typically in ways that are consistent with their own values, ethnicity, gender and sexual orientation (Morley, 1996, p. 109).

The final issue that authors like David Morley and Roger Silverstone have addressed is the domestication of technology into everyday environments (Berker et al., 2006, p. 4). Domestication is the process of "wild" and "strange" technologies being integrated into the "structures, daily routines and values of users and their environments" (Berker et al., 2006, p. 2). Domestication has helped gap an empty space that previously existed between media and communication and science and technology (Berker et al., 2006, p. 4). "[I]t provided ways to refute technological and media determinisms and rationalistic biases" (Berker et al., 2006, p. 5). Morley argues that the impact of "new technologies and global cultural flows" is no longer a local, self-enclosed space but rather much more "phantasmagoric" with the intrusion of electronic communication (Berker et al., 2006, p. 23).

Roger Silverstone (1993) argues that television is a part of everyday life, which cannot be sustained without traditions and rituals. To avoid panic and increase daily order people construct and maintain identities, manage social relationships in time and space and share meanings (Silverstone, 1993). For Silverstone (1993, p. 574), televisions are an "ontological and phenomenological reality." That is, there is an "*experience* of television" (Silverstone, 1993). Silverstone (1993, p. 575) argues that television is intimately connected to social life, whereby people watch, discuss or read about television on an hourly basis. The same argument applies, arguably on a much more encompassing level, with the concept of screen time. The experience one has of screen time becomes a piece of their experience with the world. Similar to television, screen-based devices have fully integrated into everyday life, with emotional significance as a "disturber and comforter" (Silverstone, 1993, p. 575). Silverstone (1993, p. 594) argues that, "[t]elevision is part of the grain of everyday life." I would argue that screen-based devices, particularly smartphones and tablets, have become even more important

– and more ingrained within society and everyday life – than the object of television. In addition to being mediators of space and time, tablets and smartphones have for many adults and children assumed a state of being treated as part of the body itself.

The issue of domestication emerges through the analysis of parental sentiments about children's screen time, which is discussed in section 6.10.

2.7. Ethnographic fieldwork

Ethnographic work has a number of features. First, ethnographers study people's actions and accounts in "everyday contexts, rather than under conditions created by the researcher" (Hammersley et al., 2007, p. 3). The benefit of conducting research "in the field" lends itself to a more authentic interpretation of the perceptions and sentiments that are formed by academics, media and laypeople about children's screen time.

In ethnographic fieldwork, data is gathered from a range of sources (Hammersley et al., 2007, p. 3). The range of sources used in this project included academic journals, newspapers, tweets, and forum posts on Reddit and The Bump. Data collection tends to be "unstructured" and tends to focus on a few cases, a single setting or group of people (Hammersley et al., 2007, p. 3). These field sites allowed me to examine the following macro groups: scholars, media and parents. The rationale for using these field sites was to get a sense of how academics research and write about screen time, how the media writes stories about screen time, how those news stories are circulated, and how screen time is discussed by parents.

Ethnographers typically employ an open-ended approach (Hammersley et al., 2007, p. 3). "They begin with an interest in some particular area of social life" (Hammersley et al., 2007, p. 3), such as children's screen time. Ethnographers foreshadow problems and "their orientation is an exploratory one" (Hammersley et al., 2007, p. 3). According to Hammersley and Atkinson (2007, p. 3): "The task is to investigate some aspect of the lives of the people who are being studied, and this

includes finding out how these people view the situations they face, how they regard one another, and also how they see themselves. It is expected that the initial interests and questions that motivated the research will be refined, and perhaps transformed, over the course of the research; and that this may take considerable amount of time."

2.8. The research process

The research process was open-ended, which occasionally led to new discoveries, field sites and observations that would not have been uncovered using a different methodological path. Below, I track the pattern of the research process.

2.8.1. Uncovering how academics situate children's screen time

The research process began with trying to uncover how academics research and write about children, media and technology. Psychology and science-based scholars tend to look at screen time as a phenomenon where communication, media and cultural scholars look at screen time as a discourse. As a phenomenon, screen time is an observable situation and as a discourse, screen time is a way to define what people are doing, how they are doing it, and how much time they spend in front of screens. Discourse provides a platform for people to form groups and ideologies about concepts. While not directly acknowledged by many scholars, I have observed a practice of situating children's media practices within the media harm debate. Even scholars who vehemently refute the media effects model have a tendency to frame technology as positive or negative, a benefit or drawback, which necessarily positions children as competent or vulnerable. This pattern carries through from academics to media and parents. It is problematic for macro groups to situate within these micro groups (viewing screen time as positive or negative) because screen time has positive *and* negative effects. Acknowledging both sides of the debate is important to shaping a new cultural understanding of children's screen time that is less divisive and more about coming up

with solutions that help parents minimize risks, while raising children who reap the rewards of technological usage.

2.8.2. Examining how children's screen time is presented on social networks

The next step in the process was to look at how children's screen time was presented and discussed on social networking site. Three social networking sites were selected, all of which I have been a participant on at some point prior to the study. Though my participation in these sites made it easier for me to understand the culture and communities of the field sites, I purposely selected data that I was not a participant on so I could conduct a more objective analysis. The social networks included Twitter, Reddit and The Bump. Being a user on these social networks allowed me the benefit of understanding how the platform operated but also how the social ties within each group function. I began with Reddit, which provided an environment rich with text about the topic of children's screen time. Reddit and The Bump both offered social networks where parents came together to discuss children's screen time in an informed, yet realistic manner.

Reddit and The Bump both offered rich information by active users who were by all accounts residing within a virtual community. For the research, it was necessary to only look at active members. As Hine (2000, p. 24) acknowledges, with online forums it is necessary in most cases to sideline the lurkers and focus on the active participants (Hine, 2000, p. 25). Lurkers become unimportant to ethnographers because they are not observable (Hine, 2000, p. 25). Accordingly, "[t]he boundaries of the group being studied are symbolically enacted (by active participants) through the discourse of the group and through the devices which control access" (Hine, 2000, p. 25). Cultures should be studied in its natural state, not "disturbed" by other methodologies or techniques (Hine, 2000, p. 27).

The next social network that was analyzed was Twitter. Based on my personal use of Twitter in conjunction with preliminary searches of "screen time" and "children's

screen time" I knew the content would be framed differently than on Reddit and The Bump, which don't limit the length of users' posts. With 140 characters or less, users are required to get to the point quicker and often use links that forward other readers to more information. Initially, I used NCapture from NVivo 10 to collect all available tweets on the subject. The problem with using NCapture is that I was only able to collect information that contained a hashtag. I collected data for "#screentime," "#childrenscreentime," and "#childrensscreentime." The problem I encountered was that "#screentime" yielded too many unrelated results and "#childrenscreentime" and "#childrensscreentime" were not popular enough to yield useful results. The best results appeared when I searched "children screen time" but NCapture was not able to collect the results. The data was then collected by hand – the first fifty tweets were collected alongside information on the user handle and the number of "retweets" and "favorites." The result was that ninety-eight percent of the tweets contained news sources. It felt necessary to do an analysis of the tone of newspapers in order to better inform how the information was presented on Twitter, which led to a content analysis to uncover the tone of "children's screen time" in newspapers around the globe.

2.8.3. Analyzing traditional news media to better understand how children's screen time was framed on Twitter

After conducting the research on Twitter, I noticed that while there were a handful of personal opinions about children's screen time, the content was largely re-circulated news articles. The users on Twitter were acting as citizen journalists, publishing content for other users on the site. The way users were using Twitter to convey information about children's screen time was different than the other social networks and needed a base line for comparison. The information was interesting – and useful – but felt incomplete.

A comparison between new and traditional media would provide a greater understanding of how children's screen time is framed in the media and the tone that is shared by readers. Five hundred news articles from around the world were collected from the LexisNexis database. The news articles were separated by continent, which

allowed me to see if children's screen time is an important issue around the globe and if there are any sizeable differences in the framing and tone of the phenomenon. This method provides an interesting way to examine how the media write articles and how those articles are circulated on social media.

2.9. Data collection and analysis: content analysis

The research method used to collect data was content analysis, which was used to measure the tone, social groups, narrative themes and general sentiments that the media and parents posted on Reddit, The Bump and Twitter. I treated the text within each group as an object that could help uncover meaning. Ethnographers "often need to collect and use documentary material from the research setting, as well as employing that from elsewhere" (Hammersley et al., 2007, p. 140). Documents can also be acquired; for example, "material on the internet can often be downloaded and printed out" (Hammersley et al., 2007, p. 140). Tweets and forum posts were saved as PDF documents of the Internet sites. The news articles from LexisNexis were also saved as PDF documents.

A qualitative content analysis was performed for the study to determine how children's screen time is positioned on the social networking sites. Content analysis is the "study of recorded human communications" and is well suited to the examination of newspapers (Babbie and Benaquisto, 2014, p. 278). Content analysis is a growing research technique and can be defined "as the systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2002, p. 1).

According to Entman (1993, p. 57), content analysis has the "major task of determining textual meaning" through descriptive frames in such a way as to "avoid treating all negative and positive terms or utterances as equally salient and influential." Therefore, it is useful to "gauge the relationships of the most salient clusters of messages – the frames – to the audience's schemata" (Entman, 1993, p. 57). Without

the guide of a framing paradigm, content analysis can "misrepresent the media messages that most audience members are actually picking up" (Entman, 1993, p. 57).

Content analysis has been used as a research tool for many subjects and topics. For example, Tremblay used content analysis to look at male and female members of Canada's Parliament to determine if women are "more likely than male MPs to represent women by promoting women's issues" (Babbie et al., 2014, p. 279). Tremblay discovered that female MPs addressed women's issues more than male MPs (Babbie et al., 2014, p. 279). Another project conducted content analysis on newspaper editorials in Toronto, Ontario to assess the public discourse of a multicultural society, with particular attention given to the 1995 Quebec separatist referendum (Babbie et al., 2014, p. 279).

Many researchers have also used frame and content analysis to determine the tone of a person or issue within the news. For example, in "Media Framing: a comparative content analysis on mainstream and alternative news coverage of Occupy Wall Street," Cissel (2012) analyzed news articles for length, tone and dominant frames. Busher (2006) also used content and frame analysis to examine the tone of coverage within *The New York Times* of Hillary Clinton during the 2000 New York Senate election.

Content analysis is a useful methodology for research on Twitter. According to Larsson and Moe (2015), "online services like Facebook, YouTube, various blogging services or Twitter are becoming integrated into the flow of news provision." In "Tweet, tweet, tweet: A content analysis of nonprofit organizations' Twitter updates," Waters and Jamal (2011) analyzed how philanthropic organizations cultivate relationships and communicate on Twitter. The findings revealed that most charitable organizations used Twitter for one-way communication, ignoring the potential for community building and dialogue (Waters et al., 2011). Chew and Eysenbach (2010) also used content analysis to examine tweets during the 2009 H1N1 outbreak. Similar to Twitter, Reddit and The Bump are appropriate platforms for content analysis.

2.10. Data analysis: frame theory

Frame theory was the research method used in the analysis set out in chapter four, which examines children's screen time headlines by media around the globe. The concept of "screen time" is circulated by various sources of media, both traditional and digital. When we think about media we often think about trained journalists; however, in today's digital landscape the public is also able to assume the position of citizen journalists. The information that is written and shared about children's screen time is rife with frameworks, ideologies, and salience that is ideal for a frame theory analysis.

Frame theory is part of the empirical tradition (Scheufele, 1999), but unlike agenda-setting theory, frame analysis goes one step further to explain whether or not the media can tell people what to think (Entman, 1993). The 1950s and 1960s were dominated by theories like limited media effects and the selective hypothesis position, which argued that the media largely exists to reinforce the ideas and values that people already have (McCombs and Shaw, 1972). In the 1970s, agenda-setting theory suggested that while the media doesn't tell people what to think it does play a role in telling people what to think about (McCombs and Shaw, 1972). Within agenda-setting theory, the news media establishes a list of themes and topics to report on, which in turn become a priority for the public as well (McCombs and Shaw, 1972). Frame theory is an extension of agenda-setting theory but argues that how something is presented (i.e., framed) can influence how people receive and process information. The analysis of frames looks at how features of reality come to the attention of the conscious or unconscious mind. Within the article "Consciousness in the Nervous System: An Action-Based Synthesis," the authors argue through passive frame theory that the unconscious is in charge of all consciousness (Morsella, 2015), which could make frame theory even more important because of how frames impact the unconscious mind. Frames are unconsciously created as people select and give meaning to moments in time and space.

Frame theory is derived from the work of Erving Goffman through his 1974 book, *Frame analysis: An essay on the organization of experience*. Goffman (1974, p. 11)

defines frames as “definitions of a situation [that] are built up in accordance with principles of organization which govern events […] and our subjective involvement in them; frame is the word I use to refer to such of these basic elements as I am able to identify.” Thus, frames are conceptual impressions, which cumulatively add to a greater understanding of social reality. A frame is any rhetorical tool on a spoken, written or visual narrative that conveys salience. “Salience means making a piece of information more noticeable, meaningful, or memorable to audiences” (Entman, 1993, p. 53). In “Framing: Toward Clarification of a Fractured Paradigm,” Robert Entman (1993, p. 52) notes, “To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described.” However, in today’s media climate, salience may be less critical. Within “Cascading Activation: Contesting the White House’s Frame After 9/11,” Entman (2003) still considers salience a critical factor but within his 2004 article “Projections of Power: Framing News, Public Opinion, and U.S. Foreign Policy,” the notion of salience is replaced with the idea of “making connections among.” Thus, framing is not only about calling attention to some aspect of reality but can also be used to construct a framework of analysis around events or issues.

Goffman’s (1974, p. 24) key contribution to frame theory is the idea of primary frameworks, which is the framework people apply to an issue at the first point of contact to describe the event (or issue) to which it is applied. Some “acts of daily living are understandable because of some primary framework (or frameworks) that informs them” (Goffman, 1974, p. 26). There are two types of primary frameworks, including “the natural” and “the social” – both of which help people make sense of the world around them (Goffman, 1974, p. 22). Natural frameworks “identify occurrences seen as undirected, unoriented, unanimated, unguided, ‘purely physical’”, and social frameworks “provide background understanding for events that incorporate the will, aim, and controlling effort of intelligence, a live agency, the chief one being the human being” (Goffman, 1974, p. 22). Primary frameworks allow people to form the basic understanding of a phenomenon, such as children’s screen time.

In the article, “Framing as a Theory of Media Effects,” Dietram Scheufele (1999, p. 105) argues that mass media play an important role in constructing social reality but media effects are limited “by an interaction between mass media and recipients.” While frames help present a social construction of reality, people process the information according to pre-existing “meaning structures or schemas” (Scheufele, 1999, p. 105). “The *culture* is the stock of commonly invoked frames; in fact, culture might be defined as the empirically demonstrable set of common frames exhibited in the discourse and thinking of most people in a social group” (Entman, 1993, p. 53). Kosicki and McLeod (1999) identified three dimensions of news processing, including active processing, reflective integrators and selective scanners. Active processing refers to people who seek additional sources because they believe the existing information to be incomplete or slanted (Scheufele, 1999, p. 105). Reflective integrators think about and talk to others about the information they have read to fully understand what they have learned (Scheufele, 1999, p. 105). Selective scanners use mass media to find content that is of interest to them (Scheufele, 1999, p. 105). “In sum, according to a constructivist media effects model, audiences rely on ‘a version of reality built from personal experience, interaction with peers, and interpreted selections from the mass media’ (Neuman et al., 1992, p. 120)” (Scheufele, 1999, p. 105).

Audiences perceive media personalities to be objective and credible. The way political advertising is framed can influence the way the public perceives or discusses it. According to Street (2011, p. 51) the media coverage of 9/11 “largely reproduced the frame adopted by President Bush.” The problem with the dominant frame is that it controls a national – or in the case of 9/11, the international – discourse and forces the majority to see the event through a very narrow lens. In the case of 9/11, the frame ultimately fuelled the support for the invasion of Afghanistan and Iraq. Audiences may be limited in their understanding of an event, character, or situation depending on how major media sources represent it. While journalists follow the rules of objectivity, few recognize when they are reporting a dominant frame (Entman, 1993, p. 56). The news is only successful if it is appreciated by its target audience, which creates an environment in which journalists must cover a lot of events in a limited amount of space and time (Street, 2011, p. 56 & 75).

Entman (1993, p. 55) describes the framing of news as counterframing because it brings ritual frames into focus and challenges them in light of other potential frames. A counterframe emerges after the initial frame, offering a new frame with a position that is contrary to the original. A counterframe is particularly important when the original frame affected opinions on an issue and requires a later frame to shift public opinion.

2.11. Research fieldnotes

Wherever possible fieldnotes were used to capture themes, sentiments and observations from the various field sites. Notes were collected by hand as well as through the software program NVivo. “Fieldnotes are always selective: it is not possible to capture everything. And there is a trade-off between breadth of focus and detail” (Hammersley et al., 2007, p. 142). The recorded data depends on what is relevant to the “foreshadowed research problem” and “background expectations” (Hammersley et al., 2007, p. 142). The words that people use can be analytically important and the “situated vocabularies” provide a valuable way to understand how cultures “organize their perceptions of the world, and so engage in the ‘social construction of reality’” (Hammersley et al., 2007, p. 142).

2.12. Chapter summary

Within this chapter, I outlined the epistemological framework for the research, which is virtual ethnography. Ethnography is a way to examine people’s daily lives. Cyberspace has provided new field sites and new epistemological possibilities. As a methodological practice, virtual ethnography is a way to “see” through the eyes of participants without being limited by time or place, which means children’s media can be studied fully with cultural, historical and institutional contexts (Aarsand, 2016, p. 92).

David Morley, an audience ethnographer, has done work using this methodology that examines cultural issues like audience reception, ideology, glocalization, essentialism, and the domestication of technology.

The research question for this project is: “What is children’s screen time?” The answer is that screen time is not one thing. Screen time is a discourse, a phenomenon, an object, and a thing. It is flexible, fluid and constantly evolving. It is slippery and hard to grasp because it is forced to shift in response to technology, culture and ideology.

Children’s screen time is a socially and culturally constructed phenomenon that is of importance worldwide. The groups that are culturally constructed are formed around the perceived “effects” and qualities of children’s screen time. The narratives that surround these groups raise questions about whether the sentiments are positive, negative, neutral or mixed.

The two research methods that are used include content analysis and frame analysis. Content analysis provided a useful tool for the textual analysis of data from the various field sites. Content analysis was used as a way to extract and analyze information from Twitter, news articles, Reddit and The Bump. Frame analysis provides a useful way to look at what parts of children’s screen time is made salient by the media as well as the various ways that themes about children’s screen time are framed worldwide.

Chapter 3.

Deconstructing the Popular: Exploring Definitions of "The Popular" to Understand the Screen Time Debate

In chapter two, I discuss virtual ethnography as the methodology for this work and content analysis and frame analysis as the research methods. In chapter three, the ontological framework for the thesis is outlined as cultural studies.

Screens have become a central fixture in popular culture. The sentiments that surround whether the use of screens has a positive or negative impact can be understood better through Stuart Hall's analysis of the popular. In *Notes on Deconstructing the Popular*, Hall (1998) argues that the relationship between cultural products and the content associated with common people is a complex one. According to Hall (1998) the challenge with popular culture is that it oscillates between the issue of containment and resistance. The term "popular" in "popular culture" has three primary meanings (Hall, 1998). The first meaning of the term "popular" refers to how widely the object or content is circulated as well as its commerciality (Hall, 1998). The second meaning of the term "popular" views popular culture as the cultural activities of the people (Hall, 1998). Storey (2001, p. 6) argues that popular culture is a culture that is enjoyed by the masses. Despite the difficulty in quantifying popularity, Storey (2001, p. 6) argues there must be a quantitative element because the "*popular* of popular culture…" demands it. The third meaning of "popular," developed by Hall (1998), asserts that popular culture is an ongoing process, similar to Gramsci's concept of hegemony.

This chapter contains three parts. First, there is an overview of the philosophy of technology. While science and technology may seem like the obvious choice for an

analysis about children's screen time there are limitations to this tradition and benefits to examining the topic through a media and cultural studies tradition.

The second part of this chapter examines the historical shift within cultural studies from the Frankfurt School to British Cultural Studies, with particular emphasis given to Max Horkheimer and Theordor Adorno in comparison to Stuart Hall. Specific attention is given to the topic of ideology, which is a primary focus in media and cultural studies.

The final section of this chapter examines how Stuart Hall's three definitions of the popular fit into the globalized culture of screens and screen time. The first definition of the popular argues that screens are popular because people watch them and consume them to the full. The historical evolution of screens provides a useful framework for understanding how screens have transformed from industrial to commercial use. The circulation of screens to the public is examined within this section using marketplace statistics on screen-based sales. The second definition of the popular posits that screens are part of the popular because people use them as part of their cultural activities – some of these cultural activities, as well as the propensity towards their use, are outlined within this definition. Finally, Hall's refined definition of the popular views screens, and screen time, as an evolving cultural phenomenon. The periodization of the term "screen time" illustrates how culture shifts within society. There are also larger relational tensions that exist between class and culture. More specifically, "the people" versus "the power bloc." Content producers control screen technology and the content behind the screens, which cultivates a great deal of power over the people who simply use the device and consume the content. The goal of this chapter is to help bridge the gap between understanding the highly divisive sentiments that surround screen time by exploring how screens have evolved into wide circulation, the current uses of screens and how the term "screen time" has developed over time. What results is a deeply social and political issue where "the power bloc" largely controls the screen culture of "the people."

Part I: The Philosophy of Technology

Below, I discuss various theories situated within the philosophy of technology, attempting to situate the screen time debate within each of these traditions before discussing the limitations of this type of analysis.

3.1. An overview of the philosophy of technology

The philosophy of technology may seem like an obvious choice for an analysis about screens and screen time. Technological theorists like Martin Heidegger, Herbert Marcuse, Don Ihde, Trevor Pinch, Wiebe Bijker as well as Andrew Feenberg provide critical viewpoints that may be helpful to the screen time debate. Each technological theorist offers a unique way to examine screen time, and social construction theory supported by the insertion of structure and democratic rationalization offers a valuable way to analyze issues like the sentiments that parents have over the impact of screens and screen time on their children. However, there are necessary limitations to science and technology studies, which makes it useful to look at a technological phenomenon through a cultural studies lens. Below, I will outline technological theories before historicizing the tradition of cultural studies and making a case for why cultural studies is an ideal framework for an analysis about children's time in front of screens.

3.1.1. Substantive theory: from essence to enframing

Substantive theory stems from the philosophy of technology and views technology as autonomous and value-laden. Martin Heidegger's (1977) book, *Questions Concerning Technology*, is an example of the substantive approach. Within the text, Heidegger (1977, p. 3) argues that people have a "free relationship" to the essence of technology. It is not technology, but the *essence* of technology, that is of interest (Heidegger, 1977, p. 4). Technology is a non-neutral instrument that is "a means to an end" through human activity (Heidegger, 1977, p. 4). The essence of technology is not

based on “effect” but people do bear some element of being-responsible-for it. As with poiesis, a Greek term that indicates that which nature cannot make, the revealing of this technological essence enables “something concealed [to] come into unconcealment” (Heidegger, 1977, p. 11). Thus, technology is *not* a means to an end but, rather, a way of revealing (Heidegger, 1977, p. 12). Heidegger (1977, p. 20) notes that this new mode of revealing is important to modern technology - even if not technological - and is called Enframing or Gestell. Enframing is the way truth is revealed through the standing-reserve (objects and resources that are at hand and available to be called upon for use) (Heidegger, 1977, p. 17).

According to Hegel, the machine is “an autonomous tool” because “it has its standing only from the ordering of the orderable” (Heidegger, 1977, p. 17). Through destining (“sending-that-gathers”), it is possible to make “the historical accessible as an object for historiography,” which makes it possible to equate “the historical with that which is chronicled” (Heidegger, 1977, p. 24). The setting in motion offered through destining “holds complete sway over man… insofar as he belongs to the realm of destining and so becomes one who listens and hears, and not one who is simply constrained to obey” (Heidegger, 1977, p. 25). Sojourning in the space of destining does not mean that people should “push on blindly with technology” or “rebel helplessly against it as the work of the devil” (Heidegger, 1977, p. 26-27) – both relationships with technology are counterproductive. A potential threat to man does exist – but it is not from the “potentially lethal machines and apparatus of technology” (Heidegger, 1977, p. 28). Rather, “[t]he rule of Enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth” (Heidegger, 1977, p. 28).

Through this technological theory, the everyday use of screen time blinds people to its truth. Human beings spend so much time in front of screens that they often miss the opportunity to fully understand the relationship they have to it. Screen time, while not neutral, does embody values, and it is political. Screens are shaping the way of life and the essentialist nature of screens means it only has one essence, which is arguably part of mediating affect. Screens, as a modern technology “de-worlds” its materials and calls upon nature to submit to its demands. Heidegger repudiates the idea that any continuity

exists between pre-modern and modern technologies, which, according to Heidegger, makes the evolution of technology [and thus, screens] irrelevant. Heidegger's hope that people will free themselves from technology [and screens] would allow art to recover its lost potential to define the world. But, even if it becomes possible for people to establish a free relationship with screens, there are likely to still be unresolved issues.

3.1.2. Technological rationality: a society obsessed with screens

Instrumentalism posits that technology is neutral but humanly controlled. Herbert Marcuse (1964) provides an instrumental critique of modern capitalism and social repression in his book *One Dimensional Man*. Marcuse applies the same definition of technology as the instrumentalization of nature and humans that Adorno and Horkheimer (2002) use in *Dialectic of Enlightenment*. Marcuse (1964, p. 12) argues that the private space where people are free to retain their identity "has been invaded and whittled down by technological reality." The "one-dimensional man" is dominated by culture, religion, and politics in such a way as to subvert other dimensions of humanity. Technological rationality – a term that describes the irrational compulsion of society to buy into a system of false needs – is largely responsible for the "one-dimensional man."

True needs, unlike false needs, are those that have an unqualified claim on satisfaction and are vital to survival (food, clothes, and shelter) (Marcuse, 1964, p. 4-5). According to Marcuse (1964, p. 5) all needs play an important role in society insofar as they are tools to exert power and control over people. Marcuse (1964, p. 4-5) describes false needs as those that are superimposed on people based on the repressive social interests by people in power positions. "Most of the prevailing needs to relax, to have fun, to behave and consume in accordance with the advertisements, to love and hate what others hate, belong to this category of false needs" (Marcuse, 1964, p. 5). Marcuse (1964, p. 6) asserts that needs are historically and socially constructed but that no tribunal is equipped to claim authority over the classification of true and false needs; rather, this distinction is something that can only be determined by "the individuals themselves" – even if unlikely given the lack of capacity for people to be autonomous.

Marcuse believes that dialectical or negative thinking will help people move beyond the oppressed, ideological framework that constitutes modern industrial societies.

The ubiquitous nature of screens is a sign of the technological rationality that Marcuse warns about in *One Dimensional Man*. Screens – whether in the form of a smartphone, tablet or computer – are arguably false needs. According to Marcuse, it is this irrational compulsion to buy into screen-based devices or media that produces one-dimensional people. Screen time is not neutral and any apparent neutrality is an ideological illusion. Heidegger and Marcuse both view technology as dominant over nature and human beings, which can be a particularly troubling way to examine technology in a computer-mediated society. The prospect that technology dominates nature and people reduces language "to the mere position of a switch" (Feenberg, 2005). In Marcuse's defense, while he does view screens as dominant over nature and people, he believes that human action can change the epochal structure of technological rationality and produce a new type of reason. As Feenberg (2005) suggests, "[i]nspiring as are these thinkers, we need to devise our own response to the situation in which we find ourselves."

3.1.3. Making sense of human-technology relations through phenomenology

Phenomenology is a philosophical term that refers to the "intentional analysis of everyday life from the standpoint of the person who is living it… [the] tradition places great emphasis on people's perceptions and interpretations of their own subjective experience" (Griffin, 2006). Intentionality is inherently valuable in the phenomenological perspective and is "the directedness of experience toward things in the world, the property of consciousness that is consciousness of or about something" (Smith, 2013).

Aspects of phenomenology exist in both Heidegger's and Marcuse's analysis of technology. According to Heidegger, experienced reality is obstructed by modern distinctions like objectivity and subjectivity as well as nature and culture. On the other

hand, Marcuse deals with phenomenology insofar as the everyday experience people have with nature.

In *Technology and the Lifeworld: From Garden to Earth*, Don Ihde (1990) expands this phenomenological approach to technology, which he now describes as "postphenomenology," which signifies "his synthesis of aspects of phenomenology and pragmatism" (Feenberg, 2012, p. 1). The focus of this book is to look at the subjectivity of scientific knowledge and nature. "Ihde borrows Heidegger's concept of 'world' as a nexus of meanings enacted in practice, and his later notion of technology as the underlying basis of modernity" but "rejects Heidegger's romantic nostalgia for earlier technologies" (Feenberg, 2012, p. 1).

Ihde's most interesting argument is the idea that people have already left the "garden" and entered into a technologically mediated world; thus, there is no world without technology. For as long as there have been human beings there have been accompanying technological artifacts, whether stones to make carvings, a stick to light a fire or a bow to secure sustenance. "Technology is as natural to human beings as language and culture; its specific content is historically contingent but it will always be found wherever there are human beings" (Feenberg, 2012, p. 1). In today's society it is difficult to find a human being that doesn't have a screen on their body – whether a laptop, smartphone, tablet or piece of wearable technology.

To account for the fact that artifacts and human beings are interconnected, Ihde (1990, p. 29) divides the senses (a modification of Husserl's work) between macroperception and microperception. Both macroperception and microperception belong to the lifeworld -- bodily senses like hearing and seeing are microperception and cultural and hermeneutic interpretations are macroperceptions (Ihde, 1990, p. 29).

Ihde (1990) argues that the everyday experiences of technology can be characterized through four human-technology relations, called embodiment relations, hermeneutic relations, alterity relations, and background relations. Embodiment relations are the "partial symbiosis" of a person to technology (Ihde, 1990, p. 86). The

embodiment of technology occurs when the technology truly becomes a part of the person (Ihde, 1990, p. 75). As Ihde (1990, p. 72) says, "[t]o embody one's praxis through technologies is ultimately an existential relation to the world." Examples of technological embodiment include eyeglasses, hearing aids and virtual reality games – any artifact where the mediated technology becomes an unobtrusive part of the bodily experience. Technologies that superimpose computer-generated images on the user (otherwise referred to as augmented reality) are an example of how embodiment relations connect to screens. Google Glass is an optical display, worn like eyeglasses, that displays information like a smartphone. Users can communicate with the Internet using voice commands, which makes it a touch-free experience. In this way, we see screens that display the Internet taking on an embodied relation to the wearer.

Hermeneutic relations position technology as the interface for humans to read the world through; therefore, maps, charts, and written texts (including mass media) are all hermeneutic technics (Ihde, 1990). According to Ihde (1990, p. 82), "textual transparency is hermeneutic transparency, not perceptual transparency." Textual mediums like the Internet and newspapers become transparent and integrate easily into the lifeworld for people who possess the equivalent hermeneutic skills. When users engage with the Internet via computers, smartphones and tablets they engage in a hermeneutic relationship with the screen that they read information on.

The final two human-technology relations are alterity relations and background relations. Alterity relations occur when technologies are experienced as *quasi-other*, which means the technology can respond to people but the technology is not controlled by people (Ihde, 1990, p. 170). Computer interfaces with screens, like bank machines, are a good example of this type of human-technology relation. Background relations encompass the environmental context surrounding people. People do not have to directly use the technology but it is in their environs, such as heating or air conditioning, which are often controlled through screen panels.

Human-technology relations are cross-cultural, yet experienced differently in each culture (Ihde, 1990). Ihde (1990, p. 164) describes this "first curvature" in

contemporary society as pluriculturality, “a lifeform arising out of the use of image-technologies catching up to cultures.” Pluriculturality differs from multiculturality in that people (and societies) can have multiple identities and belong to multiple groups. Ihde (1990, p. 175) argues that “[t]he pattern that emerges in the shape of the lifeworld is one which (a) sees a proliferation of phenomena… (b) display multistable… structures… (c) imply a richer field of choice and possibility, and (d) suggest new routes and adaptations.” Pluriculturality is “embodied technologically in the medium of image-technologies” and has “acquired [a] vector of the contemporary world” (Ihde, 1990, p. 177). The pluriculturality of human-technology relations is illustrated in Changho Lee’s (2014) research, which compares online game use by Korean and Chinese adolescents. The majority of Korean respondents had 4G smartphones while the majority of the Chinese respondents had 3G smartphones (Lee, 2014). Despite having less advanced technologies, the “Chinese students spent more time on using mobile game [sic] than Korean students” (Lee, 2014). The game the students most enjoyed from both countries was League of Legends (Lee, 2014). The students in the study had similar background data and used similar technologies (3G and 4G smartphones) and played similar games, but possessed distinctly different usage patterns based on their country (and culture) of origin (Lee, 2014).

3.1.4. Abandoning reductionism for SCOT and critical theory

Technological determinism embodies the idea that technologies are autonomous and free from human control (Feenberg, 1992, p. 104). Technological determinism is a reductionist theory that postulates that society is influenced by technology (Bijker et al., 2012). People do not control technology, but rather, technology controls people. A famous technological determinist is Karl Marx, who believed that the acceleration of technology asserts itself into human life in a pervasive manner (Smith et. al 1994). There are hard and soft technological determinists. Hard technological determinists view technology as the key force that regulates social activity and meaning where soft technological determinists believe that technology is the primary force in evolution but that humans do have the capacity to decide the outcome of a situation (Bijker et al., 2012). “The tendency to think about new technologies deterministically, asking what they

do to us, and whether that is good or bad" (Baym, 2010, p. 150). Technological determinists focus on the "authenticity of identity and the wellbeing of 'real' relationships" (Baym, 2010). Many people are critical about the technological determinism "implicit in public, policy, and industry hyperbole about how the Internet impacts society" (Livingstone, 2006, p. 2). The Internet appears to be "implicated in, or co-determining of, the blurring leisure and education, as children use the Internet at home [and school] for educational purposes" (Livingstone, 2006, p. 2-3). A technologically determinist perspective on screens would argue that human beings cannot control screens but that the screens control us.

In his article, *"Subversive Rationalization: Technology, Power and Democracy,"* Andrew Feenberg (1992, p. 304) argues that the fundamental challenges with technological determinism arise from the thesis of unilinear progress and the thesis of determination by the base. The thesis of unilinear progress suggests that technological advancement follows a clear, direct, and predictable path that ranks complexities from low to high (Feenberg, 1992, p. 404). Social constructivist theorists like Pinch and Bjiker have undermined this idea of unilinear progress, illustrating that technology assumes various forms and paths (Feenberg, 1992, p. 305). The history of the bicycle offers a good example of how a single technological device can assume multiple uses; thus, requiring different designs to allow for various uses (Feenberg, 1992, p. 305).

The thesis of determination by the base means that the introduction of a technology requires that society organizes or adapts to the technology (Feenberg, 1992). The idea that new technology necessarily requires a trade-off (typically between the environment and the economic objectives) is a false ideology propagated to rationalize actual or potential damage (Feenberg, 1992, p. 304).

Technological determinism is still present in current debates but the ability of scholars to debunk these key theses is an important reason why technological research must be guided by contrasting principles (Feenberg, 1992, p. 306). First, technological advancements necessarily branch in different directions and at various levels of complexities. Second, technological development should be seen as a combination of

both technical and social factors (Feenberg, 1992, pp. 306-307). Technical objects have two hermeneutic dimensions: social meaning *and* cultural horizon (Feenberg, 1992, p. 307). Social meaning can be attributed to the object based on the end usage – as with the example of the bicycle. As Feenberg (1992, p. 309) says, "*What* the object *is* for the groups that ultimately decide its fate determines what it *becomes* as it is redesigned and improved over time." Hegemonic domination is embedded into society and intertwines into the very confines of the technological structure or machine. Also, the trade-off model is so ingrained within the ideological framework of society that it is viewed as "true." This is particularly troubling because the democratization of technology is excluded or precluded from discussions about technology (Feenberg, 1992, p. 320)."Technology can support more than one type of technological civilization, and may someday be incorporated into a more democratic society than ours" (Feenberg, 1992, p. 320).

Social constructionism (also referred to as SCOT – social construction of technology) states that technology is not responsible for human action but, rather, human action shapes technology (Bijker et al., 2012). Thus, people have the power to change within both technology and society. Constructivism views design as a social process that possesses cultural definitions and needs and attributes the varying sentiments on modern society to different technical choices. "Social constructivism would focus on the social forces that influence community online and off, including the social identities of people who participate, the motivations that inspire their online actions, and the social norms they develop around how to behave and what counts as skill and competence" (Baym, 2010, p. 97-98).

Pinch and Bijker (1990) summarize social constructivism through a conceptual framework that provides a way to understand how social groups form and how these groups share meanings about a particular artifact. The multidirectional framework consists of four components: interpretive flexibility, social groups, closure and stabilization, and the wider context. SCOT provides a useful structure for the research in this thesis because it acknowledges how technology and human beings can influence one another. The four-action framework designed by Pinch and Bijker (1990) is outlined below.

The first stage in the conceptual framework is interpretive flexibility – the ability to show how technological artifacts are "culturally constructed and interpreted" (Bijker et al., 1990, p. 40). The concept of flexibility can be represented in how people interpret the artifact as well as in the object's design. Screens are used differently in varying cultures but the notion of "screen time" also assumes three different interpretations, including the time an actor spends on screen, the screen life of machinery, and the amount of physical time human beings spend in front of screens. This stage is similar to Hall's own definition of the popular, examined later within this chapter.

The second stage in the conceptual framework is relevant social groups. "The key requirement is that all members of a certain social group share the same set of meanings, attached to an artifact" (Bijker et al., 1990, p. 30). One set of social groups that surface around screen time is the distinction between the users of screens and the producers of screens. In addition, the users of screens split into subsequent user groups that reflect the sentiment they share over the perceived effect screen time has on the human condition (either positive, negative or neutral). Pinch and Bijker's (1990) work on social groups is used in chapter six for the analysis of the parental groups that form around children's screen time.

The third component of the conceptual framework is problems and solutions (also called closure and stabilization). Within this stage, each social group plays a primary role in defining the problems; after all, a problem can only exist if "there is a social group for which it constitutes a 'problem'" (Bijker et al., 1990, p. 30). The fourth – and final – stage of the conceptual framework is examining the wider context as it pertains to screen time. The task here is "to relate the content of a technological artifact to the wider sociopolitical milieu" (Bijker et al., 1990, p. 46).

In "The Social Construction of Technology: Structural Considerations," Klein and Kleinman (2002) argue that the addition of structure strengthens Pinch and Bijker's (1990) conceptual framework. The authors argue that structural analysis can be applied to the "study of the design, development, and transformation of technology." According to Klein and Klienman (2002, p. 35) "the social world is constituted of historically

established structures that at any given point in time confront actors as external and constraining." Structure can help determine whether groups exist and also the composition of the set of all groups in the design (Klein et al., 2002). While some meanings that groups develop around are obvious, it can at times be difficult to extract some meanings in social groups because they are so codified that the group is not even aware of them (Klein et al., 2002, p. 38). There are also structural factors that affect closure like power and dependency and are conditioned by rules (Klein et al., 2002, p. 39). As Klein and Kleinman (2002, p. 39) argue, the bicycle example would benefit from structural insights like: "Did deadlines force designers to make closure? Could a deadline for a trade fair or a bicycle exposition force some social groups to demand or acquiesce to closure?" Embedding these types of structural elements into Pinch and Bijker's (1990) conceptual framework helps satisfy some of the existing gaps within this theoretical tradition.

Critical theorist Andrew Feenberg (1996) uses constructivism as a platform to further investigate how individuals and groups can reconstruct technology to serve more democratic objectives. Feenberg (1996) views technology as value-laden and humanly controlled, creating a theoretical tradition that combines constructivism with critical theorists like Heidegger, Marcuse and Foucault. One of the areas of constructivism that Feenberg (1995) denounces is the idea that technology is a neutral instrument. Some of the examples that Feenberg (1995) uses to prove that technology can be humanly controlled include cases of women securing alternative childbirth practices and AIDS patients fighting for alternative medicines. Another strength in Feenberg's (1992) analysis is in the idea of democratic rationalization. "Democracy is one of the chief values a redesigned industrialism could better serve" (Feenberg, 2002, p. 318). According to Feenberg (2002, p. 319) the Minitel is a good example of this approach. The computers were politicized when the government "attempted to introduce a highly rationalistic information system to the general public" and "[u]sers 'hacked' the network" to alter its function, making human communication on a wide scale possible (Feenberg, 2002, p. 319).

3.2. The limitations of technology theories

All of the theories within the philosophy of technology provide some insight into how screens and screen time impact the environment and human beings. Heidegger (1977) illustrates how people are often blind to the concealed meanings of technology, which need to be revealed in order to ensure a balanced relationship between technology, people, and the environment. Marcuse (1964) shows the impact technological rationality has on society when false needs dominate and oppress the public into a state of one dimensionality. Ihde (2009) shows how technology impacts human sense through the human-technology relations. Feenberg (2006) makes a good case for the inclusion of democratic rationality. Additionally, there is a strong argument to be made for the removal of reductionist theories like determinism in favour of social constructionism and critical theory. There is a technological aspect to screens that cannot be ignored and technology can have an effect on the human body (eyesight problems is one issue that scientists have drawn a cause and effect relationship between). However, while some of these theories do deal with issues like national identity, ideology and class, cultural studies is different because culture is the focus rather than technology.

Part II: Media and Cultural Studies

This section of the chapter discusses the key differences between the Frankfurt School and British Cultural Studies, outlines ideology as the central component of cultural studies, and outlines the benefits of using media and cultural studies for an analysis about children's screen time.

3.3. Situating screen time within a media and cultural studies framework

The framework for this thesis is situated within the tradition of media and cultural studies. Today, culture is of "central importance to the maintenance and reproduction of contemporary societies" (Durham and Kellner, 2012, p. 1). The level of media saturation in everyday life is so high that it has become difficult to chart cultural and technological transformations (Durham and Kellner, 2012, p. 2). Culture is not only responsible for forming attitudes but it also shapes behaviour, which divides people into particular socio-economic groups (Durham and Kellner, 2012, p. 1). "The narratives of media culture offer patterns of proper and improper behavior, moral messages, and ideological conditioning, sugar coating social and political ideas with pleasurable and seductive forms of popular entertainment" (Durham and Kellner, 2012, p. 1). Thus, the narratives that are formed through media culture shape the social, political, economic and ideological conditions of society, which makes media and cultural studies a suitable theoretical tradition to tackle the subject of children's screen time.

3.4. From the Frankfurt School to British Cultural Studies

Similar to science and technology studies there is a vast range of ideas within the tradition of media and cultural studies. Below, a historical perspective on the stark contrast between Frankfurt School scholars like Adorno and Horkheimer and British Cultural Studies scholars like Stuart Hall is provided to illustrate the stark contrast that exists within cultural studies. The Frankfurt School view audience as passive and is critical of the culture industry's economic agenda. Hall, representing British Cultural Studies, argues that audiences are active and capable of interpreting ideological messages within the culture industry.

3.4.1. The intersection between cultural studies and the philosophy of technology

It is necessary to recognize that some overlap does exist between science and technology studies and media and cultural studies. Science and technology studies look at how technologies impact society, politics and culture. Similarly, media and cultural studies often address the impact technology has on society, politics and culture. There is even overlap between the traditions insofar as influential scholars and canonical texts. For example, Marcuse thought of himself as a Marxist and was a member of the Frankfurt School (Farr, 2014). Marcuse (1964) was particularly concerned with issues of decolonization and the closure of systems that impact the organized working class. Marcuse's identification with Marxism and association to the Frankfurt School means his work has roots in media and cultural studies.

Marxism provides a good way to understand capitalism, the socio-economic system that governs the Western world. Marx describes a social totality, identifying a superstructure and base, which are in a constant and dialectical relationship with one another. The superstructure refers to aspects of life that are not economic, such as religion, politics, culture, and ideology (Durham et al., 2012). The base is the economy, the mode of production, and consists of both the means of production and the relations of production (Durham et al., 2012). A Marxist analysis of media and culture looks for an indication that ideology exists (as reflected in media and culture) that aligns with the status quo of society. More recent Marxists like Engels and scholars from the Frankfurt School have attempted to give more power to the role of human agency, culture and consciousness compared to the economic determinism that was present in early interpretations of Marxism. A Marxist analysis is sensitive to the historical conditions that surround media and cultures as they emerge.

3.4.2. Media and culture is a primary fixture of society

Frankfurt School scholars like Adorno and Neo-Marxists like Sut Jhally view media and culture as a major phenomenon that is a central component within society.

Media and culture act in a dialectical relationship to the economic base and often influence one another. Ideology is not "false consciousness" but an inescapable comparative narrative that makes reality coherent. Media and culture benefit from a degree of autonomy from society, which presents and opportunity for social change. Ideologies are "mental frameworks that different classes and social groups deploy in order to make sense of, define, figure out, and render intelligible the way society works" (Griffin, 2008).

In "Advertising at the Edge of the Apocalypse," Sut Jhally (2002) argues that, "our survival as a species is dependent upon minimizing the threat from advertising and the commercial culture that has spawned it." The "starting point" of capitalism is the commodity (Jhally, 2002, p. 1). The ideological treatment of the commodity is identified as "commodity fetishism," which is rampant within a capitalistic society. Within an environment of commodity fetishism the humanity of people is realized through objects, and people become secondary to those objects (Jhally, 2002).

3.4.3. The Frankfurt School's critical view on the cultural industry

Noting the lack of revolution in the Great Depression of the 1930s, Frankfurt School scholars believed that there were unrecognized factors that resulted in the failed revolution – namely, the role of media and popular culture in forcing the masses to conform to the system, which reduced critical thought and promoted a single ideological dimension. Effectively, the convergence between culture and capitalism – the "culture industry" – reduced or destroyed the ability for resistance or the ideological critique of society. The culture industry, often referred to as "mass culture" or "popular culture," is to the Frankfurt School an organized system of indoctrination.

Within the chapter "The Culture Industry: Enlightenment as Mass Deception" within *The Dialectic of Enlightenment*, Adorno and Horkheimer (2002) argue that the culture industry is a phenomenon of late capitalism, designed to satisfy entertainment needs of capitalistic consumers. The culture industry may produce products that look like art but they are entertainment, bound up in the same economic system that governs a

capitalistic society (Adorno et al., 1972). Thus, art is a commodified product that exists within the economic mode of production (Adorno et al., 1972). Popular culture is thus responsible for how products are mass-manufactured, the blending of high and low culture and the assimilation of the thinking public into an unthinking mass. The culture industry destroys the image of what is real and authentic within the world and reduces it to the reflection of the power of the producers (Adorno et al., 1972). The culture industry is reductionist in nature, pandering to appetites, reducing the intelligence of people, and limiting critical thought (Adorno et al., 1972). According to Adorno (1972, p. 21), "The total effect of the culture industry is one of anti-enlightenment, in which enlightenment… becomes mass deception, and is turned into a means for fettering consciousness."

3.4.4. Moving from a passive to active audience

A key point within the Frankfurt School is the push for the passive audience, which was later repudiated by scholars like Stuart Hall. Horkheimer and Adorno (1972) argue that the culture industry, a byproduct of the capitalist system, is inflicted with unremarkable sameness that is spoon-fed to the masses. "The deception is not that the culture industry serves up amusement but that it spoils the fun by its business-minded attachments to the ideological clichés of the culture which is liquidating itself" (Horkheimer et al., 1972, p. 63). The commodity value placed on media is inexorable – particularly in entertainment industries enough to meet economic objectives. Hall (1980) agrees that ideology pervades media but argues that audiences do have some semblance of power over their ideological interpretations of media messages. For Hall (1980), communication is a form of meaning and reality production – a process that implies an active role for the audience, not that of simple transmission, denoted in his text as encoding and decoding.

Within the 1980 article, titled "Encoding/Decoding," Hall uses semiotics to develop this new model of audience and reception, refuting the prominent view that audiences were passive – dominated and accepting any ideology presented to them. Hall (1980) reinvented the sense of audience by defining it as "the active audience" – one that has some power over how it interprets and uses the messages (and embedded

ideologies) it receives. For Hall (1980), communication is a form of meaning and reality production – a process that implies an active role for the audience, not that of simple transmission. The two most important moments in a given communication process are those of encoding (when the sender articulates the message) and decoding (when the receiver interprets the message) (Hall, 1980). According to Hall (1980, p. 90): "Traditionally, mass communications research has conceptualized the process of communication in terms of a circulation circuit or loop…. But it is also possible (and useful) to think of this process in terms of a structure produced and sustained through the articulation of linked but distinctive moments—production, circulation, distribution/consumption, reproduction."

Hall's (1980) three-part interpretive scheme examined the dominant or hegemonic position, the negotiated problem, and the oppositional problem. Within the dominant or hegemonic position – a largely hypothetical position - one interprets a given image, idea, or program exactly as ideology intended the audience to interpret it (Hall, 1980). In the negotiated position the subject agrees with the dominant code where the 'big picture' is concerned but opposes it in relative terms at the level of one's own personal situation and interests (Hall, 1980). Within the oppositional position, someone interprets the message within a largely oppositional and alternative frame of reference (Hall, 1980). The passive audience, typical of the 19th and 20th century (and embedded within crowd theory, propaganda theory, and The Frankfurt School), was assumed to be overwhelmed by media content and unable to interpret meaning or engage ideology in their own terms. Within the transmission model, media effects imagined communication as a neutral vehicle for conveying self-evident meaning. David Morley also argues this point, which is discussed in chapter two. By the late 20th and early 21st century, theories by scholars like Stuart Hall recognized the active audience, whereby audiences are capable of relative autonomy in interpreting media content and ideology.

Morley (2006) notes that the semiotic nature of Hall's encoding/decoding model translates into a vertical transmission of ideology and power. A vertical transmission model fails to see the horizontal viewing practices that people adopt, such as being in control of the remote, channel surfing, or using multiple media at once (Morley, 2006). Rather, it would be ideal to adopt a "bifocal mode of vision, insofar as we need both

close up/micro perspectives, and long-sighted/macro ones, for different purposes and at different moments - but neither perspectives reveals the whole truth" (Morley, 2006, p. 112). Morley (2006) argues that Hall attributes too much agency to audiences that exhibit an oppositional reading and that it is important to recognize that some audiences are indifferent to the media texts they engage with.

3.5. A guide to ideology (and class struggles)

In *The Pervert's Guide to Ideology*, Slavjov Žižek suggests that ideology is like glasses that people automatically wear, which distort their view of how the world really is (Fiennes et al., 2014). Stuart Hall (1996, p. 26) defines ideology as the "mental frameworks – the languages, the concepts, categories, imagery of thought, and the systems of representation – which different classes and social groups deploy in order to make sense of, figure out and render intelligible the way society works."

Discourse and ideology are social constructs (van Dijk, 1998, p. 10). Ideologies are an appropriate way to make sense of society but also "serve to regulate social practices" (van Dijk, 1998, p. 9). While traditionally defined cognitively, ideologies can also be defined "in terms of social groups, group relations, institutions, at the macro-level and in the tercos of social practices at the micro-level" (van Dijk, 1998, p. 9). Ideologies are belief systems that belong to the practice of social beliefs; thus, ideologies are social belief systems (van Dijk, 1998, p. 29). "Ideologies are essentially social, that is, shared by members of *groups* or collectives of people" (van Dijk, 1998, p. 29). Some groups, like people waiting for a bus, may coincidentally share an ideology, but people participating in something like a protest are more likely to share a similar belief syste (van Dijk, 1998, p. 30). Ideologies are one property of a social group but individuals within the group may "endorse, accept or use a group ideology in their everyday practices" (van Dijk, 1998, p. 30). As group beliefs become more specific, the group begins to only be differentiated with respect to "this general common ground and the social beliefs of other groups" (van Dijk, 1998, p. 51-52).

The central problem with ideology is in the way “in which ideas of different kinds grip the minds of the masses, and thereby become a ‘material force’” (Hall, 1986, p. 26). The theory of ideology allows for a better analysis of how a set of ideas “dominate the social thinking of a historical bloc” (Hall, 1986, p. 26). The languages of practical thought result in power and domination, which perpetuates the positioning of people within a subordinate place in the “social formation” (Hall, 1986, p. 26). Hall (1986, p. 26) argues that ideologies form consciousness, new conceptions, and trigger historical action targeted at the social struggles ideology perpetuates. Understanding the social struggles people encounter with children’s screen time provides a better framework to understand the present ideologies and the complexities of what needs to be explained.

3.6. The benefits of a cultural studies approach

While children’s screen time is often set up as a scientific debate, it can also be understood as a cultural construct. To examine children’s screen time from a technological tradition would necessarily limit the depth of the analysis. Cultural studies allow, in a way that other theoretical traditions do not, a way to examine how children’s screen time is socially constructed in the lifeworld. Media and cultural studies is a good way to understand the wider social, political and economic systems of society, like ideology, class, and national differences.

From “cradle to grave” people are immersed in media and consumer society, which makes it vital to “learn how to understand, interpret, and criticize its meanings and messages” (Kellner, n.d.). The media plays a role in educating the public on how to think and behave, and learning how to critically engage with the media allows people to see beyond the “dominant forms of media and culture” (Kellner, n.d.).

A cultural studies approach acknowledges that children’s screen time is not a fixed topic. Children’s screen time is a social construction that constantly changes to meet the evolving demands of new screen technology and cultural consumption practices. Cultural studies offer a way to understand how habits that form around screen

time develop, how these behaviours vary from one country to the next, how the culture governs screen time, and what, if any, implications exist for following, or not following, the cultural "rules."

Culture is a way for people to form identities and group memberships, which help people construct their view of "the world, behavior, and even identities" (Kellner, n.d.). In addition to examining how people form identities and memberships, cultural studies also offers a way to see how subcultural groups resist dominant ideologies. The ideologies and social groups that form around the ideologies about children's screen time are a culturally constructed phenomenon.

"Cultural studies is valuable because it provides some tools that enable one to read and interpret one's culture critically" (Kellner, n.d.). It provides a way to look at high versus low culture and the subsequent division of power this creates between media and culture that is deemed elite versus banal or "trashy" (Kellner, n.d.). The distinction between domination and resistance provides a way to understand production, usage and tensions that exist around screen time. The issue of containment and resistance is discussed more in section 3.10.

As previously noted, ideology is a central fixture in media and cultural studies. "[D]ominant ideologies serve to reproduce social relations of domination and subordination" (Kellner, n.d.). This theme continues with respect to class (high versus low), gender ("sexist representations of women") and race (racist representations of minority groups) (Kellner, n.d.). "Ideologies make inequalities and subordination appear natural and just, and thus induce consent to relations of domination" (Kellner, n.d.). The focus on representations of race, gender and class makes it possible for cultural studies to critique these ideologies and conform to a multiculturalist program that looks at social groups and classes (Kellner, n.d). "Cultural studies thus promotes a multiculturalist politics and media pedagogy that aims to make people sensitive to how relations of power and domination are 'encoded' in cultural texts" (Kellner, n.d.).

Part III: Deconstructing Definitions of "The Popular"

In the third section of this chapter, Hall's (1998) paper *Notes on Deconstructing the Popular* is used to examine the three primary meanings that surround the popular and the definitional repercussions for the subject of screens and screen time. The first definition looks at the circulation and commerciality of screen time. The second definition argues that screens are popular because people use them. And the third definition, created by Hall, views screens – and screen time – as an evolving cultural phenomenon.

3.7. The circulation and commerciality of screen and time

According to Hall (1998, p. 446), the most common-sense meaning is that things are popular "because masses of people listen to them, buy them, read them, consume them, and seem to enjoy them to the full. This is the 'market' or commercial definition of the term." Thus, popular culture is culture that is widely liked by the populous (Storey, 2001, p. 6). According to this view, the screen is popular because it is what the masses consume. The widespread circulation of screens as well as its commerciality is integral to how people use screens and how much time people spend in front of them. To assess how screens, and thus screen time, have become popular requires an understanding of the evolution of the technical capacity of the screen, which paved the way for its circulation and commerciality.

3.7.1. Historicizing screen time: the evolution of screens

The journey to the commercialized state of screens is a technical one. Hall (1980) calls for the historicization of the popular is an effort to understand it better. Similarly, STS studies looks at the social and historical contexts of technology. The exercise of historicizing screens provides a way to understand screen time better and also is important to understanding how screens have circulated into popular culture.

The development of the first CRT in 1897 in conjunction with the discovery of electroluminescence in 1907 made it possible for Russian scientist Boris Rosing to "transmit crude geometrical patterns onto a television screen using CRT" (Walden, 2015). In 1925 Scottish entrepreneur John Logie Baird designed complex scanning systems (Winston, 1998, p. 95). Baird has been credited for developing important television capabilities like transmitting "human faces (1925), moving objects (1926) and color (1928)" (Walden, 2015). By 1928, despite a slow picture scanning time, Baird began building televisors for domestic sale (Winston, 1998, p. 95).

Experiments with 3D movies began in the 1940s and 50s (Walden, 2015). On February 16, 1953 *Life* magazine's leading headline was "3-D Day Hits Hollywood in Blinding Flash" in response to the Soviet-released film *Bwana Devil* (Zone, 2012). Between 1952 and 1955, 46 3D movies were released but the poor visual quality limited the popularity of the technology until more recently (Walden, 2015). In 1952, Cinerama unveiled the first curved television screen in select movie theaters, which became a tourist attraction (Walden, 2015). The 1950s were also important because of the incorporation of colour television (Walden, 2015). At this time, televisions in North America encoded programs using the NTSC (National Television System Committee) System, which varied from model to model, and which meant that the colour on screen changed based on the viewers' equipment (Walden, 2015). As a result, the NTSC technology acquired the nickname, "Never The Same Colour" (Walden, 2015).

In 1961, Robert Biard and Gary Pittman created a patent for the first light-emitting diode (LED); however, LED remained invisible until the following year when Nick Holonyack invented the first LED visible to the human eye (Walden, 2015). In 1964, the first working liquid crystal display (LCD) and first plasma display panel (PDP) were invented, which led to the modern LCD watch in 1972 (Walden, 2015). Plasma televisions didn't "become widely successful (or possible) until the advent of digital technologies years later" (Walden, 2015). In the 1980s and 1990s large-scale televisions became popular but with rear projection they occupied a lot of physical space until around 2005 when lighter and smaller technologies like Digital Light Processing, Liquid Crystal on Silicon, and improved Plasma and LCD became possible (Walden, 2015). In

1998, the HDTV digital broadcasting system became available to the mainstream populous in the United States (Walden, 2015).

The first Apple Macintosh (Mac) computer becomes available to consumers in 1984, featuring a 9-inch, monochrome 512x342 pixel display (by way of comparison, today's Mac with Retina has a 5,120x2,880 pixel display) (Walden, 2015). The first Apple computer was a significant cultural shift for computers. "Before the Apple-1 came along, computers were sold in kit form, not as assembled machines, and they used lights instead of keyboards and monitors for their input and output" (Marshall, 2013). Apple continued to play an important role in the culturalization of screens. The original iMac was important because it was the first legacy-free PC, it was designed to be internet-focused, and it was the first sleek design to hit the market (Marshall, 2013). The introduction of the iPhone in 2007 was significant to the culture of cell phones because it was the first device to operate as "[a]n iPod. A phone. An internet communicator" (Marshall, 2013).

Touch screen technology was popularized within the mainstream with smartphones and tablets but the first touch screen technology was developed in 1965 at the Royal Radar Establishment for the purpose of air traffic control (Bellis, 2014). At some point around 1995, touch screens begin being used in ATMs and ticketing kiosks (Walden, 2015). By the 1980s and 1990s tech companies like IBM, Microsoft, Apple, HP and Atari start bringing touchscreen products to market (Walden, 2015), paving the way for the 4G smartphones that are used today. The first bit of data was transmitted in 1969, which made everything from Internet usage to "the Internet of things" possible (Gershenfeld and Vasseur, 2004). Touch-based devices are quickly becoming the screen of choice (Meeker, 2014).

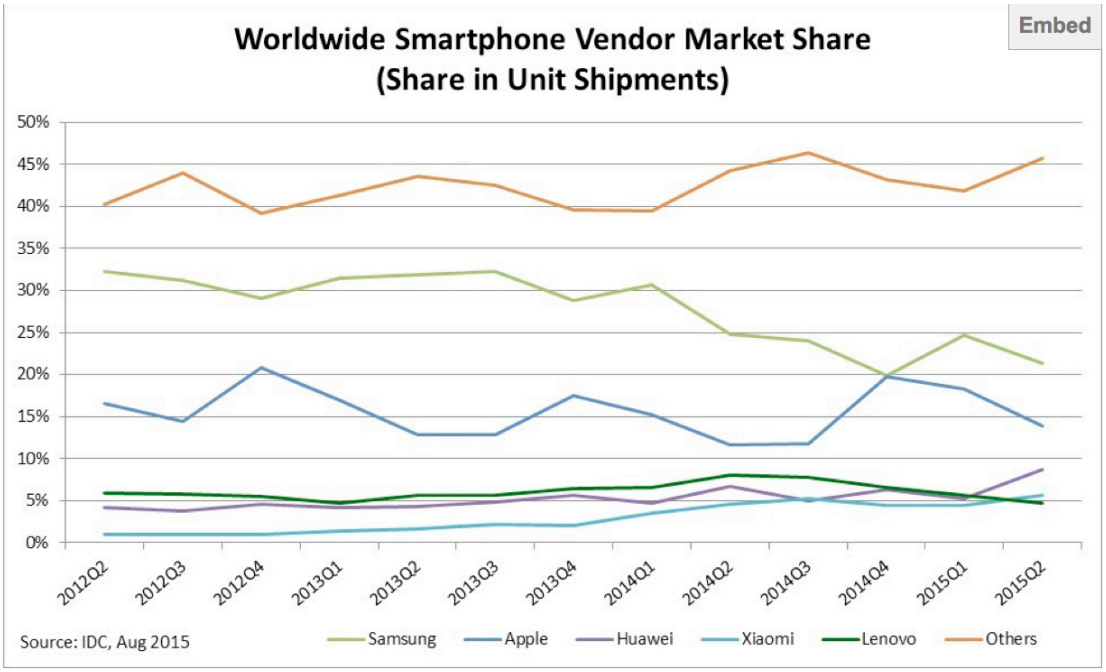
The evolution of screens is important to understanding how screens have circulated into popular culture. Similarly the commercialization and circulation of screens is also important.

3.7.2. The commercialization and circulation of screens

Within this definition of the popular, screens fit within the realm of popular culture because screens are available to the people. The two largest providers of screens, ranked by market capitalization, are respectively Apple and Google (Meeker, 2015, p. 6). Apple and Google represent leading companies in screen sales as well as content viewed on screens. For example, both brands build and sell screens as well as create and sell (either through applications or advertising) content that consumers can view on screens. In 2015, *Computer World* reported that Apple has sold one billion iOs devices to-date. The quantification of culture could be one measure of popularity. The overarching sale of books, music or videos or the attendance at concerts, sporting events or festivals is one way to determine popular culture (Storey, 2001, p. 6). In Figure 1 and 2, the International Data Corporation (2015) presents information on smartphone and tablet market shares. The data confirms that Apple and Google (represented through Samsung) hold the top two brand spots within the smartphone and tablet markets (International Data Corporation, 2015). While the numbers may prove useful in some ways, Storey (2001, p. 6) suggests the problem with this method is that unless society can agree on a number at which an object or text becomes popular culture it is difficult to know when an item becomes popular. Storey (2001, p. 6) argues that any definition of popular culture must have a quantitative quality because the "*popular* of popular culture… seems to demand it."

The commerciality of screens is also the result of managing the fears that surround screens. Lori Reed (2000, p. 159) argues that the "management of computer fear made possible the mainstreaming of the personal computer (into the home) and initiated new definitions of 'appropriate' and 'inappropriate' computer use." The discourses surrounding computers like computer addiction and computerphobia create a power/knowledge relationship ("in this case, the knowledge practices surrounding computers and computer use") (Reed, 2000, p. 160-161). Reed (2000, p. 161) uses Hall's concept of "articulation" to illustrate how "computer technologies have historically been articulated to 'masculinity' and/or 'patriarchal practices.' The commercialization of

the computer within the mainstream happened through the “cultural and industrial” normalization of “women’s attitudes and uses of the computer” (Reed, 2000, p. 181).



Period	Samsung	Apple	Huawei	Xiaomi	Lenovo*	Others
2015Q2	21.4%	13.9%	8.7%	5.6%	4.7%	45.7%
2014Q2	24.8%	11.6%	6.7%	4.6%	8.0%	44.3%
2013Q2	31.9%	12.9%	4.3%	1.7%	5.7%	43.6%
2012Q2	32.2%	16.6%	4.1%	1.0%	5.9%	40.2%

Source: IDC, Aug 2015

** Motorola figures have been captured under Lenovo.*

Figure 1: Worldwide Smartphone Vendor Market Share (Source: IDC)

Top Five Worldwide Tablet Vendors - Preliminary Results for the Second Quarter of 2015 (Shipments in millions)

Vendor	2Q15 Unit Shipments	2Q15 Market Share	2Q14 Unit Shipments	2Q14 Market Share	Year-Over-Year Growth
1. Apple	10.9	24.5%	13.3	27.7%	-17.9%
2. Samsung	7.6	17.0%	8.6	18.0%	-12.0%
3. Lenovo	2.5	5.7%	2.4	4.9%	6.8%
4. Huawei*	1.6	3.7%	0.8	1.7%	103.6%
4. LG Electronics*	1.6	3.6%	0.5	1.0%	246.4%
Others	20.4	45.6%	22.4	46.7%	-9.3%
Total	**44.7**	**100.0%**	**48.0**	**100.0%**	**-7.0%**

Source: IDC Worldwide Quarterly Tablet Tracker, July 29, 2015

Notes:

Total tablet market includes slate tablets plus 2-in-1 tablets. References to "tablets" in this release include both slate tablets and 2-in-1 devices.

* IDC declares a statistical tie in the worldwide tablet market when there is less than 0.1% difference in the market share (based on shipments) of two or more vendors.

Figure 2: Worldwide Table Vendor Market Share (Source: IDC)

3.7.3. The limitations of defining the popular through the commercialization and circulation of screens and screen time

Hall (1998) argues that there are problems with defining the popular as what the masses consume. First, it means the people who enjoy popular culture are in a perpetual state of false consciousness (Hall, 1998, p. 446). “They must be ‘cultural dopes’ who can’t tell that what they are being fed is an updated form of the opium of the people” (Hall, 1998, p. 446). News articles portray laypeople as “cultural dopes” through articles that promote the idea that technology giants are low-tech parents. For example, *The New York Times* published an article stating that Steve Jobs from Apple, Chris Anderson from Wired and 3D Robotics, and Evan Williams from Blogger, Twitter and

Medium all limit their children's screen time, promoting tech-free environments and promoting other learning tools like physical books (Bilton, 2014). The frame presented in this article (and others like it) is a divisive separation between elites (technology executives) and the rest of the world – a world where technology executives sell products like iPads for children's use but limit their own children's use of that same product. Hall (1998, p. 446) argues that pigeonholing people as "purely passive" is a "deeply unsocialist perspective." It is problematic to define the popular, with respect to screens and the content behind the screens, as a product force-fed to the passively accepting masses. Despite the fact that there is a "manipulative aspect of a great deal of commercial popular culture" ordinary people are "capable of recognising the way the realities of the working-class life are reorganized, reconstructed and reshaped by the way they are represented" (Hall, 1998, p. 446-447). A common way that theorists of popular culture deal with this issue is to suggest an "alternative" or more "authentic" popular culture as a way to compare (and divide) classes (Hall, 1998, p. 447). However, it is dangerous to think about "cultural forms as whole and coherent: either wholly corrupt or wholly authentic" (Hall, 1998, p. 448). Hall (1998, p. 447) argues that circulation and commerciality as a definition for the term popular is not useful – although it does encourage deeper reflection about the "complexity of cultural relations." It is not that screens and screen-based content do not have any effect; but rather, it occupies and reworks "the interior contradictions of feelings and perceptions in the dominated classes" (Hall, 1998, p. 447).

3.8. Screen time as the cultural activity of the people

Hall (1998, p. 448) describes the second definition of the popular as more palatable, defining popular culture in anthropological terms as "*anything* that 'the people' do or have done." The "common" ways that people engage with screens include watching television and movies, using the Internet, playing games, reading news, magazines and books, and connecting with friends on social networking sites or through SMS. Social networking sites are not limited to adult-based platforms like Facebook,

Twitter, and Instagram but also encompass children-focused sites like Club Penguin, Whyville, and Habbo Hotel (Lenhart, 2007).

3.8.1. "Screen time" is becoming a more popular cultural phenomenon

Additionally, there is evidence that screen time is becoming a more popular term among the people. For example, Figure 3 illustrates the number of worldwide Google searches for the term "screen time." According to Google Trends, the search interest in "screen time" has gone from 62 points in January 2004 to 100 points in January 2016. The graph illustrates how often the term "screen time" was searched relative to the total number of worldwide searches. Figure 4 shows the regional Google search interest in the term "screen time," with the greatest interest in Singapore, New Zealand, and Australia, followed by the United States, Philippines and Canada. The interest in screen time is becoming more popular, but, so too is the use of screens and screen-based media.

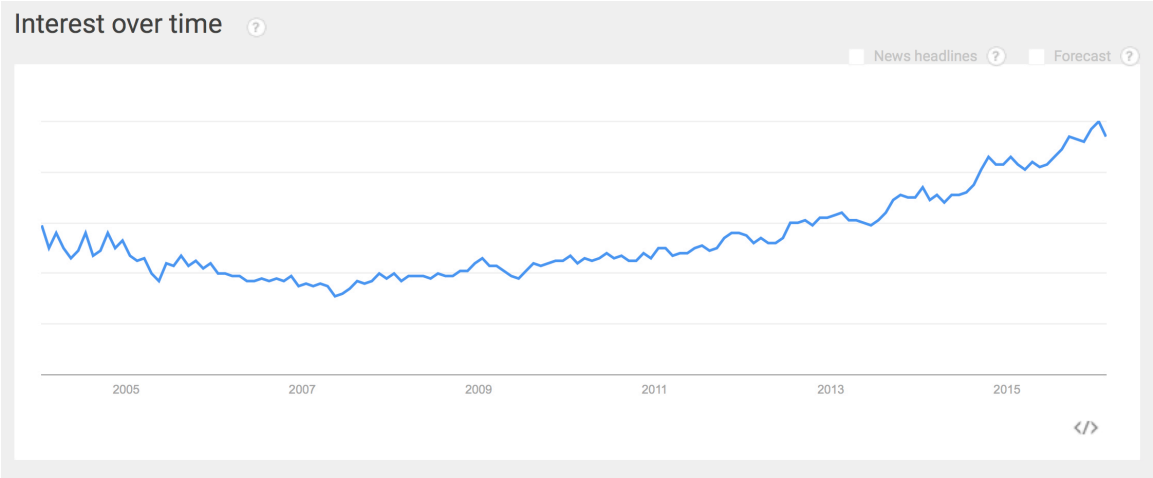


Figure 3: Worldwide Google Searches on "Screen Time" (Source: Google Trends)

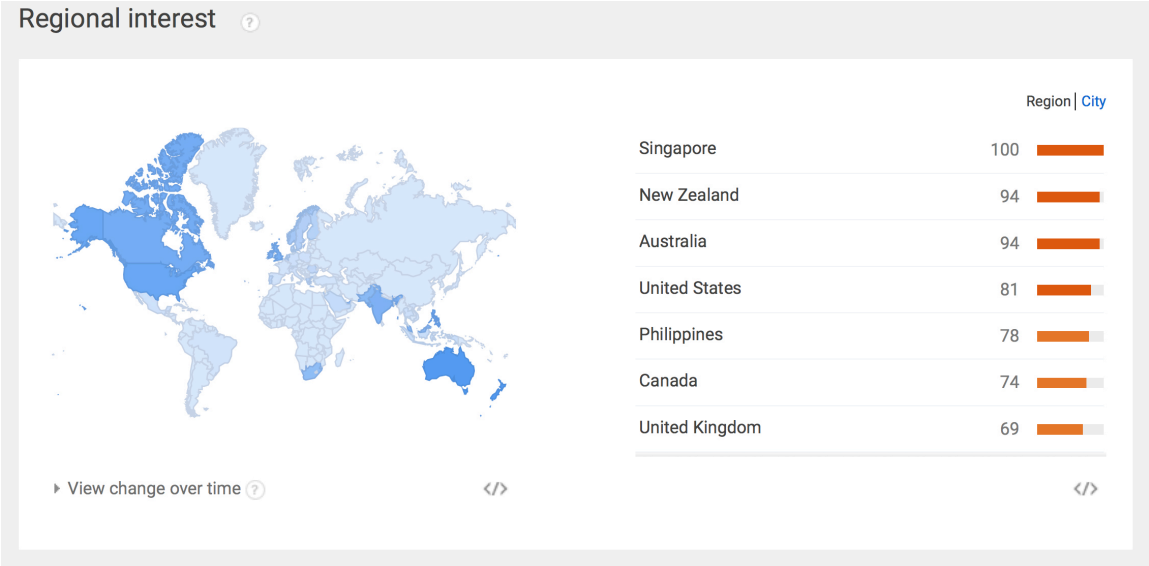


Figure 4: Regional Interest of Google Searches for "Screen Time" (Source: Google Trends)

3.8.2. The cultural evolution of screen usage

The way people use screens and the amount of time people spend in front of screens is changing dramatically. This proliferation of screen time is a byproduct of increased Internet usage. In 1995, only nine percent of the American population had Internet access, whereas in 2015, eighty-four percent of the American population had access (Meeker, 2015, p. 116). A 2014 study on the daily distribution of screen minutes across countries (see Figure 5) illustrates that people around the globe are viewing televisions, laptops, personal computers (PC), smartphones and tablets on a daily basis (Meeker, 2014, p. 96). The study found that Indonesia had the greatest daily screen time (540 minutes per day) and Italy had the lowest daily screen time (317 minutes per day) (Meeker, 2014, p. 96). On the lower end of the scale, Canadians spent 376 minutes on average in front of screens each day (104 minutes watching television, 97 minutes on a laptop or PC, 124 minutes on a smartphone and 51 minutes on a tablet) (Meeker, 2014, p. 96). On average, Americans spent 444 minutes per day in front of a screen (147

minutes watching television, 103 minutes on a laptop or PC, 151 minutes on a smartphone, and 43 minutes on a tablet) (Meeker, 2014, p. 96).

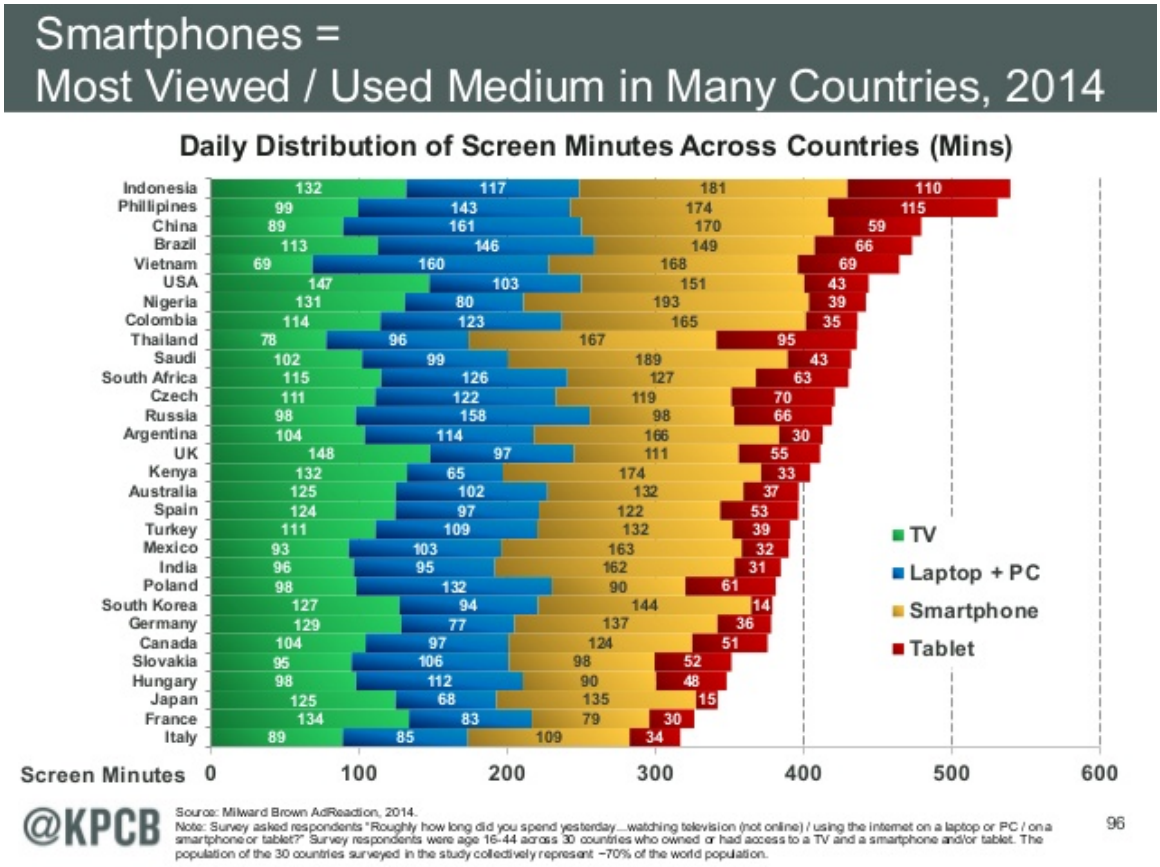


Figure 5: Daily Distribution of Screen Minutes Across Countries (Source: KPCB)

The separation of time on various screen-based platforms is important because it means that people are able to consume more content (Meeker, 2014, p. 99). For example, when people watch five hours of television, they consume four hours of television and one hour of advertising; however, when people split time across platforms they are more likely to spend the entire five hours engaging in actual content (Meeker, 2014, p. 99). As technology changes so too do viewing habits. For example, with the advent of smartphones and tablets, the screen orientation of users has shifted away from an entirely horizontal viewing. People spend seventy-one percent of time looking at horizontal screens (primarily television, desktops and laptops where orientation options don't exist) and twenty-nine percent of time looking at screens in a vertical orientation

(virtually all mobile time) (Meeker, 2015, p. 24). This is important insofar as it illustrates the cultural evolution of the screen. Screens can change over time and how people use screens can also change.

3.9. The consumer culture

The evolution of screens in conjunction with increased screen-based usage has assisted the social and cultural construction and consumption of screen.

"The triumph of advertising in the culture industry is that consumers feel compelled to buy and use its products even though they see through them" (Horkheimer, 2002, p. 167). The passivity with which consumers are viewed in The Frankfurt School matches the vulnerability argument in the media harm debate. Under this theoretical tradition, children are particularly vulnerable to the effects of screen time because they are passive consumers who perpetually buy into what is sold to them. It also paves the way for turning children into consumers, which encourages upscale emulation, whereby children are increasingly trying to keep up with the Kardashians and not the Joneses (Schor, 2004).

From a theoretical perspective, consumer culture is expansive and co-opting through its ability to re-encode meaning and influence the things people do and the relationships they have. Advertisers seek to develop brand loyalty at an early age because brand preferences tend to become fixed early and companies want to establish lifelong consumers (Lindstrom, 2003).

3.9.1. The limitations of defining screen time as *anything* "the people" do

The data above describe screen time and screen usage trends that illustrate how people use screens and screen time. While this definition is significantly more useful

than looking at the circulation and commerciality of screen time, it does have its limitations. Defining popular culture as "*anything* that 'the people' do or have done" is far "too descriptive" and promotes an "infinitely expanding inventory" of what is popular (Hall, 1998, p. 448). If *everything* becomes classified as popular culture, culture would become irrelevant because even the mundane would fit within the confines of the popular. As Hall (1998, p. 448) says:

> We can't simply collect into one category all the things which 'the people' do, without observing that the real analytic distinctions arises, not from the list itself – an inert category of things and activities – but from the key opposition: the people/not of the people. That is to say, the structuring principle of 'the popular' in this sense is the tensions and oppositions between what belongs to the central domain of elite or dominant culture into the 'popular' and the 'non-popular'.

This definition of the popular is essentialist, presents a binary division between "the people" and the "elite," and takes for granted the evolving nature of culture. Some theorists suggest that popular culture "is the culture which is left over after we have decided what is high culture" (Storey, 2001, p. 6). However, qualifying culture as high and reducing popular culture to the inferior is an ideological struggle that further divides classes. As Hall (1998, p. 448) notes, popular forms are enhanced by cultural value, which goes up and down a "cultural escalator." The cultural escalator ensures that culture is not an issue of periodization, nor one of stability. It gains and loses value, depending on a number of issues, including but not limited to literacy. Culture is not affected by periodization. Over time, popular culture gains or loses value, depending on a variety of circumstances. The popular is not simply an inventory, frozen "into some timeless descriptive mould," polarized by dominant and subordinate cultural dialectics, but rather, is a "constantly punctuating" division of cultural categories (Hall, 1998, p. 449).

3.10. The evolving nature of screen time and its connection to class cultures

The third definition of the popular looks - at any time in history - at the forms and activities rooted in "the social and material conditions of particular classes" (Hall, 1998, p. 449). The dialectical tension between dominance and insubordination still exists within cultural formations but the definition is unique in that it "treats the domain of cultural forms as a constantly changing field" (Hall, 1998, p. 449). Within this definition, there is no question of authenticity but an expectation that all cultural forms have contradictory elements, "composed of antagonistic and unstable elements" (Hall, 1998, p. 449).

3.10.1. The historical evolution of the term "screen time"

The term "screen time" is a cultural form that has evolved over time. A search on a social network, academic library or search engine for the term "screen time" illustrates the evolving definition of the term. Historically, the term "screen time" is rooted in how long (or how much time) an actor or subject appears on screen. On social networks, it is common to find posts with high user engagement about a particular television show, movie or character. For example, a post on Reddit titled, "What is the most useless character that actually get a fair bit of screen time?" [sic] received 253 comments. On Twitter, it is possible to find tweets like "Anthony Hopkins won the Best Actor Oscar for 'Silence of the Lambs' with only 16 minutes of screen time." Academic research by authors like Riggs (2012), Chavez (2011) as well as Lincoln and Allen (2004) deal with the amount of time that actors spend on screen, with particular emphasis given to gender and racial disparities.

The second way screen time is interpreted relates to the technical capacity of the screen itself. These posts examine the battery life of particular brands and models in relation to the user's screen time on the device. The screen is a technical object and as such is often treated simply as the artifact of use. The usage of this definition of screen time is still present (if you search "screen time" on Reddit, people still use this term to

denote the technical capacity of the screen) but it is becoming increasingly less common each year as the more dominant (usage) definition becomes more popular.

The third way that screen time can be interpreted reflects the time that people spend in front of screen-based media. It is important to note that the interpretive flexibility of these definitions is not permanent. Actor time on screen remained the dominant interpretation for screen time until screen-based media became ubiquitous. The “always-on” and “always connected” nature of screen-based devices has shifted the dominant interpretation of screen time to the amount of time that people spend in front of screens. This new dominant interpretation of screen time is the basis for the following research and analysis. In addition to television sets, computers, tablets and smartphones, there is a growing set of products on the market that feature screens built for 0-5-year-olds, including Baby’s First Smartphone by Vtech, Baby’s First TV network, LeapFrog and The Vinci Tablet – such products provide screen time training wheels for babies, toddlers and children but yield the same positive and negative effects as other screen-based media.

Within this definition, there is no concern about authenticity or the wholeness of popular culture; but rather, it recognizes that all cultural forms will be contradictory, with unstable elements (Hall, 1998, p. 449). “The meaning of a cultural form and its place or position in the cultural field is not inscribed inside its form. Nor is its position fixed once and forever” (Hall, 1998, p. 449). The flexible state of cultural forms like screens – and subsequently screen time – reflects the evolving definition of a term like “screen time” and the growing technical capacity of the screen itself. As illustrated above, the dominant definition of “screen time” has shifted within society and will continue to evolve as people form new relationships with the cultural artifact.

The evolving nature of screens as a cultural form is linked to the ongoing technological developments of the object. The first marketed televisors from 1928 bear no resemblance to Apple’s recently launched 12.9 inch iPad Pro. The technical capacity of screens as well as its uses will continue to evolve. How – and what – people use screens for expands as screens offer new capabilities. As Hall (1998, p. 450) suggests:

> The important thing is to look at it dynamically: as an historical process. Emergent forces reappear in ancient historical disguise; emergent forces, pointing to the future, lose their anticipatory power, and become merely backward-looking; today's cultural breaks can be recuperated as a support to tomorrow's dominant system of values and meaning.

3.10.2. The complex connection between class, the popular and screen time

As noted at the outset, the popular has also become a complex discussion interconnected with class. "The terms 'class' and 'popular' are deeply related but they are not absolutely interchangeable" (Hall, 1998, p. 452). This is because cultures cannot be "wholly" separate from specific "whole" classes despite the fact that there are distinct class-cultural formations (Hall, 1998, p. 452). Class cultures "intersect and overlap in the same field of struggle," which further perpetuates a displaced relationship between culture and class (Hall, 1998, p. 452). The relationship between class cultures creates additional strain because it polarizes the discussion between "the people" versus the "popular classes," which Hall (1988, p. 452) calls "the culture of the power bloc."

According to Hall (1998, p. 452), the term "popular" has no fixed collective subject to which to refer: "the people" are not always in a particular place, even if they were there before it is unrealistic to expect their culture to remain untouched and liberties and instincts to remain intact. "The capacity to *constitute* classes and individuals as a popular force – that is the nature of political and cultural struggle: to *make* the divided classes and the separated peoples – divided and separated by culture as much as by other factors – *into* a popular-democratic cultural force" (Hall, 1998, p. 452-453).

It is the issue of popular culture where the struggle for and against "a culture of the powerful is engaged" and goes through a process whereby it wins and loses, thus making this the "arena of consent and resistance" (Hall, 1998, p. 453). Some screen-based technologies become popular because they are "pushed" onto society – children in particular – by a dominant group.

The tension between "the people" and "the power bloc" is evident in Henry Jenkins' (2006) example of young people using their imaginations to operate a fictional school newspaper, *The Daily Prophet*, for Hogwart's School of Witchcraft and Wizardry, as popularized by the *Harry Potter* series. Jenkins' (2006) outlines the struggle of young fans wanting to express themselves within the fictional worlds they adore and companies, like Warner Bros, acting to shut down such sites because they infringed upon the company's intellectual property rights. Warner Bros has been pursuing a group of children in Poland who had started fan-based *Harry Potter* sites, which is why *The Daily Prophet* was set up. According to Jenkins (2006, p. 189) "current copyright law simply doesn't have a category for dealing with amateur creative expression. Where there has been a "public interest" factored into the legal definition of fair use… it has been advanced in terms of legitimized classes of users and not a generalized public right to cultural participation."

3.11. Chapter summary

The philosophy of technology provides various viewpoints on how to think about children's screen time in a critical way but the benefit of looking at the topic from a cultural studies perspective is that culture is the focus of analysis rather than technology. It is important to look at screen time as integrated with culture because both screens and screen time have become cemented as fixtures within popular culture.

Popular culture is of central importance in today's society – particularly with the levels of media saturation and the accelerated pace that new media and technologies develop (or change). Culture is responsible for helping form social groups, cultural attitudes, and shaping behaviour. The media plays a role in setting a narrative, using frame theory to make a story more salient and using "ideological conditioning" to sugar coat "social and political ideas" in the form of popular entertainment (Durham and Kellner, 2012, p. 1). The narratives that form through the media play a role in shaping the social, political, economic and ideological conditions of society; thus, shaping these aspects of children's screen time.

A cultural studies approach is ideal for an analysis of children's screen time because the tradition understands that the phenomenon is constantly changing to meet evolving technical capacities and the demands of consumerism. Culture is the way people form identities, group memberships, and move into an ideological state that matches the group the individual belongs to. Cultural studies also allows for the study of subcultural groups that resist dominant ideologies. Media and cultural studies is particularly well suited to understanding how class structures are formed and impacted by issues surrounding screen time, with particular emphasis on issues like the "power bloc" versus "the people."

In "Notes on Deconstructing the 'Popular,'" Hall (1980) provides three definitions of the popular, which serve to situate screen time within popular culture and cultural studies. The first definition argues that screens are popular because of the circulation and the commerciality of screen time. Hall (1980) argues that the historicization of culture is an important step in uncovering culture. By historcizing the evolution of screens there is a clearer understanding of how screens have moved into the mainstream. The technical improvement of screens is often based out of industrial need. For example, touch-screen technology was designed for air traffic control before evolving to mainstream use with tablets and smartphones.

The second definition posits that screens are popular because people use them. As an area of popular culture, screen time is popular because it is an activity people are interested in and do on a regular basis. "Screen time" as a thing and discourse is growing internationally as an item that people want to know about, illustrated in Figure 3 and 4. Figure 5 shows that around the world people spend a significant amount of time in front of screens. Reed (2000) argues that the popularity of screens (specifically personal computers) had a lot to do with combatting the articulation of the PC away from masculinity and patriarchal practices so the object would appeal to women as well as men.

The final definition, created by Hall, views screens, and screen time, as an evolving cultural phenomenon that is intertwined with issues of class. As an evolving

phenomenon, discourse, and thing, screen time is entangled in class structures, national issues, and ideology – issues that emerge in the upcoming case studies that look at academic research, media and parental sentiments.

Screen time is a concept that is situated within the popular, popular culture, and culture. It is constructed and shaped by culture but also plays a role in shaping culture. The way screen time is thought about depends a great deal about the ideological structures of society, which are determined through culture. As a debate, the concept of screen time divides people ideologically by the perceived effect of screens on children. As a thing, a debate and a phenomenon screen time impacts class structures within society. As we see in chapter four, children who have access and who are given the tools to learn competencies that teach them how to use screen-based devices in a way that maximizes their potential are in a greater position to rise or remain at a higher socio-economic class.

Chapter 4.

An Analysis of How Academic Research Constructs Children's Screen Time Using the Media Harm Debate

In the last chapter we see how screen time is a cultural construct. In this chapter, we start to look at the historicization of culture, which Hall (1980) argues is essential to understanding popular culture. The field site that we examine in this chapter is academic journals. The goal of this chapter is to look at how academics have constructed screen time and which definition they apply to it (as a discourse, phenomenon, object or thing). The macro group examined in this chapter is scholars. The micro groups are formed along the affective dimension of the debate, which divides the groups by their ideological belief that screen time is positive or negative.

This chapter provides historical roots into the research on how children's screen time is constructed by academics, which is useful groundwork for understanding children's screen time in the media (chapter five) and parental sentiments about children's screen time (chapter six).

Screens have permeated the social structures of everyday life, and screen-based devices are nearly impossible to escape in today's society. The pervasiveness of screens has done little to minimize the controversy over the perceived effect that screens have on the human condition. The amount of screen time that children consume – as well as the perceived effect that it has – is of interest to both academics and parents alike.

Below, I will argue there is a two-way influence between academia and culture, academics shape the common narratives that form around the positive and negative impacts of children's screen time, and academics play a role in framing children's screen time as an either-or (positive or negative) proposition, which as we will see in chapter five and six is also largely adopted by media and parents.

The concerns that emerge within the micro group that views screen time as harmful to children include neurological delay, social issues, psychological distress, physical impairments like obesity and myopia, and the integration of consumer culture into a child's daily life. The micro group that views screen time as positive for children argues that screen time can encourage physical activity and be used as an educational tool to promote literacy and engagement.

4.1. Academia and culture

The macro group examined within this chapter is scholars. A cyclical pattern exists between education and culture: academia has an influence on culture and culture has an influence on academia. Culture shapes not only how – but also what – scholars research and teach. Similarly, what scholars research and write about is framing the narratives around children's screen time.

4.2. Academics position screen time as a phenomenon or discourse

Based on my observations, academics tend to situate screen time as either a discourse or a phenomenon. Scholars of communication, media, or culture tend to focus on the discourse of screen time whereas scholars in the fields of science, nutrition or psychology tend to think about screen time as a phenomenon. This distinction is important because it illustrates how even within a macro group, like scholars, there is division over how to examine screen time. Scholars concerned about screen time as a

discourse look at the language, narratives and semiotics. Academics concerned about screen time as a phenomenon tend to focus on the observed impact it has, which is particularly prevalent with scholars who examine the physical effects of screen time such as the link between screen time and obesity.

4.3. Inserting screen time into the media harm debate

The most contentious area of children and media studies is over whether children are susceptible to media influences, which speaks largely to whether children should have a role in their own agency (Livingstone, 2007, p. 3). Adults are in a position of power over children for reasons of care but are also "dependent upon children to secure the continuation of life" (Drotner et al., 2008, p.10). Debates over children's media use have repeatedly resurfaced since the advent of mass media in the 19th century and are often shaped by discourse on "the information society" and "the network society" (Drotner & Livingstone, 2008, p. 2).

"From the point of view of children's rights, it is crucial to recognize and acknowledge that media culture is a part of children's daily lives from the earliest age" (Olafsson et al., 2014, p. 25). In 2010, a large-scale study in Finland examined a sample of 743 families with children aged 0-8 years and found that media use begins at a very early age, with the majority of 0-2 year olds listening to books, radio, and sound recordings (Olafsson et al., 2014, p. 24-25). The network society has accelerated the global reach of new media, which has profoundly altered children's media practices (Drotner & Livingstone, 2008). For example, tablets are increasingly important in children's digital lives (Livingstone, 2014, p. 3). The "[h]aptic and tactile interfaces of iPads and tablet devices allow very young children to relatively easily use devices" (Goggin, 2013). In fact, smartphones and tablets are so easy to use that one in three babies has used one of these devices before age one (Relaxnews, 2015).

There is extensive research on the impact that television and advertising has on children; however, the majority of research is focused on television with little attention

given to new forms of media (Livingstone, 2007, p. 15-16). While there is a fair amount of research on forms of screen time, there is little research that looks at the totality of screen time. Screen time is a multi-platform phenomenon and children are likely to engage with some combination of television sets, computers, mobile phones and tablets. I argue that the public sentiments that surround children's screen time mirror the two opposing sides of the media harm debate. For all practical purposes, screen time is a debate within the media harm debate. The media harm debate is concerned about the risk of harm to children through media representations and appropriations over a child's right to expression, exploration and risk-taking (Drotner et al., 2008, p. 3). Within the media harm debate, children are viewed as either "vulnerable" or "competent" (Drotner et al., 2008, p.10) but a partial reason for this academic divide is because terms like "harm" and "vulnerability" are rarely defined (Livingstone, 2007, p. 5). An Australian media harm study about children aged 10-15 found that children are more scared of realistic images than fictional ones (Livingstone, 2007, p. 15). Even newer effects research largely neglects issues that have recently surfaced such as regulation, mediation and literacy (Livingstone, 2007, p. 15-16). The research that follows in subsequent chapters illustrates concerns over issues like regulation and literacy and confirms the link between the advantages and setbacks of screen time within the media harm debate. To summarize, individuals who view children as vulnerable raise concerns about harmful content, physical risks and potential delays in cognitive development, whereas people who view children as competent speak about the positive aspects of being able to use technology to create, participate and build digital literacies.

4.4. Positive and negative discourses about screen time

There are two main narratives that surface in articles about screen time. On one side exposure to screen time is viewed as an advantage, having a positive "effect" and empowering the competent child. On the other hand it is viewed as a disadvantage, having a negative "effect" and putting the vulnerable child at risk. These two distinct viewpoints insert an affective dimension to the narrative on children's screen time, which is responsible for the micro groups that form under each macro group.

In order to understand the arguments that situate the micro groups, formulated by the belief that children's screen time has negative or positive impacts, the key research themes for each affective dimension are outlined below. This is the type of historicization that Hall (1980) argues is important in order to gain a better understanding of popular culture.

4.5. The negative impact of screen time

The first part of the narrative that will be examined is the idea that screen time is harmful to children. The concern that screen time has a negative effect on children is twofold. First, screens disrupt the cognitive and social development of children (with different ramifications at various ages). Second, children (and adults) have a difficult time understanding and managing the relationship they have with consumer culture, which is often viewed through screens.

4.5.1. Screen time recommendations ignored

Within this "negative" half of the debate, young children are of particular concern. Since 1999, the AAP (2016) has discouraged the use of television and entertainment media under the age of two, noting that a "child's brain develops rapidly during these first years, and young children learn best by interacting with people, not screens." The Canadian Paediatric Society (2016) has echoed this sentiment, stating that screen time is not recommended for children from 0-2 years and limited screen time (one hour or less per day) is ideal for children from 2-4 years. The potential for negative impacts on brain development at this age is enhanced because "neural growth occurs at a rate of 700 new synapses per second" (Ernest, 2014, p. 185).

Despite the AAP recommendation to refrain from letting children under age two watch television, a study conducted by the Kaiser Family Foundation found that "more than 60 percent of parents allow their children, ages 6 to 23 months, to be exposed to

some TV or video media each day" (Guersney, 2007, p. 2). A study based on 1000 random phone interviews by Elizabeth Vandewater at the University of Texas found that "39 percent of families with babies, infants and preschoolers up to 4 years old" reported that they left the television on "most or all of the time" (Guersney, 2007, p. 69). In May 2006 the Kaiser Family Foundation found that "a third of children aged 0 to 6 have a TV in their bedroom" (Guersney, 2007). A study by Vandewater illustrated that an hour of television viewing per day among 0- to 2- year-olds was linked to a 9 percent reduction in creative play during the week and an 11 percent reduction on the weekend" (Guersney, 2007, p. 21). A research study by Anderson and Pempek found that under the age of 12 months toddlers are not able to discern differences between a Teletubbies show in or out of sequence (Guersney, 2007). From a learning standpoint, according to Rachel Barr, a psychologist at Georgetown University, children are slower to imitate what they see on screen than what they see in person (Guersney, 2007, p. 60). As Hall (1998) suggests, the popular has also become a complex discussion interconnected with class, which can be problematic if children are learning in different ways (at different degrees) because it can create a social and economic division. Often children in higher socio-economic classes have greater access to extracurricular activities, which may account for higher screen time usage by lower socio-economic classes.

4.5.2. Screen time for children under the age of two discouraged

In September 2015, the evolving media landscape prompted the AAP to announce upcoming revisions to the media usage guidelines stating, "In a world where 'screen time' is becoming simply 'time,' our policies must evolve or become obsolete." In the announcement, the AAP continued to stress the importance of two-way communication between children and caregivers, unplugged playtime, tech-free zones, and co-engagement. Additionally, the AAP noted that the quality of the content matters and that curating content is important because many applications and games are labeled as educational with little to no evidence supporting such claims. The new AAP media usage guidelines have not been released yet, but, in November 2015, David Hill (2015, para.7), the Chair of AAP's Council on Communications and Media commented on whether screen time will continue to be discouraged for children under the age of two:

“My guess is the answer will be the same: it depends what they’re doing with it: does that time foster interpersonal interaction or displace it?”

4.5.3. Excessive screen time equates to greater risks

Excessive screen time for children of all ages has been linked to “childhood obesity, sleep disturbances, poor school performance, hindered peer relationships, and the undermining of learning” (Ernest, 2014, p. 184). The more children go online, the more risks they inadvertently or knowingly encounter (Olaffson, 2014, p. 6). The more children are exposed to media violence the greater their propensity toward aggressive attitudes and the more desensitized they become to violence (Ernest et al., 2014, p. 184). There is also a growing body of research to deal with the distress children experience when they come across unwelcome content like pornography online (Livingstone, 2006). The perceived risk of harm to children is sometimes described as a moral or media panic (Drotner & Livingstone, 2008, p. 2-3). Moral panics have erupted over issues like AIDS, child abuse, paedophilia and video game violence (Lim, 2013, p. 98). According to Lim (2013, p. 96):

> Cautionary voices have pointed to the apparent dangers that mobile media and communication pose for young people in the form of “deviant” activities such as sexting and mobile phone-facilitated bullying and criminal activity. Such incidents have ignited moral panics about the proliferation of mobile media because they are seen to facilitate emergent social/spatial interactions that are either unprecedented, or occurring on a scale not hitherto witnessed.

4.5.4. Childhood myopia: “too much ‘screen time’ and not enough sunlight”

There is significant research on the physical effects of screen time.

USC Eye Institute (2016) recently conducted the largest study of childhood eye disease in the United States and confirmed that incidence of childhood myopia among American children has doubled over the last 50 years. Doctors at the USC Eye Institute

(2016) speculate that the possible culprit is "[t]oo much 'screen time' and not enough sunlight."

4.5.5. A link between obesity and screen time

The most commonly cited physical effect of screen time is the propensity toward obesity. Children and adults who watch television have a greater propensity towards obesity and the more television a child watches the more likely it is that he or she will gain excess weight (Bureau of Labor Statistics, 2011; Grontved, 2011; The Neilsen Company, 2012; Dietz, 1985; Rey-Lopez et al., 2008; Boone, 2007; Henderson, 2007; O'Brien et al., 2007; and Danner, 2008). Children who have television sets in their bedrooms are more likely to become obese than children who do not (Dennison et al., 2002; Delmas et al., 2007). Some studies suggest that computer, video game and Internet use correlate to excessive weight gain (Berkey et al., 2008; Schneider et al., 2007; Carvalhal et al., 2007) but not all studies have found the same result (Rey-Lopez et al., 2008; Swinburn et al., 2008). There is some evidence that sit-time in general – at work or at home – increases the risk of becoming obese (Hu et al., 2004; Blanck et al., 2007) and may increase the risk of chronic disease or early death (Thorp et al., 2011; Katzmarzyk et al., 2009; Patel et al., 2010).

4.5.6. Obesity and food marketing

Some studies suggest there is a potential link between television, obesity and food marketing. Despite the fact that sex and violence make it into the headlines more, advertisements for processed foods are actually at the center of children's consumer culture (Schor, 2004, p. 120). "Kids are treated to a steady diet of enticements for sugary food, fatty food, salty snacks, fast food, and solid and 'liquid candy' (a.k.a. soft drinks)" (Schor, 2004, p. 120). Junk food placements and advertisements are common in print advertisements, movies, Internet sites, and programs (Schor, 2004, p. 121). For example, a count of the May 2002 issue of *Nickelodeon* magazine found that of the twenty-four pages of advertisements, eighteen and a half were of junk food (Schor,

2004, p. 121). A study by the Institute of Medicine (2012) found a significant growth in new food products marketed to children in the United States between 1994 and 2004. Each year thousands of advertisements geared toward children and youth feature high-calorie, low-nutrient foods and drinks that contribute to an environment that puts the health of children at risk (Institute of Medicine, 2012). Food marketers rely on influencing children's purchase requests through advertisements and product placements to facilitate pester power, which influences what parents buy (Schor, 2004, p. 61). A 2008 analysis of prime-time television found that children and teens see on average one food brand per day and three out of four advertisements are sugary beverages (Speers et al., 2011). Several studies have found that television food advertisements influence food consumption (Harris et al., 2009; Halford et al., 2008). One study found that children who watch cartoons with food commercials ate 45 percent more snack food than children who watched cartoons with non-food advertising (Halford et al., 2008).

4.5.7. Consumer culture moves away from the gatekeeper model, markets directly to children

Children have been sold products for centuries (Schor, 2004). "Historians report that as early as 1870, toys began to serve as status symbols" (Schor, 2004, p. 14). However, advertising to children is a more recent phenomenon (Schor, 2004). In the late 19th and early 20th century, advertisers used the gatekeeper model to sell children's products (Schor, 2004, p. 16). The gatekeeper model identified the parents as the gatekeeper to the child, which led to a considerable amount of time and money spent convincing the parents that the product was beneficial for the child (Schor, 2004, p. 16). Parental authority was valued and children were left largely free from advertisements. Today, the gatekeeper model has been replaced by a "home alone" approach, where adult strangers in advertisement and marketing campaigns directly address children about their values, aspirations and identities in the form of cartoon characters, voice-overs, well-scripted child actors, approachable adults, brand-extensions, cross-promotion and product design (Schor, 2004). Direct child marketing and advertising is troubling because toddlers can recognize logos as young as 18 months and by age 2 can ask for goods by brand name (Schor, 2004). By age 3.5, children can associate

brands with qualities such as fun, friendship or adventure (Schor, 2004). Each year, the average child views 40,000 advertisements and makes 3,000 requests for products and services (Schor, 2004).

This shift in the way children's products are marketed raises questions about power, structure and agency, and forcing consumerism onto young children. We can glean from Hall's (1980, p. 453) own definition of the popular that there is a clear tension between children as consumers and child marketers and advertisers as the power bloc. Directly marketing to babies and toddlers is troubling because children are in a subordinate position to the professionals.

4.6. Positive aspects of screen time

The positive benefits of screen time include its educational potential and the ability for children to develop physical skills and digital literacies.

4.6.1. Active screen time is not the cause of obesity

Some scholars go one step further than the division of the active audience versus the passive audience discussed in chapter three. Some academics argue that despite rhetoric that children have become sedentary in the age of technology, a study by Livingstone et al. (2014, p. 3) discovered that young children often lead active lives that consist of a variety of activities including sports. Scholars like Sweester, Johnson, Ozdowska and Wyeth (2012) argue that not all screen time is created equal.

There are two types of screen time: active screen time and passive screen time (Sweester et al., 2012, p. 95). This is an extension of the active and passive audience outlined in chapter three. "Physically active games are comparable to physical exercise" (Sweester et al., 2012, p. 95). Some games, like Wii Fit, are designed to increase fitness

but some games, like Dance Central, are designed to be entertaining and exercise is a "side-effect of play" (Sweester et al., 2012, p. 95).

Systematic surveys indicate that "regular video-game players" are "less likely to be obese" and more likely to enjoy outdoor play and social interaction (Palmer, 2016). Other experts state that, despite a plethora of research, it is impossible to find a definitive link between television and obesity because there are many "other factors "involved in the complex problem of childhood obesity" (de Lange, 2014).

4.6.2. Maximizing screens as a learning tool by curating content

Children model the online and offline activities of parents and siblings and primarily use technology to play games and listen to music (Livingstone et al., 2014, pp. 24-25). This supports the idea in chapter three that screen time is a cultural activity of the people. Children want to use screen devices because they see parents, siblings and friends also using the technology. Surveyed parents report using digital devices with their children for learning and fun (Livingstone et al., 2014, p. 3).

Screen-based media can be used as a learning tool. In the 1980s, the Children's Television Network found that children who watched *Sesame Street* with their parents, which is called "coviewing," learn more than children who watched television alone (Shapiro, 2013). "[T]he content children view is the best predictor of cognitive effects" (de Lange, 2014). According to Heather Kirkorian, "Children who watch age-appropriate, educational TV programmes often do better on tests of school readiness" (de Lange, 2014).

According to Shapiro (2013), "technology is so adept at providing 'adaptive feedback' that it proves to be an exceptionally effective teaching tool." A study by SRI found that "game based learning can boost cognitive learning for students sitting on the median by 12%" (Shapiro, 2013). Touchscreens work well for motivating children (de Lange, 2014). "[S]tudies have shown that children who struggle to learn using books often made more progress with iPads" (de Lange, 2014). A survey of over 1000 parents

with children aged 3 to 5 found that tablets promote learning (de Lange, 2014). “[C]hildren enjoy reading more when they look at stories using books and touchscreen compared to just books” (de Lange, 2014).

According to de Lange (2014), the type of screen time children consume is important. “Five hours sitting in front of the TV is not the same as 5 hours of some TV, a couple of hours playing on Dance Dance Revolution or some other kind of active game, followed by a Skype session with a grandparent” (de Lange, 2014).

4.6.3. Access to screens is a critical component to successful technology usage

Access to screen-based devices is critical to a child’s success using technology. Children between the ages of 0-8 are active citizens in the digital age but possess knowledge gaps with respect to access and use (Livingstone et al., 2014, p. 4). Children are often exposed to media without the skills to analyze content or purpose (Ernest et al., 2014, p. 185). Many children use devices and content outside of the recommended age range for the product or program (Livingstone et al., 2014, p. 4). One finding that emerged from the Livingstone et al. (2014, p. 32) study was the disconnect between children’s actual media use compared to parental perception of use; for example, many children were accessing content that was not age appropriate because they knew how to bypass password protection settings.

According to Hobbs (2008, p. 4), access also refers to the ability to locate information:

> The term access generally means the ability to locate information or find messages and to be able to comprehend and interpret a message’s meaning. Analysis refers to the process of recognizing and examining the author’s purpose, target audience, construction techniques, symbol systems and technologies used to construct the message. The concept of analysis also includes the ability to appreciate the political, economic, social and historical context in which media messages are produced and circulated as part of a cultural system. Evaluation refers to the process of assessing the

> veracity, authenticity, creativity, or other qualities of media messages, making judgments about a message's worth or value. Finally, the definition of media literacy includes the ability to communicate messages using a wide variety of forms (using language, photography, video, online media, etc.). Media literacy emphasizes the ability to use production processes to compose and create messages using various symbol systems and technology tools.

Many students have access to the Internet in the home or at school (the ease with which they can access it is questionable) but a large percentage of children (29%) are without access to the Internet or a computer (Buckingham, 2004, p. 12). With respect to access to mobile telephony: "BMRB's TGI research (BMRB, 2004) shows that 71% of 11-19-year-olds have their own mobile phones, an increase from 42% in 2000 – while other surveys suggest that as many as 90% of young people (Crabtree et al., 2003) and 90% of children age 5-9 (Richardson, 2003) have some degree of access" (Buckingham, 2004, p. 13). Young people between the ages of "12-17 who are living in lower-income and lower-education households are still somewhat less likely to use the Internet in any capacity – mobile or wired" (Madden et al., 2013). In Confronting the Challenges of Participatory Culture: Media Education for the 21st Century, Jenkins (2009, p. 3) identifies potential challenges including an unequal access to opportunity, ensuring that young people understand how media shape their world view, and helping young people prepare for "their increasingly public roles as media makers and community participants."

The physical dimension of access can create inequalities in the degree of access different social groups have to screen-based devices, commonly referred to as the digital divide (Buckingham, 2004). Children from lower socio-economic backgrounds who use both books and tablets at home were "less likely to be below average at school than if they only look at books (de Lange, 2014). Additionally, the government in Quebec recently ruled that schools can't "compel" parents to buy tablets, despite a number of schools reporting "great success using the devices" (CBC, 2015). Westmount, an all-girls private school, ensures that from kindergarten onward children have access to "tablets or laptops to help enhance their learning" (CBC, 2015). The division between public and private school tablet usage creates an unavoidable disparity problem (CBC, 2015). "Some schools are simply in a better financial position than others to buy tablets

for in-class usage" (CBC, 2015). The separation of socio-economic groups further divides class structures. It provides more opportunity to the wealthy and less opportunity to the poor, which Hall (1980) argues is unavoidable when it comes to popular culture.

4.6.4. Moving beyond access: children are further divided by skills and competencies

People are no longer simply divided according to those who do and do not have access (Jenkins, 2009). Buckingham (2004) also recognizes that the digital divide is more than a question of technological access but also encompasses the skills and competencies required to reap the maximum benefits of technological usage. People are now divided into "those for whom the Internet is an increasingly rich, diverse, engaging and stimulating resource… and those for whom it remains a narrow, unengaging, if occasionally useful, resource of rather less significance" (Jenkins, 2009). Many young people lack the necessary skills to access, analyze and evaluate the information they encounter online (Hobbs, 2008, p. 1). According to Hall (1998, p. 452) because culture cannot be "wholly" separate from specific classes, the emergence of different "class-cultural formations" is evident. Children who learn digital skills that maximize the benefits of technological usage will have an obvious privilege and class advantage in the future (if not already). It is also arguably easier for higher social classes to help their children obtain these skills than lower social classes.

4.6.5. Digital literacies maximize benefits of screen time

The skills that help children analyze the information they encounter online are called digital literacies. Other terms to describe literacy that have shifted into popularity include "media education, visual literacy, technology literacy, critical literacy, critical media literacy, youth media, media competence, cyberliteracy, media management, multimodal literacy and others" (Hobbs, 2008, p. 3). The terms "media literacy" and "media education" highlight an understanding of mass media and popular culture (Hobbs, 2008, p. 4).

Raymond Williams (1983) describes literacy as an invented word to express achievement and possession of skills – not a way to describe writing, reading or knowing the alphabet (Livingstone, 2008, p. 9-10). Historically, literacy has been viewed as a route to emancipation and the same hope exists with digital technologies despite the fact that the word "literacy" has stuffy, high culture origins that stigmatizes people who lack it (Livingstone, 2008).

There are rising concerns that people do not have sufficient resources and competencies to handle new technologies (Drotner & Livingstone, 2008, p. 2; Livingstone, 2008, p. 7). Media literacies include traditional forms of literacy involved with print culture (Jenkins, 2009) as well as new literacies associated with digital media, computers and multimedia (Drotner et al., 2008). People are combining literacies by using new media technologies to engage with old media content (Jenkins, 2006, p. 175). As new technologies emerge and media genres change and evolve, new forms of literacies will surface (Buckingham, 2004).

Current digital literacies share three themes: the construction of authorship and audiences within economic, political and social realms; the circulation of messages and meaning and audience interpretations; and, the exploration of how texts represent social realities, reflect ideologies and influence one's place in the world (Hobbs, 2008, p. 7). The new literacy skills that are emerging include play, performance, simulation, appropriation, multitasking, distributed cognition, collective intelligence, transmedia navigation, networking, and negotiation (Jenkins, 2009, p. 4). Reports from the Kaiser Family Foundation "have bemoaned the amount of time young people spend on 'screen media' but these reports lack reflection on the various degrees of connectivity, creativity, and learning involved" (Jenkins, 2009, p. 11). "Although youth are becoming more adept at using media as resources (for creative expression, research, social life, etc.), they often are limited in their ability to examine the media themselves" (Jenkins, 2009, p. 14-15).

4.6.6. Problematizing digital literacy education for children

"Today's students… represent the first generation to grow up on this new technology" (Prensky, 2001, p. 1). The average college graduate has spent "less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV). Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives" (Prensky, 2001, p. 1). New media literacies allow young people to become more "adept at using media as resources" but are limited "in their ability to examine the media themselves" (Jenkins, 2009, p. 14-15). Turkle (1995) cites games like SimLife as a way to teach players to think actively within an evolving system.

"Most people agree on the importance of both helping children and young people use and create messages using technology and enter into the process of critically analyzing digital media, popular culture and the array of technology-infused social practices that are part of contemporary life" (Hobbs, 2008, p. 2). There is some concern that the rise of the information society has decreased critical thinking skills in young people (Hobbs, 2008, p. 1). Schools have only made superficial efforts in the ways they teach literacy, technology, and culture, and computer use is limited to isolated sessions (Hobbs, 2008, p. 1).

According to Prensky (2001, pp. 1-2) a major issue within the education system is that young people are digital natives – native speakers of the digital language – but are being taught by digital immigrants – instructors who speak an outdated and pre-digital language. Implementation of new literacies within the classroom would be difficult because teachers have a "longstanding antipathy to[wards] popular culture and technology," teachers are not evaluated on the ability to use technology in the classroom, and the financial resources of schools varies dramatically (Hobbs, 2008, p. 11). "[L]iteracy practices inevitably embody power relationships within society," which is why critics of critical literacy, like Buckingham (1998), tend to situate teachers as heroes (power issues), which create pedagogical problems (Hobbs, 2008, p. 5).

There is also tension between product and process between youth media educators and their funders (Hobbs, 2008, p. 8). When a "product is valued over process, then adults take greater responsibility for youth media productions, shifting the balance between youth and adults and raising questions about authorship and student learning" (Hobbs, 2008, p. 8).

Parents have an active role in shaping children's early relationships to media and supporting new skills and competencies (Jenkins, 2009, p. 60). New media technologies provide parents with greater control over the flow of media but parents are in fact more overwhelmed now by the role that media plays in their children's lives (Jenkins, 2009, p. 60). It is the parents' expertise rather than their children's that is important (Buckingham, 2004, p. 39). "Facer et al. (2003) concluded that there was a significant 'digital divide', which derived from parents' work and educational experiences, and that this had sizeable implications in terms of parents' ability to support their children's use of ICTs at home" (Buckingham, 2004, p. 39). The key point is to encourage educators at all levels to talk about how to change pedagogical practices to reflect the ways young people are engaging in the world around them.

4.6.7. Screen time as an interactive platform

New technologies have made screen time more interactive. Children have the capacity to participate and shape the technologies to create new content. Children no longer have to assume the role of the passive audience. They can be active participants – some of whom even play a role in the creation of online content.

The media environment plays a crucial role in the cultural construction of how children use screen-based devices. According to Henry Jenkins (2004) there are two significant trends in the media environment that define culture. First, new media technology places low-cost production and distribution in people's hands, expands the range of delivery channels, and allows for new ways of sharing, sorting, and organizing content (Jenkins, 2004). Second, there is substantial concentration of media ownership. "Some fear that media is out of control; others that it is too controlled. Some see a world

without gatekeepers; others a world where gatekeepers have unprecedented power" (Jenkins, 2004, p. 34). Jenkins (2004, p. 33) notes that media convergence makes it possible to identify "major sites of tension and transition shaping the media environment." The media landscape today is defined by convergence – a transformative change in the culture, in which three layers of convergence (technological, corporate, and participatory culture) are happening simultaneously (Jenkins, 2004).

The term "participation" has become a governing concept surrounded by conflicting expectations (Jenkins, 2006, p. 175); yet, this type of participation exists with media for every age. Shows like *Dora the Explorer* have built in audience participation for children and parents. When the characters in *Dora the Explorer* say a significant or novel word in English or Spanish they ask the children to repeat the word, which fosters a level of interactive participation. Additionally, media convergence – the flow of content across multiple media platforms – is a reality for most children's programming. For example, *Dora the Explorer* shows can be found on television, Netflix, and YouTube, while show-specific games featuring Dora can be found on Nickjr.com. *Dora the Explorer* also crosses over into the toy market, selling items like Dora's Rescue Bag and a talking Dora doll. There are also fan sites like Fanpop.com that host a *Dora the Explorer* club that features images, videos, polls about the show, and a space where show-watchers can ask and answer questions. This type of media convergence allows the imagination of children to extend beyond the media they play with or watch.

Children of all ages experience this type of participation and media convergence through the products with which they engage. Heather Lawyer is a home-schooled 13 year-old who uses *The Daily Prophet* (an online school newspaper) to operate within the fictional world of the *Harry Potter* novels (Jenkins, 2006, p. 177). The platform was designed to promote reading and writing skills but also acts as a hub for *Harry Potter* fans. The children visiting the site were able to use fiction to confront issues they were dealing with in real life. Affinity spaces – spaces that offer participants a place to contribute skills, interests, and expertise as well as learn from others - offer a new form of learning. The boundaries between producers and consumers of media content became blurry as Warner Bros. and *Harry Potter* fans negotiated the notion of ownership of media content, which caused the *Harry Potter* film franchise to re-evaluate its position

and move towards a more collaborative policy on the creative output of young fans. The *Harry Potter* case study raises the issues of determining how literacy should be taught and who should control it.

The case of young children writing *Harry Potter* fan fiction is an excellent example of how screen time can lead to interaction and participation in online environments (and even communities). As new technologies continue to evolve, there is even a place for children to acquire content creation literacies. For example, Root is a prototype being developed by Harvard, which has updated "the classic Turtle robot design, in an effort to bring coding to life for children (Plumlier, 2016). There are also programs around the world dedicated to helping children learn how to code. TechUpKids is one example of a not-for-profit organization dedicated to helping children make the "switch from consuming computer programs to creating them" (TechUpKids, 2016).

Despite the switch from passive to active audience (discussed in chapter three), some scholars are abandoning the term "audience" altogether. Words like "audience" are increasingly supplanted by terms like "publics" and "users" to signify the transformation from passive viewers to active participants (Livingstone, 2008). With examples like the *Harry Pottery* fan fiction sites and children coding games and websites, the shift from "audiences" to "users" and from "consumers" to "producers" (Lister, 2009, p. 9-10) is visible.

People who engage with the Internet, mobile phones, and digital games cannot be easily labeled an audience - user is becoming the more common term to address this group but implies individualism when often networked people work collectively (Livingstone, 2008, p. 4). Within the critical tradition, literacy is being reframed, audience studies are combined with consumption studies, and there is a renewed interest in youth culture (with young people frequently being dubbed as "pioneers" in a way that wasn't possible with traditional mass media) (Livingstone, 2008, p. 4-6). Audience research has identified ways in which audiences are critical as well as how audiences engage with media texts and shape them to suit their own circumstances and daily lives (Livingstone, 2008, p. 6). Henry Jenkins (1992) has reviewed how creative interplay between literacies

is required to produce fan fiction and Jim Gee's (2003) work linked the importance of identity development and new media literacies for young video game players (Livingstone, 2008, p. 6). The term "literacy" is more suitable than "audiences" in a converged environment where the lines are blurring between leisure and learning, public and private, and work and play (Livingstone, 2008, p. 6).

This discussion of literacy links back to Hall's (1980) definition of popular culture because literacy has become an important factor with class structures with respect to children's screen time. Children who have greater digital literacies will end up with greater advantages, more opportunities, and have a greater chance of being in (or moving to) a higher social class.

4.7. The evolution of research into ideologies

Hall (1996, p. 26) argues that ideology is a mental framework constructed to help "different classes and social groups" make sense of how society operates. The micro groups within each macro group (scholars, media and parents) are defined by the ideas and ideals situated within the screen time debate. The affective dimension of the debate (the tendency to view screen time as positive or negative) shapes how people think about, research, write, and talk about children's screen time. This affective element of the debate, which is discussed more in chapter six, is engrained into the ideology of each micro group, which is part of the reason screen time as a debate is so controversial.

4.8. Chapter Summary

In chapter three, Douglas and Kellner (2012, p. 1) say that culture forms attitudes and shapes behaviour, which can separate people based on socio-economic groups. Academia and culture are intertwined, and scholars are in a position to influence culture and shape that narrative and guiding ideology around children's screen time. Scholars

examine screen time as a phenomenon and a discourse, which is important because academics in different fields view children's screen time in different ways. Children's screen time has become a debate within the pre-existing media harm debate. This debate over the perceived impact of screen time on children guides ideology, which is how micro groups are formed within each macro group.

Hall (1980) argues that historicizing a culture is an important part of understanding popular culture. By examining how academics have constructed screen time we are now able to look at how the media use academic research to circulate news stories to the public. This chapter provides the necessary background information to understand the ideological group formations that follow the advantages and drawbacks outlined in the screen time debate. People form strong ideologies around children's screen time because academics have constructed strong arguments with compelling data on both sides of the debate. Scholars argue that screen time is linked to obesity, myopia, sleep issues, mental health problems, delays in cognitive development, and unnecessary exposure to consumer culture – and all of the problems that accompany it – at an early age. Other academics argue that screen time can promote physical activity and can be used as a learning tool to develop digital literacies that allow children to participate and create in a way that traditional media didn't allow.

The compelling research that exists on both sides of the "debate" makes it possible for academics to frame screen time as positive or negative, rather than highlighting both the advantages and drawbacks that screen time has for children. This tendency to frame children's screen time research as wholly positive or wholly negative is also true for the media and parents, but necessarily limits a more balanced viewpoint on the subject.

Screens are not the enemy. It is time and content that can create concerns. When time on screens is overused and displaces human interaction, play time, or outdoor activities it opens the door to the risks outlined above. The real problem is this: children's media usage differs drastically from their parent's perception of their media usage (Livingstone et al., 2014, p. 32). Parents don't have a clear idea about how much

time their children spend in front of screens or what they are doing when they are in front of them (Livingstone et al., 2014, p. 32). Parents need a clearer understanding of their own children's screen time. This is especially important because not all screen time is created equal. Some screen time fosters new literacies, while other screen time encourages passivity. Not all types of screen time are created equal, and this is an area where more academic research needs to be concentrated.

In order to make meaningful change there will need to be an ideological shift away from viewing screen time as exclusively positive or negative to children. Rather, it is more useful for parents, academics and media to be aware that there is a "spectrum of effects," which I define as a large scale of "effects" that range from positive to negative. Children are never simply exposed to positive effects or negative effects, but rather, a mixture, on a continuum.

Chapter 5.

Framing Screen Time: An Analysis of "Screen Time" Headlines in Worldwide Media

Chapter four addressed how scholarly research constructs children's screen time within the media harm debate, often positioning the issue as positive or negative for competent or vulnerable children. In this chapter, the same screen time issues and themes appear in media around the world. The macro group that is discussed is media (both traditional journalists and information shared on digital media by citizen journalists). The formation of micro groups follow the same delineation outlined in chapter four, by the perceived effect of screens on children. The media use academic research to write the articles that go to print, which means an understanding of scholarly work is essential before we can uncover how children's screen time is framed by the media.

The field sites for this analysis include print news media articles archived in LexisNexis and tweets from Twitter. The rationale for using two field sites is to illustrate a fuller idea of how the media frame screen time. It also serves to demonstrate how traditional media is later disseminated on social networking sites. This chapter explores framing as a theory of media effects and the impact media has on the sentiments that people form about children's screen time.

When examining LexisNexis as a field site, I looked at 500 news articles to determine whether a positive, negative or neutral tone is dominant throughout the English-speaking world. The data was further delineated by continent to determine if children's screen time is important worldwide, if it is framed similarly worldwide, and if there are issues that are more (or less) important in some continents. Grouped by

continent (minus South America and Antarctica which were not represented in the sample), the articles about children's screen time are predominantly positive in Africa and negative in North America, Europe, Australasia and Oceania, and Asia. Next, some articles from the dataset were hand-selected for frame analysis in an attempt to represent some of the key issues addressed at large by the dataset (using articles coded as positive and negative in tone).

Twitter as a field site provided a way to look at how traditional news articles, like the ones archived in LexisNexis, are circulated on social networks by citizen journalists. Citizen journalists are public citizens who play a role in collecting, reporting, analyzing and reporting information. Thus, every tweet becomes a form of public journalism and the "tweeters" play a role as both citizens and citizen journalists. Fifty tweets about children's screen time were examined on Twitter. Ninety-eight percent of the tweets were users sharing news articles about children's screen time on the platform. The tweets were coded to determine the tone (positive, negative or neutral) of children's screen time on Twitter. The most "retweeted" and "favorited" tweets were analyzed using frame theory.

The research presented below provides a unified picture of how children's screen time is framed by the media. What emerges in the findings of this study is that children's screen time is a global issue. The research findings suggest that the media tells stories about children's screen time based on how academics have set up the issue using the media harm debate. The media hone into the affective dimension of the debate by routinely framing the subject as positive, negative and neutral. Traditional media tend to frame children's screen time as negative. News media tend to share negative stories because they are more salient than positive news stories. Social media also presents children's screen time as negative but neutral and positive articles are more likely to be retweeted and favourited. A partial reason for this behaviour is that in affective networks people are more inclined to share positive (or neutral) information than negative (Berger, 2013). With all media, children's screen time is framed emotionally, which may be why the arguments are so divided as to whether children's screen time is positive or negative. The findings indicate that news articles about children's screen time are primarily negative while shared articles about screen time are mainly neutral. Negative

framing is a common strategy that news media employ because it makes the story more salient, and therefore more effective, than positive news stories.

The most important finding illustrates that children's screen time is not only a cultural construct but also a worldwide issue. In chapter three, we see that "screen time" is a thing that has garnered worldwide interest through both Google searches and uses. Therefore, it is important to see how this worldwide interest of the popular (in this case screens) is similar and different. As a discourse, the same themes and "debates" surface in the media as they do in academic research, also divided by the affective dimensions of the debate. However, it is important to think about children's screen time as a global issue because popular culture has assumed a level of glocalization. This glocalization, defined in greater detail by Morley in chapter two, is also part of the cultural evolution of screen time. While people use screens around the globe, Meeker's (2014, p. 93) research in Figure 5 illustrates how they use them, how much they use them, and the issues that matter in various cultures can be different. This is significant because it helps us understand the similarities and differences of this shifting, moving thing that is called screen time.

5.1. Frame theory as a tool to understand screen time

Frame theory examines how material is presented to an audience, which is called the frame, and the potential influence it has on decisions people make about an issue or phenomenon. The media frame issues like children's screen time, presenting a dominant frame to the public. Often, the media choose to report on the negative aspects of screen time because they are more salient. Frame theory, which is outlined in chapter two, is the research method used for the analysis in this chapter.

5.2. Research objectives and questions

Within cultural studies, culture is a global issue. Figure 3 illustrates that Google searches for the term “screen time” happen worldwide and have been increasing since 2005. Figure 5 shows that most countries use a variety of screen-based devices but there are differences in usage patterns. The purpose of this study is to determine if the general interest in children’s screen time (discussed in chapter three) is also reflected in media around the world. A qualitative content analysis was conducted for this study. Content analysis is outlined in greater detail in chapter two. The primary focus of the study was to determine the tone applied by the media to children’s screen time. News articles were coded by continent to determine if there were any affective differences between countries.

In an effort to address the larger research question (“What is children’s screen time?”), this chapter looks at how children’s screen time is framed by the media, if children’s screen time is a concept represented by media around the world, if the articles written about screen time have the same tone as those circulated on social networks, and if there is any variation between tone and important issues between continents.

5.3. Selected media: newspapers and tweets

Social and traditional media were selected for this study. Twitter was the selected platform to deal with how children’s screen time is presented in social media, and newspapers were selected to deal with how children’s screen time is presented in traditional media. Twitter is a good comparison platform for newspapers because users often share news articles about topics on the platform. A tweet is similar to a headline, which makes them easy to code the emotional dimensions of the debate in a consistent way even while using different forms of media.

5.3.1. Twitter: media messages in 140 characters (or less)

"Twitter is an online social networking platform where the registered users can create and share messages with other users" (Mejova, Weber, & Macy, 2015). Twitter began in March 2006 as a "side project at a San Francisco podcasting company" (O'Reilly & Milstein, 2009). The messages, also referred to as tweets, are a maximum of 140 characters in length. While tweets can be made private, they are typically accessible to the public. Twitter uses hashtags, prefixed with the "#" symbol, as a way to categorize searches (O'Reilly et al., 2009). Twitter "provides an avenue to share content with a large and diverse population with few resources" (Mejova et al., 2015). Twitter (2016) has 320 million active monthly users and one billion unique monthly visits to the site. Approximately seventy-nine percent of accounts are outside the United States of America (Twitter, 2016). Eighty percent of users access the site from their mobile devices (Twitter, 2016).

5.3.2. The role of newspapers in shaping public sentiment

The news media has enormous power within North America and plays a vital role in the sentiments that people develop about children's screen time. Media coverage is partially responsible for shaping public opinion about whether children's screen time has a positive, negative or neutral impact. News media is a product of a world that needs to know what is happening. It is fundamentally dependent on trade, markets and information that citizens want to keep informed about. "When communications have no such need, where their actions do not depend on their neighbours, there is little reason or incentive to create news" (Street, 2011, p. 55). The news is an important source of information for the public. Journalists decide what stories are most important and broadcast or write news stories about those issues. Through this process, media personalities set the informational agenda.

In "Telling Tales: The Reporting of Politics," John Street (2011) argues that people often think about the "news" as a source of objective information about important events, personalities and topics. It is easy to distinguish the "news" from fiction or

advertising because people view news stories as “true” (Street, 2011). Despite the truthfulness and objectivity credited to the news, neither is an inherent feature of the medium (Street, 2011). One of the reasons people view the news as true is because of the rhetorical performance of newspapers and news broadcast shows, which persuades the public of its credibility in representing the meaning and nature of reality (Street, 2011). “The point is, though, that in each case—in fiction or news—we are being persuaded of its truthfulness, and the difference between the genres lies in the techniques they use to do this” (Street, 2011, p. 53). The news is presented as an urgent and relevant form to understand the world unlike other forms of media like soap operas and comic strips. Historically, the public sphere has depended on a degree of separation from market forces but in more recent years the news’ contributions to public debate has been threatened by greater market pressure, which leads to a commoditization of the news, making news an economic product rather than a public good (Street, 2011).

There are also political factors behind the production of the news. The news emerges with and contributes to the rise of the public sphere insofar as the form and content of the news are a source of rationality upon which the modern world and public sphere rely. The rise of the public sphere is concerned with the emergence of the middle class whose existence depends on markets, trade and subsequently news about market conditions. This is exactly the link between class and popular culture that Hall (1980) argues is unavoidable. Those who operate the newspaper are part of the “power bloc” and those who consume the newspaper are predominantly middle class. This is an important consideration because it means the articles are written with a middle class audience in mind. “Nowadays, the citizen of the public sphere has been replaced by the consumer of the private sphere. The new order does not serve the need for public discourse about political goods; instead, it aims to link audiences and advertisers” (Street, 2011, p. 55). Thus, the relationship between the consumer and supplier in the everyday marketplace becomes more important than the relationship people have as citizens to the weakened public sphere. This impacts the research in three ways. First, newspapers operate more as an economic product rather than a public good, which means the framing of children’s screen time may be skewed by the commoditization of the news. Second, when the news is thought about as a commodity it is clear there must be an audience and that audience is the middle class. This informs what is written and

how it is conveyed about screen time. Third, physical space is less important than the connection the audience has to the information they consume within the news.

5.4. Research design and coding

The first task in the research process was to develop operational definitions of the two key variables in the inquiry (Babbie et al., 2014, p. 279). The two variables in this study were *screen time* and *children*. An ethnographic approach was taken to operationalize these variables.

The unit of analysis for this study was "children screen time." The dependent variable for this study included tone of the screen time mentions as negative, neutral or positive. The independent variables included the nation, the newspapers, and the Twitter users.

The field sites used to gather information about children's screen time in the media include tweets on Twitter and the archived news database on LexisNexis. On Twitter, two pilot projects were conducted before the research study was launched. The first pilot project involved pulling hundreds of tweets from Twitter using NVivo capture for the hashtag searches "#screentime," "childrenscreentime," and "childrensscreentime" The problem the researcher encountered was the inability to use regular search terms without hashtags, which meant the results were not as relevant as they needed to be for the research. The second pilot project involved using the term "children's screen time" in the search bar on Twitter and collecting and deciphering the tone of each tweet manually, which was verified as a useful method for the research study used in this project.

On February 2, 2016, I gathered data from Twitter using the search term "children screen time." The top fifty tweets were gathered for analysis. The data was collected by hand and transferred into a Word document for additional analysis. The content was analyzed using two methods. First, the data was coded similarly to the case

study on news media, examining whether the shared tweets contained a positive, neutral or negative tone. Second, the data was sorted to reveal which tweets garnered the greatest number of “Retweets” or “Favourites.”

The data was manually entered into a Word document. For each tweet, I inputted the full tweet, the username of the poster, and the number of “retweets” and “favorites.” The data was transferred into NVivo 10 for analysis. The tweets were coded according to the same schema (minus continent categorization) for tone (positive, negative or neutral). The advantage to using Twitter is that it is easy to collect data, the data can be sorted within the platform by search terms or hashtags, and the method allows for a basic interpretation of public perception about children’s screen time. The main reason for using Twitter is that it is one of the only platforms used primarily for sharing news articles, which means it can be used alongside the research from the LexisNexis news articles.

The findings on Twitter indicated that users primarily share information about children’s screen time that is neutral. In order to make this information more meaningful it became necessary to conduct a similar research study using traditional media. Newspapers were selected for the purpose of this study.

The LexisNexis database was used to retrieve newspaper articles. In February 2016, a pilot study was conducted using a sample of the first 95 articles about “children’s screen time” that appeared in LexisNexis. I hypothesized that there would be an equal mix of positive and negative news articles from North America, which was rejected within the pilot project. In fact, the majority of articles in North America and Europe were negative in nature. In March 2016, 500 articles were retrieved from the LexisNexis database for the full research study. Duplicate newspapers were removed from the sample that was pulled from the database; however, if an article appeared in several media outlets it appeared in the dataset once for each source.

Within the LexisNexis database, I retrieved articles using the search term, “children’s screen time.” Several search terms were tested but “children’s screen time”

yielded the most relevant articles for the purpose of this study. All newspapers within the LexisNexis database were examined between 2006-2016. The time period is not significant. The dates indicate the articles that appeared as part of the dataset within LexisNexis. The LexisNexis search of "children's screen time" resulted in a total of 1000 articles matching the unit of analysis. The researcher selected every other article as they appeared within the LexisNexis database and 500 articles were analyzed for this study.

Both studies included an analysis of the independent variables (continent, newspaper, Twitter user, retweets and favorites) and dependent variables (tone of the article or tweet). Positive mentions included mentions that viewed screen time as beneficial for children and negative mentions included mentions that presented screen time as harmful to children. For example, headlines like, "Media diet encouraged for children" were coded as positive because the article encouraged parents to include media (and screens) in a child's daily life. Articles that stressed the positive benefits of screen time for children, such as increased learning and digital literacy or refuted negative effects like obesity or inactivity, were coded as positive. Headlines like "Zoned out: Too much screen time for children is not just detrimental physically but can inhibit communication skill" were coded as negative. In addition to articles that directly cited the negative effects (obesity, screen addiction, physical ailments, etc.) of screen time, articles that stressed limiting or managing screen time were also coded as negative.

"Content analysis is essentially a coding operation. Coding is the process of transforming raw data into standardized form" (Babbie et al., 2014, p. 283). The researcher was the coder of the study. The coding instruments that were used included the LexisNexis database and NVivo 10 data analysis software. The key nodes that were used during coding include continent (Africa, Asia, Australasia and Oceania, Europe, North America and South America) and article or tweet tone (positive, negative or neutral). Before the data was coded the researcher read each news article and classified the country of origin for each news source.

5.5. Limitations

There are limitations to the research that was conducted. The sample size of the Twitter study is small but adequately represents the general sentiments being shared on the platform about children's screen time. While the analysis contains significantly fewer tweets than newspapers, the two are still comparable. This is because the results from the second pilot project matched the results of the full study and while more tweets could have been studied, it didn't yield more information. Looking at more newspapers provided an opportunity to look at how media around the world viewed children's screen time.

Brevity is essential on Twitter, which means content often includes slang, abbreviations and other language that can be difficult to interpret. Tweets had to be read carefully and the links examined to understand what the user was saying and the overall tone of the tweet and accompanying links.

Newspapers were the only form of traditional media used for the second field study. The LexisNexis database also has limitations including no images or page placement, and not all newspapers are accessible through the database. Despite its limitations, the LexisNexis database has over 2.5 billion documents (Neuendorf, 2002, p. 219) and is a useful tool for researchers. Within LexisNexis, each document is "full text searchable," which means "the user may specify any word or string of characters, and due to the unique organizing pattern of the system, all documents containing the string will be located almost instantly" (Neuendorf, 2002, p. 219). Another limitation is that only English language newspapers were analyzed in this study. Future researchers may consider looking at how "screen time" is used by newspapers in the native tongue of the country in which they originate.

There are additional limitations to comparing tweets to news articles. Not all tweets that are shared are news articles. Some news headlines are longer than 140 characters and people often change the news title or add their own sentiment to the post.

5.6. Summary of major findings

Fifty tweets were analyzed to determine the tone (positive, negative or neutral) of tweets about children's screen time on Twitter. Twenty-eight tweets were neutral, seventeen tweets were negative, and five tweets were positive (see Table 1). The fact that more neutral content was shared than negative and positive content may indicate a user discomfort with posting strong opinions about children's screen time. More research would need to be done to determine exactly why published articles about children's screen time tend to be negative while shared articles tend to be neutral. The top six most favourited and retweeted articles are analyzed below using frame theory.

Table 1: Children's Screen Time Sentiments on Twitter

Tone	Number	Percentage
Positive Tweets	5	10
Negative Tweets	17	34
Neutral Tweets	28	56
Total	50	100

The worldwide articles about children's screen time were largely negative. Out of 500 articles from around the globe, 28 articles were positive, 416 articles were negative and 56 articles were neutral (see Table 2). The neutral articles were neither negative nor positive *or* the positive and negative effects of screen time were presented equally within the article. Articles about screen time came from every significantly populated continent except South America because it was not present in the dataset. The breakdown of the 500 articles by continent is as follows and as illustrated in Figure 6: Africa (9), Asia (42), Australasia and Oceania (105), Europe (136), and North America (208).

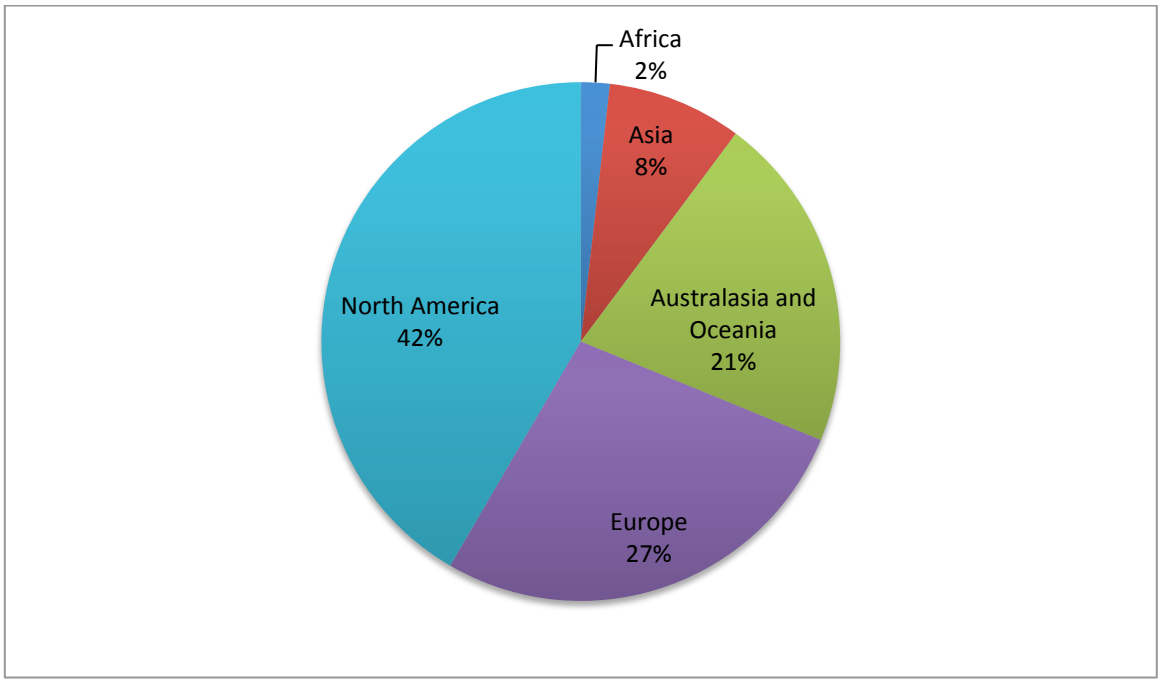


Figure 6: Breakdown of Articles by Continent

The tone of news articles for each continent is available in Table 3. The complete dataset of positive, negative and neutral articles from each continent is available in Table 4.

Table 2: Tone of Children's Screen Time in Worldwide Newspapers

Tone	Total	Percentage
Positive	28	6
Negative	416	83
Neutral	56	11
Total	500	100

Table 3: Total Newspaper References Per Continent

Continent	Total References	Percentage
Africa	9	2
Asia	42	8
Australasia and Oceania	105	21
Europe	136	27
North America	208	41
Total	500	100

Table 4: Tone Breakdown in Newspapers by Continent

Continent	Tone	Total References	Percentage
Africa	Positive	4	44.5
	Negative	3	33.5
	Neutral	2	22
	Total	9	100
Asia	Positive	3	7.5
	Negative	33	78.5
	Neutral	6	14
	Total	42	100
Australasia and Oceania	Positive	0	0

	Negative	97	92.5
	Neutral	8	7.5
	Total	105	100
Europe	Positive	9	6.5
	Negative	119	87.5
	Neutral	8	6
	Total	136	100
North America	Positive	12	5.5
	Negative	165	79
	Neutral	31	6
	Total	208	100

5.7. How social and traditional media frame children's screen time

Social and traditional media frame children's screen time using four elements: selection and highlighting, using highlighted elements to position an argument, evaluation, and the solution (Entman, 1993, p. 52). In "Framing European politics: A content analysis of press and television news," Holli Semetko and Patti Valkenberg (2000) identified five frames that the media present in the news, including attribution of responsibility, conflict, economic consequence, human interest, and morality. All of the frames identified by Semetko and Valkenberg were present in the analyzed media. According to Entman (2003, p. 417) news frames aim to define a phenomenon or event

as problematic, identify causes, convey moral judgement, and suggest remedies for the problematic situation. While moral judgement was not always present in the news articles and tweets, most of the media followed a pattern of stating children's screen time as a problem, identifying the causes and suggesting remedies for the situation.

There is less separation between the type of platform (newspapers versus television) but more so between the content (serious versus sensational press) (Semetko and Valkenberg, 2000). While Twitter can be used in a sensational way, the manner it was used by users for this study has resulted in categorizing it as "serious" press, similar to the news articles. The media exhibited a ritualization to the frames. For example, "newspapers are framed by deadlines and publication times. TV news is framed with music, graphics, headlines and news readers" (Watson and Hill, 2014, p. 105). The words and images that are used have the ability to "stimulate support of or opposition to" the issue, which can be measured through cultural resonance and magnitude (Entman, 2003). The media "use words and images highly salient in the culture, which is to say noticeable, understandable, memorable, and emotionally charged. Magnitude taps the prominence and repetition of the framing words and images. The more resonance and magnitude, the more likely the framing is to evoke similar thoughts and feelings in large portions of the audience" (Entman, 2003, p. 417). A clearer picture of how the media used this ritualization framing is presented in the article and tweet analysis below.

Entman (1993, p. 51) argues that an important part of framing is the ability to "influence thinking" to "describe the power of a communication text." The process of framing includes the selection of one aspect of reality, which becomes more salient through the careful construction of words, images, and messages within a text (Entman, 1993, p. 52). The media places reality into frames – a form of a narrative device – and what is left out of the newspaper, out of the frame, is left off the public agenda (Watson and Hill, 2014, p. 104). News media make conscious and unconscious "framing judgements" on what to report on, which is guided by frames (often referred to as schemata) to organize their belief system (Entman, 1993, p. 52). News reports, as well as other texts, are "framed by the framer within a frame" (Watson and Hill, 2014, p. 105),

which is important to recognize because the framer is already shaped by other biographical and historical factors.

5.8. Children's screen time framed largely as negative in Australasia and Oceania

The articles from Australasia and Oceania (primarily from Australia) were negative (97) and neutral (8) in tone. There were no positive articles from this continent within the dataset. Of all continental regions, Australasia and Oceania had the news articles with the most sensational headlines. The headlines included lines like, "Children trapped in zombie zone," "Video games turned my brilliant son into a raging, school-hating monster," and "Generation of screen addicts: Games, not other children, are their friends." The key negative effects that emerged within the articles from Australasia and Oceania included screen addiction (also referred to as technology obsession), and issues with sleep, obesity and tantrums.

Context plays an integral role in understanding frames for negative journalism. An example of negative journalism is the news article, "Video games turned my brilliant son into a raging, school-hating monster," which was printed in Australia in *The Sunday Telegraph* (Hansen, 2014). The newspaper article is positioned to garner support from the public who agree with the idea that screen time is harmful to children. The author defines the problem and diagnoses the cause within the first sentence: "HER child is like a drug addict — at age 12. His drug of choice is computer games." The villains in the story are clear: technology, screen time and gadgets. The opening line serves as a hook that children can be like addicts when it comes to screen-based technologies. The narrative offered, through the lens of a mother interviewed about her "computer-addicted" child, is that allowing her child to have screen time (in the form of computers) was a mistake (Hansen, 2014). The mother states, "It feels like a drug, it's like living with someone who is a drug addict" (Hansen, 2014). The author continues by citing experts about the positive and negative attributes of screen time, continuing to frame the issue with the drug-use metaphor, noting that at "[t]he right dose…. appropriate screen time…

can be good" but "if it's the wrong medicine, if the dose is too high… its effects can be serious" (Hansen, 2014). The author continues to cite studies affirming the negative effects of screen time. For example, an Australian study of children aged four, six and eight "showed a direct correlation between screen time and reduced sleep", and a UK study suggested that technological "gadgets could be to blame for a 70 per cent jump in speech problems" (Hansen, 2014). The article is a clear warning to parents not to fall into the same existence as the mother who describes her son as a computer addict. The author ends by noting that the child is now seeing a psychologist from the Video Game Addiction Treatment Centre in Sydney. The news offers a genre that complements frame analysis because both serve to highlight particular motives (Street, 2011, p. 67). In the case of Hansen's (2014) article, the future is grim for children who use computers and other electronic gadgets as a form of medicine. Frames allow the "practical realization of genre" (Street, 2011, p. 57). In this case, the narrative is used to scare readers and set the scene for what is to come in this dystopian, computer-addicted future.

The second part of framing involves selecting aspects of reality, which creates salience within a text (Entman, 1993). Aspects that increase salience include placement, repetition, culturally familiar symbols, and messages that resonate with a viewer's beliefs (Entman, 1993). The article follows a traditional news genre, interviewing a mom for a human perspective on the issue, bringing in experts to discuss the case and citing research studies with other negative screen time findings. The repetition of words like "drug," "addict," and "medicine" perpetuates the doom-and-gloom of a world riddled with young computer addicts. The article parallels the culturally familiar symbol of drug addicts because it is something to which readers can relate and determine is bad for children – it puts young people in harm's way. The rhetoric used by the narrator is meant to scare, but resonates with the viewer's schemata, a frame that is deeply embedded into the culture that guides people's beliefs (Entman, 1993). "The culture is the stock of commonly invoked frames; in fact, culture might be defined as the empirically demonstrable set of common frames exhibited in the discourses and thinking of most people in a social grouping" (Entman, 1993, p. 52). The narration highlights deeply rooted concerns for Australian people, including drug addiction, sleep issues and speech problems.

Frames can be analyzed in one of two ways: as the entire body of work or as several small frames that create one final picture. The problem with calling each part of a text a frame is that often times the frame only contains meaning in the entire context. In the case of Hansen's (2014) article the individual frames of the mother, her computer-addicted son, the experts who discuss "medicinal" doses of technology and the citations of negative effects research studies on screen time are not as effective unless strewn together under a single frame.

5.8.1. Children's screen time linked to class structures

Children's screen time is linked to class structures in two ways: the media is often framed and consumed by "elites", and there is a link between how much screen time a child consumes and their social status.

Similar to how popular culture is entangled with class, so too is framing. Framing is a central component in the democratic process because political elites control how issues are framed (Watson and Hill, 2014, p. 105). Within "The Media Elite: America's New Powerbrokers" the authors found that the "media elite" is remarkably similar in background, status and beliefs (Lichter, Rothman, & Lichter, 1986). In the 1980s, the "media elite" were predominately white, male and college educated (Lichter, Rothman, & Lichter, 1986). In fact, four out of five media personalities surveyed were raised in affluent business or professional families (Lichter, Rothman, & Lichter, 1986).

An article in *The Sydney Morning Herald*, titled "Class divides viewing habits," frames screen time as an issue of the wealthy versus the poor (Teutsch, 2010). "Research has shown the wealthiest 30 per cent of Australian children spend more than half an hour a day more than their poorer peers at school, studying, reading, doing homework and music lessons. The well-off children also spend 20 minutes more each day doing organised sport, and 10 minutes more eating" (Teutsch, 2010). The article begins on a positive note that, "Parents who worry their children do too much schoolwork and extracurricular sport can take heart - it may be keeping them from being glued to more television" (Teutsch, 2010). The author then highlights key differences in

technological use between children of high and lower classes, before citing a university professor, Tim Olds from the University of South Australia, who states, "An extra 40 minutes a day is three hours a week, and over the course of schooling is equivalent to a year of full-time work. So it does go some way in explaining educational differences [between wealthier and poorer students]" (Teutsch, 2010). The article concludes stating that according to the Kaiser Family Foundation, "Australian children have less screen time than their American peers" (Teutsch, 2010). Throughout the article, time was used in a repetitious manner to illustrate the downfalls of screen *time* and the benefits of other *time* in order for a socio-economic equality to be achieved for children. The dominant frame within the article is that wealthier children do better and have less screen time; therefore, if Australian children from lower classes want to keep up to their peers from higher classes they need less screen time and more time dedicated to educational and athletic endeavours. Hall (1980) argues that a link between class structures and the popular are inevitable. The link between screen time and class status is a fact but also a major discourse used to generate fear for parents (particularly middle class parents who want more for their children).

5.8.2. Screen time as the cause for the obesity epidemic in Australia

In the article, "Screen time blamed for obesity," printed in the *St. George & Sutherland Shire Leader*, a research study found that obesity rates remained at 22.8 percent in 2010 (Porter, 2011). Porter (2011) cites the Deputy Premier and Health Minister, Carmel Tebbutt, saying that while it is good that obesity rates for children have stopped climbing attention still needs to go towards reducing the number of overweight children and reducing screen time is one way to tackle the problem. The Australian screen-time guidelines (no screens before age two and limited thereafter) were mentioned before a state-funded study by the University of Sydney was cited, which found that only 63 percent of students in years 6, 8 and 10 met Australian physical activity guidelines during summer (a number that dropped to 50 percent in the winter) (Porter, 2011). The Education Minister was cited noting that the results illustrated

progress from the recently implemented programs like Crunch&Sip and Munch&Move (Porter, 2011).

In chapter three, we examined the active versus the passive audience. According to Hall's transmission model, the active audience is capable of autonomy and interpreting media content and ideology. This implies that children are capable of deciding when (and how long) they spend in front of screens and playing a more active role in the obesity epidemic. There may be a link between television (and sedentary time) and obesity but as a society, we can overcome this link with more education and healthier eating practices. The active audience is also progressing beyond Hall's encoding/decoding model. The active audience can now be physically active while in front of screens, as discussed in section 4.6.1.

5.9. A strong "physical effects" frame in Asia

The news articles within Asia predominantly focused on the physical effects of screen time. The articles were mainly negative (33) followed by neutral (6) and positive (3). The salient issues were topics housed within the negative side of the media harm debate including obesity, eyesight, sleep, screen addiction and cognitive delays. Some corresponding headlines include, "Screen time leads to bigger waistlines" and "Too much exposure to TV can disrupt child's cognitive growth."

5.9.1. Children's screen time and language delays

The *South China Morning Post* published an article called, "Zoned out: Too much screen time for children is not just detrimental physically but can inhibit communication skills" (Dutt, 2014). The opening of the article is written to promote a visual picture in the reader's head: "As a mother screams on the delivery table, her newborn suddenly pops out and cuts the umbilical cord after Googling how to do it on his father's tablet. The baby then grabs the nurse's phone and Instagrams a selfie, crawls to a laptop on the

floor and signs into multiple social networking sites, and uses a GPS to find his way out of the hospital" (Dutt, 2014). The opening of the article is a description for a recent ad campaign, "Born for the Internet," released by the national mobile service provider MTS for its 3G Plus network (Dutt, 2014). The author discusses how it is not uncommon to see "babies and toddlers swiping away on their parents' touch screen gadgets" before citing evidence from research studies indicating that "limiting a child's screen time is the best approach" (Dutt, 2014). Citing a study conducted by Iowa State University, Dutt (2014) notes, "Children get more sleep, do better in school, behave better and see other health benefits when parents limit content and the amount of time their children spend on" screens. Another research study by the University of Michigan is cited, noting that children with greater screen time eat more often and "choose less healthy snacks" (Dutt, 2014). Without citing specific examples, the author says "[m]any studies" have found a link between screen time and weight gain among children (Dutt, 2014). Dutt (2014) states that the effects go beyond the physical, with children who "spend most of their time" in front of screens tend to be "insular and lacking in communication skills." Dutt (2014) acknowledges that devices can be a "useful resource" to engage children in learning but then cites an expert who states that screen-based devices "cannot be the only medium of acquiring language." The speed at which brains develop in the first two years of a child's life is disclosed followed by a statement that "[b]etween two and four, even incremental television exposure can delay development" (Dutt, 2014). Dutt (2014) cites recommendations by the AAP and The Hong Kong Health Department (HKHD), which adopted similar screen time guidelines to the AAP. The author cites an academic from the University of Michigan, who says 3-4 hours of screen time per day "crowds out other important activities that babies and young kids should be engaging in: looking at books, going for walks or playing outside" (Dutt, 2014). The author cites several research studies who have linked screen time to myopia and other eyesight issues with children before disclosing a laundry list of steps parents can take to limit their children's screen time (backed up with more research studies), including being a good role model, setting limits, and more face-to-face interaction between parents and children and between kids (Dutt, 2014).

The main problem identified in the article is that "digital babies" (a term I have created to define babies born capable of using technology before the ability to walk and

talk) are experiencing real problems, like overeating, eyesight issues, an inability to communicate “in real life” (note: the author implies that communicating over technology is not “real”) and language development delays. Dutt (2014) cites screen time as the cause of these issues for children. The author concludes the article by suggesting remedies, which match the AAP guidelines of reduced screen time, modeling screen time habits and increasing face-to-face interaction. The author stresses that screen time is bad for children citing a list of reasons, which are backed up with research studies and expert opinions. The sheer volume of research data in the article is meant to add authority to the text and incite a sense of fear over what technology can do to children. The author mentions that screen-based devices can be used for learning but does not cite any studies to back up this positive claim before hammering in on the negative effects of screen time.

5.9.2. Screen time as the cause of eyesight issues

The Buluchistan Times published an article titled, “Excess screen time narrows retinal vessels” (Unknown, 2011). The frame that surrounds the article is that children who spend too much time looking at a screen “have narrower eye arteries, a marker of future cardiovascular risk, than children who are more physically active” (Unknown, 2011). The article indicates that physical activity and sedentary behaviour in adults is linked to retinal microvascular caliber, before citing an Australian study of school-aged children that tracked sedentary time, physical activity and the link to retinal microvascular caliber (Unknown, 2011). The study found that children spend 1.9 hours per day using screens and get 36 minutes of physical activity (Unknown, 2011). The study found that children who spend one and a half hours of time on screens were “more likely to have adverse effects on the retinal vessels” (Unknown, 2011). Additionally, children who spent more than an hour outside per day had “2.3 microns wider average retinal vessels” than children who spent a half hour or less outside each day (Unknown, 2011). “Children with a high level of physical activity had a more beneficial microvascular profile compared to those with the lowest levels of physical activity, which suggests that unhealthy lifestyle factors may influence microcirculation early in life and increase the risk of cardiovascular disease and hypertension later in life” (Unknown, 2011). The

article concludes with the recommendation for parents to encourage children to be physically active and for schools to promote free play and have a minimum (and mandatory) two hours of physical activity in schools per week (Unknown, 2011).

5.9.3. The link between screen usage and mental illness

Aside from the eyesight articles, the news articles about screen time from Asia focused heavily on the idea that more screen time (with particular emphasis on television) leads to a greater risk of mental illness. The headlines included, “Couch potatoes face mental health risks” and “Television viewing and rise in mental problems.” *Right Vision News* (RVN), an outlet from Islamabad published the article, “Couch potatoes face mental health risks.” The first line reads, “More than two hours a day spent watching television or playing computer games could put a child at greater risk for psychological problems” (RVN, 2009). The issue is defined as psychological harm to children with the cause being screen-based technologies (television, computers, etc.). The author follows by noting that physical activity is good for the “physical and mental health” of children and that “screen viewing is associated with negative behaviour” (RVN, 2009). A UK research study of 1000 children between 10-11 years of age is cited, trailed by the finding that “significant psychological difficulties were about 60 percent higher for children spending longer than two hours a day in front of” a screen (RVN, 2009). The article notes that “psychological problems” were further exacerbated when children don’t exercise for at least one hour per day (RVN, 2009). The article concludes with the suggested remedy of limiting television viewing to one hour per day and to reduce children’s screen time by 50 percent per day (RVN, 2009). The dominant frame is that children need less screen time and more physical activity to avoid psychological issues. Phrases like physical activity and exercise are repeated throughout the article and consistently linked to psychological problems.

5.10. Africa omitted from analysis

Within Africa, the articles were positive (4), neutral (3) and then negative (2). The small number of articles means more research would need to be done to generate statistically significant findings. As a result, the analysis for Africa's news articles has been omitted from this chapter.

5.11. Family-focused framing in European news articles

The tone of news articles in Europe was primarily negative. The impact of parents using screen-based devices was raised in several articles. Headlines included articles like, "Parents 'must stop checking phones in front of children'" and "Parents fixed on phones guilty of child neglect." A familial frame was set around many of the articles stating that parental use of smartphones "during family time is damaging children" and the best gift adults can give to children is their time. This familial frame matches the ideological tendency within Europe to value the pluralism toward an expanded family concept (McGlynn, 2006). Several articles stated the dangers in using smartphones as "digital babysitters." Many articles mirrored the same negative effects outlined within the media harm debate including obesity, emotional turmoil, screen addiction and the increased risk of screens for babies and toddlers.

The *Irish Examiner* published an article called, "Expert calls for limit on children's screen time," stating that, "[b]y age of seven, a child born today will have spent a full year glued to screens" (Unknown, 2012). Another article in the *Irish Independent* also published a similar article, titled "Children spend a year watching television by time they're seven" (Unknown, 2012). The article notes that the average 10-year-old has access to five screens at home (Unknown, 2012). Children spend more time watching television than they spend in school (Unknown, 2012). The author cites negative screen time effects like obesity, increased risk of cardio-vascular disease, Type 2 diabetes, psychological issues and decreased social relationships (Unknown, 2012). The article accuses parents of using devices as "electronic babysitters" – screens "have created the

three-parent family" (Unknown, 2012). The article recommends no screen time before the age of 3, no more than one hour per day up to age 12, a maximum of 1.5 hours per day for children aged 12-15, and no more than two hours for children over the age of 16 (Unknown, 2012). "Reducing total daily screen time for children, and delaying the age at which they start, could provide significant advantages for their health and wellbeing" (Unknown, 2012).

5.11.1. Parents urged not to use screens as a "digital babysitter"

Published in the *Irish Independent*, "Is that smartphone minding your toddler?; There is a real danger in using smartphones as digital babysitters," is a cautionary tale for parents who use digital devices as a substitute for parenting (Coleman, 2015). The article begins in a relatable fashion, "Parenting can be an exhausting occupation," followed by a long list of items that parents are tasked with every day like preparing meals, washing clothes and helping children with homework (Coleman, 2015). Coleman (2015) uses approachable language to sympathize with parent readers: "Plopping the kids down in front of screen, whether it is a TV screen, a tablet or a smartphone, can be very appealing.

"It seems like such an easy win-win." The author cites data that indicates 29 percent of babies under the age of one and 64 percent of toddlers aged 1-2 watch up to 90 minutes of television per day (Coleman, 2015). Children between age two and five view screens for at least two hours per day – some studies even suggest that number could be as high as four hours of media per day (Coleman, 2015). Coleman (2015) infers from the data that screens are more than just an "occasional or temporary babysitter" but that small children are now dependent on them. Additional studies are cited that link screen time to obesity, delayed language acquisition and decreased creative play (Coleman, 2015). Even if the parents are watching a television show with their children they will talk and play less with that child, which means there are missed opportunities for learning (Coleman, 2015). Coleman (2015) notes that many parents believe screen time is good for their child's brain development but states the opposite is true, citing research - with particular emphasis on brain development and shrinkage – to

support the reduction of children's screen time. Essentially, screen time is changing the brain's composition and making areas of the brain less competent to deal with decision-making, risk taking, planning and communicating (Coleman, 2015). The author urges parents to ban screens throughout the "toddlerhood and preschool years and limited thereafter in favour of activities like reading, playing, baking and gardening" (Coleman, 2015).

5.11.2. Screen time as an educational tool

The positive news articles framed screen time as an educational tool. Some of the headlines included, "Look, learn in digital age" and "Why the digital era is the new golden age for children." Printed in the *Daily Record* and *Sunday Mail*, the latter article is penned by mom-of-two Carmen Reid who "defies moaners who say iPads are ruining childhood" (Reid, 2013). The article began with a story of a pregnant lady who brought her two children into a hair salon and popped screens in front of them while she got her hair done before citing an Ofcom survey that found that fifty-one percent of families with iPads or tablets let their children use them at least once a day (Reid, 2013). Reid (2013) draws readers in with provocative language and questions: "Shock! Horror! Yes, I'm sure there are plenty of people who'd like to throw up their hands in dismay and gasp: "Why weren't those poor deprived children running about in the fresh air?" and "Back in my day…" The author says, "Calm down, dears" before expanding on the claims that novels would be disastrous for children when they were introduced in the Victorian era (Reid, 2013). Reid (2013) admits to being "terrified" of letting her children near screens when they were young but states that the advantages for homework, imaginative play, entertainment, participation and connection to friends and family makes screen-based devices like the iPad a useful tool. Reid (2013) notes that "children and screen time is all about moderation," encouraging some relaxing (screen free) time before bed before concluding that screens are not "making children lonely and isolated," but rather, "it's a sharing experience."

5.12. North America had mainly negative (and neutral) news articles about children's screen time

The news articles from North America were largely from the United States of America and Canada. The articles were mainly negative (165) followed by neutral (31) and positive (12). The positive articles framed screen time as a useful tool for children. Some of the headlines included, "Why you should be keen on the screen" and "Youths with a bit of daily screen time may have a lower risk of depression." An article titled, "More screen time may not be bad when learning is involved," published in the *Spokesman Review* acknowledges that learning is active and television is passive, agreeing that "too much TV might be associated with attention-deficit disorder, sleep disturbances and poor teenage decision-making" (Paster, 2016). Paster (2016) argues that not all screens (and screen time) are created equal. "Studies have shown that 2-year-olds can swipe, lock, unlock and actively search for material on screens from tablets to smartphones. And this interaction may be just like other forms of play, when it comes with parent involvement that we know is important to development" (Paster, 2016).

5.12.1. Screen time is encouraged for children under the age of two

North America was the only continent with news articles in the dataset that encouraged screen use for children under the age of two. Headlines like "Baby tech: Many safety and learning devices are available" and "New Milestone Emerges: Baby's First iPhone App" encouraged screen-based technologies for babies and toddlers. Within the "Baby tech" article printed in *The Tampa Tribune*, the author discloses technologies to help parents decipher cries, early iPhone and iPad reading apps and a new robotic car seat by 4moms (Pittsburgh Post-Gazette, 2014). The author mentions the AAPs suggested ban for screen time before citing The Fred Rogers Center's Early Learning Environment, which encourages "caregivers to treat digital media more like they would treat a book" - a shared exploration between parent and child (Pittsburgh Post-Gazette, 2014). The article concludes with the suggestion that parents should steer

clear from games like Candy Crush and offer children “more educational offerings” (Pittsburgh Post-Gazette, 2014).

5.12.2. Screen time as an interactive learning tool for toddlers

Some articles praised technology for toddlers, including one article titled, “Touchscreens and toddlers: the research is mostly good news.” Another article published in the *International New York Times* called, “Never too young: Mobile screens make their way into smaller hands; U.S. study finds that 38% of children under 2 are using phones or tablets,” argues that screen time used to be passive but is now an interactive learning tool (Lewin, 2013). “There are vast numbers of apps for babies and children, available free or at low cost: educational apps to teach letters, numbers, shapes, sign language; apps featuring television characters like *Dora the Explorer*; game apps (*Angry Birds* is a favorite with all ages); and art and music” (Lewin, 2013). Several articles mentioned moderation as a key factor for keeping screen time positive for children, as mentioned in the articles titled, “Television for children OK in moderation” and “Screen time for kids good in small doses.”

5.12.3. A negative framing of children’s screen time with a focus on quantification

Out of all of the continents, North America had the greatest number of negative articles about children’s screen time. Quantified time was a central frame within the negative news articles in North America with many news articles quantifying numbers around the phenomenon. Some examples include, “Kids' couch-surfing hits new high; Average screen time is now 6 hours per day,” “Kids get an F for physical activity; Average child spends 42 hours a week in front of a screen,” “Trend of lazy children getting worse: report; 90% not getting enough exercise, study finds,” and “Screen time bad for kids' mental health; Two-plus hours a day at the TV or computer raises psychological risk.” Within the news articles, obesity, inactivity, screen addiction, psychological harm and depression were the most cited negative effects of screen time

for children. Physical activity, sedentary pursuits and obesity were the top concerns within the negative effects news stories in North America. The narratives in North American news articles largely assume that audiences are passive rather than active. A passive child audience consumes content and has little control over media messages.

5.13. Social media presents children's screen time as mainly neutral

We have just used frame theory and content analysis to examine the tone traditional news articles take with respect to children's screen time around the globe. Next, we look at how news articles are shared on social networking sites by everyday people (citizen journalists). Twitter was selected as the social network of choice because the platform is predominantly used to share articles. Fifty tweets were examined to see if the tone of shared news articles on Twitter has a similar sentiment to those printed in newspapers.

The tweets shared on Twitter about children's screen were neutral (28), negative (17) and positive (5). The five tweets with the most retweets and favourites were selected for analysis.

5.13.1. Children's screen time management strategies for parents

The most retweeted and favourited tweet was by the verified account of the World Economic Forum (WEF, @wef) which posted, "How much screen time should children have? http://wef.ch/1QL6M8n #digital." The tweet garnered 66 retweets and 53 favourites. The link attached to the tweet redirected people to an article about children's screen time on WEF's website. The second most popular tweet (4 retweets and 12 favourites) was posted by @cape and read, "How much screen time should children have? - good insights for kids and adults," with a link to the same article. Both articles were coded as neutral within the dataset.

The article begins by empathizing with the readers, “Parents are worried” (Park, 2016). The article then discusses a recent survey by WEF, in which 71 percent of “respondents said they believed digital-media use could create problems for 8-11 year olds” (Park, 2016). The author admits to wanting to rattle out the AAP guidelines when the question of how much screen time comes up but “’two hours every day, end of story’ is not the answer people want to hear. It's not a solution; it's just the beginning of more problems” (Park, 2016). A study by Cambridge University is cited to disclose the negative effects of screen time on lower academic grades, developmental issues like obesity, sleep disorders and attention problems (Park, 2016). Park (2016) argues that parents wouldn’t allow their children to eat ice cream all day and says that similar to junk food, “a life immersed in digital media can be highly addictive.” The author reiterates that children need a balance between “digital and physical realities” (Park, 2016). The question of how much screen time is ideal is posed again before disclosing the suggested “seven-point family framework for managing digital media and helping kids develop their own sense of self-control” (Park, 2016). The steps include convince, agree, give and take, gamify, exercise the mind, be persistent, and do alternate activities (Park, 2016).

The author defines the key problem as being that it is difficult for parents to know how much screen time they should allow their children to use. The author indicates that while screen time *can* be an issue, it only becomes a problem with overuse. Park (2016) uses words to help set a scene for parents: screen time is like junk food; it’s good in moderation but not ideal all day long. The dominant reading is that screen time is about moderation, balance and implementing a family framework so everyone in the household knows what to expect.

Another humorous, non-news tweet by an academic received 3 retweets and 8 favourites: “#RealAcademicBios[1] The author's children get way too much screen time while she grades.” The post is pithy but relatable to parents – and academics - who

[1] On January 23, 2016, Eva Mrozcek, an assistant professor at UC Davis started the hashtag “#RealAcademicBios,” which quickly gained traction with the academic community. Mrozcek said, “Tradition of (mostly male) scholars who describe idyllic life w/wife &kids in academic bio needs to be supplemented w #realacademicbios.”

understand that sometimes “too much” screen time happens. The tweet was coded as neutral because, while the word “too” may suggest the author feels screen time is negative, it is too ambiguous to code it as decidedly positive or negative.

A tweet by @mykidsy and read, “How to Manage Children's Screen Time in 5 Easy Steps http://buff.ly/1KmkKqJ via @mybabatweets.” The tweet was categorized as neutral within the dataset and received 2 retweets and 2 favourites. The link within the tweet directed readers to the article titled within the post. The author presents no positive or negative effects of screen time, lists no research studies and does not quote an expert. The author identifies the problem at the outset: “It sometimes feels like a losing battle trying to drag them [children] away from the iPad, computer or television” (Barker, 2016). Barker’s (2016) suggested remedy is to agree upon household rules for technology, communicate them with the children and consistently apply them. Barker (2016) recommends coming up with an “idea jar” for things to do once the alloted technology time expires, provide a gentle countdown for the time, model good technology use and have daily “technology-free” time.

5.13.2. How parents can make story time less like screen time

A tweet by Pratham Books (@prathambooks) said, “How can we make reading e-books to young children more like story time and less like screen time?” http://ithacajr.nl/1OJPJko.” The tweet was coded as positive within the dataset. The tweet received 6 retweets and 5 favourites. The link directed readers to an article called, “Guidelines for children reading e-books” (Stillwell, 2016). The question addressed is whether reading stories with children on a tablet is story time or screen time. The AAP’s recommendations are cited before the author poses a different question: “How can we make reading e-books to young children more like story time and less like screen time?” (Stillwell, 2016). For older babies and toddlers, Stillwell (2016) recommends reading out loud, pointing to illustrations, and selecting digital books enhanced with music, animation and games. The article acknowledges that the research points to less adult-child interaction with e-books versus print books but argues that the convenience of e-readers is a good way to access hundreds of books and easier to use while traveling (Stillwell,

2016). Stillwell (2016) provides recommendations on how to get the “read-aloud benefit” from picture books, including selecting a simple book format, turning off narration and using the manual setting instead of the auto setting. The article concludes: “The convenience and novelty of e-readers for young children can provide entertainment and access to a huge collection of books. It’s an adult who can help make this experience more complete by adding a warm lap and lots of conversation” (Stillman, 2016).

5.13.3. Parents should use technology *with* children

A tweet by @SRI_Education stated, “New blog post from @smoorthy! Beyond screen time: insights on using #digitalmedia w/ young children: http://bit.ly/1Kv8hRB @cct_edc @PBSKIDS.” The post was coded as positive within the dataset. The tweet received 2 retweets and 4 favourites. The link in the tweet directed readers to an article titled, “Beyond Screen Time: Insights on Using Digital Media with Young Children” (Moorthy, 2016). The article begins by stating, “conversations about young children and media are changing” (Moorthy, 2016). The ubiquitous nature of media and technology makes it difficult to keep “children away from screens,” which Moorthy (2016) argues, may not even be “desirable.” The article describes new research from Education Development Center (EDC), which surveyed 200 families over a 12-week period (Moorthy, 2016). One group engaged with educational games, apps, videos and print activities while the other group “continued with ‘business as usual’ media use” (Moorthy, 2016). The study found that “more joint parent-child technology use and more conversations connecting media, mathematics and daily life than the parents in the comparison group” (Moorthy, 2016). Moorthy (2016) argues that the “findings coincide with profound shifts in how people are thinking and talking about young children's use of digital media.” The dominant frame within the article is clear: screen time is becoming simply time and parents can “maximize learning opportunities while minimizing risk” (Moorthy, 2016).

5.14. Negative framing

There are positive and negative consequences for using negative frames within news articles. Negative news articles allow journalists to question an issue, position or recommendation. Frames emphasize “empirical and normative” abnormalities (Entman, 1993, p. 55), which aid to highlight weaknesses in the argument that screen time has positive effects. Negative journalism is effective and works because it is more memorable as a result of negative bias, complexity, and the sleeper effect. The research on negative advertising can also be applied to negative news stories. Negative bias suggests that people remember bad things more easily than good things. Negative news stories are more complex and imply a comparison (negative screen time versus positive screen time).

As with Hansen’s (2014) article, “Video games turned my brilliant son into a raging, school-hating monster,” there is an added complexity to the negative news story because there are more points that stick out to the reader. For example, computer use is like drug use, screen time is medicinal and with the right dose it can be good but with the wrong dose it can be detrimental to children, and so forth. The “sleeper effect” suggests that the sender of negative advertising or articles tends to be removed from the media text, which means characters like computer-addicted children, lackadaisical parents and the authors of the articles themselves tend to be excluded from the articles altogether. The sleeper effect was used in both of the Pakistan articles mentioned above, “Couch potatoes face mental health risks” and “Television viewing and rise in mental problems.” It is important to note that while viewers may not always agree with the frame, negative news reporting is more memorable and salient than positive news reporting because of negative bias, complexity, and the sleeper effect.

In political communications, scholars argue that negative advertising makes the public distrust politicians and may decrease voter turnout during elections; however, this has only happened when the public perceives an attack to be true (Black, 2012, s. 43). Applying this logic to negative news stories, the objective is for negative news stories about screen time to encourage parents to limit children’s screen time; however, this

only happens if the public believes what is written about the negative effects of screen time. Penn (2012) argues that negative advertising is good for democracy because it forces the public to question facts and beliefs and raises legitimate questions. If negative advertising and journalism is extreme, the sender assumes the risk of the public perceiving the text as baseless, which might account for the steadily climbing numbers of technological usage by young children despite recommendations from authorities like the AAP and overwhelmingly negative news coverage on the topic.

5.15. Affective networks: people want to share information that is positive (or neutral)

The tweets about children's screen time were largely neutral and negative but the tweets that received the greatest number of retweets and favourites were mainly positive and neutral. One possible explanation is that emotionality plays a key role in the sharing of information in online environments (Berger and Milkman, 2013). People prefer to share positive news rather than negative news (Berger, 2013). "Affect-laden content (independent of valence) is more likely to make the most-emailed list than content that does not evoke emotions" (Berger, 2013, p. 20). *Valence* is the degree to which experienced emotion is viewed as positive or negative whereas *arousal* is the perceived amount of energy (Thelwall et. al., 2009, p. 191). Berger (2013, p. 20) notes that content that induces high-arousal emotions (such as anger or awe) 'after accounting for valence is more viral.'

Sharing information (content or about the self) on social networks is a physiological response – a circuit of information that tells the brain to continue to post, share, tweet, and repeat. Within online social environments affect moves in a circular motion – a concept expressed as affective networks. Dean (2010, p. 21) suggests that blogs and social networks are an example of the production and circulation of affect as a binding technique: a tweet or comment, a forwarded image or message, has the potential to accrue "a tiny affective nugget" that makes it "stand out from the larger flow before it bends back in." Ahmed (2004) argues that in an affective economy emotions

circulate around the boundaries of "I," "We," and the "Other." "Emotions have the ability to do things and align individuals with communities" (Ahmed, p. 119). Dean (2010, p. 124) describes affective networks a bit differently, noting that:

> Affective networks capture users in circuits of drive. The more we contribute, the more extensive our submission. More bluntly put, as we share our opinions and upload our videos, there are more opinions to read and videos to watch and then more responses to craft and elements to mash up. And then there are still more responses to read, and as these increase so do the challenges of finding the ones we want…The result looks like a power law distribution, new voices are disadvantaged, those without language, media, and visual skills remain lost in the flow.

Andrejevic (2013) and Dean (2010) share a similar definition of affective networks. "[T]he data-drive fantasy of control in the affective economy: the more emotions are expressed and circulated, the more behavior is tracked and aggregated, the greater the ability of marketers to attempt to channel and fix affect in ways that translate into increased consumption" (Andrejevic, 2013). As Cukier (2010) notes, in digital environments, "economies form around the data." Traditionally, capitalism has been thought of as a-emotional and dominated by bureaucratic rationality (Illouz, 2007). However, Illouz (2007) argues that capitalism has "fostered an intensely emotional culture." Illouz (2007, p. 5) describes emotional capitalism as "a culture in which emotional and economic discourses and practices mutually shape each other, thus producing… [a] sweeping movement in which affect is made an essential aspect of economic behavior and in which emotional life… follows the logic of economic relations and exchange."

Screen time as a debate and discourse is intensely emotional. This emotionalism can be linked back to Hall's (1980) third definition of the popular, which argues that popular culture like screen time is an ongoing process. The evolving nature of screen time makes it even more emotional and controversial. The continuous changes that screen time goes through can make people uncomfortable, which can result in moral panic over its "effect" on children. The emotional frames that newspapers place on children's screen time are sensational in an effort to help sell newspapers. Negative frames are more salient, which means they are sticky and people are more likely to

remember them. Emotion is a useful tool to engage people in a conversation or debate and it is also a factor in how people ideologically position themselves within a topic like children's screen time.

5.16. Chapter summary

Within this chapter, frame theory is used to understand how children's screen time is represented in tone by traditional and new media. The two-part research scheme offered within this chapter allows a greater understanding of the emotional framing constructed by the media about children's screen time.

The tone of children's screen time was analyzed in 500 worldwide news articles, sourced from LexisNexis to assess the global origin and the tone of the story (positive, negative or neutral). Every continent was represented in the study with the exception of South America. The news articles about children's screen time were mainly negative (with the exception of Africa, where it was mostly positive). The frames positioned around the articles mirrored the media harm debate with issues like digital literacy, physical activity, class, as well as physical and psychological ailments (like obesity, myopia, sleep disturbances, cognitive delays, etc.). This is an interesting finding for a few reasons. First, it suggests that the same themes and ideologies exist within each macro group. Second, as a phenomenon, discourse, object and thing, children's screen time is positioned in the center of a few core issues that people are concerned about. This makes it easier to understand the key themes that shape screen time as a phenomenon, discourse and thing.

Twitter represented social media, with fifty tweets about children's screen time examined to determine the tone of articles about the topic. Ninety-eight percent of the shared tweets were news articles, which is useful because it allows for a comparison of the tone in traditional versus social media. The most posted tweets were neutral, followed by negative; however, positive and neutral tweets were more likely to be favourited and retweeted than negative tweets. The discourse that emerged within social

media was guidelines on how to manage children's screen time so it is used in moderation. Despite the fact that negative tweets were the second most coded within the dataset, the most reteweeted and favourited tweets were neutral and positive in tone. This result is likely because the information is emotionally framed and affective networks prefer to share positive (and neutral) information within their networks.

The media has the ability to create an emotional response in people. Stories are framed to define problems, make moral judgments and suggest remedies to the public. Frames are interconnected to culture and have the ability to shape discourse. Frame theory aids in understanding the relationship between frames, public opinion and children's screen time. Analyzing the frames around children's screen time makes it easier to see how framing controls the issues and shapes public opinion (Entman, 1993, p. 57). Frames can be used to address a single issue, like children's screen time, for the benefit of multiple perspectives, which helps free communicators of bias and from assuming "a single ideological position" (Street, 2011, p. 51).

In chapter three, Hall (1996, p. 26) defines ideology as the "mental frameworks – the languages, the concepts, categories, imagery of thought, and the systems of representation – which different classes and social groups deploy in order to make sense of, figure out and render intelligible the way society works." By stripping back the frames the media use, it is easier to identify the various perspectives that exist about children's screen time. The ideologies presented by media match the ideologies presented in academic research. There is a tendency to look at children's screen time as an either-or proposition. It is largely framed as entirely positive or entirely negative. In an attempt to be objective some news stories present facts that are positive and negative but all stories skewed in one direction or the other. The language used to frame children's screen time has an impact on parents. It would be useful for future research to compare the sentiments of parents in various continents next to the findings reported here about worldwide news frames around children's screen time.

Frames provide a lens influenced by the media which in turn leads the formation of discourse. Disjointed images, information, and sounds are individually meaningless

but combine to create a frame through which an audience can understand the information and viewpoint. Journalists use negative stories because they are more salient than positive news stories as a result of techniques like negativity bias, complexity and the sleeper effect. Negative stories about children's screen time are good for democracy because they encourage people to critically think about the issues at hand. It is important for communication and media professionals to be aware of frames because the media has the power to shape public opinion and detecting frames, rather than simply reporting the dominant frame, is an important part of objective journalism.

Children's screen time is a highly emotional topic, which presents an affective dimension to the debate. Emotional topics are more likely to be discusses and shared, which may be one reason that children's screen time is such a "hot" topic. The data suggests that this is not simply a North American issue, but a global issue. This is important because it illustrates that despite some cultural differences, children's screen time *is* of concern within popular culture. Overall, more research needs to be conducted to determine the variance between the overwhelmingly negative news stories published about screen time and the neutral and positive sharing tendency on Twitter. Additionally, more research needs to be done to understand the influence the news articles have on shaping parents' decisions about children's screen time. It would also be useful to have a better understanding of the types of parents who follow children's screen time in traditional and/or social media. As the article, "Class divides viewing habits," published in *The Sydney Morning Herald* by Teutsch (2010) suggests, perhaps parents who read the newspaper are more likely to limit screen time for young children, which may account for the data differences between actual technological use by children versus the recommendations made by organizations like the AAP and news articles. To stress the point again, the way media frame children's screen time helps shape societal ideologies, which as Hall (1996) argues different social classes use to help make sense of the world.

Chapter 6.

Public Sentiments About Children's Screen Time on Reddit and The Bump

In the previous chapters I examined how academic research and media construct children's screen time. In this chapter I look at how parents form sentiments and define children's screen time. The same themes, ideological groups, and class issues presented in chapter four and five carry over to parental discussions about children's screen time. The ideological groups that parents form are situated around whether the individual believes children's screen time to be positive, negative or neutral. Additionally, this chapter examines the screen-based platforms and media that parents discuss children using as well as how parents manage screen time within the household.

The pervasive nature of screens has done little to minimize the controversy over the perceived effect that screens have on the human condition. A social network content analysis of forums on Reddit and The Bump revealed that parents form social groups around the perceived effects that screen time has on children, which correlates to the media harm debate that situates children as competent (able to use technology to create, participate and build digital literacies) or vulnerable (subjected to harmful content, physical risks, and potential delays in cognitive development). The resulting problems and solutions that emerged from these social groups include concerns over vanishing skills, a reduction in face-to-face communication, and the risk to personal health. Parental supervision tactics depend on the person's view on the perceived effects of screen time as well as what suits the milieu best. There is not one strategy for dealing with screen time; based on the research, every family chooses an approach that works best for their family dynamic. However, there is an overwhelming consensus that parents and children do not, and should not, follow the same rules with respect to screen time.

Many parents cited setting up age-appropriate rules and modeling the kind of screen time behaviour they wanted their children to adopt. The research examines the discourse surrounding the controversy of screen time, particularly with respect to children, and outlines issues that parents view as potential problems and solutions. How parents define, implement, and manage screen time is imperative to understanding how children engage with screen-based media and the observed effect it has.

Within this chapter, I outline the key social groups that surround children's screen time, which are formed around the affective dimension of the debate (positive, negative, neutral and mixed), review the sentiments shared about the screen-based devices children use, which includes computers (laptops and personal computers), television, tablets and smartphones, and management strategies that parents use with respect to their child's screen time.

6.1. Social network platforms: Reddit and The Bump

The macro group targeted for this research is parents; however, because the research was conducted on social networking sites some of the commenters are adults without children, care providers, teachers and teenagers. The two social networks that were selected to uncover the sentiments that parents have about children's screen time include Reddit and The Bump. These platforms were selected because both sites are community-focused. The users on each site are parents and some of those members are concerned about children's screen time so there are forum threads with content useful for the textual analysis of the subject. Additionally, the members of these communities have used logic and reason to inform their opinions, which means the users also double as self-professed semi-experts on the topics that they write about. Each platform is discussed below. After, I address the research design and its limitations.

6.1.1. To upvote or downvote: Reddit

Reddit is a bulletin board-style forum where users post, comment and vote on a variety of topics like law (Clinton, 2014) news (Ovadia, 2015) and parenting issues like screen time. Posts are generated and ranked by users using positive and negative votes, referred to as an upvote or downvote (Haralabopoulos, Anagnostopoulos, & Zeadally, 2015). Posts that receive a high rank are positioned on the front page of Reddit (Haralabopoulos et. al, 2015). Reddit follows a similar setup and user interaction scheme to other user-powered social news sites like Slashdot (Weninger, 2014). "Web users may access these sites anonymously (without an account) in read-only mode where they can browse postings and comments, but not contribute, vote or comment" (Weninger, 2014). To set up an account, users need a username, password and to pass a challenge-response test (e.g., Captcha-test). As a result, contributors are able to remain anonymous (Weninger, 2014). Each post typically contains a title, content and comment section (Haralabopoulos et. al, 2015). "The comment section is hosted within Reddit domain while content is usually hosted at an external domain [like YouTube] and rarely in Reddit" (Haralabopoulos et. al, 2015).

As of December 2015, Reddit had 234 million unique visitors and 8 billion page views (Reddit, 2016). The average visitor spends 11:11 minutes on the site per visit (Reddit, 2016). Fifty-three percent of visitors are male and forty-seven percent are female (Reddit, 2016). Fifty-four percent of users are based in the United States and forty-six percent of users are designated as "international" (Reddit, 2016)

A report by the Pew Research Center found that 6 percent of online adults are Reddit users (Duggan and Smith, 2013). As Figure 6 illustrates, there are more male users on Reddit than female users and men between the ages of 18-29 are the most active users (Duggan and Smith, 2013). This is interesting because we often think of the "screen time" debate as a female issue but this may mean that men ("Dads") are also just as interested in the topic.

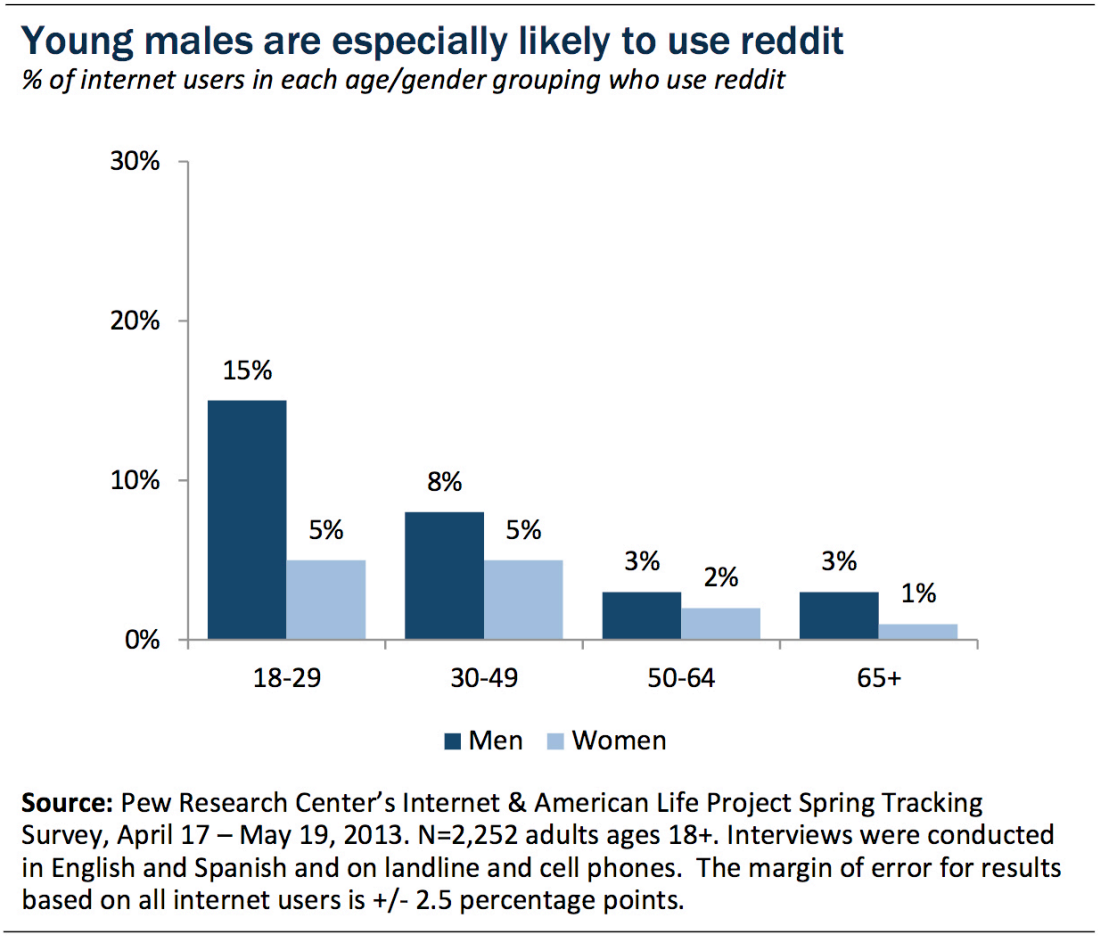


Figure 7: Young Males Most Likely to Use Reddit (Source: PEW)

Reddit provides a useful framework to analyze children's screen time because: 1) the user community is active; 2) the platform is increasing in popularity; 3) the posts, comments and aggregate user data is publicly accessible; 4) the platform is rich in content related to the topic; and, 5) the users exhibit informed – yet diverse – opinions.

6.1.2. A network for parents: The Bump

The Bump is an informational website with bulletin-board style forums for a number of topics related to fertility, pregnancy and child rearing. "The Bump gives first-time millennial parents the lowdown on fertility, pregnancy, birth and babies with stage-

by-stage content, expert advice, breaking news, style inspiration and interactive tools—across all of our platforms (including our apps, mobile and desktop site)" (The Bump, 2016).

According to The Bump's (2016) media kit, the average age of readers is 30.5 years, 84 percent of users are married, 28 percent of members had a baby in the past year and 52 percent are currently pregnant. Bump users have an average household income of $86,100, 60 percent own their own home, and 63 percent are college graduates (The Bump, 2016).

The Bump is targeted at "millennial moms" who want to belong to a community of like-minded moms. The mission statement of The Bump is, "To be the go-to media for influential first-time moms on pregnancy, fertility and baby's first years."

The Bump is a useful platform to examine children's screen time because: 1) there is an active online community; 2) the platform is extremely popular with parents (particularly mothers); 3) the posts, comments, and aggregate user data is publicly accessible; and, 4) there is a unique mix of users, ranging from very informed about children's screen time to not aware at all.

6.1.3. Network similarities and differences

Reddit and The Bump share a similar approach of allowing users to post questions or statements and allowing other users to comment on the threads. Both sites require members to log into the site to participate. The sample is interesting on both sites insofar as it represents adults turning to screens to discuss children's screen time.

A few key differences surfaced between the platforms. For example, users on The Bump were easily identified as "parents" whereas many Reddit users didn't indicate whether they have children within their posts. Reddit users who did not have children tended to disclose this fact within their post, which means it might be reasonable to assume that the majority of Reddit users on the threads were parents. In terms of

content, users on Reddit tended to cite academic journals and news articles more often than users on The Bump.

Reddit users appeared more concrete in their opinions and beliefs than the users on The Bump. Several users on The Bump even acknowledged that they had not considered the topic of children's screen time before seeing the thread. Reddit users appeared to seek out a thread about children's screen time whereas the design of The Bump meant users were being exposed to the thread through their existing community forum. This speaks to the culture of each site. The Bump users are often more willing to have their opinions changed whereas Reddit users are often set in their opinions.

A small number of Reddit users used the forums to gather information but the users on The Bump were openly using the forums as a way to canvas other parental views and management strategies as it pertained to children's screen time. The threads on Reddit were substantially larger than the average threads about screen time on The Bump, perhaps because users on Reddit sought out forums about children's screen time where users on The Bump occasionally came across the threads because someone within their community group posted about it.

6.2. Research design and coding

An ethnographic approach was taken to the exploration of the field sites on Reddit and The Bump (see Chapter 2). The purpose of the research was to uncover user perceptions about children's engagement with "screen time." The research fieldwork and ethnographic process is outlined in section 2.7 and 2.8. As a mother I have used online communities like The Bump to help me navigate issues around childbearing and child rearing. I have used both of the sites in the past, which gave me a pre-existing sense of how the platform, culture, and social groups tended to operate on both sites prior to starting the official research. My role on both sites was primarily as a lurker although prior to conducting this research I have, on occasion, posted or responded to postings. For the research, I wanted to remain one step removed from the process and

act as simply an observer, not a participant, for the forums that were used in the analysis.

A social network content analysis was used to retrieve forum threads about children's screen time from Reddit and The Bump. For Reddit, the forum posts were collected using an internal search for "screen time children." For The Bump, "The Bump" and "screen time" were typed into a search browser and the top-listed forums were selected for analysis. On Reddit, I examined seven forum threads, totalling 266 comments. The Reddit research was conducted from October to December 2015. On The Bump, I examined three forum threads, totalling 35 comments. The threads were selected because they were the first forums to appear because they had the greatest amount of engagement. In both cases, a PDF of the web forum was created and uploaded into NVivo 10 for analysis. The research on The Bump was completed from February to April 2016.

The forums on Reddit and The Bump were coded identically, including categories to indicate mentions of screen types, effect, and parental management strategies for dealing with children's screen time. The nodes that were coded for screen-based devices include smartphones, tablets, television, and computers (personal computers and laptops). Social groups were situated around the perceived effect or impact of children's screen time. This was coded in emotional terms, similar to the code design used in the media analysis, as positive, negative, neutral and mixed (positive and negative). An example of a post that was coded as positive includes:

For what it is worth, I am 23 and was definitely one of those kids that was raised on TV since basically birth, my mom loves movies and such, and coupled with it still being at least the 90s, what really inspired me were the documentaries about basic things like lion prides or how moss and fungus grows that made me get outside and get immersed.

An example of a post that was coded as negative includes:

> It's really sad when I see people taking pictures at museums or events of historic sites. Just take a while to breathe it all in first, and then take some pictures if you need to. I feel like this kind of thing is ruining our ability to remember things.

The users who were coded as neutral appeared to be unaware of the concept of children's screen time or unsure about which way to lean. The users that were coded as mixed mentioned both the positive and negative aspects of children's screen time.

Additionally, parental management strategies were noted when these techniques or strategies were mentioned in a post.

6.3. Research limitations

Between The Bump and Reddit there are hundreds of forums related to children's screen time and only a small fraction of these forums were analyzed for this research. The comments on social network forums are not a representative sample. Most forum users are lurkers while the comments on The Bump and Reddit represent active participants. Additionally, there are people who don't use social media or forums so the sample is necessarily limited to the users of these field sites. It is unknown if the comments on the analyzed forums adequately represent all sentiments and social groups that exist about children's screen time.

Newspaper articles and social networking sites can have tremendous power over shaping public sentiment, but it is important to recognize the influence only extends as far as the audience. Not all social groups read the news or participate on social networks. There is a level of privilege that must be assumed for the participants who wrote and shared the content that was analyzed in this study. In order to read, write and participate, the participants illustrated a basic level of media and digital literacy. Access to newspapers, online news sites and social network sites are also not readily available to all socio-economic groups.

6.4. The cultural construction of ideological social groups

A key finding that emerged from the data was the idea that social groups formed along similar ideological lines. The formation of social groups is culturally constructed through ideology. The social groups that form around children's screen time have similar opinions and beliefs (ideologies). Bijker and Pinch's (1990, p. 30) note that social groups should share "the same set of meanings, attached to an artifact." Thus, the group members share the same set of meanings about children's screen time as other people who also belong to the same social group.

According to Zyga (2008), people's opinions "both influence and are influenced by our surroundings." The development of opinions is "strongly influenced" by the people a person interacts with – either by how strongly a person is influenced by another individual or the number of overall connections an individual has (Zyga, 2008). The opinions that people have about screen time are largely influenced by what other people in an individual's network think about screen time. According to Siebold (2014), people associate with people who are similar to them. "People with high-level formal education like to associate with the academic elite… rich people like to associate with others who are rich" and so forth (Siebold, 2014). Whether people form the sentiment that screen time is negative or positive (or whether they even think about the subject) has a lot to do with the people they are influenced by and connect with on a regular basis.

Opinions form around social groups that share the same set of meanings about children's screen time. Several groups may exist but the one thing each group has in common is that it shares the same set of values and beliefs as other people within the group. Every social group is susceptible to being influenced by media, academics and the people they engage with on a regular basis.

More than one social group can form around a thing like screen time. In the case of children's screen time, several groups appear to form, primarily around the affective dimensions of the argument. The arguments that parents make about children's screen time appear to stem from news media, which is largely modified from academic research

and articles. While free from scholarly jargon, the groups form along similar lines to the ideas attributed to the various traditions within the philosophy of technology.

Bergey and Kaplan (2010) argue that "all nominal groupings are themselves cultural constructions: social schemas and that emerged through social interaction in particular contexts to fulfill conceptual and practical functions in ritualized social life." Social groups have "messy" boundaries that are constantly evolving (Bergey et al., 2010). "As a cultural phenomena, nominal groupings should be themselves a topic for study" (Bergey et al., 2010). While nominal groupings do not have an ontological presence they are important to the social and political landscape of society (Bergey et al., 2010). The cultural construction of groupings or experiences shared by a group can "result in cultural processes" (Bergey et al., 2010).

The social groups that formed around children's screen time were ideologically based (that is, based on beliefs and opinions), which tended to have an affective element. As such, the perceived effects of children's screen time, which was coded as positive, negative, neutral (neither positive nor negative) or mixed (both positive and negative). On both Reddit and The Bump, social groups formed around this affective nature of the argument.

The groups on Reddit who held similar ideologies equally represented the positive, negative and neutral (neither positive or negative in nature) position of children's screen time. On The Bump, social groups formed primarily around the sentiment that children's screen time has neutral effects, followed by negative effects. See Table 5. These social groups are groups because they share the same ideology. A space with shared ideology creates a sense of belonging. Seth Godin (2008, p. 3) argues that "the most powerful of our survival mechanisms is to be part of a tribe to contribute to (and take from) a group of like-minded people." One of the key observations that emerged from the research is that each group had members that supported other members who had similar beliefs and tried to denounce groups within other ideological groups. The groups were like-minded and supportive of other people with similar ideas and ideals. Godin (2008, p. 17) argues that the term "partisan" may be

a criticism when hurled at a politician “but all tribes are made up of partisans, the more partisan the better.”

Table 5: Sentiment Groups Formed on Reddit and The Bump

Sentiment Group (Tone)	Reddit (%)	The Bump (%)
Positive	30	3
Negative	29	18
Neutral	27	79
Undecided/Unclear	14	0

6.5. Group formations around the neutrality of screen time

On Reddit, 27 percent of 266 commenters perceived the use of screen time to be neutral. One Reddit user, self-described as a professor at a university in Australia, perceived “screen time” to be neutral, noting that the evolving nature of communication means there are inevitably benefits and drawbacks: “Smartphones are great tools, but each year in-class mobile use increases and attention goes down. I think mobiles are to blame, but am I remembering simpler times [and] out of touch to the new reality?... In my mind evolution is not negative or positive, it just is. For instance, the way language changes over time might disappoint some, but there is little point complaining.”

On The Bump, 79 percent of the 35 parents were neutral about the effects of children’s screen time. The Bump users made statements like, “I am not against screen time,” prefaced by statements acknowledging that “small children should not be in front of screens for prolonged periods of time.” Responding to a question about how much screen time other parents allow their children to get, one parent responded, “Pretty much none. I’m not anti-screen time by any means, but our t.v. is in our not-child-proofed living

room. DS1's toys and things are in the family room off the kitchen, so he spends pretty much zero time in a room that has a television."

6.6. Group formations around the negativity of screen time

On Reddit, 29 percent of the 266 users perceived screen time to have a negative effect compared to 18 percent of the 35 commenters on The Bump. The users who thought screen time was negative formed clusters around thematic issues like the potential drawbacks, side effects and lost human skills. One user posted: "Attention [and] focus are the causalities with these little dopamine dispensing distraction machines. Yes, they are amazing tools, but how much are we really giving up?"

Throughout the history of communication, new technological tools cause new skills to develop while others disappear. The discourse surrounding screen time represents optimism for the future on the part of the positive effects social group and nostalgia for the past by the negative effects social group. One Reddit user posted:

> I am very concerned about many people around me being absorbed by their smartphone while walking and even driving. That's very dangerous for them, but unfortunately also for other people… There does not seem to be a world without smartphones for more and more people. Life seems to run away from them without being noticed and they do not consciously miss anything. Many of these people are like zombies.

The nostalgia for simpler times is represented by the negative effects social group, where the most coded concern was the perceived impact that screens have on face-to-face communication and "real" relationships. Similar to the user who posted about the "dopamine dispensing distraction machines", many users posed questions about the kinds of socialization skills that are being lost in a screen-centric society.

One Reddit user lamented that providing children with electronic devices at the dinner table is harmful to their social development. Another Reddit user suggested "more

people are going to have problems with having conversations because they aren't encouraged to at a young age. [T]hey will have been given a device to keep them quiet."

In a rebuttal to the claim of lost social skills as a result of electronics at the dinner table or restaurant, one Reddit user said:

> I do not think that the art of the civilized conversation has been cultivated well in most families, even before the advent of distracting electronic devices. However, now people are learning how to send tweets and text messages, as a substitute for a civilized conversation.

The strain that smartphones place on the parent-child relationship was the most common anecdote told about the impact of distracting devices within the household. For example, one Reddit user posted:

> Just last night I was watching a movie with my son. I took out my phone just for a few minutes to look something up, and he said, 'Mom, I want you to watch this with me, not be on your phone.' Even though it was only a few minutes, it was enough to take away from our time together. I apologized and put the phone away, but if he hadn't said anything I might have been on it for quite a while.

As noted in chapter three, many scholars have linked excessive screen time to issues like obesity and sleep disturbances (Ernest et al., 2014, p. 184). A significant concern raised by the negative effects social group was the impact that screen time has on emotional and physical health. The two most cited concerns within the forums were decreased social functions and obesity. One Reddit user described mobile phones as a "morally indefensible form of technology" that, in addition to making people antisocial, I can cause "serious problems with some people's health." Another Reddit user posted:

> While the actual number is arguable, there's no question that many kids have WAY too much screen time. There are studies that show that it actually can damage your brain. There are other studies that show that it can lead to obesity and decreased social functioning.

Several parents cited tempter tantrums with preschool-aged children when it was time to transition away from screen-based media. One Reddit parent noted: "We've noticed tantrums correlating with her TV time, sometimes directly caused by it (as in,

‘your show's over now come to dinner’). When this happens we go back to zero TV for awhile and carefully reintroduce.”

The most contentious area raised within the negative effects group on The Bump was over how educational material was. The negative impacts social group suggested that the positive impacts social group put too much weight on the fact that their kids’ screen time was educational. One parent on The Bump recalled:

> The other night we went to dinner with our friends and their 18 mo daughter, they carry a tablet and play videos for her non-stop. When DS got a little fuzzy my friend moved the tablet so that he could watch it too and DS wanted nothing to do with it, so I said thank you for sharing but we've noticed he doesn't like watching for more than a few seconds, her response? "Then how does he learn?" Apparently her videos are all ‘educational’ but the kid had no interaction with any adult didn't even eat because she was ‘learning.’

Many members on The Bump agreed, arguing that media like *Baby Einstein* are *not* educational and while babies can see colours and movement on television, they learn from play and interaction with other people. There are clear group formations because the members who share similar ideas, ideology and ideals posted similar sentiments, supported other group members and often rejected competed viewpoints.

6.7. Group formations around the positivity of screen time

On Reddit 30 percent of the 266 commenters viewed screen time as having positive benefits for adults and children compared to 3 percent of the 35 users on The Bump. The social group is centered around the benefits of screen time and most frequently cite cultural literacy, digital literacy, and keeping in touch with friends and families. One Reddit user discussed the incredible benefits of smartphones, stating that with issues like technological addiction, “It’s the user that’s the problem, not the phone.”

The positive effects social group does not view screen time as an impediment to face-to-face communication or “real” relationships; but rather, screen time acts as an

additional tool to stay connected to information and people. Parents acknowledged the benefit of screen-based technologies as a tool to connect with family members at a distance: “I allow my son to Skype and Facetime with my family quite often (5 times a week around 30 min[ute]s each).”

Several parents tried to debunk criticisms that screen time was crippling social skills. One parent on Reddit, who describes her 17-year-old son, raised with few screen time restrictions, as sensitive and compassionate said, “I do not support the correlation between screen time and decreased emotional sensitivity. I think there are more impactful factors at work there such as parent's [sic] refusal to let kids experience a full range of emotions under the pretense of ‘protecting’ them.”

Another Reddit parent said:

> We don't put any limits on screen time, never have. If the kid was in danger of becoming a zombie, we would, but otherwise, we figure it's better to let her figure out how to self-regulate. On school nights, she spends maybe 30 minutes in front of a screen of some sort, and on weekends, a few hours. As for empathy… and reading emotions, that's something my daughter is very adept at. She's also a pretty self-aware kid.

Some members of The Bump raised questions about what counts as screen time. Are applications screen time or just television? Are electronic books considered screen time or story time? The general consensus within the community was that the recommendation for no screen time means “zero” time on screens of any kind or for any purpose. On Reddit and The Bump, several parents found “zero” screen time to be an impossible standard to achieve.

Even families who adopted the AAP recommendation not to allow screen time before the age of two cited the benefits of screen-based media after this initial “cold” period. One Reddit parent emphasized that in addition to reading physical books and playing outdoors, screens, like television, are part of the child’s media diet; however, when the child interacts with screens, the adults in the household engage in the same activity *with* the children. “Last week, we were talking about nebulae, so we put on a

program about that. Basically, we use television as a tool and family bonding experience."

Many parents on The Bump and Reddit mentioned using games and television for educational purposes. One parent on The Bump admitted that her boys get a fair bit of screen time: "Sesame Street, Dora, [P]aw [P]atrol, etc. Somewhat educational things…We also work with a few learning apps together on my iPad a little each day... they get quite a bit of screen time, but it's not all useless stupid cartoons or mindless games, so that makes it some better, right?"

The positive effects social group most frequently cited cultural and digital literacy as the main benefits of screen time for children. One user pointed out that they learned English by watching television and playing video games. "[O]nline games teach you valuable team working skills and games like Minecraft let you build amazing things and use your [brain]."

A Reddit parent who described him/herself as a member of the film industry said:

> From my perspective, native cultural literary is extremely valuable, and video viewing is one aspect of cultural literacy, as are games (and of course books). So we have no limit on screen time, and we don't treat it any differently than any other kind of learning or play, though we do try to make sure that my son (age 1, but this has been our policy from the beginning of his life) is exposed to a variety of materials, particularly those that are age appropriate (but not shielding him from adult-oriented materials that don't contain excessive sex or violence).

One Reddit parent acknowledged wanting his/her child to be able to appreciate movies but wanting them to be a "treat" while another parent posted that they allow their 13-month-old to watch *Baby Einstein* DVDs and play with a *LeapPad*. "We don't completely disallow 'screen time' as we feel she needs to be technologically literate in our world, but we don't let it be a babysitter either. Everything in moderation."

6.8. The relevance of social groups

"In deciding which social groups are relevant, we must first ask whether the artifact has any meaning at all for the members of the social group under investigation" (Bijker et al., 2009, p. 30). The social groups that have developed around screen time on Reddit each share similar interpretations, problems and solutions around screen time – a debate that mirrors the media harm debate in children's studies. The key problems, such as how to categorize children as vulnerable or competent and the trade-off between new and lost skills are the cornerstones to the contentious affective dimensions of the debate.

The dichotomy between the competent child and the vulnerable child is represented within the discussions between the social groups that perceive screen time to be negative or positive. One Reddit parent posted:

> The more something is restricted, the more kids will want it… Particularly if the kid goes to school outside the home [or] has friends. They will find out what screens are, and be upset they don't have as much time as their friends. Making it available and giving them the responsibility of deciding how much they watch will make them far more likely to restrict themselves because you are trusting them, and giving them freedom…

Another parent suggested that it is important for children to learn how to navigate various platforms, including laptops and tablets, to help prepare children for the skills and competencies they will require when they go to school. "I think the difference is using technology as tools and not solely for games." Hall (1980) argues exactly for this type of audience engagement with his analysis of the active audience. Children as an audience are capable of using technology in an active, rather than just passive way that can encourage competencies and skills required to maximize the benefits of screen time.

6.9. Types of screen-based devices that children use

The screen-based devices that users on Reddit and The Bump cited included television, smartphones, tablets and computers (a combined category that included personal computers and laptops). On Reddit, 40 percent of users wrote about smartphones, 23 percent of users wrote about tablets, 21 percent of users wrote about television, and 16 percent of wrote about computers (desktop and laptop computers were coded as one unit). On The Bump, 65 percent of users wrote about television, 22.5 percent wrote about tablets, 7.5 percent wrote about smartphones, and 5 percent wrote about computers. See Table 6.

Table 6: Types of Screen-Based Devices Mentioned on Reddit and The Bump

Device	Reddit (%)	The Bump (%)
Smartphones	40	7.5
Tablets	23	22.5
Television	21	65
Computers	16	5
Total	100	100

Each medium teaches children different skills and competencies. The type of media that children use becomes the message insofar as the dominant devices become the culturally and socially preferred medium. The device becomes an integral part of the social, economic, and political system that children navigate. Sentiments about each device that were posted to the forums are expanded upon below.

6.9.1. Computers (laptops and personal computers)

Computers were the least mentioned screen-based devices on both social networking sites. On Reddit, 16 percent of users mentioned computers compared to 5 percent on The Bump. The classification of computers included both laptops and personal computers. No distinctions were made for brand.

Computers are viewed as an educational tool for children. One Reddit user said, “I believe we also need to think about how important laptops and tablets are going to be to our children in the future. They're going to have to learn to navigate a laptop and change the settings and volume, and all devices are just a little different from each other.” The user also commented that exposure to laptops helps prepare children for the research and writing they will need to do when they start receiving homework. The parent got his/her daughter interested in using the laptop by allowing her to watch “cute animals on YouTube.” Later, the parent helped the daughter find videos on seeing-eye dogs so she could use the laptop to write a short story about how animals help people.

Using computers is not a sign that children won’t enjoy the outdoors. A Reddit user wrote, “Grew up in front of computers and gaming systems, Atari, Nintendo, Sega and so forth. Went into the software development field and spend most of my day in front of a computer. Yet all my free time I spent out doors, hiking, camping, hunting, fishing, etc. I think that if anything it's because I'm on a computer all day that I am so eager to spend my time outdoors and have thus developed such an extreme appreciation for nature.”

Using a less portable device, like a laptop, may be better. One Reddit user noted that they preferred to use a laptop over a smartphone, but only use it in a “single location” to avoid “drawbacks” like government surveillance, increased cancer risks, and antisocial behaviour.

6.9.2. Smartphones

Smartphones received the greatest number of mentions on Reddit and were the second lowest screen-based device mentioned on The Bump. Forty percent of Reddit users mentioned computers compared to 7.5 percent on The Bump. Smartphones were not further classified to denote brand, such as Apple's iPhone or Google's Samsung Galaxy. The terms most commonly used by users included "phone," "mobile," "smartphone," and "iPhone."

Many parents on The Bump indicated that their children use their phones to play games, listen to music and watch television through applications. Applications were often mentioned in reference to smartphone usage.

Smartphones provide the necessary distraction to make parenting easier. A parent of twin toddlers on The Bump considers gadgets, like iPhones, lifesavers. "Do I want a diaper change without alligator rolls and running off with naked bums? I hand that kid a phone and let them play with it for 2 minutes."

Some parents use their devices in front of their children and others refrain. One parent refused to use their mobile device in front of their daughter stating, "A physical presence but having your mind elsewhere is not really being present… basic social interactions need preserving."

Addiction to smartphones was one of the most commonly cited issues on The Bump and Reddit. The described "addictions" ranged from mild to severe. One parent described their child as "obsessed with phones and remote controls." Phone addiction raised some conflict between Reddit users. For example, one user said, "I think that some of the comments are sad as well, particularly the mother who is a 'mild internet addict' who defends her screen time by saying that just because she's on a device doesn't mean that her daughter has to be. I feel like she's completely missing the point that her devices are taking away from time spent building a relationship with her child."

One child Reddit user said, “[W]e need to stop attacking everyone else's technological choices. I do need my phone, actually, and my… friends with overprotective parents do as well. In an emergency, a cell phone can be very essential.” The user defended the use of smartphones in public saying people use them because they are bored, not in lieu of conversations. “They’re not missing out on conversation, they’re just keeping occupied waiting for the bus.”

Whether smartphone addiction was caused by the smartphone or the user was an important conversation on Reddit. One Reddit user said, “It isn't the phone that makes people addicted, it's the people.” Several Reddit users were nostalgic for the past, when landlines were the predominant phone, but many users acknowledged that it would be difficult, if not impossible to go without their smartphones. Reddit users mentioned that smartphones doubled as cameras, maps, music, scheduling and a response system (email, text messaging, etc.), which made smartphones useful technological tools.

On The Bump and Reddit, parents felt judged for using their phones. A Reddit parent said, “I read books on my phone. So when I'm at the beach or park with my kids I read... on my phone. I know I'm being judged.” The user points out that it is easier to read books on a phone than to carry the physical copies around. The parent believes that she would be thought of as a good role model if she read physical books but was viewed as a negative role model for being on her phone. The Reddit user believed that parents should stop being so judgmental about how (and when) other parents are using their smartphones.

Many parents feel that smartphones disrupt the time between a child and parent. One parent said, “Just last night I was watching a movie with my son. I took out my phone just for a few minutes to look something up, and he said, "Mom, I want you to watch this with me, not be on your phone." Even though it was only a few minutes, it was enough to take away from our time together. I apologized and put the phone away, but if he hadn't said anything I might have been on it for quite a while.”

6.9.3. Tablets

Tablets were mentioned a similar amount on Reddit and The Bump. On Reddit 23 percent of commenters mentioned a tablet compared to 22.5 percent of commenters on The Bump. Parents on The Bump and Reddit used tablets with their children for the purpose of watching shows and engaging with applications (games). One parent on The Bump said his/her son had “a little game/show on the ipad [sic] that let him have maybe 30 [minutes] 2-3 times a week.” Another parent on The Bump said, “Sometimes they watch cartoons or short youtube [sic] clips on my ipad [sic].” Many parents noticed that their children would only play games on a tablet for a few minutes before becoming bored. One parent said, “Sometimes when I'm not feeling well I let her play with the ipad [sic] but she gets bored with it after a few minutes. She would much rather push the ipad [sic] around on the floor face down than play with the apps.” Some parents acknowledged being concerned about how much time their children spend on tablets. One parent on Reddit said, “When you see a kid watch something on its iPad, then put the tablet down and read a traditional book instead, or go and play with its dolls, you've probably got the balance right.” A common way that parents use tablets is for longer car rides to keep children entertained. The length of what parent’s considered a “long” car ride ranged from 30 minutes to over 3 hours.

On both Reddit and The Bump there were discussions about tablets being used by children at restaurants. On both platforms the parents were divided over whether tablets at restaurants were a good or bad idea. One parent said,

> “Every time I go out to a restaurant these days, I see a family with children who are glued to a cell phone or tablet device. While I understand the the goal is generally keep the child from disrupting the parents or other patrons in the restaurant (which it doesn't always), I feel like this is keeping kids from learning basic behavior in public, social situations. While I understand that children do learn other behaviors while in school or at home, I believe it is important to practice good behavior and to prevent children from growing up with their eyes glued to a screen. Communication skills suffer greatly. Also, there have been several times where children's electronic devices are distracting, and I'd rather not hear *Dora the Explorer* during my anniversary dinner.

In response to the above poster, another parent said,

> [I] sometimes give my child a device when we are out, and sometimes I don't. It really depends on the situation. Here's some counterpoints based on my experience. We teach our daughter basic social behaviour at home. We do this because it's quieter, and we bother less people. A lot of the time, our daughter, if she's in a testy mood (and she's 2 1/2, so that happens a lot) will see what boundaries there are by throwing her food, adding her milk to her plate, shouting, getting in and out of her seat, or any other activity she thinks up. It's not that she's always terrible, or can't sit still, but there's just days where she's going to push boundaries. If we're at home, we'll deal with that and try to teach her as best we can, but if we're out, it's time for her to be distracted. You say that electronic devices are distracting, and yes, Dora can be annoying to hear, but imagine a mother saying 'we don't throw our food, dear. Don't throw. Don't... good... no! Don't throw! Stop throwing. Eat your food, don't throw it' and so on and so forth during your meal. It's going to get real old, real fast.

The poster commented that they only go out for a nice meal as a family, where there would be no devices, or because as parents, they are so tired they don't want to cook. "We just want to rest, eat a quick meal, and try to relax a bit away from our toy- and diaper-strewn house."

Another parent said,

> I have two children if I did not give them a game boy or tablet at dinner in a restaurant I, and my family, would be beaten by an angry mob comprised of the other patrons at the restaurant. One of my kids has autism and the other is hyper as fuck. They cannot, and I don't mean "won't" or "dislike to" I literally mean cannot delay gratification. Additionally the one with ASD has sensory issues that cause loud, noisy, crowded, busy restaurants to be an unbearable environment. The gameboy helps her to tune out the torture. At home, both of them are totally fine at dinner with no electronics. We don't even allow them at the table. Restaurant dining is totally different with completely different expectations. To some degree its [sic] not fair to expect all children to be able to deal with sitting still quietly at a table while hungry and waiting for food for up to a half hour. That's not realistic.

A number of parents viewed tablets as an educational tool. One parent said, "I attribute my kids reading skills in part to apps like Montessori Crosswords and other letter/word manipulation apps." Another parent said, "I kept seeing recent studies about

gadgets and kids (an aunt telling us it might be hindering child's development), and I was wondering if I was the only one actually a little proud to see my child navigating through the iPad easily, or actually seeing her getting familiarized with shapes, fruit names, alphabet, etc and other educational games."

Tablets are increasingly becoming a tool for connection. Several parents on The Bump and Reddit disclosed using applications like Skype from tablets to connect to relatives at a distance. One parent on The Bump found that in additional to selective television shows watched on a television or iPad, the child enjoyed looking at pictures of family on a screen-based device. "We do this a lot because we don't have any family that lives close to us and want him to know who they are (if that makes sense)."

6.9.4. Television

Television was mentioned in posts by 65 percent of users on The Bump and 21 percent of users on Reddit. Television is a strategy that parents use to promote learning, entertainment, and to keep children occupied when the adult needs to accomplish a task or needs rest. The most frequently cited shows were *Sesame Street*, *Baby Einstein*, *Bubble Guppies*, *Dora the Explorer*, and *Paw Patrol*.

One parent on The Bump wasn't familiar with the concept that screen time could be perceived as bad for children. The user said when the son "was around 2 months it [television] was the only thing that would help calm him during his evening fussiness. He'd rest on my propped up legs facing the TV and calm right down… from the lights and sounds, and honestly, I don't see what the difference is between that and the light up things on his activity mat."

Many parents found their children to be engaged with the television shows they were watching. One parent whose child enjoys watching *Disney* movies, *Mickey Mouse Clubhouse*, *Bubble Guppies* or *Jake and the Neverland Pirates*, described their child's television viewing: "When we're watching he's typically talkative and asking questions

about what we're watching or telling me about it, so that seems better than totally zoned out."

Television was the most cited screen-based device that parents treated like a babysitter – using the device so the parent could occupy the child in order to complete a task or rest. Completing daily tasks like meal preparation and cleaning were often referenced on The Bump and Reddit. One parent on The Bump said, "DS watches cartoons while he eats his breakfast (usually *Cat in the Hat*) and he loves *Elmo*. I love *Elmo* too because he gives me time to clean up, make supper etc without DS in my feet."

Another parent said: "He recently fell in love with *Bubble Guppies*. Obsessed! During the week he goes to daycare and they don't have any TVs. When we get home he always asks for 'guppy guppies.' I let him watch a 25 min episode while I'm getting dinner ready." Another user on The Bump said, "DD watches 1 episode of *Sofia the First* either while I shower or while I make dinner whichever is more important to me that day."

Some parents used the television as a way to occupy the child while taking care of other children or to express breast milk. "He watches 20 minutes of tv purposely a day because it's the only way I can pump and I EP. So, he either starves or watches 20 minutes of *Yo Gabba Gabba*....a little DJ Lance isn't going to hurt him."

Some parents use screens in the morning to assist with getting ready for the day or to get more sleep. One parent said, "Our screen time is usually at like 6:30 in the morning when we're all trying to get ready before dropping her off at daycare." Another parent shared a similar sentiment, "DS gets to watch TV while I shower in the morning...it's a big help!" On Reddit one user posted, "On weekends since the baby came my wonderful husband lets me sleep in so they all watch cartoons for a couple of hours in the morning as well as the evening."

6.10. The domestication of screen-based devices

The domestication of screen-based devices is one of the main findings that emerged from the research. The concept of domestication, as outlined by Morley and Silverstone, is outlined in section 2.6. The very structure of screens has, in many cases, become fully integrated into the household, with parents using screen time as a way to occupy every aspect of the child. Screens are used during mealtimes at home and at restaurants. Family's gather around devices for entertainment and parents find ways to make shows and games educational for their children. Parents use devices as a way to occupy children so they can get household work done. Screen time has permeated the very social structure and family dynamic to the point where it has become a permanent fixture in the home. The changing structure of the family dynamic means that family time is more situated than ever around screens. This has implications for how families spend their time and money as well as how families socialize with one another.

6.11. Parental management strategies for children's screen time

The largest social and political factor that emerged from the data is how various households choose to manage screen time for their children. The management strategies by parents varied from strict regulation of screen time to an unlimited amount of screen time. The most coded sentiment surrounded the idea that parents and children do not, and should not, have the same screen time rules. One user said: "[K]ids are different to adults in many ways that make them more vulnerable to media, so it makes sense to restrict their media consumption more than an adult, just like you wouldn't feed a small child an adult portion of food."

Another user implemented a strategy called "adult privilege" whereby various household members receive different privileges with respect to screen time: "We are planning on using it to negotiate why she may get opportunities that her coming younger

sibling might not… Kids think fairness means the same for everyone. I think this is helping her learn fairness has context."

In a conversation about whether it is hypocritical for parents to use screens while children are not allowed or restricted, one Reddit parent said,

> The rule isn't "screen time is limited;" the rule is, "screen time is limited for those under the age of X." It's like laws banning drinking, movie ratings, and statutory rape laws: Under a certain age, certain things are bad for mental and emotional development. Now, I certainly try to limit my screen time when I'm around my kids, but it's not hypocrisy to say, "This is not appropriate for kids of your age.

Reddit users largely agreed that having different screen time rules for parents versus children was not hypocritical. Another user said,

> It's important to realise that having different rules for kids and parents is not necessarily hypocritical. I'm allowed to drink alcohol. My six year old is not. This doesn't make me a hypocrite.

Some users argued that it is only hypocritical to have different rules if the rules cannot be rationalized:

> If you have a good reason for why adults should be allowed to do something that children are not, it's fine to maintain different rules. Does she have a good reason for your "no screen time during the week for children, but for adults it's permitted" rule, or no?

Another user felt it was acceptable for parents and children to have different rules but that parents need to be cautious about the examples they are setting and modeling good behaviour.

Having age-appropriate rules was a common management tactic for screen time use. Another user posted, "I have 4 children....I have different rules for each of them, too, based on age and personality...they are different people and need different guidance… Little brains are not fully developed...hence less screen time more books."

Most of the users cited limiting screen time to some extent. For example, some parents restricted screen time before bed so it wouldn't affect sleep or on school nights when homework needs to be done. Some families allowed screen time on school nights after homework was done or to assist with homework. Other users agreed that there should be some control placed on screen time for children but weren't sure what those limitations should be.

Some users did not agree with placing any limitations on screen time, stating, "I personally think the whole 'no screen time' thing is absurd. We live in a technological society. It's better to teach moderation and appropriate use with something like smartphones rather than banning them completely. It will just result in your children sneaking around behind your back to do things if they aren't allowed it at all when at home."

The social decisions that parents make about their children's screen time is relevant to understanding how people are adapting to the onslaught of screen-based media. No one parenting management strategy appeared dominant within the data; rather, it was clear that every family customized an approach that worked best for their home.

6.12. Chapter summary

The research within chapter six examines parental sentiments about children's screen time. How parents define, implement, and manage screen time is imperative to understanding how children engage with screen-based media and the observed effect it has.

The concept of children's screen time is a cultural construct. Social groups form around the affective elements of children's screen time. The ideologies the groups share connects them together around the idea that children's screen time has a positive, negative, neutral, or mixed result.

In terms of screen-based devices, children use computers the least. Smartphones, tablets, and television appear to be the most mentioned (and used) screen-based devices with young children. Screen time has integrated into every part of daily life, extending time sand space, and invariably so ingrained within society that the artifact is often treated like an extension of the body. Screens and screen time have become so embedded within the household that they have shifted the very structure and dynamic of the family unit.

When parents talk about screen time, they are talking about television, smartphones, tablets, and computers. On both platforms, computers were the least mentioned type of screen. Parents often use television as a babysitter. A way to occupy children to allow parents to sleep in, prepare meals, clean the house, drive long distances, or complete work. Smartphones and tablets are used for entertainment and educational purposes. Parents discuss actively engaging with children who are using smartphones and tablets to watch YouTube videos or play educational applications as well as allowing children to passively watch shows. The portability of tablets and smartphones makes it easier for parents to take the device with them when they need to be out of the house for shopping, dining or visits with family and friends.

Parents on Reddit and The Bump have different strategies for dealing with children's screen time. There is no one preferred strategy. Every household determines the rules, which range from no rules to limitations or abstinence under a certain age. The majority of posters acknowledged having some limitations and many of the users who did not allow screen time only did so under certain ages (typically age 2, as per the recommendations of the AAP). In a Reddit discussion about whether it was hypocritical for parents to have different screen time rules than children, the overwhelming consensus was that screen time rules should be different for adults versus children and even between children depending on their age.

Chapter 7.

Conclusion

"Screen time" is a term commonly used by scholars, media and parents; however, although its usage is widespread, "screen time" as a concept is rarely defined. Screen time is defined as a phenomenon, an object, a discourse and thing. Using virtual ethnography, I explored a number of cyber field sites in an effort to uncover how scholars, media and parents define children's screen time. The research within this thesis attempts to answer the research question: "What is children's screen time?"

7.1. Screen time as an evolving cultural construct

First, children's screen time is a social and cultural construction. Screens have become embedded into the social fabric of everyday life, which is the result of screens claiming a coveted position within the popular. Media and cultural studies provide a useful way to examine how screens – and children's screen time – have assumed a spot within the popular, as well as addressing issues of ideology, class structure, and national differences.

How can we address screens and children's screen time through the popular? In "Notes on Deconstructing the Popular," Stuart Hall provides three definitions of the popular, which was used in chapter three to unpack components of screens and screen time. A historical assessment of screens leads to a greater understanding of today's always-on, always-connected society. The technical changes to screens have made them compact, portable and affordable, which has made its commerciality and

circulation easier. Screens are indeed popular because people use them. Screens are so ubiquitous that they have woven into the background of daily life to the point that people don't even think about the fact that they are using them. Screens have become the artifact that people can't live without. And for some, screens have simply become an extension of the human body.

"Screen time" is a rapidly evolving phenomenon. As a society, how we think about "screens" and "screen time" depends a great deal on how it is defined within the culture. Historically, screen time defined how much time an actor or subject appeared on screen. The second way it has been used is to determine the technical capacity of the screen itself. The third way it has been defined reflects the time that people spend in front of screen-based media. The latter definition is the most common today but previously it was the first definition. Screen time as a concept has changed before and will change again. The meaning of screen time is not set within a cultural form, place or position in the cultural field. It is flexible, which only reaffirms that children's screen time is a cultural construct.

7.2. Screen time is a worldwide issue

The issue of screen time is not an isolated phenomenon. While there are marginal differences to the time spent in front of screens around the world (see chapter two), there is an increasing trend towards more time in front of screens. Not only for adults, but also children. The result of this increased screen *time* is that people write, read, and discuss children's screen time around the globe.

Traditional and digital media around the globe write about children's screen time. The stories written by traditional news outlets were primarily negative, which is likely a way to increase the salience of the story, but also because the easy-to-report academic "screen time" studies often highlight the negative impacts of screen time.

There were a few interesting findings that emerged from the media field sites. First, the continents shared similar advantages and drawbacks about screen time but each continent focused in on particular issues. The frames for each continent aligned with the issues that were most important in that region. For example, Australia linked screen time to class issues and obesity, Asia focused heavily on physical side effects (obesity, eyesight issues, etc.), and Europe was family-focused.

Second, on both traditional and digital media the frames contained an affective dimension. Affect may be why children's screen time has become such an important issue around the world. People tend to cling onto content that is affective in nature and often become more emotionally involved in determining if it is good or bad.

7.3. Screen time as positive *or* negative

The affective nature of children's screen time leads to the tendency of scholars (and media who use the work of academics) to position children's screen time as positive *or* negative, often attached to the media harm debate, which views children as competent or vulnerable.

The either-or proposition that has been created with respect to children's screen time is the result of an academic community divided over the term "effect," which I argue only perpetuates a problem of being divided over the impact of children's screen time. The either-or situation moves away from, rather than toward, a solution (or management strategy) that child-influencers like parents and educators can use to lessen negative outcomes and encourage positive ones.

We know that the digital divide is no longer simply an issue of access, but rather an issue of skills and competencies. This is creating a new division between classes with respect to children's screen time. "The people" versus "the power bloc" where children with influencers who can help them use screen-based devices to create, participate and

interact have a leg up from the children and youth who simply use screen devices in a passive or unproductive way.

7.4. An ideological chain from scholars to media and parents

There is an ideological chain that exists whereby sentiments that surround screen time begin at the academic level. I believe the flow is situated in this direction because of the frequency at which media and parents point to academic research to validate the points they make. As a result, we see strong beliefs situate around children's screen time. Children's screen time is too often oversimplified within research, and an aspect or two is deemed as having positive or negative influence on children. The reality is that many studies are simply too narrow in scope to do children's screen time justice in understanding that it is not an issue of being positive *or* negative but being both positive *and* negative.

Within the positive camp, we see screen time for children touted as a way for children to learn, create, participate and interact. It is a way for children to learn digital literacies – the skills and competencies required for success on screen-based devices. Within the negative side, there are strong concerns for children's screen time, particularly for young children, but also for the physical and emotional wellbeing of children.

7.5. Parental sentiments and management strategies

Parents within the field sites used for this study were aware of the issues around children's screen time. It is interesting how parents interested in screen time seek out screens in order to discuss the phenomenon.

The users often cited academic studies or news articles based around scholarly research. An interesting finding was the desire of parents to strongly uphold their opinion and back it up with corresponding research. Unfortunately, there is research on both sides, which may be a partial reason for the contention over whether children's screen time is good, bad or both.

The parents on the forums noted similar advantages and drawbacks to children's screen time as academics and media. Social groups had obviously formed around the sentiments of like-minded parents. One interesting finding is that parents formed similar ideological groups but also followed similar thought-patterns to the traditions found within the philosophy of technology. While the parents in the social groups didn't use academic language to describe their construction of children's screen time, they way they described children's screen time matched the academic parameters around the groups outlined in chapter three.

While parents discussed all screen-based devices, tablets and smartphones were frontrunners for children's usage. Parents used devices for various reasons including education, entertainment, and as a babysitter so the adults could complete a task like dinner, work or chores. Parents had various management strategies and the only dominant sentiments were that some screen time limitations are good for children and that children and parents do not – and should not – follow the same screen time rules.

7.6. More research is needed for parental management strategies

Moving forward, it is clear that more research needs to be conducted on parental management strategies. Strategies that recognize that not all parents are going to adhere to "zero" or "limited" screen time rules but rather helps parents understand how to foster screen-based usage that encourages children to build digital literacies – regardless of education, socio-economic status, or class.

Child influencers (parents, educators, tech companies that sell devices children use, and media producers that create content that children view or use) have a responsibility to teach digital literacy skills to children and help parents navigate what (and how much) of various activities are more helpful than harmful.

A big change that needs to happen is an ideological shift away from the idea that children's screen time is positive or negative. It is not. It is positive and negative. It has the potential to be great. It has the potential to be bad. The ideal situation is coming up with management strategies that child influencers can use to limit technology uses when it is too much or too violent and encourage technology use that encourages creativity, such as coding. Children's screen time is a contentious issue but it doesn't need to be. It can be an issue where both sides can come together to find a solution.

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