

Georgia State University

ScholarWorks @ Georgia State University

---

English Theses

Department of English

---

8-12-2016

## The Rhetoric of the iPhone: A Cultural Gateway Of Our Transforming Digital Paradigm

Jessica Rose

Follow this and additional works at: [https://scholarworks.gsu.edu/english\\_theses](https://scholarworks.gsu.edu/english_theses)

---

### Recommended Citation

Rose, Jessica, "The Rhetoric of the iPhone: A Cultural Gateway Of Our Transforming Digital Paradigm." Thesis, Georgia State University, 2016.  
doi: <https://doi.org/10.57709/8831478>

This Thesis is brought to you for free and open access by the Department of English at ScholarWorks @ Georgia State University. It has been accepted for inclusion in English Theses by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact [scholarworks@gsu.edu](mailto:scholarworks@gsu.edu).

THE RHETORIC OF THE IPHONE:  
A CULTURAL GATEWAY OF OUR TRANSFORMING DIGITAL PARADIGM

by

JESSICA ROSE

Under the Direction of Mary Hocks, PhD.

ABSTRACT

The metaphors “tipping point” and “paradigm shift” are used to describe the moments surrounding social and scientific changes; however, I argue that in examining changes in culture and communication, the role of technology suggests the need for a new metaphor. Weaving together cultural studies, digital rhetoric and technology theories, I offer a complimentary metaphor, the cultural gateway, defined as specific artifacts that are simultaneously familiar and strange, providing a comfortable bridge between “before and after.” This thesis posits that the iPhone behaves as such a gateway to our current, fully mobile paradigm, and has changed the face of everyday composition. Employing the circuit of culture, I examine evidence found in early media accounts of iPhone’s impact, literacy narratives that name smartphones and iPhones as literacy agents, and early advertising. Investigations suggest that these quotidian artifacts have additional, unintended purposes that are quite human and intrinsic to our ordered realities.

INDEX WORDS: Cultural gateway, Digital literacy, Digital rhetoric, Mobile composition, Technological artifact, New media

THE RHETORIC OF THE IPHONE:  
A CULTURAL GATEWAY OF OUR TRANSFORMING DIGITAL PARADIGM

by

JESSICA ROSE

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2016

Copyright by  
Jessica Alcorn Rose  
2016

THE RHETORIC OF THE IPHONE:  
A CULTURAL GATEWAY OF OUR TRANSFORMING DIGITAL PARADIGM

by

JESSICA ROSE

Committee Chair: Mary Hocks

Committee: Michael Harker

George Pullman

Electronic Version Approved:

Office of Graduate Studies

College of Arts and Sciences

Georgia State University

August 2016

## **DEDICATION**

To Paul, Paula and Bill for cultivating my curiosity. To Jason, Ian and Jemma for harvesting it.

## ACKNOWLEDGEMENTS

I would like to thank the members of my committee for their generous time and input. I owe a debt of thanks to Dr. Mary Hocks who took on advising me in the middle of an insane year and offered both invaluable advice and incredible patience. Secondly, my deepest gratitude to Dr. Michael Harker, whose conversations and feedback have always encouraged me to think further. Additionally, to Dr. George Pullman, my sincerest appreciation for agreeing to all the unknowns this thesis had to offer. Finally, to my dear friend, Paige Arrington, I want to say thank you for your constant conversation and encouragement, and for being a sincere partner-in-crime.

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS .....</b>	<b>v</b>
<b>LIST OF TABLES .....</b>	<b>viii</b>
<b>LIST OF FIGURES .....</b>	<b>ix</b>
<b>1 INTRODUCTION .....</b>	<b>1</b>
<b>1.1 Environment .....</b>	<b>1</b>
<b>1.2 Relevant Metaphors .....</b>	<b>5</b>
<i>1.2.1 Tipping Points .....</i>	<i>5</i>
<i>1.2.2 Paradigm Shifts.....</i>	<i>7</i>
<b>2 A NEW METAPHOR .....</b>	<b>10</b>
<b>2.1 Defining the Cultural Gateway .....</b>	<b>10</b>
<b>2.2 An Analog Model.....</b>	<b>15</b>
<b>2.3 The Circuit of Culture .....</b>	<b>18</b>
<b>3 THE DIGITAL MODEL .....</b>	<b>20</b>
<b>3.1 iPhone from Apple .....</b>	<b>20</b>
<b>3.2 Gateway Consumption.....</b>	<b>23</b>
<i>3.2.1 Reactions .....</i>	<i>24</i>
<i>3.2.2 The App Store.....</i>	<i>29</i>
<i>3.2.3 Example: the Facebook App.....</i>	<i>31</i>
<b>3.3 Gateway Representation.....</b>	<b>34</b>



3.3.1	<i>Embodied Representation</i> .....	35
3.3.2	<i>Representation and advertising</i> .....	37
3.4	<b>Gateway Identity</b> .....	45
3.4.1	<i>IT iDentity</i> .....	50
3.4.2	<i>iDentity and Literacy</i> .....	53
4	<b>CONCLUSIONS</b> .....	59
4.1	<b>Commonalities between the gateways</b> .....	59
4.2	<b>Implications of the iPhone and the mobile paradigm</b> .....	61
	<b>WORKS CITED</b> .....	63

**LIST OF TABLES**

Table 1 Source: Statista, Apple Value Growth over Time .....	25
Table 2 Source: TechCrunch, Facebook versus Myspace .....	32
Table 3 Source: TechCrunch, Facebook's rise over Myspace .....	33

## LIST OF FIGURES

Figure 1: Jobs onstage at MacWorld 2007, Source YT cc-BY.....	2
Figure 2 Kuhn's rabbit-duck image of a paradigm shift, source WikiCommons, cc-BY ...	7
Figure 3: Anatomy of the California Roll, Alessandro Scotti, cc-sa 3.0 .....	17
Figure 4: The Circuit of Culture, source DuGay et al.....	19
Figure 5: Waiting for iPhones NYC, 2007 .....	28
Figure 6 Think Different Campaign; Source Mark Mathoslan Flickr, CC-A-NC-SA2.0	37
Figure 7 Ali "Think Different" billboard; Source: Johnny Evans, ComputerWorld .....	38
Figure 8 Will Ferrell in "Hello" ad, Source YT, EveryAppleAd, cc-BY .....	39
Figure 9 Closing image of "Hello" ad; source, YT, GulTechLife, cc-BY.....	39
Figure 10 Still of Lucille Ball in "Hello" ad, source YT, EveryAppleAd, cc-BY.....	39
Figure 11 Opening shot from "Hello" ad, Source YT, EveryAppleAd, cc-BY .....	40
Figure 12 MacIntosh Plus Hello ad, 1984, source Kit Cowan, Flickr, cc-nc-nd-g-2.0 ....	41
Figure 13 Disembodied hand, Source, Matthew Miller, YT, cc-BY.....	43
Figure 14 Long and Hodgeman as Mac and PC, source You Tube cc-BY .....	51
Figure 15 Author's iPhone "face" .....	53

## 1 INTRODUCTION

“...progress in science is not a simple line leading to the truth. It is more progress away from less adequate conceptions of, and interactions with, the world.”

(Thomas Kuhn, *the Structure of Scientific Revolutions*)

“...we are calling it iPhone. Today, Apple is going to reinvent the phone.”

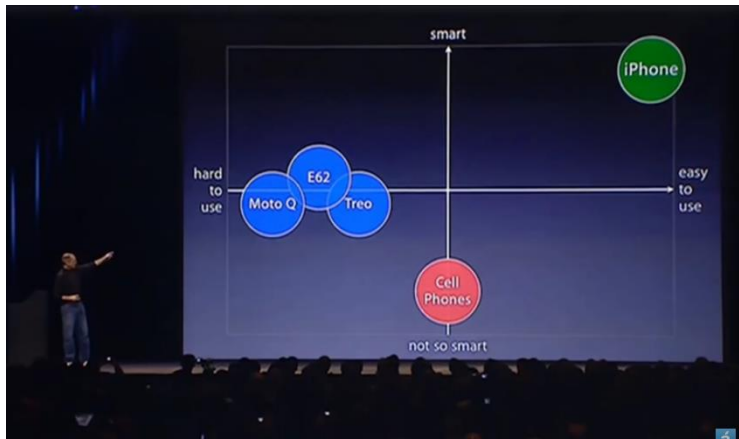
(Steve Jobs at the 2007 MacWorld Convention)

### 1.1 Environment

On January 9, 2007—less than a decade prior to this publish date—Steve Jobs made good on rumors that Apple would be delivering something historic when he took the stage at the 2007 Macworld convention and delivered a manifesto that began, “Every once in a while a revolutionary product comes along that changes everything.” Suggesting Apple has experience with this sort of moment, Jobs briefly recounted the Apple mythology, reminding his audience of past successes: the MacIntosh personal computer in 1984, which “changed the whole computer industry,” and the iPod in 2001, something that “didn’t just change the way we all listen to music—it changed the entire music industry.” Jobs promised his audience that *that* day he would continue the legacy by unveiling three new revolutionary products that were actually just one device: iPhone.

Of course the iPhone was not the first *smartphone*, a designation originally reserved for phones that combine voice, email, and limited internet functions. Earlier models of the smartphone existed, with modern iterations going back as far as the mid-nineties. Though, these models were narrowly marketed to the business class (as PDA’s) and came with hefty price-tags, sometimes nearing \$1000, limiting their use and appeal (Sager). Early twenty-first century models hoped to build on these older versions, yet, as Jobs explained, these forerunners were still clumsy, inefficient and difficult to use. Alternately, Jobs defined iPhone as a “leapfrog product,”

with its radical new user interface and “magic” multi-touch technology; and he was right. In looking to software applications designed for computers for inspiration, and in reconfiguring the phone, not to keep up with demands but rather to anticipate demands, the iPhone became the communication icon of a new generation. Jobs was on to something when he called iPhone a reinvention, but it was more than a revolution in mobile technology; it was a cultural and technological gateway into a new communication paradigm.



*Figure 1: Jobs onstage at MacWorld 2007, Source YT cc-BY*

Looking back, this paradigm shift began long before Jobs rallied techies at MacWorld. It was suggested, in fact, with the incorporation of personal computers in the home in the early 1980's. Part of sweeping changes that accompanied the digital revolution, introducing the PC into the everyday social routine was a move which demanded physical and social space be set aside for previously site-specific technologies. As a result, digital methods of communication became ubiquitous for many, both personally and professionally. Although, while the PC transformed the way some people spent a portion of their time communicating and composing, interactions were still limited to a fixed workstation with limited affordances.

Still, alongside the development of new technologies came fresh, increasingly interdisciplinary forms of literacy which did not replace standard practices, but rather built upon

traditional literacies already in place (Jenkins et al. 28-30). Earlier forms of these communications included chat rooms and email, developed to connect people with specific relationships, such as the enthusiast or the co-worker. In recent years, researchers have eyed how identity, agency, literacy and consumption relate to virtual spheres, examining moments where composing has occurred (DeVoss & Selfe, 2002). Most recent studies focus on blogs, Facebook, Twitter, and other forms of social media have also enjoyed the attention of scholars seeking to examine the rhetorical nature of these virtual, persona-building practices.

However, perhaps because it is, relatively speaking, newer technology, or perhaps because it is considered an ancillary device, the smartphone has only recently begun to enjoy study on such critical levels. Interestingly, while other fields, like the tech sciences, marketing and advertising, and communications, have engaged in liberal smartphone-related research, similar research has been elusive in the field of rhetoric and composition. For instance, studies of the effects on smartphone use in children are becoming somewhat common, especially given concerns over increasing screen-time options<sup>1</sup>. Additionally, studies involving smartphones in economics, law and technology examine everything from herd behavior<sup>2</sup>, and the social aspects of mobile media<sup>3</sup>, to abstract copyrights<sup>4</sup>. Still, because of its ubiquity, serving multiple communication functions across multiple interfaces and with fewer locational limitations, the iPhone and its imitators are an essential part of how mobile-ly connected people regularly communicate and persuade.

Given rhetoric's intimate connection to culture and digital technology, I seek to investigate the iPhone as a cultural gateway to our current mobile paradigm. The iPhone, while

---

<sup>1</sup> See Kabali et al., Redesky and Christiakis, and Kiger and Herro, among others.

<sup>2</sup> See Heshan and Sun

<sup>3</sup> See Hjorth, Burgess, and Richardson

<sup>4</sup> See Schultz

not the first smartphone per se, is the first smartphone whose features and platforms have been universally adopted, which makes it a pervasive standard not just for cellphones, but also mobile technologies, more broadly. It was a game-changer when it was unveiled, making the future feel imminent, but comfortably so. Therefore, I contend that the acceptance of the iPhone made possible the establishment of new, quotidian behaviors that would have previously been seen as cumbersome or even invasive, such as routine, on-the-go digital recording and the mobile management of everyday experiences. The adoption of these new behaviors implies a corresponding change in the ways in which those experiences are interpersonally mediated and communicated. As a result, everyday literacy practices are also changing, being reframed by the affordances which accompany the deeply integrated mobile technology.

In taking up this work, I aim to extend the body of research concerning the study of emerging, socially bound artifacts, which is limited within our field. More specifically, I hope to demonstrate how these objects successfully and rhetorically insert themselves as everyday items, as well as how these items influence modes of composition and persuasion. To do this, however, I must first map links between two scientific metaphors (*the tipping point* and *paradigm shift*) which are rooted in technology studies, but are both highly rhetorical in practice and significant to my assertion. From these two metaphors I suggest a new metaphor, *the cultural gateway*, to represent the processes by which certain artifacts encourage cultural shifts in perception. Moreover, since much of the discussion of mobile technology as a cultural actor has occurred in other fields—like the sciences, marketing and anthropology—what I will complete is multi-disciplinary, calling upon aspects of (pop) cultural studies, technical studies, and rhetoric and composition. In short, my analysis will include an examination of the iPhone as a technological

and cultural artifact, by which its value as a rhetorically charged gateway and influencer of literacy will be revealed.

## 1.2 Relevant Metaphors

### 1.2.1 *Tipping Points*

The sociological use of the metaphor *tipping point* refers to a threshold at which a critical social shift occurs. The term comes from the field of physics, where it is used to describe the moment when, after adding minute amounts of weight to a balanced object, the object finally becomes unbalanced. Sociologist Morton Grodzins appropriated the term and used it as a metaphor in his studies of post-war ‘white flight’ from the cities to the suburbs in the 1950’s. Grodzins’ utilized the term to refer to the point at which, if given two choices—in this case to move away or to stay in a transitioning community—at some point the weight of evidence for leaving outweighs the evidence for remaining. Specifically, Grodzins applied the metaphor to mean the point at which white families (dominant community) decided to leave their neighborhoods based on the number of non-white families (minority community) moving in.

Other, mid-century sociologists built upon Grodzins’ work, also adopting the metaphor, and bringing it into the sociological lexicon. Thomas Schelling’s 1978 work *Micromotives and Macrobehavior*, also studies community behaviors, revisiting the topic of white flight. Schelling explains that “the tipping model is a special case...of critical-mass phenomena” where individuals have differing “cross-over points” related to place of residence, work or recreation (101). Additionally, he claims that the moment of decision involves “*being* someplace rather than *doing* something” and that these points moved certain groups to do something that they had previously avoided doing (102). Schelling observed that when only a few minority groups moved in to a neighborhood, some majorities (white families) were apt to stay. Yet, once a definable



percentage of minorities had moved in, these families reach as threshold and moved away.

Schelling's tipping point is, ergo, a response to maintaining a community status quo, rather than changing the status quo.

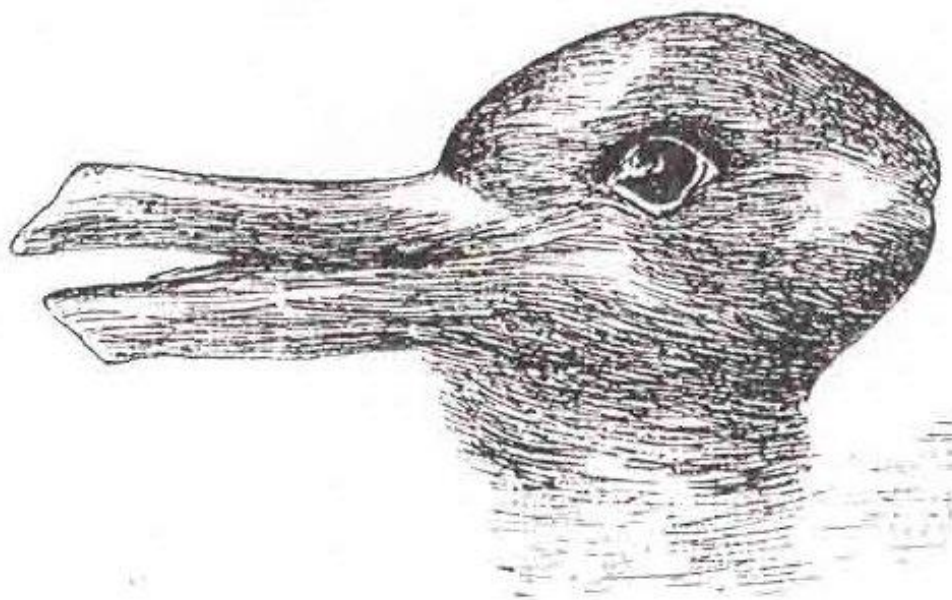
While Grozdins' and Schelling's use of the metaphor remains tied to class and race, pop-pundit Malcolm Gladwell extends this metaphor to discuss the acceptance of social trends and how dominant social groups subsume new phenomena into the social structure. For Gladwell, the focus is as much on the *doing* as on the *place*, and involved more nuanced types of weight. In his book *The Tipping Point: How Little Things Can Make a Big Difference* (2002), Gladwell calls these moments of tipping social epidemics, claiming that "ideas and products, messages and behaviors spread just like viruses do" (7). In his text, he demonstrates how certain laws (he cites three) govern a rhetorical machine to move the masses, fueled by charisma, punditry, negotiation, and social diffusion.

One example Gladwell cites is the adoption of the children's show *Blue's Clues* over *Sesame Street* as the new gold standard in educational programming (117). While *Sesame Street* had been the model for children's educational programming for much of the 1970's and 1980's, *Blues Clues* seduced a new generation of viewers when it debuted in 1996. The reason for this move, interestingly enough, did not lie in marketing or time slots, or even in casting; it was the result of some simple but radical changes to the model of what children's programming should do, turning characters into simplified icons (the mailbox was named Mailbox, Blue was the color blue), distilling the lessons, and creating pauses for responses from its audience. In eliminating distractions and making space for interaction, *Blue's Clues* kept the attention of its main viewers even if perplexed parents. As such, this show had what Gladwell terms a 'stickiness factor,' meaning that the show was "catchy" or magnetic to its audience. This example details how

Gladwell's use of the term tipping point differs from Grozdins' and Schelling's original usage. While they looked at tipping points as moments of critical mass that forced a group to change, Gladwell repurposes the definition of a tipping point to mean the moment when a cohort might abandon their status quo not with dread, but as part of a paradigm shift.

### ***1.2.2 Paradigm Shifts***

Similar to the tipping point is the *paradigm shift*, which is generally perceived as a change in underlying assumptions that reorder one's worldview. The phrase is slippery, having been birthed in the sciences, yet being adopted by other fields to describe similar changes but



*Figure 2 Kuhn's rabbit-duck image of a paradigm shift, source WikiCommons,* with dissimilar parameters. The term was coined by science historian and physicist Thomas Kuhn, who claimed that scientific knowledge and progress do not accrete or evolve, but rather develop as part of intermittent conceptual revolutions, or paradigm shifts, which he narrowly defines in two ways. First, the term paradigm shift refers to fundamental changes in scientific assumptions and methods, which occur between moments of ordinary science (existing

knowledge and practices) and extraordinary science (advances in knowledge and practice). Secondly, Kuhn defines these shifts as “scientific revolutions” in which an *approach* to data is altered by reconfiguring the framework through which the data is examined. Therefore, a paradigm shift involves changing the standard model through which a field does its work. Kuhn likens this idea to an image that can be simultaneously viewed as either a rabbit or a duck.

This change in models, however, was a natural process, for Kuhn, who clarified that “the successive transition from one paradigm to another via revolution is the usual developmental pattern of mature science”; as the proponents of old paradigms retire or die, the progressive research paradigms of younger scientists eventually become *de rigueur* (12). For Kuhn, then, shifting is simply a part of progress, where new knowledge does not arrive as a *Eureka!* moment, but is slowly incorporated by surviving long enough within the works of newer generations in order to outlive the outdated modes of older generations. Yet, while not immediate, neither is the paradigm shift passive; shifts do not happen to an oblivious community, but are, rather, part of the scientific process. For Kuhn, a scientific revolution, or paradigm shift, occurs when an amalgamation of anomalies refuting the accepted paradigm grows large enough to create doubt in the paradigm. Just as with tipping points, out of this doubt new theories emerge, and if one of these theories is dominant enough for long enough, a turn will occur.

Although Kuhn sees the scientific shift as a part of empirical evidence and sturdy scientific research, paradigm shifts also have a human, rhetorical element. Arguments and debate are also part of shifting, with competing paradigms vying for dominance and relevance. Kuhn elucidates that, “As in political revolutions, so in paradigm choice – there is no standard higher than the assent of the relevant community. Consequently, to discover how scientific revolutions are effected, we shall have to examine not only the impact of nature and of logic, but also the

techniques of persuasive argumentation effective within the quite special groups that constitute the community of scientists” (92). Given all of this, while the Kuhnian definition of a shift is initially constrained to science, here Kuhn opens the door to possible expanded definitions by situating them within a cultural and social sphere.

One formal expansion, which is significant for our purposes, is the *technological paradigm*, defined in 1982 by economist and researcher Giovanni Dosi, whose research attends to evolutionary economics and the economics of technical change. Dosi’s definition, influenced by Kuhn, seeks to reconcile technological and industrial innovations with economic interests and behaviors. He defines the technological paradigm as “an ‘outlook’, a set of procedures, [and] a definition of the ‘relevant’ problems and of the specific knowledge related to their solution” (148). He furthers that the specific technological and economic trade-offs of each technological paradigm determine its own concept of progress, adding “a ‘technological trajectory’ [is] the direction of advance within a technological paradigm” (148). Finally, he reveals that the trajectory is set by the constraints of technology, which also include social considerations. In short, what Dosi posits is that technological advances have significant and lasting effects on the whole of an economy which, by nature, has a social effect as well. One clear example of Dosi’s paradigm shift would be the adoption of the Fordian model of mass production. The adoption of mass production affected not only the financial aspects of manufacture, it also created unforeseen demands in the workforce, solidified the middle class, and changed the tastes of day to day activities and consumerism, to name a few things.

Similarly, the definition of a cultural paradigm shift—a fundamental change in worldview or perception—while less rigorously rule-bound than Kuhn’s or Dosi’s definitions, intuitively connects to the ideas that multiple factors accumulate to encourage a macro move.

For, cultural shifts are the products of charismatic agents, with certain agents being technological, especially where knowledge is communicated and disseminated. Simple examples of cultural shifts include the shift from spoken to written which occurred with the invention of the printing press, and recent shifts in writing that have occurred with the standardization of email.

Given these summaries of tipping point and paradigm shift, clearly both can be broadly applied to investigate the iPhone as a scientific and cultural artifact. Looking at the Western response to the iPhone reveals a moment of tipping and the birth of a shift away from a selectively digital program to a full, digital immersion. However, the iPhone is not the paradigm or the tipping point; rather, it is the weight that causes the tip and the force that catalyzes the shift. Given this, I offer another metaphor for the iPhone: the cultural gateway.

## 2 A NEW METAPHOR

### 2.1 Defining the Cultural Gateway

The gateway, as a metaphor, was first used in the 1970's by Columbia University researcher Denise Kandel in her work on the influences of alcohol and tobacco, which she coined *gateway drugs*. Kandel's area of interest was drug abuse and addiction, and specifically how abuses and addictions appeared in pairs. She had a hunch that there was a connection between the illicit and acceptable substances and wanted to explore the links. But, because recent decades had seen a rise in experimentation among youths that often included or began with the use of marijuana, American medical research funding for marijuana studies was plentiful, while funding for regulated substances was routinely denied. Kandel explains in an NPR interview, "you were not even supposed to ask about anything else," inferring that legal substances like

alcohol and tobacco were taboo, being firmly supported by the industries that manufactured them (*Setting the Record Straight on the Phrase 'Gateway Drug'*). So, Kandel applied for and received a grant to research ties between addiction and marijuana, and then slipped in survey questions about alcohol and tobacco use.

Kandel's results were significant. She found that young adults and teens appeared to follow a specific pattern when experimenting with substances: "when they got involved with drugs...they did not start with marijuana, but they started with drugs that are legal for adults in the society, such as beer and wine and cigarettes." Tobacco and alcohol were social rituals that adults took part in. In watching adults use these legal drugs recreationally, young adults were given a model by which they could both imbibe and behave, as well as expand on. As gateways, nicotine and alcohol were practices that suggested certain behaviors were not only socially accepted, but also socially expected.

Similarly, the *cultural* gateway is a sociocultural or techno-cultural artifact that introduces and rhetorically normalizes a provocative shift, while also serving its primary function. Cultural gateways are simultaneously something familiar and something completely new and unique; as such, they provide an audience with a seemingly familiar space in which to engage with new concepts. When speaking of gateways as technologies, the word 'technology' is meant in the broadest sense of the word; for instance, some artifacts are socio-cultural and barely considered technologies (like the first modern woman's pantsuit), but still standardize changing social norms. Yet, other artifacts are unequivocally technological and may either be a part of a momentous shift in thought or design, like the iPhone, or they be part of a subtler sea change, as I will describe later. Regardless, these gateways are consistently rhetorical in their ability to induce a velvet transition from one worldview to another. Additionally, they are disruptive,

becoming souvenirs of tipping and shifting. Finally, gateways both determine and are determined by their cultural contexts. Therefore, while the tipping point encompasses a moment and the paradigm shift refers to a new standard, the gateway is a techno-cultural interface.

As interfaces, cultural gateways adhere to Melvin Kranzberg's laws of technology, which govern how technologies socially operate, and relate to Kuhn's assertion that paradigm shifts progress "away from less adequate conceptions of, and interactions with, the world." This relationship bridges the gap between Kuhn's definition of paradigm as a discrete example and its broader definition as a change in cultural perception. Because Kranzberg's laws focus on the intersection of technology and culture, they also directly relate to the cultural gateway.

Kranzberg states:

- 1 Technology is neither good, nor bad; nor is it neutral
- 2 Invention is the mother of necessity
- 3 Technology comes in packages big and small
- 4 Although technology might be a prime element in many public issues, non-technical factors take precedence in technology-policy decisions
- 5 All history is relevant, but the history of technology is the most relevant.
- 6 Technology is a very human activity—and so is the history of technology

While all of these laws relate to the gateway, laws one, two, and six are crucially significant to understanding how a gateway operates. Kranzberg's first law—*technology is neither good nor bad; nor is it neutral*—reminds us that the truth of a technology's outcomes may be seen by observing "how technology interacts in different ways, with different values and institutions, indeed, with the entire sociocultural milieu" (548). In fact, Kranzberg clarified this law, stating that "technology's interaction with the social ecology is such that technical developments frequently have environmental, social, and human consequences that go far beyond the immediate purposes of the technical devices and practices themselves" (547). Hence, this first law, dedicated to the relationship between a technology and the society in which it is

either embraced or rejected, is markedly significant to this discussion of emergent technologies that revise communication.

Kranzberg's second law—*invention is the mother of necessity*—refers to the notion that new technology is not only devised on an as-needed or as-desired basis; rather, transformative technologies meet specific needs even as they generate new ones. While initially speaking to the unintended consequences of technological advances, the second law also connects to Paul Prior et al.'s discussion of remapping the rhetorical canon, done in an effort to speak to the modern, technological paradigm (for more on this, see “Resituating and remediating the canons: a cultural-historical remapping of rhetorical activity”). Prior and his colleagues claim that *invention*, as defined canonically, is “widely understood as a process that goes on throughout the entire work...not something done first, then funneled into an arrangement, then enacted in words, then stored in some memory, then delivered...”(8). Instead, invention is something that is constantly occurring. Given this flexibility, the process of “remixing” the canon of invention for new and updated purposes manifests easily as the process of “merg[ing]...invention with the mediated force of technologies, genres, discourses, and practices.” (Prior et al. 20).

Prior et al. also ties delivery to invention through cultural-historical practices that can be updated and reformed to fit our modern, technological paradigms. Classically, delivery has been relegated to oratory. Prior et al. specifically state that “delivery was about gesture, stance, gaze, dress, quality, intonation, and so on” (4). When the tides of favor turned away from speech and towards writing, focus on delivery also began to fade. However, more modern concepts of delivery reject the conventional notion that delivery is a fixed set of behaviors in favor of the idea that delivery is a medium. Especially considering 20<sup>th</sup> and 21<sup>st</sup> century technologies that place a heavy focus on modern modes of delivery, delivery also becomes a parent of necessity,



driving the need for new rhetorical conventions. Invention, as the co-parent of necessity in the new, technological paradigm, is a nuanced, multi-layered thing that affects both the message and the medium.

Finally, Kranzberg's sixth law—*technology is a very human activity—and so is the history of technology*—alludes to the anthropological importance of technology and technological artifacts. Kranzberg begins unpacking this significance, stating that "...man could not have become *Homo sapiens*, "man the thinker," had he not at the same time been *Homo faber*, "man the maker"... the function of the technology is its use by human beings—and sometimes, alas, its abuse and misuse" (557-8). To further unpack this notion, Kranzberg cites the computer as a metaphor in which the hardware (computer) is inactive without the software (human element): "without the software, the machine is simply an inert device, but without the hardware, the software is meaningless. We need both, the human and the purely technical components, in order to make the computer a usable and useful piece of technology" (558).

Similarly, the significance of the gateway lies specifically in its value as a persuasive, cultural interface; both the artifact and the interaction are necessary to enact the gateway. As an artifact whose purpose(s) is obscured, the gateway is an 'inert' object. Yet, as a culturally connected artifact, the significance of the object as an interface comes into view. Hence, the second half of Kranzberg's law, that this history of technology is also a human activity, also applies to the gateway. The historical significance of the gateway lies in its very nature as an artifact; that it is able to pinpoint through what mechanisms a shift occurs. In identifying these mechanisms, we gain social, historical, and anthropological insight into how culture is rhetorically composed. So, the significance of the gateway lies not only in its moment as a

cultural and technological mover, but also in what it says about why it was culturally and technologically successful as disruptive device.

The cultural gateway, as a rhetorical artifact, meets the standards of all three of these laws: a cultural gateway, as an interface, has “environmental, social, and human consequences that go far beyond [its] immediate purposes” (Kranzberg 545). Likewise, the gateway also embodies both invention and the mechanism of delivery. As an interface, the gateway has the dual purpose of intuitively doing what it was designed to do, while also marketing a new paradigm by appearing less foreign than other iterations and counterparts. Given all of this, understanding the gateway means understanding rhetoric’s intimate connection to culture and technology. Moreover, knowing how emerging technologies can operate to influence an audience is especially meaningful for technologies whose primary purpose is communication.

## **2.2 An Analog Model**

One rudimentary example of a cultural gateway is the California roll—a standard feature of every Western sushi menu. Competing origin myths, outlined by food historian Tori Avey, all trace back to the mid-1960’s to the west coast of the United States and Canada (np). However, regardless of where and who invented the roll, the purpose was the same: sushi—and more precisely, seaweed—was too foreign. Historically, Americans prefer cultural insularity and tend to eschew the unrecognizable: coffee, whiskey, pizza, chow mein, and beef stroganoff were all things that had been homogenized to meet the American palate, and sushi would be no different.

As Michelle Marion suggests in her article, “Have You Eaten?” (2007), food is a cultural carrier that is deeply intimate, speaking to national identity. She states that “the informality of food and food-sharing is often the first step to appreciating heterogeneity and in creating cohesion within a changing or changed society,” meaning that the sharing *and* accepting of food

is an opening act of kinship which can lead to wider acceptance and harmony. This is because food is a universal necessity that is enacted in culturally specific ways. So, while mealtime is often a social or semi-public event, food is a rhetorical entity that ties to appearance, identity, and sociocultural norms.

For these reasons, it makes sense that the introduction of sushi to North America during the early 1950's was a perilous venture. In the United States, all things Japanese were still viewed with suspicion and considered icons of the enemy. Discrimination against Asians and Asian cultures persisted beyond the Japanese-American internment camps, producing enclaves of Japanese-Americans who "though "American" in every other way... —their "otherness" kept them in a subordinated position in society" (Tong 8). The Asian theatre was still viewed with curiosity from afar but, for many, anything genuinely Japanese was also genuinely *not* American; sushi was not apple pie. In short, homogeneity and the breaking of bread was unlikely beyond the business sphere where Japanese-American relations worked to flourish.

As part of a response to lagging food sales, one struggling sushi maestro engineered a roll that would cater to the Western cultural palate. First, he switched the fish from fatty Toro (tuna) to something more familiar (crab), substituted the common cucumber for the more exotic daikon, replaced the fat with California avocado, and, most crucially, hid the seaweed on the inside of the roll. Less than fifteen years later, Claire Standish would be eating sushi for lunch in 1985's *The Breakfast Club*, a demonstration of her international sophistication and class.



*Figure 3: Anatomy of the California Roll, Alessandro Scotti, cc-sa 3.0*

This brilliant new roll's importance as a gateway, however, lies not just in appealing to the American palate. Rather, the acceptance of the California roll actually suggests a more significant shift, which began with the United States' decision to actively participate in Japan's post-war reconstruction after WWII. As historians Nakamura and Forsberg both review, the United States worked diligently on post-war reconstruction efforts in Japan in order to buttress Western economic and cultural ideals in the Pacific. In an effort to encourage an alliance with Japan, as well as speed economic healing of both countries, the US devised industrial partnerships with Japan, co-wrote new foreign policies, and supported their inclusion in trade and banking organizations. Japan, wanting to be a global player, actively modernized and diversified their exports, moving into the manufacture of cars and machinery. Over the next twenty years, both countries engaged in business transactions that sent white collar workers from each nation abroad, sparking both economic and cultural exchange (Nakamura 76).

With this cultural exchange, sushi restaurants began appearing in America in the mid-nineteen sixties, seeking to cater to the influx of Japanese businessmen to the west coast. However, as Avey details, this process was slow, there was still bitterness over the war, especially so close to Pearl Harbor and in a state whose Asian population was heavily impacted. Bias was rampant and no matter how savvy the marketing was, the only American customers

were businessmen dining with their Japanese counterparts. Unhealed wounds and active conflicts still simmering in the Pacific theatre meant that for many, sushi was the symbol of a bridge too far.

While Japanese culture struggled to take hold in the US, business and trade were beginning to flourish. Over the next decade, businessmen continued their privileged cultural exchange, which also gave way to unintentional exports, like Godzilla and, with the less exotic California roll, sushi. Thus, early forerunners, were not just selling Japanese food, but also the coming of the Japanese people, and a profitable peace despite a long and bitter war. When the California roll made its debut, it offered something that was familiar, yet completely new and exciting: a gateway to a post-war society that existed globally and offered opportunities that isolationism could not.

### **2.3 The Circuit of Culture**

Having revealed both contexts and definitions surrounding the gateway, and determining gateways to be culturally and technologically relevant, I now offer a model by which the iPhone can be fully explicated. Because the iPhone is a gateway for a communication-driven paradigm, because of its function as a multi-purpose, multi-modal entity, and, most pertinently, because it's technology is frequently ahead of the market, the iPhone must be examined through several different contexts. Through these contexts, early smartphone practices will be studied to examine the significance of the iPhone's cultural impact. However, in order to look at early smartphone practices, which have not been extensively or explicitly studied, I will examine literacy narratives, popular press discourse, and early advertisements introducing the technology, all of which will form an image of how the iPhone was received.

Additionally, because the iPhone is a cultural artifact, I will explore it using Paul DuGay et al.'s *circuit of culture* as a framework through which the technology might be more clearly viewed (xxx). This circuit consists of five major cultural processes for analysis: representation, identity, production, consumption, and regulation. DuGay et al. devised the circuit of culture for their text, *Doing Cultural Studies: The story of the Sony Walkman* (1997). In the introduction to the second edition, Paul DuGay and Anders Koed Madsen state that “for a long time the analysis of cultural products within parts of the social and human sciences focused heavily on process of production, with the implication that the mode of production...was a prime determinant in the manner in which they were ‘encoded’ with particular meanings and uses” (xiii). The circuit, however, demonstrates that there are multiple aspects to the life of an artifact which are equally responsible for encoding meaning and delivering significance.

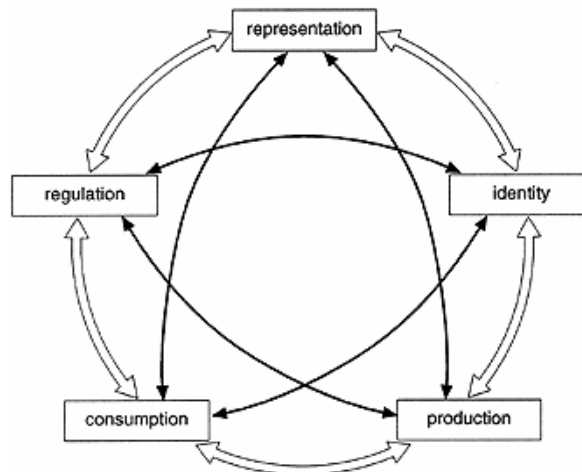


Figure 4: *The Circuit of Culture*, source DuGay et al.

I will engage in analyzing the iPhone through the three processes I contend are most valuable to evaluating a gateway: consumption, representation, and identity. Each of these contributes to an artifact's cultural, technological, and rhetorical ethos. Additionally, they can

serve as indicators of gateway behavior, isolating the aspects of technology that encourage immersion, acceptance, and meaning-making

### 3 THE DIGITAL MODEL

#### 3.1 iPhone from Apple

Apple, founded by computer hobbyists Steve Jobs, Steve Wozniak, and Ronald Wayne, has had a reputation for innovation and risk-taking from its inception. Rising from the seeds of California tech subculture of the 1970's, Apple originally sought to provide affordable components to amateur technologists, while improving upon emerging technologies. These innovative roots remain; in fact, while tech culture has changed dramatically, Apple's original 1980 mission statement proves that this fruit has not left the shade of the tree: "To make a contribution to the world by making tools for the mind that advance humankind" (Rowland).

The iPhone, Apple's first foray into the mobile phone sector, echoes the tenets of Apple's early vision. On the stage at the 2007 MacWorld, Steve Jobs promised that the iPhone would "reinvent the phone." This promise meant more than just reinventing how people conduct the regular business of making calls. For Jobs, this reinvention meant linking products together that would incorporate communication activities that Apple saw as technologically significant and socially pervasive for modern society. These activities initially included telephone communications, computer-related performances, and musical entertainment. All three of these areas of technology had become somewhat portable, although each had tight limitations on their physical and technological affordances. Hence, while these things were *portable*, they were hardly *mobile*.

In combining three quotidian devices—the phone, the computer, and the mp3 player—into one device that was portable and shareable, Apple's promise to contribute to the world,

advance mankind, and be technologically ahead by “at least five years” is fulfilled (Jobs). But, the iPhone was not limited to combining just these three devices; rather, they were a jumping off point, from which different combinations of experiences and communication platforms could individualize the invention and delivery experiences of the user. Fluidity of sharing and accessing information encouraged possible combinations that the public had only considered in science-fiction. Hence, the iPhone moved beyond prefiguring future interfaces to determining them.

While the iPhone as a device was a game-changer, very specific elements made the device a cultural gateway. Certainly the hardware—the device itself as a combinatory entity—embodied forward thinking, yet two specific components were the difference between the iPhone being an iconic gateway and the iPhone meeting the same fate as Lisa, one of Apple’s earliest computers to offer a graphical interface and an early flop. These two elements are Apple’s touch-screen technology and the introduction of the App store.

The iPhone’s touch screen technology had the wow-factor when it was first introduced, looking suspiciously like something out of an episode of Star Trek. Its face was almost completely glass and had no discernible buttons, making it the physical manifestation of the future. The general public did not have daily interaction with touch-screen technology beyond an ATM or POS, and iPhone’s touchscreen had an air of futurism about it that also felt familiar and accessible. However, beyond appearing comfortably futuristic, iPhone’s touchscreen also delivered a fluid user experience that was free of clunky buttons. QWERTY keyboards on other smartphones operated in the same manner as a conventional computer keyboard, with shift and tab keys to access alternate modes. While convenient and familiar, these keyboards slowed down communication practices, creating physically staccato motion that was, ultimately, a limitation.



Touchscreen technology, on the other hand, not only allowed for textual communication, but it also provided users with the ability to flexibly switch tasks and purposes.

The other significant element of the iPhone is its software partner, the App Store, which completes the circuit of innovation. The App Store, which was an extension of Mac widgets, brought to fruition the potential of the iPhone as an interface, making it truly interactive. With apps, iPhone users could diversify their mobile experience, choosing the parameters by which they interact with the world. As apps have been added, so has the user experience and, likewise, the communication and composition experience. Apps, by their nature, encourage the combinatorial character of the iPhone (and post iPhone iterations of other smartphones) and serve as a la carte extensions of the device that allow a user to individualize and internalize the user experience.

However, while these components were separate innovations by Apple, they have become synonymous with the iPhone and mobile identity. With the introduction and immersion of iPhone into the market, other smartphones eventually followed suit. This shift from keyboard to touch-screen, with the addition of apps, launched a social change which Mark Wilson of Fast Company calls *the Apple effect*. In his article, “The Apple effect: Nine ways Apple changed the world with the iPhone” (2015), Wilson supports the idea of iPhone as a gateway, first describing life before its introduction: “We used to watch movies on our living room TV’s, hail taxis by raising an arm, and lovingly crumple photos of our kids into leather carriers we called “wallets.” Wilson then describes an “after” image: “...since Steve Jobs introduced those ubiquitous little devices in June 2007, they have altered—and yes improved—our daily routines in countless ways. But the...impact has been far greater than just changing the UX of our lives. It’s also affected our digital infrastructure, our design sensibilities, and even the way we think about

modern labor practices.” Of course what Wilson leaves out is the effect iPhone has had on our hypermobility and on our literacy practices—our modes of everyday composing and delivery. Communication innovations, courtesy of the iPhone’s technological advances, have occurred to adjust to the affordances of our mobile technologies, which have, in turn, altered the realities of mobile-dependent cultures.

### **3.2 Gateway Consumption**

While production is a distinct process and uniquely significant to the creation of any artifact, for these purposes production elements will be viewed through the process of consumption. Production is tightly bonded to consumption, behaving as the initial leap from the possible to the real. Consumption, however, is inherently yoked to the gateway equation, particularly as it pertains to the iPhone, because it is through consumption that an object’s meaning is fully realized. In fact, there are certain facets of utilization that can either constrain or transform an objects ultimate role.

First, consumption reflects basic cultural absorption and rejection, especially as it applies to commercial commodities. Additionally, as DuGay et al. specify, consumption can act as an indicator of appropriation and resistance, whereby object meanings can take on deeper social contexts. Looking at responses to products that influence communication and identity, placing their growth upon a timeline, and by tracking the reactions of consumers and competitors, an artifact can be culturally situated within a social structure, establishing its acceptance and ubiquity. However, consumption does not refer merely to purchasing habits; rather, it refers to the entire life-span of an artifact and its social roles. Consumption reflects changes in social behavior and mores, cultural customs and practices, and, in this case, pervasive modes of communication.

In looking at consumption as part of the Circuit of Culture, DuGay et al. defer to Michel de Certeau, whose work on everyday behaviors and spaces illuminates how habitual processes reinforce culture. de Certeau indicates that consumption is naturally a personal and productive act, that “leaves neither the person engaged in it, the object(s) involved, nor the sphere of production untouched” (DuGay et al. 97). Additionally, and critically, de Certeau also notes that an object’s meaning is not generated in production; that it is not innate or “ready to wear.” Instead, meaning is tailored, acquired as the object is folded into everyday practices and uses, creating a conversation between cultural sectors.

Thus, although an object might have an initial use for which it is created, the object does not take on true purpose or meaning until it is consumed, creating *personal* meaning through an individual’s use, and social and cultural meaning, as the item is regularly used in a group. This process of meaning-making is essential for looking at technology, where many times the original purpose of an artifact might be complicated or reinterpreted by the user for their own ends. Especially as it refers to the iPhone, whose flexible and combinatory nature encourages an individualized user experience, de Certeau’s assertion that consumer meaning-making engages in a cultural dialogue—one that echoes Kranzberg’s idea of technology’s relationship to the social—reaffirms the importance of consumption to the examination of the iPhone’s cultural significance.

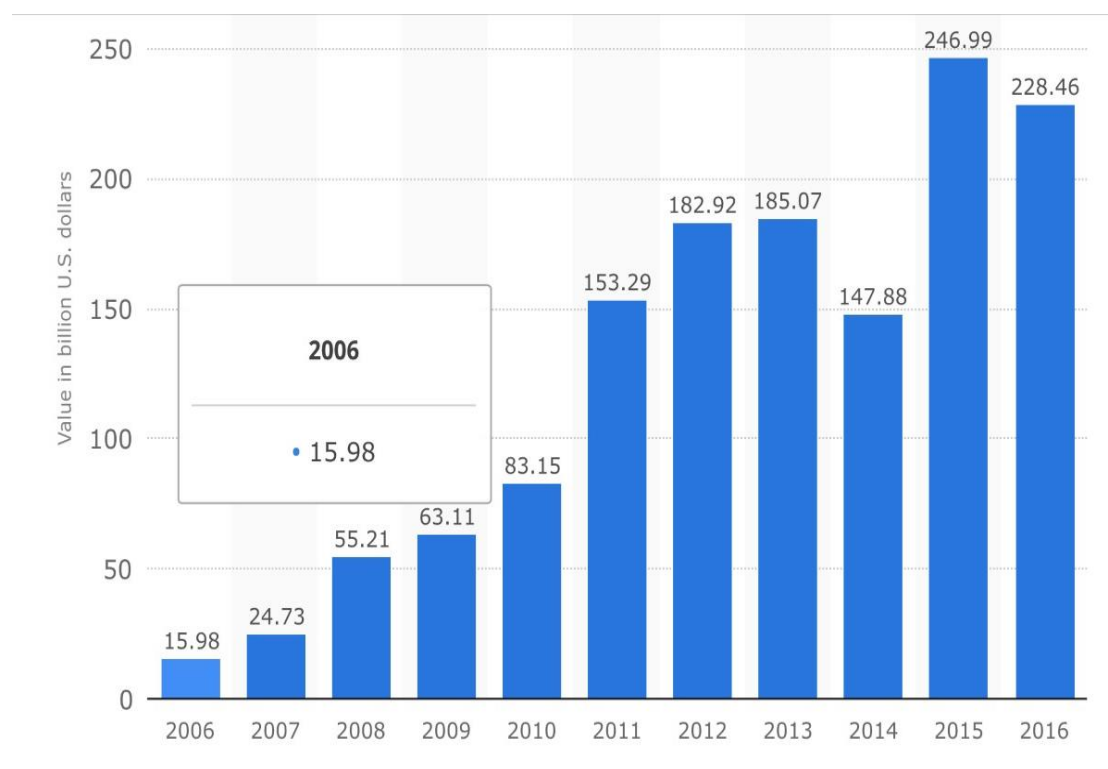
### ***3.2.1 Reactions***

The description of the iPhone as a game-changer is often followed up by accounts of Jobs’ unveiling but, while this moment is significant, the iPhone’s status as a gateway does not hang on this event. A deeper look at the iPhone’s insinuation into the actual cultural fabric reveals that while the futurist first impression of that MacWorld unveiling worked to stall

competitors in their tracks, the actual experiences, communication models, and fluidity of the device are equally responsible for the iPhone embodying the traits of a cultural gateway.

However, the months leading up to the release of the first iPhone are remarkable and should not be discounted, especially as they influence early consumption. Ever the showman, Jobs used his big reveal to create a frenzy among techies that ensured some historically significant results.

*Table 1 Source: Statista, Apple Value Growth over Time*



Economically, Apple as a whole went from being valued at 15.98 billion dollars in 2006, to 24.73 billion dollars, in just one year (Table 1). In 2008, the same year as the American recession began to ramp up, Apple's value estimate jumped again, to 55.21 billion dollars; interestingly this was the same year that Apple released the iPhone 3G and the App Store opened. Even through the recession, while growth was slow, Apple's value rose incrementally each year. These patterns of growth are often directly associated with the rise in popularity of the

iPhone. One Yahoo Finance reports that iPhone releases ‘have meant serious money for shareholders’ (Lewitinn). For instance, the first generation iPhone correlates with 12-month investor share returns of 39% in 2007, while the iPhone 3GS correlates with 12-month investor share returns of 96% (Lewitinn).

As an innovation that has encouraged tech development and influenced the entire mobile economy, the iPhone is distinctly part of a technological paradigm shift. Prior to the iPhone, smart phones were clunky, operated by a QWERTY-based keypad, and bound by a limited fund of mobile software. In fact, as *Fortune*’s Michael Copeland states, the introduction of the first iPhone, and specifically its innovation of touch screen technology, did not only disrupt the mobile market, it changed the definition of what a smartphone was (161).

Outside of the cellular industry, few developers were building mobile software. Mobile technologies were largely proprietary, belonging to a small group of cellular carriers and developers who demanded gatekeeping powers, which limited the mobile sector in several ways: it famously lacked any standardization, often making software incompatible between phones and carriers, often rendering a user’s device useless without the carrier; additionally, the gatekeeping nature of the industry discouraged independent development and exploration because software developers lost money to the restrictive rules that accompanied a carrier’s contract.

While this discouragement slowed progress, by the time Apple had begun developing iPhone, other early smartphones had introduced web applications and toyed with limited search engines, which signified to major tech rivals Google, who was gaining prominence, and Microsoft, a tech leviathan with bullying power, that the mobile sector was a viable place to continue development. Search engines were already ubiquitous in traditional, computer-related practices, and with the development of smart phones under way, the possibility of being the

standard mobile search engine continued this rivalry in a new platform. This was the mobile industry's race to the moon, and Google and Microsoft were the United States and Russia, vying for smartphone search engine dominance. So, although they knew that Apple was looking to enter the mobile market, Google and Microsoft were more concerned about planting their own flags, figuring that Apple had some catching up to do. Such was the atmosphere in which Jobs introduced his iPhone.

However, Jobs' reveal at MacWorld 2007 was only a sneak peek, with the actual units not hitting the market until June. Nevertheless, even just the introduction of the idea of such a phone on the market was a heavy enough weight to tip technology in favor of iPhone's radical new approach. *The Atlantic's* Fred Vogelstein, in his article "The Day Google Had to 'Start Over' on Android" (2013), called the unveiling of the first iPhone "a kick in the stomach" for other tech companies working on smartphone technology. Google engineer Chris DeSalvo described the moment he saw the first iPhone: "As a consumer I was blown away. I wanted one immediately. But as a Google engineer, I thought 'We're going to have to start over'" (Vogelstein).

Google would push back their own unveilings by a year, scrapping designs and technologies that had instantly become obsolete. Vogelstein reports that while the tech Google had in testing could stand up to the iPhone in some respects, Google found its drawbacks to be significant. One unnamed Google source for Vogelstein clarified that the difference was not in what the iPhone could do, but rather in its user experience; that the iPhone "was not only cool looking, but it used those cool looks to create entirely new ways to interact with a phone—ways that Android engineers either hadn't thought possible or had considered too risky...Jobs had come up with a new way of interacting with a device...and likely a lot more." These "ways" to

which Vogelstein's unnamed source refers include the touchscreen but, they also include the rapid rate at which a use could change from one task to another; true multi-tasking, using one device that could think, compose, remind, and deliver with intuitive and fluid gestures.

As the June launch approached, the fervor was Beatles-esque, with early adopters camping outside Apple stores to be one of the first to get the new phone. *CNN Money*, who called the lead-up to the iPhone's release 'iPhone mania,' reported long lines of technophiles camped for three and four days, enduring thunderstorms and heat, and busying themselves with laptops and games while they waited (Kelley). However, in its first review of the iPhone, *Wired* detailed that in its first year, while Apple fanfare was at a fever pitch, sales of the iPhone lagged because of price and computer wariness. Yet, once vetted by early adopters, the next generation of iPhone, which promised a faster 3G network and boasted a price tag that was \$200 cheaper than the original model, sold 10 million units in just five short months. (Chen).



*Figure 5: Waiting for iPhones NYC, 2007*

While this seems to be a clear cut case of economics, however, *Wired's* Brian X. Chen supports the idea that while economics and new-tech syndrome might attract some, that the secret to iPhone's success was more complex and had much to do with the conversation between

consumer and technology. For, unlike other mobile devices and previous mobile tech, the iPhone had a distinct, consumer-driven philosophy associated with Apple's overall purpose to make "tools for the mind to advance mankind" ("Mission Statement"). Chen asserts that the iPhone was a mobile iteration of the Apple II, in that it was "the first [mobile] phone whose software was designed with the user in mind", making all of its applications "pleasant like a massage." In other words, the physical experience of the iPhone—the finger Tai Chi of pinching, tapping, and swiping—combined with the ability to quickly shift from one activity to another, was uniquely intuitive.

### ***3.2.2 The App Store***

As demonstrated, the first impressions of would-be consumers and competitors, and the intuitive physical feel of the device are both a part of consumption; yet, meaning-making through the iPhone's consumption is not enacted without software, more specifically the App Store. In a description of their work with the iPhone, technologists Hjorth, Burgess, and Richardson, state that "the "iPhone moment" functions as a barometer for broader patterns of change... a symbol, culture and a set of material practices around contemporary convergent mobile media" (viii). These convergent media move beyond Jobs' three devices, and into the App Store, which catalyzed the iPhone as a gateway, because it turned the device into a function Lego, where consumers and producers could individualize their experiences through the addition of apps.

Interestingly, the App Store came about through a moment of piracy and appropriation; independent techies and hackers saw the potential of the iPhone for accepting these widgets and first began to *jailbreak* the iPhone, or remove the proprietary software restrictions that allowed Apple's operating system to remain closed. Jailbreaking the iPhone became a pastime for the tech-savvy who wanted to extend the purposes of the iPhone through third party applications that



could tailor the iPhone to an individual's specifications. The rise of jailbreaking became a cat-and-mouse game between hackers and Apple developers, who then began to run frequent updates meant to stall hackers' efforts.

The irritations of jailbreaking, however, were actually a blessing in disguise for Apple. While Apple struggled to keep hackers at bay, the situation hinted the possibilities of what the iPhone could become and revealed an entirely new market for third party applications. Remaining a consumer-driven company, Apple took the radical step of incorporating the notion of further personalizing the iPhone, and introduced the App Store, where independent App developers could market their products. From an economic point of view this compromise made sense: deflate the jailbreaking situation by giving App developers a legal forum where they and Apple can make money, which in turn keeps new iPhone users loyal, and creates new possibilities for accessories.

However, as a component of the gateway, the App Store is the catalyst that realizes the potential of the iPhone as a multi-use device. With the App Store in place, and with the ability to shop and use apps, the iPhone ceases to be a mobile phone with additional applications, and becomes a fully mobile device; a true technological Swiss army knife. For instance, in 2015, industry magazine Tech Insider released their list of "The 10 most innovated apps in the world" (Heath). Included in this list were WeChat, China's messaging app, which allows them to do much more than chat, including send money, order food, or hail a taxi; SnapChat, which introduced "ephemeral messaging"; Uber, the on-demand ride service, which Heath suggests "could eventually become the way we get everything from our packages to our groceries;" and Foursquare, the community feedback App that is being consumed by the rise of Yelp.

The innovation of these Apps is not just in the niches they target, but also in how they are consumed. The nature of apps is that they can appeal to an individual while also reserving the potential of changing larger, social behaviors. Moreover, they allow consumers to manage multiple aspects of their life that require they communicate specific needs or wants. As of 2016, one may date, bank, pay bills, purchase nearly anything, set appointments, engage in multi-location meetings or talk to friends overseas, research, read books, or learn a foreign language all through apps on one device. As such, not only does the modern smartphone allow a consumer to personalize or compartmentalize their activities, they also consolidate the places in which these activities occur. In other words, no matter where a consumer is, the modern App allows them access to tools that would once have kept them stationary.

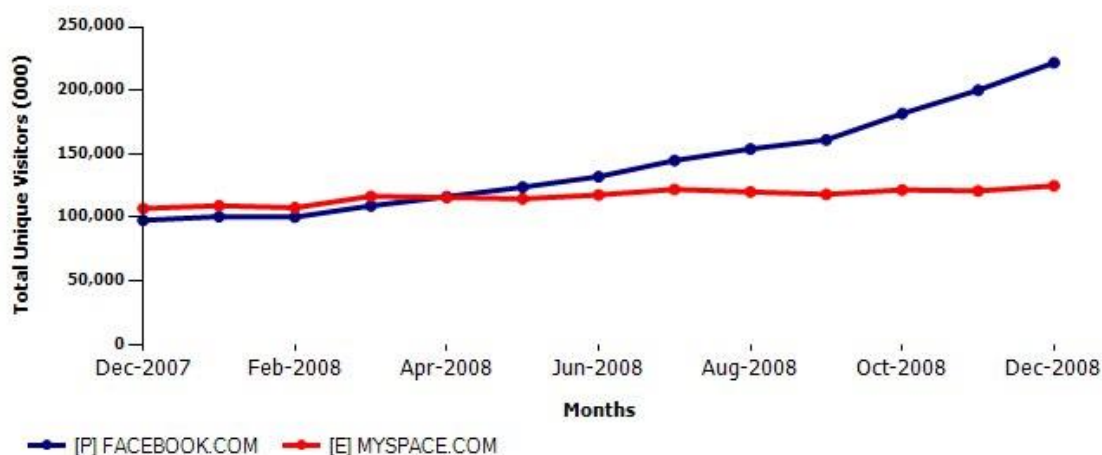
### ***3.2.3 Example: the Facebook App***

The introduction of the Facebook App in 2008 demonstrates just how quickly and definitively Apple's model of the App Store changed cultural habits. As of December, 2015, statistics show that 1 in 5 minutes of all digital media time is spent engaging with social media; moreover, close to 80% of social media interactions occur on mobile devices, both smartphones and tablets (Sterling). These numbers are a testament to both our current levels of mobility and the ways modern, tech-heavy societies choose to interact and communicate. Of these multiple social media sites Facebook "dominates all other networks in engagement," regardless of age groups (Sterling). However, just ten years ago Facebook had serious competition with other social media sites, most notably its rival, Myspace.

Prior to the introduction of the Facebook app, Facebook and Myspace were fairly balanced competitors. Myspace had already gone mobile in 2006, pairing with wireless carrier, Cingular, whose subscribers could download a Java app for \$2.99/month, that would allow them

to manage their profiles from their phones. However, the program had problems; function was limited, it included a subscription price, and there were bugs. Additionally, Myspace was facing an identity crisis of sorts, marketing itself as both a social media and entertainment media location.

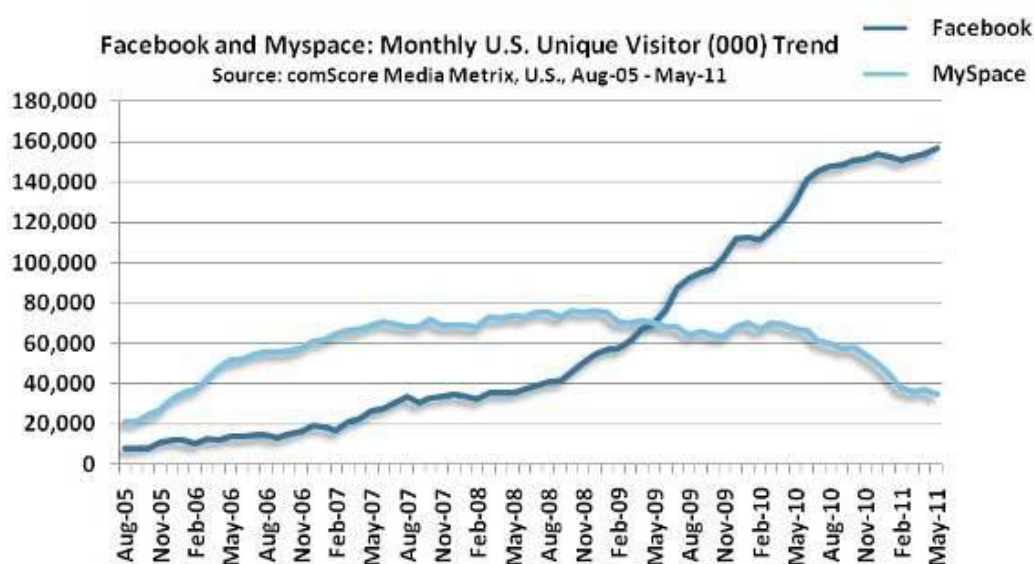
*Table 2 Source: TechCrunch, Facebook versus Myspace*



Statistically, while Facebook was on the rise as a social media outlet in 2006, Myspace and Facebook enjoyed an even footing, with differing publics: Facebook's site attracted a collegiate, white collar crowd, while Myspace was "the haven of subaltern teens," (Oshiro). However this even footing changed as Facebook decided to expand its reach, creating both Facebook Connect, which would allow users to post from anywhere on the web, and a Facebook mobile app, allowing users to post on-the-go. In the spring of 2008, as iPhone launched the App Store, Facebook offered a mobile App that could be downloaded for free at iPhone's App Store. Alternately, Myspace remained with Cingular and continued its subscription, which was common for many apps at the time. However, as Table 2 and Table 3 show, this is the year that Facebook began to overtake Myspace in social media dominance, despite continued arguments

that Myspace could recover because it was able to “monetize its audience much better than Facebook” (Arrington).

*Table 3 Source: TechCrunch, Facebook's rise over Myspace*



Of course the shift from Myspace and Facebook had to do with more than just the introduction of an app; Myspace faced some internal struggles that would eventually result in a change in ownership and an overhaul of its marketing presence; it would also turn its attention to its relationship with musicians, looking to build it along a YouTube model. Still, Facebook tapped into something crucial happening in the public sphere that Myspace executives did not entirely embrace. A mobile revolution was mounting, one where mobility was not a convenience that could be paid for, but rather a necessity that must be built into a social media company’s purpose. The ability to connect in multiple ways, at any moment, was on the horizon.

### 3.3 Gateway Representation

Gateways are intimately connected with representation. As W.S. Pickering states in his ‘introductory sketch,’ “Where they relate to the social world, representations are not just ideological reflections or superstructures of various social orders. The claim is that they picture the social order as an objective expression of systems of ideas” (12). Associated with this is Emile Durkheim’s notion of ‘collective representations,’ sometimes described as a collective conscience or self-referencing institutions (Pickering). Collective representations are a sort of social glue, “provid[ing] shared understandings which [create] social solidarity, binding individuals into a society” (DuGay et al. 12). These representations are modal and may be visual, spatial, gestural, aural or verbal; what counts is that, as collective representations, they move from being arbitrary to being a cultural signifier. The meanings of gestures, such as nodding or giving a thumbs up, for example, often vary from culture to culture.

Gateways, whose job it is to appear both familiar and foreign, help to alter these collective representations. In fact, gateways might be compared to Max Weber’s interpretation of collective representations. Weber specified that some actions were involuntary or without cultural significance, while other actions required a cultural context to interpret their meaning. In other words, people create conceptual frameworks through which their reality is then assembled, frameworks which are supported by the conceptual frameworks of others. When something new or different arrives, it is assessed according to the cultural framework for meaning and similarity. Gateways seek to access a conceptual framework through familiarity, in order to introduce a new representation.

### 3.3.1 *Embodied Representation*

While what the iPhone represents extends beyond the physical, its physical attributes give form to these representations. This physical embodiment speaks to the hedonic aspects of innovation (Arrudo-Filho, Cabusas, and Dholakia). At the outset of their study on the social behavior of iPhone devotees, Arruda-Filho, Cabusas, and Dholakia assert that the early iPhone attracted two different sets of consumers, iPhone devotees (“Apple acolytes”), “whose loyalty to the brand is so intense that it survives poor product performance, scandal, bad publicity, [and] high prices...and...social users who use mobile technologies as tools to create relationships among technology, body, and social roles ...and engage in rhetoric and “meaning-making” that occur via social interaction.” Both of these groups are essential to the sort of innovation that the iPhone represented: one that was so shiny, it may have significant limitations in the short term, but one that was also so significant, it could change the way meaning-making and rhetorical engagement evolve.

Physically, the iPhone blurred lines before it was even released. The lack of keyboard was both thrilling and disorienting for many; a smooth glass face that lit up with your fingertip felt almost alien. Beyond the screen, though, was what Apple promised would be more than a phone, but an entire communication system devised through a graphical user interface and accessed through that magical looking-glass of a screen. *Wired*'s David Pierce recently looked back at the first iPhone, and recalled the first time he ever touched one:

“The last keyboarded phone I ever owned was a gray Motorola Q9. It had email, Solitaire, and a D-pad just below the screen. I bought it on eBay (2007!). A few weeks later, my friend bought an iPhone. It didn't have 3G or GPS like my Q, couldn't send picture messages like my Q, couldn't even shoot a video like my Q. In every way we'd

ever measured phones, the iPhone was inferior. But the first time I swiped my finger to unlock its screen, it was clear the iPhone was the future.”

This “future” that Pierce indicates, however, is not the touchscreen. In fact, Pierce explicitly states that while it is “tempting...to say it was the touchscreen that revolutionized smartphones” that is not what makes the iPhone different. “The real magic of the iPhone was that you didn’t actually interact with the screen at all. You interacted with a world on the other side—and you believed you were interacting with something real.” In other words, the iPhone had a portal-like sense to it, wholly futuristic, but tangibly so. The visual configuration of the buttons and images responded to touch, were subject to motion and maneuvering, and looked denser than a 2-D image. As Pierce puts it, “It really sold the illusion that collections of illuminated pixels were objects that you could directly manipulate.”

If Pickering’s description of representation—that representations picture the social order as an objective expression of systems of ideas—then Pierce’s illusion is part of a change in representation, where the iPhone slightly reconfigures the systems of ideas through the complete newness and familiarity of its design. Pierce affirms this, stating that “the gesture-driven touchscreen changed, work, entertainment, transportation, socializing, everything. Our lives are so interwoven with its influence that explaining it is a little like trying to explain the mystical powers of your car’s steering wheel.” As a result of the iPhone, smartphones transitioned swiftly to touchscreen technology, trying to emulate the same familiar-future feel that revolutionized the way tech-engaged cultures experience the world, one elegant swipe and tap at a time.

Yet, the visual and haptic representations of the iPhone are not just about illusion of reality, they also cater to a hedonic illusion. The phone, at its core is a utilitarian object meant to make certain tasks in everyday life easier to perform. But wrapped around the utilitarian aspect

of the iPhone is the sensory, pleasant feel that the user is allowed to access. The original iPhone was palm-sized and curved on the back edges, making it pleasant to grip. It also had a feeling of quality because of its density and the smoothness of the glass. Unlike other phones at the time that might flip, twist, click or snap, the original iPhone felt like a small brick of potential that could only be awakened by the user's touch. For this reason, the iPhone felt right, as Brian X. Chen said, "...pleasant like a massage."

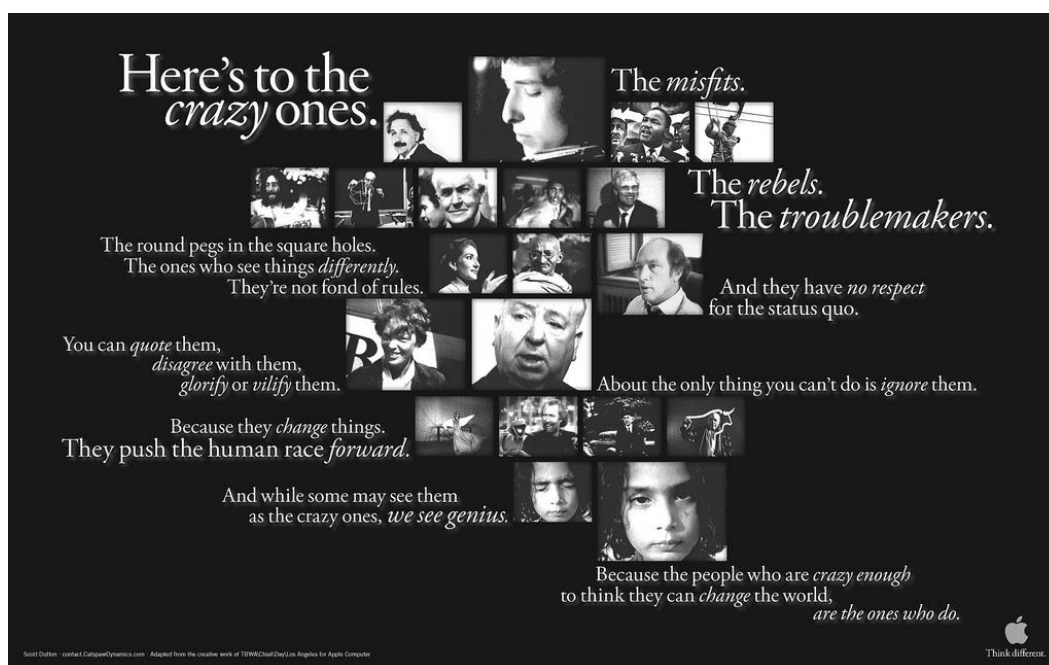


Figure 6 Think Different Campaign; Source Mark Mathoslan Flickr, CC-A-NC-SA2.0

### 3.3.2 Representation and advertising

Representation, as it pertains to the iPhone can be examined in a few different ways. Because it is a commercial item, one of the simplest examinations of its representation is through its branding. The Apple brand and the Apple vision have both always worked in concert to make a specific and unified statement about the company's intentions. Its original mission statement reflected an idyllic promise to be forward thinking and contributive (see page 22). As a brand, Apple has always had a specific aesthetic: young and edgy, friend of the mad genius and the



independent thinker, a herald of the future. Some of the most notable advertising campaigns have belonged to Apple, in which larger statements about society were intertwined with product display.

However, Apple's branding, which is closely tied to the iconography of the iPhone, has historically been a tightly choreographed expression of social idealism and human connection. For instance, Apple's "Think different." campaign, which lasted for five years, featured a variety of images that aligned Apple with revolution, independent thought, and wisdom through superimposing the Apple logo and "Think different." tagline over the portraits of cultural icons.

The advertisers who created "Think different." sought to revive the company's with image and representation as a company of thinkers and dreamers. This campaign was launched in 1997, a pivotal year for Apple, and responded to IBM's "Think" campaign. IBM and Microsoft had been steadily beating down Apple, who faced a dire future; Steve Jobs had just been reinstated at the helm to refocus aspects of the company that had gone astray, they had 90 days of working capital left, and needed to repair their ethos after a series of lackluster quarters (Evans).

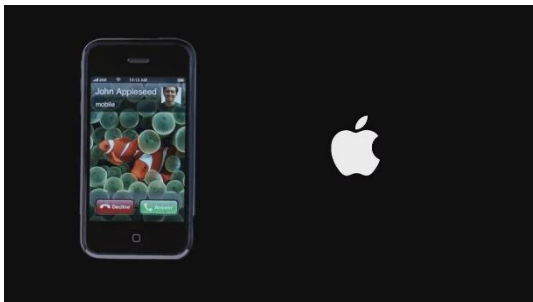


*Figure 7 Ali "Think Different" billboard; Source: Johnny Evans, ComputerWorld*

Craig Tanimoto, who was the art director assigned to Apple's task, began sketching looking for a direction. Much the way writers free write or brainstorm, Tanimoto used his sketches of logos to help him think through the problem. From these sketches, Jonathan Littman reports, came a riff on Magritte's *Treachery of Images*, "a huge billboard featuring a boxy Mac, and a slogan... "This is not a box" (Evans). Tanimoto sketched further, adding a reminder to himself to think outside of the box, or to "Think different."



*Figure 8 Will Ferrell in "Hello" ad, Source YT, EveryAppleAd, cc-BY*



*Figure 9 Closing image of "Hello" ad; source, YT, GulTechLife, cc-BY*



*Figure 10 Still of Lucille Ball in "Hello" ad, source YT, EveryAppleAd, cc-BY*



*Figure 11 Opening shot from "Hello" ad, Source YT, EveryAppleAd, cc-BY*

Out of Tanimoto's Magritte-inspired sketches came the "Think different" campaign, which not only aligned Apple with "the crazy ones," but also reaffirmed to tech culture that Jobs was firmly back in control. The advertisements were everywhere, on television and in print, from billboards and bus stops to magazines. The pervasive nature of these ads, with their simple inspirational image, and rainbow apple, made Apple synonymous with influence and ingenuity.

Ten years later, with the release of the iPhone, Apple called upon the spirit of older campaigns like "Think different." to create their new campaign. The first iPhone campaign, "Hello," was simple, bookended by images of a phone. The first scene of the ad is a black and white image of a black phone on a desk ringing (figure 8). What follows is an old film montage of movie icons answering the phone, ending with a new image—a new representation—of the phone in the form of an iPhone. Similar to the "Think different" campaign, "Hello" connects comforting and inspirational images to the unknown. But, this iteration of the Apple

representation does not want to remake reputation, but rather establish the iPhone with being the entity that will change the way people do the most normal thing: answer the phone.<sup>5</sup>

The phone, as a cultural artifact and icon, represents multiple things, which Apple translates to the iPhone, through their advertising. First, the phone as a symbol represents connection on multiple levels, because the iPhone is literally a line connecting its user to the rest of the world. Yet, it is also an expression of an individual's life, as expressed through their computing choices and the ways in which they choose to connect. With the introduction of the iPhone, an individual was finally given the chance to engage with multiple parts of their personality—work, social, guilty pleasure, self-improvement—through a single portal, making it an expression of their consciousness. In combination with the first iPhone ad campaign, what the iPhone comes to represent, overall, is a 21<sup>st</sup> Century, technological awakening.



*Figure 12 MacIntosh Plus Hello ad, 1984, source Kit Cowan, Flickr, cc-nc-nd-g-2.0*

However, the premier ad, “Hello,” was not new, but drew upon long-standing Apple iconography and meaning. In fact, “Hello” recalled earlier MacIntosh advertisements that responded to another historical moment, that of the rise of the PC. For Apple, “Hello” represents

---

<sup>5</sup>All of the first generation iPhone ads can be conveniently accessed on the YouTube channel EveryAppleAd: <https://www.youtube.com/watch?v=jDZEoBgKTiY>. Watching them in succession reveals some interesting things about how they work together to complete a sketch of what the iPhone was encouraged to be.

multiple ideas, all aimed at connection and change. “Hello” is an acknowledgment of new paradigms, an extended hand to society, a way to connect to others through new and different mediums, and a greeting to consumers and creators alike. Looking at Apple’s “Hello” ads reveals a consistency and repetition of message that reinforces Apple’s place in the world. “Hello,” with the iPhone takes on even more direct meaning because “Hello” is how people initially engage with the device, becoming open to whatever is on the other side.

On the heels of “Hello” came a series of ads that demonstrated how the iPhone works, featuring a light, instrumental tune and a disembodied hand tapping, swiping and pinching the iPhone to demonstrate different aspects of the device (figure 12). The first of these shows the hand holding the phone against a black background while a finger uses the swipe bar to unlock it. A man’s voice says “This is how you turn it on.” The hand and voice then go on to demonstrate the features of the phone—this is your music; this is your email; this is the web—while turning the phone from portrait to landscape, pinching and tapping to enlarge, finally culminating with a phone ringing as the voice states, “and this [pause for a beat] is a call.”

The disembodied hand ads continued to demonstrate other things that are now taken for granted. Another early version of this call begins with the hand holding an iPhone playing the film, *Pirates of the Caribbean*. The voice over suggests, “Say you are watching *Pirates of the Caribbean*,” the film then flashes to a Kraken’s tentacles dragging a ship undersea. “Mmm, did somebody say calamari?” the voice asks, as the hand taps on the phone to pull up a map and type seafood into the search bar. Several pins show up on the map (of San Francisco), while the voice continues, “The closest would beeeee...ahh!” The hand chooses a pin to pull up a phone number, which it then taps on. A phone begins to ring and the hand pulls the iPhone off screen like it is being put up to an ear.



Figure 13 *Disembodied hand*, Source, Matthew Miller, YT, cc-BY

The purpose of the disembodied hand ads was to demonstrate the various things that a consumer could do with the iPhone, acting in concert as a spokesperson for the iPhone and focusing on convenience and versatility: reading The New York Times (“This is not a watered down version of the internet...or the mobile version of the internet...it’s just the internet...on your phone,” the voice explains); dining out, booking a vacation, changing a flight; preparing for the day (“It’s amazing what fits in a pocket these days...your favorite music...all your email...today’s newspaper...endless entertainment...and of course...a phone.”). The voice is youthful and casual, but matter-of-fact. The hand, reminiscent of *The Addams’ Family’s* Thing, supports the voice, and provides the action. With no body, the iPhone remains the face and body, having things simultaneously *done* to it, while it also actively *does* things.

The disembodied hand concept remained popular through the launch of the iPhone 3G, which demonstrated the App Store and popularized their trademarked tagline “there’s an App for that.” But the significance of these ads is not in their sparseness; it is in their representation. By minimizing the human element and making the iPhone the star, these ads kept the iPhone as the undistracted focus; yet, in giving the iPhone a voice to express with and hands to create with, these ads also anthropomorphize the iPhone, making it speak for itself. These ads, therefore, contribute to the representation of the iPhone as a friendly, assistant with helping hands.

Alongside the disembodied hand ads, Apple launched a series of ads with ordinary consumers discussing their iPhone habits and recounting stories in which their iPhone came in handy. One gentleman, dressed casually in shorts and a t-shirt, describes the number of devices he toted around before his iPhone, so many he had to carry a bag: “I want to get up, grab my iPhone and my wallet, and get out of the house...I never forget my phone...that’s my lifeline.” Another gentleman, early thirties, dressed in an Oxford and a tie calls the iPhone, “one of the greatest advancements in the history of mankind...” A twenty-something describes avoiding an awkward social encounter with his girlfriend upon meeting her boss and his fiancé; a young playwright adjusts his plays performance in real time with the help of the iPhone; a ballet dancer mobile-blogs her performances with live images and updates through her phone (“it’s multi-tasking...it’s important, even for ballet dancers”).

All of these advertisements were part of creating new collective representations. “Hello” provided the link from the past to the present by accessing ingrained frameworks with the repetition of traditional phone calls and inserting a new representation with the image of the iPhone. The disembodied hand commercials also played with the idea of the familiar and the foreign by demystifying the iPhone, beginning with “This is how you turn it on.” In repetitively demonstrating the hand gestures needed to operate the iPhone over the course of several years, the gestures became part of a mobile lexicon, whereby they accrued meaning. As would-be consumers became actual consumers gaining comfort with these gestures, they gained even more meaning as they were attributed to specific practices. Behaviors that seemed foreign now had context, both visual and gestural, which was reinforced through these commercials.

The commercials that featured real users giving their personal thoughts and contact with the iPhone personalized the device. While “Hello” was introductory, and the disembodied hand

was demonstrative, these commercials were experiential, imbuing the iPhone with humanity and insinuating that the device was not an exotic, niche item for techies or gadget heads, but was both accessible and beneficial for everyone. These experiential ads also elaborated on the disembodied hand's demonstrations through these personalized accounts. While the disembodied hand ads demonstrated hypothetical situations ("suppose you are watching *Pirates of the Caribbean*"), the experiential ads recounted live situations where communication was made easier or was transformed.

### 3.4 Gateway Identity

**Interface:** the place or area at which different things meet and communicate with or affect each other...a system that controls the way information is shown to a computer user and the way the user is able to work with the computer...an area or system through which one machine is connected to another machine. (Merriam-Webster)

In looking at the iPhone and identity, a few givens must be established. First, individual and collective identities are constructed through amassed human experience, but they are also performed. Lalonde, Castro, and Pariser describe this performance as "a repetition of stylized actions that are socially validated and discursively established," and is tied to culture, which "emerges out of the negotiated spaces where social dimensions are enacted by participants" (41). While these negotiated spaces have traditionally been concrete places of gathering and interaction, with the internet, and now mobile technology, these spaces are becoming increasingly virtual.



The second truth, then, is that virtual spaces can be places of culture and identity construction. Moreover, with the proliferation of mobile devices, the spaces are increasingly accessed, mobile-ly. In examining mobile technologies as interfaces, Adriana de Souza e Silva reveals that there has been a shift from “a virtual space that at one time existed only online and was primarily experienced through a desktop computer, to a currently more physical, in-the-world virtual interface made possible by mobile computing devices” (39). De Souza e Silva also claims this space, which she calls cyberspace, as a place with “embedded social practices, in which the supported infrastructure is composed of a network of mobile technologies” (271).

Given both de Souza e Silva’s assertion, combined with Lalonde, Castro and Pariser’s definition of identity, the third truth states that the iPhone, as an interface, contributes to identity construction. Yet, the iPhone contributes not only as an interface, but also as a physical manifestation of these performances. This is nothing new—people frequently associate their everyday experiences with tools and technologies with their personal identities. Modern knitters incorporate their needles and yarn into decorative badges and tattoos, while online gamers create alternate online identities that they then outfit in cosplay; people often decorate and adorn their cell phones to reflect their personalities and interests.

The growth of digital technologies as spaces of culture and identity creation has led researchers like Carter and Grover have examined the phenomenon, calling these identity constructions *IT identity*. They define *IT identity* as “the extent to which an individual views use of an IT as integral to his or her sense of self” (932). They note that “...in many societies, it [now] appears almost impossible to fully participate in normal, everyday activities without IT.” Moreover, through conscious, habitual engagement with specific IT technologies and interfaces that provide a link to others in their social order, individuals construct these *IT identities* (932).

In other words, these technologies are creating the parameters of the individual realities of their everyday users.

The iPhone is one such technology—a device that occupies both time and space, connecting users across a digital interface. While the iPhone meets the classical definitions of an interface, serving as both a place where communication happens, and a place that provides access to other technologies, it also meets an extended definition of the interface, *the linguistic contact zone*, a term that Selfe & Selfe borrowed in 1994 from Pratt to describe computer interfaces in the classroom (482). Pratt defines these zones as “social spaces where cultures meet, clash, and grapple with each other, often in the contexts of highly asymmetrical relations of power, such as colonialism, slavery or their aftermaths...” (Cited in Selfe & Selfe 482). Selfe & Selfe elaborate further, stating that computers “are articulated in many ways with a wide range of existing cultural forces,” meaning that the current pervasive nature of computer technologies has impacted multiple social institutions (482). However, they also have an impact on the development of IT identity.

As social spaces, these zones receive regular and regulated traffic that abides by real world social norms. Selfe & Selfe put forth that “if the map of the interface is oriented simultaneously along the axes of class, race, and cultural privilege, it is also aligned with the values of rationality, hierarchy, and logocentrism characteristic of Western patriarchal cultures” (491). This “logocentrism,” Selfe & Selfe claimed, reinforced Western, majority culture aspects upon computer consumers, including Standard American English and formal, outside-in forms of problem solving and knowledge construction. By this they mean that standard programming protocols preference both the English language and Western constructions of meaning making

over more personal, intuitive ones, creating barriers for those who do not identify with these norms.

Alongside these Western cultural reinforcements was the development of an IT culture that mirrored these constructions. However, Selfe & Selfe saw curious changes in the social interactions of computer specialists in these linguistic contact zones. Instead of insulating, “increasing numbers of computer specialists have begun to identify limitations inherent in relying on hierarchical approaches...in dealing with learners who have varying levels and kinds of visualization skills...and in representing non-hierarchically organized information structures...and in coping with natural language input” (492-3). What Selfe & Selfe explicitly identify are alternative programming paradigms meant to be more user friendly: object oriented programming systems (OOPS) and the development of icons and objects, which create meaning through *bricolage*, “the construction of meaning through the arrangement and rearrangement of concrete, well known materials, often in an intuitive rather than logical manner” (Selfe & Selfe 493).

These bricolaged OOPSs would later become widgets and Apps. Bricoleurs, programmers who employ bricolage, “reason ‘from within,’” charging a path to users who are “more comfortable with a relational, interactive, active and connected approach to objects” (Selfe & Selfe 493). Steve Jobs, in a 1994 interview with Rolling Stone, explained OOPSs in very practical terms:

“Objects are like people. They're living, breathing things that have knowledge inside them about how to do things and have memory inside them so they can remember things. And rather than interacting with them at a very low level, you interact with them at a very high level of abstraction, like we're doing right here.

Here's an example: If I'm your laundry object, you can give me your dirty clothes and send me a message that says, "Can you get my clothes laundered, please." I happen to know where the best laundry place in San Francisco is. And I speak English, and I have dollars in my pockets. So I go out and hail a taxicab and tell the driver to take me to this place in San Francisco. I go get your clothes laundered, I jump back in the cab, I get back here. I give you your clean clothes and say, "Here are your clean clothes."

You have no idea how I did that. You have no knowledge of the laundry place. Maybe you speak French, and you can't even hail a taxi. You can't pay for one, you don't have dollars in your pocket. Yet I knew how to do all of that. And you didn't have to know any of it. All that complexity was hidden inside of me, and we were able to interact at a very high level of abstraction. That's what objects are. They encapsulate complexity, and the interfaces to that complexity are high level" (Goodell)

Selfe & Selfe, who were investigating digital engagements prior to the mobile boom, saw OOPs and bricolage as a form of resistance to hegemonic protocols, and within that resistance they identify possibilities for both individualization and unification. Instead of keeping the end user intimidated by their lack of computing knowledge, OOPs were user friendly, engaging and developed a sense of agency with the end user. But how do these theories apply to mobile, smartphone culture, more than a decade later? Moreover, how is the *IT identity* manifested through OOPs as they apply to smart phones? How do both relate to the iPhone as a cultural gateway?

### 3.4.1 *IT iDentity*

The iPhone's contribution to *IT identity* begins before the iPhone. As noted, Apple's prefigurative branding practices staked a claim on characteristics of innovation, genius and individuality. A year prior to the launch of the iPhone, Apple released the first of a series of sixty-six ads that ran from 2006-2009. This campaign—*Get a Mac*—features Justin Long, as a Mac (“Hello, I’m Mac...””) and John Hodgeman as a Window’s PC (“...and I’m PC”) having a series of conversations against a white background. Hodgeman, always dressed formally, is a bit stuffy and formal, implying that he is inflexible. Long, on the other hand, is always casually dressed, laid back, and emits an air of relaxed logic.

These characters hint at some of the qualities called out by *Selfe & Selfe*. While both are straight white men, Mac often elaborates on the user experience, while PC relates to traditional forms of computing:

**MAC:** Hello I’m a Mac.

**PC:** And, I’m a PC.

**MAC:** I’m into doing fun stuff like movies, music, podcasts...stuff like that.

**PC:** I also do fun stuff like timesheets and spreadsheets and pie charts.

**MAC:** Okay, umm, by fun I mean more...it’s more in terms of...for example, it’d be kind of hard to capture a family vacation, say with a pie chart, you know, ummm...

**PC:** Not true. For example [points to greyscale pie chart on a stand], this light grey area could represent hangout time, where this dark grey area could represent just kicking it.”

**MAC:** Yeah...no, I feel like I was there....

(Mac Ad, “Work vs. Home”)



*Figure 14 Long and Hodgeman as Mac and PC, source You Tube cc-BY*

While the early *Get a Mac* ads discussed usability, in 2007 *Get a Mac* expands to include features on iLife, Apple's new software suite for OSX and iOS, which was aimed at entertainment and media creation, and included iTunes, iMovie, iPhoto, among other features that were eventually incorporated into the iPhone identity. These ads hone in on user identity by connecting personal identity with software configurations and purposes. They asked if a consumer connected more readily to systems that valued innovation, variety, family, creativity, and difference, or to systems that valued tradition, hierarchy, business, and creative limitation. In other words, with the inclusion of the prefix "i", *Get a Mac* introduced the gestating concept iPhone and asked viewers the significant question, "Are you a Mac or are you a PC?" By extension, with the introduction of the iPhone, they also ask "Are you a cell phone or are you an iPhone?"

In fact, the iPhone's name speaks quite succinctly to this question. Through his unveiling at MacWorld, Steve Jobs never once calls the device *the* iPhone; rather he simply calls it *iPhone*. In dropping the, Jobs gives his device a name, attaching a HAL-esque personality, and immediately linking it to both action and identity. iPhone becomes the action "I phone," as in i

[do stuff with this] phone, but it also suggests that the device stands proxy for its user: i [in the form of a] phone. “This is my iPhone” equally means “this is an accessible me.” Accordingly, the iPhone, as an interface, magnifies *IT identity*; reinforced through utterance and usage, the iPhone becomes the surrogate embodiment of the user’s identity, organizing how that user individually prioritizes, communicates, thinks, and socially engages into boxes and programs that can be isolated or accessed upon command.

These boxes are Apps whose icons adorn the face of the iPhone. Through Apps like Tinder, Match and J Date, consumers can romantically connect; with Facebook, Snapchat, Instagram and Facetime, consumers can socially connect; and with Apps from news outlets, movie and television streamers, and digital radio, consumers engage with both pop culture and socio-historical entities; LinkedIn, Outlook, and iPhone’s Mail app encourage business consumers to keep connected even away from their computers. Given all of these, Apple predicted the future when they said, “there’s an app for that.”

Apps become a part of identity-making, and are part of the digital world in which smartphones connect and communicate. If the iPhone suggests another world on the other side of its screen, then the apps on that screen are the features of the consumer’s digital face. Their IT identity, in turn, constructs a part of a consumer’s analog identity and with it how they interact with the world at large. No longer are consumer’s being asked “are you an Mac or a PC?”, instead they are being asked if they are Twitter or Instagram, Tinder or Match, Skype or Facetime—in other words, how do they choose to communicate and where do their ideologies lie? Every time a consumer chooses an app for their face and incorporates it into their everyday

digital interactions, a consumer is cultivating their IT identity and what that identity stands for.

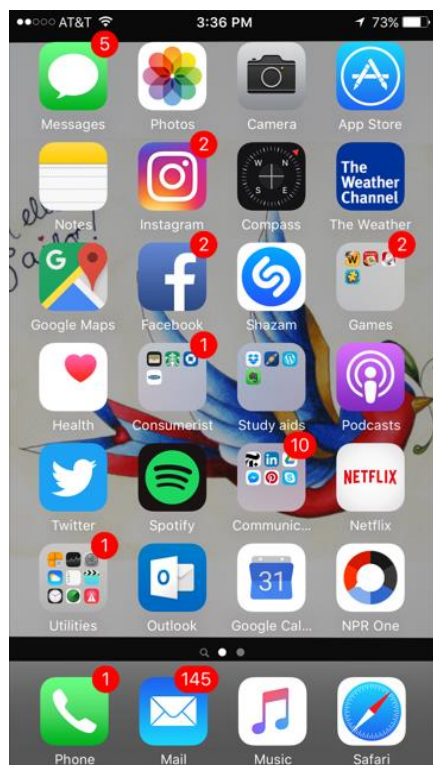


Figure 15 Author's iPhone "face"

### 3.4.2 *i*Identity and Literacy

The iPhone's mobile identity does not end at Apps and ads, however. Just as computers changed the face of the way people write and speak, so has the mobile paradigm. Prior to the iPhone, textspeak was already a concern for some. LOL's, IDK's, and abbreviated "u's" were already in common use and changing the landscape of informal literacy. These were all part of the impact of digital literacies, defined by Knobel & Lankshear as "the myriad social practices and conception of engaging in meaning-making mediated by texts that are produced, received, distributed, exchanged, etc. via digital codification" (5). In their introduction on the disparities between 'conventional' and digital literacies, Knobel & Lankshear explain that "numerous contemporary popular cultural pursuits involve highly technical and specialist styles of language.



Young people across the socioeconomic spectrum engage in these practices socially with one another in informal...peer learning” (11). Moreover, these practices engage with “digital artifacts of one kind or another [and entail] complex vocabulary and syntax” (11).

These digital literacies and practices have developed over the course of the computer age, creating a rich body of formal, written discussion. However, they have only just begun to translate and be applied mobile-ly. For this reason, while discussions of mobile technologies are dense in communications and marketing and early childhood education, discussing the smartphone as a distinct influence on digital literacies has not so richly manifested. Yet, there are places where discussions of mobile technologies are being linked to literacy, specifically among consumers who are asked to recount their literacy practices: the Digital Archive of Literacy Narratives (DALN).

Looking at the DALN’s narratives provides insight into how the iPhone and mobile culture has changed the ways in which literacies are utilized and considered. These narratives are self-tagged by their authors for organization by the archive. While typing in the search term “smartphone” returns just 8 narratives, entering the term “cellphone” brings up another 139 entries; “iPod” elicits another 13 narratives, and “mobile technology” returns 10 pages, over 297 items. Finally “iPhone,” itself returns 22 narratives. While some of these are cross-listed, the numbers make it evident that connections between mobile devices and literacy are being made. Within these narratives are explicit discussions of how these devices are coloring digital literacy.

Nick Kutsmeda writes in his “Digital Autobiography” (2016) that the iPhone is “one of the most significant pieces of technology.” He got one for Christmas after begging his parents to help him by paying for half, and he kept his original iPhone until he traded up for the iPhone 5. “There are plenty of times when I consider getting rid of my smartphone [for] a basic phone...it

would probably be about \$100 dollars less than I am paying now. Then I start to think of all the things I would be giving up: the camera to capture anything cute that my daughter does (which happens all the time), the GPS that keeps me from getting lost when I have to drive to Kutztown by myself, the unlimited access to information at my fingertips. I just can't do it. I can't bring myself to part with the technology."

In her literacy narrative, Jeni Laird also chooses to discuss the iPhone, specifically how it has transformed her everyday writing. "Words are everywhere," Laird notes, from "school—notes on the board, textbooks discussion boards—or for pleasure, like the TV guide, or a book, or songs on my iPod, Facebook wall posts, or text messages—I inevitably spend about 90% of my day reading." When Laird recalls how she learned to read, she cannot recall, but she claims that she never expected to "use literacy" the way she does now. While her introduction begins with incidents of reading outside the mobile world, she jumps immediately from early reading experiences she cannot remember to her cellphone, describing early iterations she owned and the limited functions they had; her Nokia 3390, "didn't have many functions other than to send text messages," and her Razr, which had internet, allowed her to "download games, ringtones, [and] look at random websites."

Laird notes, like Kutsmeda, that "everything changed when I received my first iPhone":

"The iPhone changed the way I did all my reading. I can use the iPhone for just about everything, like checking my email in the palm of my hand, finding weather updates, checking my Twitter, or checking my Facebook...I can also use the internet and Google to look up anything that I can possibly imagine...Google Maps helps me if I'm lost or if I'm just looking for a slice of pizza around. The camera is used to take pictures of anything I can possibly imagine...I use the calculator to split the bill every month, or

when I'm at restaurants...and as much as I despise it, I use the internet to read gossip blogs like Perez Hilton...a good friend of mine said, "Once you have an iPhone, there is no going back," and I completely agree...nothing compares to the iPhone. I'm able to read all day, every day, and I wouldn't change it for the world."

Like Kutsmeda and Laird, Luke Conroy also links his everyday literacy habits to his iPhone. However, Conroy's look at the iPhone goes a bit deeper. Unintentionally, Conroy links the emergence of smartphones directly with the introduction of the iPhone, ignoring other iterations like Blackberries and PDA's (which were marketed to a business class): "When the concept of the smart phones were introduced, I felt like I just had to have one...the idea of being able to check my Facebook, browse the internet, and use all kinds of applications was exciting to me...Right way, I put all my music and contacts into it and I started figuring out everything I could do with it...I said to myself... "I'm never gonna want to put this thing down..."

For Conroy, these forms of *doing* and interacting were attractive because they were synonymous with modes of *being*, as well: "After having the iPhone for a couple of months, I became almost attached to it. It was always in my pocket and I always had it close to me." Conroy sees his mobile, digital literacy extend beyond the social, however, and identifies his iPhone as a new tool for learning and thinking. "I realized I could use it for things that I would normally have to use regular resources for, such as a dictionary, a thesaurus, or even a pen and paper for that matter. There was always an answer right at my fingertips. There was never really a need to use other resources, like the library... and I was amazed that technology had come this far..."

Conroy also admits to drawbacks, including becoming "a little lazier" with spelling and relying on autocorrect. "this feature wasn't doing anything to actually help me learn to spell the

word; I'm not saying it's a bad thing that my phone can fix my grammatical errors, but what happens when I have to hand writ[e] something and I don't have my phone to catch my mistakes?" Still, he credits his iPhone with enhancing his literacy practices, overall, musing, "since I was constantly texting people, I was constantly writing, and I always wrote in complete sentences...I feel like it's helped me formulate sentences and become more fluent in my writing...I've gained knowledge from this phone since I've used it to learn about so many things."

Conroy's discussion of reliance on the iPhone is not unusual. Mark Shelton admits that "it was kind of embarrassing to see how much I valued my iPhone's top-of-the-line technology and needed it to communicate with people. I felt disconnected with the world...basically technology has opened up many new doors to the way we communicate and think."

While these contributors all speak for digitally entrenched generations, this iPhone identity shift is not confined to these generations. Dr. Lennard Davis, whose grew up in a deaf household, discusses his iPhone in very personal ways: "I love my iPhone...I love how it orients you in the world...it keeps you in touch and it orients you, which really goes back to the deaf thing...as a kid I felt very disoriented because I didn't have parents who could orient me... but my iPhone is great...all I have to do is pick it up and say..."where am I?" and it will tell me...it connects you."

However, not all people have these same experiences. Some feel less connected or oriented than ever. Some lament: "We live in the age of social media and iPhone and tablets and computers to the point where we get drowned in it...newspapers, articles, novels, have all become [digitized]...paperback books aren't as cherished or as valued as they were before" (De La Rosa). Others feel out of time and place: "I'm just not used to that new technology ...I deal

with it every day and it does get frustrating. And what I have to remind myself of is that's just what it is nowadays in order to function in society today. Language has really changed and if you don't text or do anything on your iPhone...it's frustrating but I'm learning to deal with it" (Harrington).

The disparities in these narratives speak to similar disparities in cultural identity. For those who have access to smartphones, the mobile *IT identity* is integrated and confident. Yet, for those who do not identify with mobile, technological culture, there is loss and division. This identity divide is not just internal, however; there is also the matter of socio-economics. Today, smartphone technology is pervasive and this divide has narrowed considerably but, when the first iPhone came out, possession of one reflected status. Luke Conroy hinted at this, noting that he was the type of guy who always wanted "the latest and greatest," which, for him, was the iPhone when it debuted. For Conroy, possessing the device cemented his status as a trendsetter. Annie Mendenhall, who conducted her literacy narrative in 2008 when she was a PhD student, also raised the topic of the socio-economic divide. When asked if she used any communications devices, like a cell phone or a Blackberry, she responded:

Annie: Ummm, I have my cellphone and I text message pretty frequently, yeah. Umm, probably the same group of people that I message on Facebook pretty frequently (laugh). And...ummm... then I also...my husband has an iPhone and so whenever I'm out and want directions or whatever, I use his iPhone... sometimes I check my email on that and, ahhh ...it's really cool, I reeeally want one, but that would be too expensive...so....

All of the aspects discussed in these narratives contribute to the assertion that the iPhone and iPhone technologies influence identity-making. As a gateway, the iPhone offered a glimpse

at how digital literacy can be interpreted in a mobile space. Jeni Laird's friend spoke directly to this when she exclaimed, "Once you have an iPhone, there is no going back." Early iPhone technologies introduced pivotal new ways of doing and being—of performing and becoming—that shifted what it means to communicate individually and culturally.

## 4 CONCLUSIONS

### 4.1 Commonalities between the gateways

In explicitly defining this new metaphor of the gateway and explicating a digital model, this analysis spotlights the artifacts that participate in cultural change. Many times cultural artifacts are used until they are rendered obsolete, and left to be cataloged by historians, archivists and archaeologists. However, these artifacts make up the material stuff through which social and cultural ideologies are enacted. While these objects do not have independent agency, as material culture they are active participants in cultural change with dynamic identities that depend upon both their initial and unintended uses.

The California roll's role as a cultural gateway was to reduce alienation and assuage concerns over cultural differences between two formerly hostile nations. It was more than just a media ploy meant to boost sushi sales; rather, it participated in a long reconciliation process that was complicated by racial bias, violent aggression, and the fatigues of war. Through its creation, the California roll told Western consumers that there were commonalities in taste, a quality that extends beyond the physical palate to a socio-cultural one, and served as a portal linking a time before the war to a future after it.

While the California roll unintentionally functioned to close cultural and ideological gaps, the iPhone acted as a doorway between digital paradigms. Viewing the iPhone through the lens of the Circuit of Culture reveals the ways in which the device has both influenced and been

influenced by digital interactions. And, while we have only looked at the American public, other researchers have studied the effects of mobile technology, and specifically the iPhone, in other cultures with similar results<sup>6</sup>. But, for the American culture, where the phone was first conceived and launched, the iPhone has had a significant impact upon everyday behaviors, identities, and literacies. iPhone technology, which was so innovative—“a game changer,” as one Google exec told Fred Vogelstein—have since become folded into the everyday practices of smartphone users through a burst of copycats. New business fields have risen out the unforeseen want for modifications, and power structures have been redistributed away from traditional spaces, like carriers and mainstream programmers.

As gateways, both the iPhone and the California roll help shift from one mode of being to another by embodying both modes, simultaneously. The California roll was both sushi and western canape, representing reconciliation. The iPhone, was a conventional phone and a futuristic Swiss-army device, emblematic of the ease and possibility of future communication habits. While these influenced the structures into which they were injected, they also became casualties of these structures. The California roll is now seen as pedestrian, a safe introduction to the world of sushi for novices, stigmatized by the changing out of crab in many restaurants for imitation crabmeat. One New York Times reporter even called it, “the Ford Escort of the sushi set” furthering that the roll is “non-exotic, functional, and doesn’t have high aspirations” (Lee). Likewise, the iPhone has been through six major iterations with multiple updates, none of which have elicited the same fanfare or excitement. But continual innovation is not the function of the cultural gateway. Gateways, rather, are realized flashes of genius, fireworks bursting to alert

---

<sup>6</sup> For more, see Adrianna de Souza e Silva’s research on mobile culture in Japan; Muralidharan, La Ferle, and Sung’s look at smartphones and social media in India; and Peters, Winschiers-Theophilus, and Mennecke’s investigation of Facebook practices in Namibia and the US, to name a few.

anyone listening of revolution, even when the revolution seems uncertain. Thus, the similarity between all gateways is that they are both innovative and transitional, while managing to find a successful foothold.

#### **4.2 Implications of the iPhone and the mobile paradigm**

Through looking at the iPhone as a gateway, this analysis sought to investigate the iPhone's relationship to the mobile paradigm. The implications of considering this device not only as an interface where informal, everyday writing occurs, but also as a space where more formal literacy experiences can occur are only just beginning to unfold. For instance, in highly mobile cultures, where the thought of sitting down at a computer has become less attractive, and less possible, many students often find themselves taking notes on phones and pads as they go. Apps like Evernote and Notes are auxiliary spaces for thoughts and research, serving as memory placeholders and index files. While these are not new, the fact that they are mobile, constantly accessible, and intangible, reinforces the suggestion that the parameters of mobile existence are blurring.

As E'Rich Harrington relayed in his literacy narrative, people who do not live a highly mobile existence are having to deal with the social consequences of the pervasiveness of mobile technology. Perhaps a day will come when digital content is not being retrofitted to the mobile platform, but rather conventional technologies are having to adjust to mobile content. This is not to say that the shift to mobile is a death knell for life as we know it; however, in the exuberance to embrace the freedom of a mobile technoculture, it is important to see who might be left behind. Additionally, this shift complicates how literacy is perceived. Selfe & Selfe viewed the programming protocols that made this shift successful as opportunities for resistance, through the individualization of icons and objects. While both the programming protocols and their icons



have, in some respects, behaved as a sort of critical rhetoric, they have been folded in to the dominant social order.

The most prevalent objects for the iPhone are the Apps, of which there are an enormous number. However, as previously discussed, these Apps are often developed by independent, third party programmers and then moderated for approval by Apple. As such, the agency that the consumer has over its *IT identity* is being curated through the limits that govern the App store. Some Apps are rejected by Apple for one offense or another, while others are monetarily valued. The reality that there are free apps open to anyone, while others cost money to own (or become) suggests a commoditization of *IT identity* and virtual social access. While some would argue that this is a matter of simple economics, the fact remains that the economics of *IT identity* perpetuate a class system Selfe & Selfe hoped to alleviate. Acknowledgment of this truth invites those who are actively participating in the mobile paradigm as developers and programmers to find room to grow as a communicator and a meaning-maker. It also suggests that agency is cemented only when mobile users take a cue from the jailbreakers of the early iPhone and become authors of their own identities.

## WORKS CITED

- Arrington, Michael. "Facebook Now Nearly Twice the Size of Myspace Worldwide." *techcrunch.com*. TechCrunch. 22 January, 2009. Web.
- Arruda-Filho, Emílio J.M., Julianne A. Cabusas, and Nikhilesh Dholakia. "Social Behavior and Brand Devotion Among iPhone Innovators." *International Journal of Information Management* 30. (2010): 475-480. *ScienceDirect*. Web.
- Avey, Tori. "Discover the History of Sushi." Blog. *The History Kitchen*. Pbs.org. 5 September 2012. Web. <http://www.pbs.org/food/the-history-kitchen/history-of-sushi/>
- Carter, Michelle and Varun Grover. "Me, My Self, and I(T): Conceptualizing Information Technology Identity and its Implications." *MIS Quarterly* 39.4 (2015): 931-957. *Computer Source*. Web.
- Chen, Brian. "June 29, 2007: iPhone, You Phone, We all Wanna iPhone." *wired.com*. Wired Magazine. 29 June 2009. Web.
- Chin, Meredith. "Facebook for iPhone." Facebook
- Copeland, Michael V. "The iPad changes everything." *Fortune Magazine*. 22 March 2010: 161-164. Print.
- Davis, Lennard. "Lennard Davis' Literacy Narrative." daln.osu.edu. *Digital Archive of Literacy Narratives*. Video Interview. 27 January, 2010. Web. <http://hdl.handle.net/2374.DALN/974>.
- de Certeau, Michel. *The Practice of Everyday Life*. London: University of California Press, 1984. Web.
- De La Rosa, Darlene. "Dear Diary...I have abandoned you." daln.osu.edu. *Digital Archive of Literacy Narratives*. 11 December, 2013. Web. <http://hdl.handle.net/2374.DALN/5035>.

- de Souza e Silva, Adriana. "From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces." *Space and Culture* 9:3 (2006), 261-278. *Sage Publications*. Web.
- DeVoss, Danielle N. and Cynthia Selfe. "'This Page Is Under Construction': Reading Women Shaping On-Line Identities." *Pedagogy* 1 (2002): 31. *Project MUSE*. Web.
- Dosi, Giovanni. "Technological Paradigms and Technological Trajectories: A suggested interpretation of the determinants and directions of technical change." *Research Policy* 11.3 (1982), 148-162. Web.
- DuGay, Paul et al. *Doing Cultural Studies: The Story of the Sony Walkman*, 2<sup>nd</sup> Ed. Thousand Oaks, CA: Sage Publications, 2013. Print.
- Evans, Jonny. "The Untold Story behind Apple's "Think different." Campaign." *Computerworld*. Computerworld, Inc. 17 June, 2015. Web.
- EveryAppleAd. "Get a Mac ad—Work vs. Home (2006)." Online video clip. YouTube. YouTube, 18 October, 2012. Web.
- Forsberg, Aaron. *America and the Japanese Miracle*. Chapel Hill: University of NC Press, 2000. Print.
- Gladwell, Malcolm. *The Tipping Point: How Little Things Can Make a Big Difference*. New York: Back Bay Books, 2002. Print.
- Goodell, Jeff. "Steve Jobs in 1994: The Rolling Stone Interview." *rollingstone.com*. Rolling Stone Magazine. 17 January, 2011. Web.
- Grodzins, Morton. *The Metropolitan Area as a Racial Problem*. Pittsburgh: University of Pittsburgh Press, 1969. Print.

- Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991. 149-181. Print.
- Harrington, E'Rich. "My Struggles with Technology." daln.osu.edu. *Digital Archive of Literacy Narratives*. Interview. 02 December 2010. Web. <http://hdl.handle.net/2374.DALN/1866>. Web.
- Heath, Alex. "The 10 most innovative apps in the world." *techinsider.io*. Business Insider. 28 October, 2015. Web.
- , "The History of Jailbreaking [Feature]." *Cult of Mac*. Cultomedia Corp. 26 September, 2012. Web.
- Heshan, Sun. "A Longitudinal Study of Herd Behavior in the Adoption and Continued Use of Technology." *MIS Quarterly* 37.4 (2013): 1013-A13. *Business Source Complete*. Web.
- Hjorth, Larissa, Jean Burgess, and Ingrid Richardson. *Studying Mobile Media: Cultural Technologies, Mobile Communication, and the iPhone*. n.p.: New York, NY: Routledge, 2012. Web.
- Jenkins, Henry et al. *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. Chicago: The MacArthur Foundation, 2007. Web.
- Jobs, Steve. "iPhone Introduction in 2007 (Complete)." Online video clip. *YouTube*. Applepub/N2TechGeeks, 10 January 2013. Web.
- Kabali, Hilda K.1, et al. "Exposure and Use of Mobile Media Devices by Young Children." *Pediatrics* 136.6 (2015): 1044-1050. *Education Source*. Web. 14 May 2016.
- Kandel, Denise. "Setting the Record Straight on the Phrase 'Gateway Drug'" Interview by Arun Rath. *Npr.org*. WABE 90.1, Atlanta, GA, 18 Apr. 2015. Radio. Transcript.

- Kelley, Rob. "iPhone mania hits flagship stores." *CNN Money*. CNN. 29 June 2007. Web.
- Kiger, Derick, and Dani Herro. "Bring Your Own Device: Parental Guidance (PG) Suggested." *Techtrends: Linking Research & Practice To Improve Learning* 59.5 (2015): 51-61. *Professional Development Collection*. Web.
- Knobel, Michelle & Colin Lankshear. *Digital literacies: Concepts, Policies, and Practices (New Literacies and Digital Epistemologies)*, 1<sup>st</sup> New Edition. New York: Peter Lang Publishing, 2008. Print.
- Kranzberg, Melvin. "Technology and History: 'Kranzberg's Laws'". *Technology and Culture* 27.3 (1986): 544–560. Web.
- Kuhn, Thomas S. *The Structure of Scientific Revolutions*, 3<sup>rd</sup> Ed. Chicago: University of Chicago Press, 1996. Print.
- Kutsmeda, Nick. "Digital Autobiography: Impact of the iPhone." daln.osu.edu. *Digital Archive of Literacy Narratives*. 07 June, 2016. Web. <http://hdl.handle.net/2374.DALN/6743>.
- Laird, Jeni. "My Phone is Smarter than Your Honor Roll Student." daln.osu.edu. *Digital Archive of Literacy Narratives*. Video clip. 20 February, 2010. Web. <http://hdl.handle.net/2374.DALN/1092>
- Lalonde, Martin, Juan Carlos Castro, and David Pariser. "Identity Tableaux: Multimodal Contextual Constructions of Adolescent Identity." *Visual Arts Research* 42.1 (2016): 38. *Publisher Provided Full Text Searching File*. Web.
- Lee, Jennifer. "Can Anything Replace the Humble California Roll?" cityroom.blogs.nytimes.com. *The New York Times*. 22 August, 2008. Web.
- Lewittin, Lawrence. "Here's how Apple performed after each iPhone launch." Yahoo Finance. *yahoo.com*. 06 August, 2014. Web.

- Manovich, Lev. "There is Only Software." *Doing Cultural Studies: the story of the Sony Walkman*. Paul DuGay et al. Thousand Oaks, CA: Sage Publications, 2013. 136-138. Print.
- Marion, Michele. "Have You Eaten?" Heterogeneity and Identity through Food." *East West Connections* 7.1 (2007): 129-139. *Literary Reference Center*. Web.
- "Mission Statement." *The Economist Online*. Economist.com. 2 June, 2009. Web.  
<http://www.economist.com/node/13766375>.
- Nakamura, Takafusa. "Chapter 3: Rapid Growth," *The Postwar Japanese Economy: Its Development and Structure*. Trans. Jacqueline Kaninski. Tokyo: University of Tokyo Press, 1980. Web.
- Pickering, W.S. "Representations as Understood by Durkheim: An Introductory Sketch." *Durkheim and Representations*. Ed. W.S. Pickering. London: Routledge, 2000. Web.
- Pierce, David. "How Apple Taught the World to Smartphone." *Wired Magazine*. Condé Nast. 12 June, 2016. Web.
- Prior, Paul et al. "Re-situating and re-mediating the canons: A cultural-historical remapping of rhetorical activity." *Kairos* 11.3 (2007): 1-29. Web.
- Radesky, Jenny S., and Dimitri A. Christakis. "Increased Screen Time: Implications for Child Development and Behavior." *The Pediatric Clinics of North America* (2016): *ScienceDirect*. Web.
- Rogers, Brishen. "The Social Costs of Uber [Article]." *University Of Chicago Law Review Dialogue* (2015): 85. *HeinOnline*. Web.

Rowland, Christine. "Apple's Vision Statement and Vision Statement." *Panmore Institute*.

panmore.com. 3 September, 2015. Web. <http://panmore.com/apple-mission-statement-vision-statement>.

Sager, Ira. "Before iPhone and Android Came Simon, the First Smartphone." *Bloomberg.com*.

Bloomberg News. 29 June, 2012. Web.

Schelling, Thomas C. *Micromotives and Macrobehavior*. New York: Norton & Company, 1978.

Print.

Schultz, Jason. "Law And Technology The Internet Of Things We Don't Own?"

*Communications of the ACM* 59.5 (2016): 36. *Advanced Placement Source*. Web.

Selfe Cynthia and Richard J. Selfe, Jr. "The Politics of the Interface: Power and Its Exercise in

Electronic Contact Zones." *College Composition and Communication* 45.4 (1994): 480-504. Web. *JSTOR*.

Sterling, Greg. "Nearly 80 percent of social media time now spent on mobile devices."

*Marketing Land*. Third Door Media. 04 April, 2016. Web.

Tong, Benson. "Race, Culture, and Citizenship among Japanese American Children and

Adolescents during the Internment Era." *Journal of American Ethnic History* 23.3 (2004): 3-40. *History Reference Center*. Web.

Vogelstein, Fred. "The Day Google Had to 'Start Over' on Android: Google was building a

secret mobile product to fend off chief rival Microsoft. Then Apple announced the iPhone, and everything changed." *The Atlantic*. Atlantic Media Company, 18 Dec. 2013. Web.

Wilson, Mark. "The Apple Effect." *Fast Company* 201 (2015): 62-63. *Business Source*

*Complete*. Web. 8 June 2016.