

**Smartphones and Cognition:
The Case for an Updated Theory of Electronic Eloquence**

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Introduction

As Marshall McLuhan first proposed in his seminal work, *Understanding Media: The Extensions of Man* (1964), humanity has progressed through several stages of communication technology that have each fundamentally changed the way we think and behave within society at large. Oral communication changed with the advent of writing, and the printing press in turn caused a paradigm shift with the mass production of information. Electronic media redefined society in the 20th century, and now, according to Mark Poster, we stand at the cusp of a new revolution.

In his book, *The Second Media Age* (1995), Poster further argued that “new media,” centered around the development of the Internet, have fundamentally altered communication and cognition — from centralized, one-way communication based on broadcast to a new era of decentralized, two-way communication based on networks. Stephen Littlejohn and Karen Foss lay out six parameters in which Poster’s second media age differs from its predecessor (2011, pp. 340-341): (1) decentralized versus centralized production, (2) two-way versus one-way communication, (3) beyond state control versus largely state controlled, (4) democratizing versus media “reproduction of social stratification and inequality,” (5) individually oriented versus “fragmented mass audiences” and (6) “promoting individual consciousness versus social consciousness.”

There are two predominant ways of analyzing the differences between the first and second media age, according to Littlejohn and Foss. One method looks at

social interaction, which analyzes media based on the extent to which they physically approximate face-to-face communication. Thus, broadcast media fall squarely within the first media age, because they revolve around a rigid, one-way transfer of information. New media, on the other hand, emphasize interactive, personalized forms of communication such as social media.

The second form of media age analysis looks at social integration. Littlejohn and Foss define this approach as an investigation of the ways people use various media to create a sense of community through the use of “rituals” (p. 340). Using a smartphone to constantly check Facebook or Twitter between activities or during pauses in conversation is an example of ritualized activity. From the social integration perspective, users are interacting more with the medium itself than other users. The medium allows individual users to feel connected within a larger community and they perceive and interact with the medium itself almost as if it were another person. Littlejohn and Foss suggest this connection is the reason people often anthropomorphize their computer or smartphone, often talking to the device and getting upset when it fails to work quickly or properly (p. 341).

Intense reliance on social media for common interaction is increasing as more Americans purchase smartphones. According to the latest Pew Research Center statistics (2014), nearly two-thirds of Americans own a smartphone and more than a third of those go online mostly using their phones rather than computers or tablets. The latter number is probably far lower in actuality, given that the statistics for Internet access are a year older (spring 2013) than the number of smartphone owners (fall 2014). Also, more than two-thirds of cell phone owners

“find themselves checking their phone for messages, alerts, or calls — even when they don’t notice their phone ringing or vibrating” — and nearly half (again, probably a low number 16 months later) sleep next to their phones in order not to miss texts, calls, or other interaction. A study by Robert LaRose and Matthew S. Eastin (2010) shows users begin to crave feedback of “likes,” “favorites,” comments, and other notifications because they feel value and connection to their friends, family, and society at large. The same study demonstrates a downward spiral wherein users interact with their favored media more often with the goal of generating more positive reinforcement in the form of those notifications — ultimately looking similar to drug users in their spiral of increasing addiction.

According to *Boston Globe* staff writer Hiawatha Bray in an April 2015 article, the aforementioned cultural and psychological changes will soon be expanding to corners of the world relatively cut off from Internet access to date. Until relatively recently, most of the African continent was without broadband Internet, if they had Internet access at all. But now, according to Bray, most of Ghana alone will have 4G or 5G mobile Internet access “within a decade,” and the 60 percent of the world without Internet access is rapidly following suit. He also points to the “‘Internet of things,’ in which billions of ordinary objects can be controlled online,” as the next major revolution. The vast majority of “smart” items are already controlled via smartphone apps, and there is no reason to expect that to change any time soon.

By interacting more directly with new media themselves than with actual people, and developing an artificial sense of community in process, users are fundamentally altering society itself, in the sense of McLuhan’s stages of

communication technology. Does the increased reliance on new media as the primary vehicle for social interaction actually degrade the level of true community attained by new media users? The power of new media to create global networks in which people can immediately communicate with “friends,” “followers,” readers, or viewers in faraway places actually tends toward shallower connections and a dearth of true community. McLuhan’s “global village” is a network of strangers and distant acquaintances at best.

To demonstrate this, the researcher will examine each major stage of communication culture — oral, written, and electronic — followed by an analysis of the dawning “new media” age and its effects on both individual communicators and society at large, through the lenses of McLuhan’s concept of media as message and Jamieson’s theory of electronic eloquence. The goal is to find out the effects of new media on attention spans, choices of media consumed (humor versus serious news or practical advice, for example), and shifts in standards of “electronic eloquence.” By examining each stage of communication technology in turn, terminating with so-called “new media,” cultural paradigm shifts and changes in standards of eloquence will become apparent between each of the stages. Then, the researcher will discuss a survey conducted for the purposes of this study with the goal of examining changes in attention spans, media content, and electronic eloquence firsthand.

Literature Review

Marshall McLuhan realized writing itself is just as much a form of technology as the telegraph and the radio. He also pointed out writing and successive forms of communication revolutionized human society as much as the invention of the wheel or the harnessing of electricity. While previous historians and theorists focused on messages themselves, McLuhan famously stated that “the medium *is* the message.” As he described in his book *Understanding Media: The Extensions of Man* (1964), the inventions of writing, the printing press, and electronic media like the radio and television have each caused a fundamental revolution in human cognition. From McLuhan’s perspective, researchers consistently overlooked the most important aspect of communication: the act of communicating via a particular medium transforms the communicator himself.

McLuhan’s graduate student Walter Ong eventually broke down the stages of communication media into oral, written, and electronic culture and examined the effects each stage had on the societies in which they took place. By analyzing each stage beginning with oral culture, a clear progression emerges, leading to today’s so-called “new media” culture. The goal of this thesis is to examine the changes caused by new media with an emphasis on attention spans, content, and eloquence.

Oral Culture

Throughout his career in the mid- to late-20th century, literature professor and historian Walter Ong studied the differences between oral and written cultures — focusing in particular on the shift in cognition from a primarily oral society to a

literate one. In his 1982 book *Orality and Literacy: The Technologizing of the Word*, he described the written word as a technology that, once learned, “restructures consciousness” from a focus on concrete, everyday ideas to complex, abstract reasoning.

As Ong pointed out, primarily oral cultures must keep everything in mind at once, or information is lost. This simple fact requires both prioritization of daily life over more abstract pursuits like philosophy, and a heavy reliance on memory devices like repetition, simple formulas, songs, and so on. Modern culture retains some of these simple agrarian mnemonics, such as, “Red sky at night, sailors delight; red sky in the morning, sailors take warning.” In fact, this same proverb is recorded as far back as the first century, when Jesus referenced it in an impromptu debate with the religious leaders. “The Pharisees and Sadducees came up, and testing Jesus, they asked Him to show them a sign from heaven. But He replied to them,

“When it is evening, you say, ‘*It will be* fair weather, for the sky is red.’
And in the morning, ‘*There will be* a storm today, for the sky is red and threatening.’ Do you know how to discern the appearance of the sky, but cannot *discern* the signs of the times?” (Matthew 16:1-3, *NASB*)

The idea of constellations is another oral holdout in our current digital age. Agrarian societies have always used an early form of astronomy to mark the seasons relied upon for farming and hunting. Constellations provided a narrative framework so that successive generations of farmers could look to the sky and recall which stars rose and set at specific times necessary for planting, harvesting, and the onset of winter. Ursa Minor, the Lesser Bear, points the way to Polaris, the North Star, vital

to navigation. To remember constellations, Greeks told the story of Callisto and Arcas whom Zeus, Father of the Gods, turned into bears. The great hunter Orion, harbinger of winter, is one of the largest and most easily recognizable constellations even today (Krcro, 2002). An image of his constellation has been found in a German cave, carved on a piece of mammoth ivory that secular archaeologists reported to be around 32,500 years old (Whitehouse, 2003). The book of Job mentions both of these constellations when God speaks to the eponymous patriarch from out of a whirlwind:

“Can you bind the cluster of the Pleiades, or loose the belt of Orion?
Can you bring out Mazzaroth in its season? Or can you guide the Great
Bear with its cubs? Do you know the ordinances of the heavens? Can
you set their dominion over the earth?” (Job 38:31-33, *NKJV*)

The human mind is designed to look for patterns to make sense of the world around it, and the creation of stories around important patterns helps to retain their memory and pass them down to subsequent generations. Astronomical tales and meteorological maxims remain a part of society for reasons besides their memorable nature. Ong described oral cultures as “traditionalist” and “homeostatic.” He said that they “aggregate” useful or vital information, like climate predictors in an agrarian society, and maintain steady routines to preserve and pass down that information. This is a key reason why oral relics like nursery rhymes still retain a place in modern culture, even though their original meaning is long since lost to culture at large.

The ability to record such knowledge in a book or almanac, however, frees up individuals to think about other, more abstract or complex ideas and to build off of other people's innovations — thus the birth of philosophy, advanced mathematics and engineering, medical science, and so on. This new emphasis on sight and abstract thought over hearing and concrete thought fundamentally changes cognition in a literate person. To illustrate his point, Ong proposed a thought experiment:

A literate person, asked to think of the word “nevertheless,” will normally (and I suspect always) have some image, at least vague, of the spelled-out word and be quite unable ever to think of the word “nevertheless” for, let us say, 60 seconds without adverting to any lettering but *only* to the sound. This is to say, a literate person cannot fully recover a sense of what the word is to purely oral people (Ong, 1982, p. 12).

Ong referenced studies done on oral cultures that clearly demonstrated this difference in thinking. One interesting account recorded the responses received when researchers asked illiterate farmers a question using a deductive formula that would be familiar to literate people.

In the Far North, where there is snow, all bears are white. Novaya Zembla is in the Far North and there is always snow there. What color are the bears? Here is a typical response, “I don't know. I've seen a black bear. I've never seen any others.... Each locality has its own animals.”

One man who was “barely literate” replied, “To go by your words, they should all be white.” The man’s response indicated that he understood the logical process the researchers were using and gave the desired reply, but he did not fully trust the abstract reasoning since he had never personally seen the bears they were talking about (Ong, 1982, pp. 52-53).

Written Culture

This tectonic shift in cognition is exactly what Marshall McLuhan described when he analyzed the different eras of communication technology. His book *The Gutenberg Galaxy: The Making of Typographic Man* (1962) discusses the transition from what he saw as rich, open-ended oral culture through a sort of hybrid manuscript culture — where books were few and had to be read aloud to an audience — to the printed “Gutenberg Galaxy.” He explained the cognitive difference between orality and literacy in terms of structure and confinement.

No merely nomadic people ever had writing any more than they had ever developed architecture or “enclosed space.” For writing is a visual enclosure of non-visual spaces and senses. It is, therefore, an abstraction from the ordinary sense interplay. And whereas speech is an outing (utterance) of all of our senses at once, writing abstracts from speech (p. 43).

McLuhan resented the “reduction of tactile quality in life and language” brought on by the advent of the printing press (p. 240) and its “homogeneous repetition” (p. 249). He saw the mass production of information as having a profoundly negative effect on culture.

Everybody is familiar with the phrase, “the voices of silence.” It is the traditional word for sculpture. And if an entire year of any college program were spent in understanding that phrase, the world might soon have an adequate supply of competent minds. As the Gutenberg typography filled the world the human voice closed down. People began to read silently and passively as consumers. Architecture and sculpture dried up too. In literature only people from backward oral areas had any resonance to inject into the language — the Yeats, the Synge, the Joyce, the Faulkners, and Dylan Thomases (p. 250).

In an attempt both to distance himself from print and to better express his ideas, McLuhan wrote *The Gutenberg Galaxy* as a “mosaic,” where individual chapters were only a page or two, were loosely connected, and could be read independently from the rest of the book. He stressed that it was not print itself that he did not like, because there was not anything inherently “good or bad about print but that unconsciousness of the effect of *any* force is a disaster, especially a force that we have made ourselves.” (p. 248) He welcomed the “electronic wave,” however, and saw it as a return of sorts to a richer past and the development of a “global village.” To McLuhan, our “liberation” comes from “electronic technology with its profound organic character. For the electric puts the mythic or collective dimension of human experience fully into the conscious wake-a-day world.” (p. 269) According to him, it was “futile” to “describe the revolution in human perception and motivation that resulted from beholding the new mosaic mesh of the TV image,” but it would become “easy” in “a few decades.” (p. 273)

Electronic Culture

Kathleen Hall Jamieson picked up the torch from McLuhan when she developed her theory of electronic eloquence. In her eponymous book *Eloquence in an Electronic Age: The Transformation of Political Speechmaking* (1988), she described the shift in political eloquence from a purely literary form to a visual one. Jamieson prefaces her book by relating the story of then-presidential candidate Theodore Roosevelt being shot just before giving a campaign speech on October 14, 1912. The would-be assassin was standing only “four or five” feet away, and the bullet from his Colt .38 passed through the 50-page, double-folded speech and metal spectacles case in Roosevelt’s coat pocket, saving his life (O’Toole, 2012). Jamieson astutely points out that the circumstances may have been much different had he run for office in the teleprompter age (Jamieson, 1988, vi).

Roosevelt proceeded to stand and address the crowd for ninety minutes with a bullet lodged in his rib. His long, complex oration would never pass muster in the electronic age, according to Jamieson. Half a century later, the presidential election of 1960 demonstrated for the first time the paradigm shift in modern eloquence. Young Senator John F. Kennedy debated Vice President Richard Nixon on national television for the first time. One focused on appearance and delivery while the other honed his content. Both were fairly evenly matched based on content, and many radio listeners believed Nixon won. Most of the audience, however, watched the debate live on television, since 88 percent of American households had then purchased televisions.

This fact is believed to have cost Nixon the election (Webley, 2010). Kennedy was tanned, healthy, and dressed sharply with a black suit that contrasted well on black and white television, but Nixon was feeling sick and looked ashen, with a gray suit that blended into the gray background (“First Kennedy-Nixon Debate,” 1960). In a 2012 article looking back at the debate, US News & World Report quoted then-Chicago Mayor Richard Daley as saying of Nixon, “My God! They’ve embalmed him before he even died.” Nixon’s running mate, Henry Cabot Lodge Jr., Kennedy’s senatorial counterpart in Massachusetts, reportedly said that Nixon had “just lost the election” (Schlesinger, 2012).

In his textbook *Persuasion in the Media Age* (2013), Timothy Borchers concisely summarized Jamieson’s five main tenets of electronic eloquence. In Borchers’ words, “it is personified, self-disclosive, conversational, synoptic, and visually dramatic.” To compare modern standards with one of the fundamental concepts in communication theory — Aristotle’s *pathos*, *ethos*, and *logos* — the former two matter far more to modern audiences than logic and reason. Everything in modern eloquence comes down to visual presentation, credibility, and short, emotional, and witty “soundbites.” Neil Postman explains in his book *Amusing Ourselves to Death* (1985) how the medium itself requires a specific sort of content, like McLuhan had stated. Postman proceeds to edit McLuhan’s famous statement by saying that the “medium is the metaphor,” because a medium cannot make a “specific, concrete statement about the world” — the definition of “message.” He does say, however, that “each medium, like language itself, makes possible a unique

mode of discourse by providing a new orientation for thought....” Therefore, television requires more visual than verbal presentation.

For on television, discourse is conducted largely through visual imagery, which is to say that television gives us a conversation in images, not words. The emergence of the image-manager in the political arena and the concomitant decline of the speechwriter attest to the fact that television demands a different kind of content from other media. You cannot do political philosophy on television. Its form works against the content (p. 7).

Like Postman, Jamieson is less enthusiastic about electronic culture than McLuhan was. She laments the loss of reason in favor of entertainment and subjective emotional appeal. Quoting Immanuel Kant concerning the dangers of reliance on *ethos*, Jamieson examines a presidential campaign ad from 1968:

In this ad we see realized the fears that prompted Kant to condemn rhetoric as “the art of deluding by means of fair semblance ... which borrows from poetry only so much as is necessary to win over men’s minds to the side of the speaker before they have weighed the matter, and to rob their verdict of its freedom.” Such uses of the available means of persuasion confirm Plato’s concern that rhetoric can artfully make the untrue appear true (p. 240).

In Plato’s *Republic*, he banned poets from his ideal society for the very same reason Jamieson mentions here. Plato argued that people who were not careful and analytical enough could be led astray by poetry and stories of the gods used for

propaganda (Plato, Jowett, & Scharffenberger, 2005). Jamieson worried that modern culture was effectively removed from historical context and a sense of heritage. She explained her concern that people's misinterpretation of eloquence in the electronic age would lead to chaotic politics and poor decision-making.

Those unschooled in the past readily confuse elegance with eloquence, conviction with cogency. Unable to recognize leadership when we see it, we careen from election to election, searching for a candidate who compensates for the weaknesses of the president who most recently failed us. After Nixon, an honest, blue-jeans-wearing populist whose lack of Washington experience was considered a blessing; after Carter, competence and a confidence in the country; after Reagan, a command of detail and a strong management style (Jamieson, 1988, p. 241).

Jamieson's fears seem to be borne out in the "new media" age of the 21st century — especially in terms of social media culture in general and recent political campaigns in particular.

New Media Culture

New media take Jamieson's electronic eloquence to a new level. If a 21st century audience were forced to sit through Roosevelt's 1912 speech, they would pick out key phrases and post them to Twitter and gloss over the rest. At best, they might post a longer section on Facebook with a comment or even write an analysis or retort on their personal blog. Social media, often referred to as Web 2.0, distills electronic eloquence and visual communication down to its very essence. Instead of

a soundbite, entire arguments are often made with a simple picture or “emoticon” posted on a Facebook page or Twitter feed. Social media users often post “memes,” which are (usually humorous) pictures taken from a movie, television show, or just a random photo someone posted on a forum. The photos are chosen to convey a specific emotion, usually clearly evident on the face of the person or animal within the picture. At most, the user will write a few words above or below the picture to provide context or make a point. The mindset behind a meme is fascinating, because a single picture is used to convey an entire thought or reaction, and everyone who sees the photo immediately understands the message, provided they are “literate” in Internet culture. Similarly, “gifs” are a step up from a single picture and show a brief, two- or three-second video clip that serves the same purpose as a static meme.

An enthymeme, or “truncated syllogism,” is a rhetorical argument in which one of the premises is implied instead of being explicitly stated (Burton, n.d.). “Enthymeme” is also the root for the social media term “meme,” which refers to a particular style of stock image framed by text — usually intended to be humorous or sarcastic. Most social media debates rely heavily on enthymemes, because the media themselves strongly favor concise statements. Twitter only allows 140 characters, while non-smartphones have a 160-character limit for texts. Users have grown so accustomed to immediate communication and instant gratification that few have the patience to read a complete Facebook post if it is more than a few lines. Even this mindset has its own abbreviation: “tl;dr” is frequently used shorthand for the phrase, “Too long; didn’t read.” Beginning with texting, the Millennial generation developed its own language for use on social media, which eventually required its

own dictionaries. Some are legitimate and well-intentioned, like Socialbrite.org's "Social media glossary," while others are less so, such as the often "Not Safe for Work" ("NSFW") UrbanDictionary.com. Each social media site has its own micro language as well. "Friends," "followers," "subscribers," "viewers," and a host of other epithets all describe the same thing: people who choose to pay attention to what you post on a particular site.

These networks of people are an enormously powerful tool. President Barack Obama has been called the "Social Media President," and many analysts have attributed his rise from obscurity to become the most powerful man in the world to his grasp of this new media eloquence (Wortham, 2012). Obama had tens of millions more social media connections than his opponent in either election, and he handled his advantage with the same charismatic finesse that John F. Kennedy had with television. Obama could immediately spin anything he wanted to tens of millions of voters across his social media networks. Romney tried to accomplish the same thing but without much success (Coleman, 2013).

McLuhan tried to describe the effects of the electronic revolution while America was still undergoing the paradigm shift from written to electronic culture. So, too, the transformation brought about by new media is still in its early stages, but differences are apparent when contrasted with previous generations. Social media users are transformed by their communication tools just as much as any previous generation has been sculpted by their predominant communication technology. What already existed as visual media in the electronic age has become even more so. News that used to come via television broadcasts or newspapers

before them is now instantly available on Twitter in 140 characters. Longer articles can be accessed through a link in the original tweet, but web users skim through more than they actually read — if they bother to click on the link at all, and if the site does not take more than a second or two to load.

The emphasis on visual communication is even more apparent when viewed in terms of online video data. According to YouTube's published statistics, more than one billion visitors use the site each month — that is one out of every seven people on the planet. Those users watch more than six billion hours of video per month, while 100 hours of video are uploaded each minute. YouTube also reports that its ContentID system scans more than 400 years worth of video daily ("Statistics," 2014). Popular video conferencing service Skype reported more than a year ago that its users recorded more than two billion minutes of calls each day ("Skype," 2013). Smartphone owners have also started using a new app called SnapChat that allows people to send brief video clips to each other like text messages. It already had more than 70 million users last spring (Edwards, 2014).

This enormous reliance on video, images, and brief snippets of conversation leads to a serious reduction in spelling, grammar, and writing ability. One Wall Street Journal article describes the rampancy of grammar mistakes in corporate America because of Internet culture. Writer Sue Shellenbarger quotes the head of a consulting firm saying, "I'm shocked at the rampant illiteracy (on Twitter)" (Shellenbarger, 2012). The problem goes beyond linguistic issues, which would not have bothered McLuhan anyway. He wrote that print "made bad grammar possible" and diminished the rich variety in language (McLuhan, 1962, p. 231). The real

problem lies in the fact that social media users grow accustomed to interacting more with the medium itself than with other users. Stephen Littlejohn and Karen Foss write in *Theories of Human Communication* (2011) that the medium and electronic device used to access it become anthropomorphized (pp. 340-341). Users feel that they are connected to all of their friends and family on various social networks, but the community is actually a façade. Robert LaRose and Matthew S. Eastin (2010) analyzed social media usage in terms of uses and gratification theory and found that people actually use social media more for personal reinforcement (looking for “likes,” “favorites,” etc.) and that “as deficient self-regulation comes into effect, media behavior tends to become an end unto itself and no longer subject to active consideration of its expected outcomes” (p. 363). They also found that people tend to feel “tense, moody, or irritable if I can’t get on the Web when I want,” indicating a “self-reinforcing’ downward spiral into problematic or addictive usage” (p. 363). This breeds an attitude of narcissism and distance from actual human relationships.

There are a number of studies examining the possible link between 21st century communication technology, particularly social media, and psychological disorders — narcissism being the most commonly cited. Researchers from the University of Michigan published a study in 2013 saying that different social media platforms “reflect and amplify the culture’s growing level of narcissism” (Swanbrow, 2013). According to their findings, college students “who scored higher in certain types of narcissism posted more often on Twitter,” using the site as a “megaphone” with an over-inflated view of their own opinions. “Through Twitter, they’re trying to broaden their social circles and broadcast their views about a wide range of topics

and issues,” one researcher stated. Middle-aged adults, on the other hand, prefer to use Facebook as a “mirror” to “gain approval from those who are already in their social circles.” The researcher further explained that narcissistic Facebook use for middle-aged adults was “about curating your own image, how you are seen, and also checking on how others respond to this image.”

Another study, published in 2011 in the American Psychological Association’s journal *Monitor*, found that increased social media use led to a variety of problems not limited to psychological disorders. Dr. Larry D. Rosen found that children are physically less healthy, perform poorly at school, and “that even when he accounted for demographics, eating habits and lack of exercise, media and technology still had a powerful effect on the children's health” (Chamberlin 2011).

“Those who used more hours of media were more unhealthy across the board, from elementary school age through high school. ... They reported more sick days, more stomach aches, more depression and worse behavior in school” (Chamberlin 2011).

Rosen compared technology use among children to simply breathing. “It's not just a tool to them, they sleep with it, they wake up with it, and it's part of their world,” he said. Rosen did point out, however, that increased social media use also led to increased empathy in many children. The amount of time they spent interacting online with their friends, the more they showed “virtual empathy,” which led to “real-world empathy.”

This leads to deeper questions, which are fiercely debated by psychologists: what exactly is the causality between social media use and narcissism? Does social

media promote narcissists, or do narcissists simply use social media more often? In 2013, the *New York Times* published an interview with psychologist Dr. Jean M. Twenge who argued that narcissism is on the rise in America, but the fault lies with “America’s culture of self-esteem, in which parents praise every child as ‘special,’ and feelings of self-worth are considered a prerequisite to success, rather than a result of it” (Quenqua 2013). Her conclusion is “that younger generations are increasingly entitled, self-obsessed and unprepared for the realities of adult life.” The article set off a storm of controversy, leading the newspaper to publish a follow-up “Room for Debate” segment a month later. In it, various professors and social media experts debated whether “social media like Facebook (was) turning us into narcissists.” Communication studies professor Dr. Bruce McKinney argued that frequent Facebook use was not an indicator of narcissism, but Twitter use was. He explained that Facebook had become an established part of society that most people mainly used to keep in touch with each other, but Twitter was still a fairly new medium used to broadcast one’s opinion. McKinney said that Twitter would probably also become mundane as it becomes more established in society. His own published paper on the subject went so far as to argue for a redefinition of narcissism “in a social media world,” because, as he explained in his *Times* response,

As I walk around the college campus where I teach, I am amazed at how many students seem to have their eyes glued to their smart phones. Tweets and texts seem to be replacing actual eye contact and the more audible and direct “hello” as students pass each other in the hallway. The other night my wife and I were eating at our favorite

restaurant. At the next table were four 20-somethings who said nothing to each other — they were all immersed in their smartphones tapping away on their electronic keyboards. Were they narcissistic? I doubt it (McKinney 2013).

A more disturbing outlet of this modern relational detachment might be the apparent increase in mass shootings in recent years and the meteoric rise of terrorist groups around the world. Journalist Robert Beckhusen for the site War is Boring interviewed Roger Griffin, an Oxford Brookes University history professor and political theorist, about the subject following the publication of his book *Terrorist's Creed*. In Beckhusen's article "What's driving mass shootings?" Griffin explains why he thinks new media are leading to a serious disconnect among young people today.

I think a lot of problems that 19th-century sociologists picked up on — loss of identity, loss of community — are now given almost hallucinogenic dimensions by the powerful force of media, virtual reality, social media, the ability to travel physically from one country to another and back again in a day, which makes everything feel really unreal (Beckhusen, 2014).

According to Griffin, mass shooters and terrorists share a similar mindset in which they lose their sense of purpose, identity, and community, and engage in "heroic doubling" — a psychological process in which they find meaning by becoming the protagonists of their own heroic (to them) tragedy. "The person has undergone a process whereby a rather confused, pained, ordinary self puts on a sort

of mask, which turns them into an actor — or a protagonist — in a personal narrative drama,” Griffin tells Beckhusen.

(Isla Vista, California shooter Elliot Rodgers) tragically preferred a “real” death shrouded in his own myth, to a meaningless death or a pointless life. He gave his death a meaning. He knew he was going to get shot. Nearly all of them get killed or shoot themselves.

In his own private scenario, he went down guns blazing as a sort of Nietzschean protest against the mediocrity of a civilization that wouldn’t love him. And the thing is obviously incredibly complicated psychologically, but also a symptom of a really widespread modern problem (Beckhusen, 2014).

Regarding terrorist groups like Al-Qaeda and ISIS, Griffin points out that they are similar to the Nazi movement in the Weimar Republic. “Becoming a Nazi in the peculiar circumstances of late Weimar solved the problems of ‘being’ for a whole load of extremely dysfunctional, potentially violent, misogynistic, fearful men who were terrified of life engulfing them.”

Griffin suggests that, while mass shootings and terrorism are not a new problem, unique characteristics of modern culture and new media are causing them to become a more common outlet for “ordinary young people who once would’ve just been miserable or committed suicide.” Griffin’s point is obviously not that he is okay with suicidal tendencies, but rather that the problem is becoming more common and that younger people affected by it are increasingly acting out violently.

Methodology

The effects of communication technology on human behavior is an expansive topic — even when narrowed to a single object like smartphones — so for the purposes of this study, the researcher limited the study's focus to changes in attention spans, objects of focus (humor versus serious topics like news and analysis), and “electronic eloquence.” The researcher's prediction is that the results will show a distinct difference between smartphone users, specifically millennials, and non-users, particularly those from previous generations. According to the project's hypothesis, smartphone users will show a marked decrease in attention spans and a definite preference for short, visual forms of communication, such as “tweets” or “memes” — with a strong preference for humor over anything else.

To demonstrate this, the researcher performed a quantitative study based on survey questions submitted to 200 anonymous participants via Amazon's Mechanical Turk website. The goal was to obtain responses from a wide range of demographic groups. To achieve the clearest results, the researcher tried to offset the main respondents with a large enough sample size from the 36 percent of Americans who have yet to purchase a smartphone, according to the Pew Research Center. Non-users from older generations would be especially beneficial, because they would probably be the smallest respondent demographic and should demonstrate the most apparent differences from other respondents. The clearest differentiation for the purposes of this study, however, would be between smartphone users and non-users from the millennial generation. Given a large

enough survey pool, it would be reasonably safe to attribute any significant differences between them to the smartphone variable, because it could be assumed that they would otherwise share similar interests, influences, and backgrounds. Rather than leaving it up to interpretation, however, the researcher asked for such background information to try and narrow down the cause for any significant differences between members of the same demographic.

Participants

The researcher obtained survey results from 200 anonymous participants ranging in age from 18 to “65+” and split roughly 44-56 percent between females and males, respectively. The majority (119) were under 35 years of age, with 94 respondents identifying themselves within the 25-34 age group and only 25 in the 18-24 subset. Thirty-three participants fell within the 35-44 group, which actually ended up being the second-largest age demographic — closely followed by the 45-54 group with 31. The two smallest age demographics, 55-64 and 65+, consisted of only 12 and four respondents, respectively. One participant did not identify their age, and the researcher failed to notice it in time.

All but 12 of the participants had at least some college education, with 18 holding at least an associate’s degree. A plurality, 85, held bachelor’s degrees, and 39 responded that they held some form of graduate degree. The 12 participants who identified as having only a high school education were split evenly between the <34 and >45 demographics, with one respondent older than 65. None fell between 35 and 44.

Materials

The researcher used Amazon Mechanical Turk to perform the survey. Mechanical Turk is a crowdsourced “artificial intelligence” tool that allows researchers and businesses to quickly outsource simple tasks and survey questions to hundreds of thousands of “workers” in exchange for small financial compensation (usually pennies per survey). The name comes from an 18th century magic trick by Hungarian inventor Wolfgang von Kempelen. Kempelen’s “Turk” was a fake automaton that played chess. Hidden inside the “machinery” was a chess grandmaster who manipulated the Turk from within — famously beating such noblemen and celebrities as Napoleon Bonaparte and Benjamin Franklin.

The most generous common payment level the researcher found was \$.30 per minute, so that is what the researcher chose to pay the participants. In hindsight, the researcher should have made it \$.60 apiece because of the way the payment system works — the researcher paid \$.30 per completed survey, which actually took an average of 2.5 minutes to complete, thus resulting in an average payment of roughly \$.15 per minute — but that was a simple mental error on the researcher’s part. The fact that the researcher got 100 percent of the surveys completed within the brief span of about three hours suggests that the wages were still fairly generous. Looking at some other surveys, the researcher found a lot that paid only one or two pennies per completion, so the researcher was ultimately happy with the payment.

Procedures

The researcher asked 16 questions focused on participants' attention spans, interests, levels of technology and social media engagement, how and how often they socialized with friends and family outside of work or school, and forms of "electronic eloquence." The researcher first asked basic demographic questions — gender, age, and highest level of education — but the researcher ultimately refrained from asking about ethnicity and income levels. The researcher somewhat regrets that decision because of the extra data the researcher would have obtained, including possible variables eliminated or accounted for, but the researcher does not think it significantly affected the results. The researcher will go into that more clearly in the "limitations" section.

Regarding smartphone ownership, the researcher asked respondents how long they had owned a smartphone or tablet, ranging in time from "I don't own a smartphone or tablet" to "more than 5 years." The researcher did make a small error in dividing up the possible answers by writing an option for "less than 1 month" rather than "less than 5 months," which is what the researcher intended. Thus, there was a small, but ultimately insignificant, gap from one month to six months. No one selected the shortest timeframe, though 17 participants did respond that they had only owned a "smart" device for 6-12 months. Only 15 said that they had owned such a device for "13-23" months, but the vast majority selected "2-5 years" or "more than 5 years." Only seven respondents said that they did not own a smart device at all. This ultimately limited the researcher's ability to contrast smartphone owners with non-owners somewhat, but the researcher does not think it

significantly affected the answers in the end — for reasons the researcher will explain later. Ultimately, however, the extremely small numbers of limited ownership mean that the “1-5 month” oversight is basically irrelevant.

The researcher next asked how often the participants used social media, ranging from “I don’t use social media” to “never.” The researcher further asked which platforms they regularly used as well as to rank 10 primary reasons for doing so. The responses for the latter included “keeping up with friends and family,” “checking the news,” “reading others’ opinions on pop culture and public events,” “sharing my own opinions on pop culture and public events,” “sharing photos,” “watching videos,” “miscellaneous things like recipes and vacation ideas,” “sharing what I’m currently doing/eating/watching/etc.,” “getting local information like traffic updates, news, and the best restaurants,” and “other.” Further focusing on the content angle, the researcher asked which types they most preferred, including videos, photos, news articles, blogs, “inspirational quotes,” “memes,” and “other.” The researcher also asked them whether they preferred “more funny, serious, or practical content (e.g. recipes, tips, or ‘life hacks’).”

Regarding socialization, the researcher asked the participants how often they spent time with family or friends outside of work or school, with responses ranging from “every day” to “not very often.” the researcher expected most to respond with the “every day” or “a few times a week” answer and almost none to admit to the “not very often” response. The researcher will discuss this more in the “limitations” section, but the researcher’s expectation was essentially borne out in the actual responses — though a few did choose the latter answer and many responded with

the middle answers of “on the weekends” or “a few times a month.” The researcher also asked how often that time spent with others included “playing video games or watching TV (movies, shows, sports or other live events),” ranging from “always” to “never.” Based on that question, the researcher further asked which type of screen they usually used — a TV screen, computer monitor, or “mobile device.” The researcher followed up with a question about TV or movie preferences regarding “streaming” versus regular, live broadcast. As expected, nearly 75 percent preferred streaming to broadcast, with an overwhelming age correlation.

In terms of electronic versus print preferences, the researcher asked participants whether they preferred to read “printed books or periodicals versus electronic ones.” The researcher included an option for neither, but worded it as “I prefer watching video content more than reading.” Not too many people picked the latter, but it was still fairly surprising that they would admit to it at all, given that it was a self-reported survey. The researcher also asked them whether they usually read such articles thoroughly or just skimmed them, and as expected, most admitted to merely skimming them. The researcher still expected a somewhat smaller number of “skim” responses, again considering it was a voluntary, self-reporting question.

The final, and most important, question directly involved electronic eloquence, though it obviously did not include the phrase. The researcher took one of the most famous quotes from one of his childhood heroes, President John F. Kennedy, and presented it in four different forms — plain text, his portrait and quote, “meme”-style using a famous photo of an astronaut on the moon, and a two-

minute video clip on YouTube from that particular speech — asking respondents which one they preferred. The researcher’s prediction was that they would primarily choose one of the two image styles, with a slight preference for the meme. The researcher did not actually want to present it as a meme *per se*, but it ended up being simpler to use a meme generator than to design the image himself using design software like Photoshop. The researcher will explain his reservations in the “limitations” section.

The researcher specifically chose a well-known inspirational quote from JFK’s “Moon Speech,” delivered at Rice University on September 12, 1962, a year before his death, in which he challenged the nation to land on the moon before the end of the decade. The two images included the shortest, most famous quote from the speech — “We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard” — while the plain text and the YouTube video included the quote within a larger context. For the text, the researcher used the following block quote:

There is no strife, no prejudice, no national conflict in outer space as yet. Its hazards are hostile to us all. Its conquest deserves the best of all mankind, and its opportunity for peaceful cooperation many never come again. But why, some say, the moon? Why choose this as our goal? And they may well ask why climb the highest mountain? Why, 35 years ago, fly the Atlantic? Why does Rice play Texas? We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and

measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too. It is for these reasons that I regard the decision last year to shift our efforts in space from low to high gear as among the most important decisions that will be made during my incumbency in the office of the Presidency. — JFK's "Moon Speech"

The reasons the researcher chose a quote from JFK, besides simple admiration for the former president, are because it is a quote with which most people are already familiar; it is inspirational; as an historical quote, it is ideologically neutral and does not involve other variables such as politics or race; it can be easily presented in either a short statement or a larger block quote; and it is within the public domain. It also allowed the researcher to choose visually appealing photos of both the president's portrait and a powerful image of an astronaut on the moon as well as a video clip of the speech, all of which also came from the public domain. Being a beloved president and an inspirational leader figure, JFK presented the perfect opportunity to demonstrate the shift in electronic eloquence from Jamieson's original theory to the social media age. Kennedy's timelessness, his famous and inspirational speech, his persona, the aesthetic appeal of his portrait and that of the astronaut on the moon all came together to minimize external variables and maximize the preferences of the social media generation, and the results were very clear.

The researcher also intended to ask questions directly regarding attention span — which involved asking questions at the end of the survey about some of the

previous questions to see how well participants had paid attention and remembered — but the format of the survey prevented him from doing so. It would have required using a multiple-page survey that prevented backtracking, but the researcher could not figure out how to structure it that way. It should be possible to do so using Amazon’s Mechanical Turk, but the format was more than a little confusing. The researcher ultimately opted to code the entire survey in HTML (included in the appendix), since that gave him direct control over the entire survey presentation, and just dispense with the attention-span questions. The researcher will explain more of this in the “limitations” section as well.

Finally, the researcher had assumed that Mechanical Turk would structure the data for him, leaving him free to focus on analyzing it, but it merely spit the results out in a Microsoft Excel document. Again, it may have been possible to get them to better organize the data, but the researcher could not find a way to do that. The researcher did most of the organization, chart creation, and analysis himself using Excel, but he also found a free site called Data Cracker that organized and analyzed the data for anomalies and significant results. Data Cracker actually turned out to be pretty useful and user friendly, but it did force the researcher to submit the results in separate batches of 100 responses at a time unless he paid a lot of money for an annual account. Rather than purchasing a subscription, the researcher chose to work around the limitations and examine the data both himself via Excel and using Data Cracker’s personalized charts and graphs.

The researcher analyzed all of this data through the lenses of Marshall McLuhan’s theory of “the medium as message” and Kathleen Hall Jamieson’s theory

of electronic eloquence. Per McLuhan, the researcher was expecting to see a very clear difference between the smartphone users and non-users — particularly a degradation of attention spans and short-term memory faculties. Jamieson’s theory seems to predict an even more acute focus on immediate, concise, and visual communication than during the previous “electronic age” of television and radio, and the researcher expected to see millennials and smartphone users in particular prefer the two image options in the final question. From these responses, the researcher extrapolated conclusions for future cultural trends — bolstered by the latest Pew Research Center statistics — and areas for further study.

Limitations

The very nature of surveys causes the results to be somewhat subjective based on the participants’ answers. Actual experiments and observational studies would provide the most concrete evidence of the trends the researcher is trying to study, but the logistics are fairly prohibitive in this case. Thus, the researcher was forced to rely on participants’ own assessments of their smartphone use and media preferences, but that is exactly why the researcher crafted the “JFK question” explained above. That particular question largely eliminated subjectivity on the part of the respondents and allowed the study of their behavior directly, if in limited scope. Rather than asking general questions about what they consciously preferred, the researcher simply asked which quote format appealed to them the most, without explaining why or giving any other context that might skew their results. This is in direct contrast to their responses about how often they socialize with friends and family outside of work or school, in which case they are less likely to admit to being

less social — due in part to cultural stigmas about people who keep to themselves. Culture (through mass media and otherwise) insists that people should constantly be out with friends, having fun, and involved in romantic relationships to a degree that average people, statistically, do not measure up. Therefore, the researcher expected most people to respond in ways that suggested they were constantly out with their friends to a degree that those age demographics, statistically, are usually not.

Secondly, the participants were somewhat limited demographically. According to a 2010 UCLA study on Mechanical Turk's workers, participants are 69 percent female, 63 percent college graduates, and have a median age of 30. This limited the respondents from other age groups, but any demographic homogeneity could alternatively serve to emphasize the differences correlating with the smartphone variable. However, both because of the electronic medium and the website chosen, the researcher found very few participants who did not own a smartphone or tablet for less than two years, and almost none who did not own a smart device at all. The positive caveat is that the researcher found little correlation between smartphone use and shifts in electronic eloquence, but he found an enormous correlation between age demographics and cognitive or behavioral shifts. This ultimately goes back to technology use, but it suggests those changes require much longer periods of time or at least an emphasis on technology use during early childhood and adolescent development rather than simply owning a mobile device for a few years.

While it would have been interesting to analyze the results for any correlations with ethnicity or household income, the researcher thinks the dramatic differences between age demographics suggests that the effects of other variables would be somewhat limited. The researcher would almost certainly have gotten limited ethnic data and almost no high-income respondents, given Mechanical Turk's demographic information and the simple fact that few high-income individuals would likely perform menial tasks for tens of cents per minute. However, the researcher obviously cannot make any definite conclusions in that regard since he did not ask for ethnic or income information.

Some of the participants also failed to properly interpret the question that asked them to rank 10 common uses for social media, and the results were somewhat garbled. A number of respondents, for example, ranked each individual option on a scale of 1-10 in such a way that they gave the same number to more than one answer. This confused the analytics a bit, but it did help the researcher to see how much they valued each individual option. The answers for that question and a couple of the others, such as favorite social media platforms and preferred content (videos, photos, etc.) turned out to be far less useful and more difficult to analyze than the researcher anticipated. Nearly everyone surveyed was on Facebook and said they used social media primarily to look at videos and photos (in that order), but that hardly told me anything new. The researcher had expected to be able to draw some tangential conclusions from that, but it turned out to be mostly irrelevant information.

Another minor problem on the analytical side related to the researcher's use of Data Cracker as a simple analytic tool. The site only allows data to be input in batches of 100 without a fairly expensive subscription, which meant that the researcher needed to crunch the numbers in two separate batches. The results were essentially the same when the researcher compared them, but it still would have been preferable to analyze all of the results in one large group to avoid any implicit errors in the analysis.

The "meme" response for the JFK quote received slightly fewer responses than the researcher expected. The researcher's prediction was that the meme and portrait would be the top two responses, respectively — which largely turned out to be true — but the portrait actually placed first out of the two. The researcher believes that this came down to three primary reasons. First, President Kennedy is a beloved figure in recent American history, and his assassination at the peak of this approval, as well as his charisma, youth, and attractiveness in general, made him into a martyr-figure. Therefore, JFK's status amongst most Americans placed him ahead of the photo of an anonymous astronaut in a faceless helmet. Secondly, the fact that human beings react better to smiling, attractive faces means that participants would psychologically have preferred anyone fitting the former definition to a faceless astronaut helmet — all else being equal. Finally, memes are generally meant to be funny, and at this point in time, they are often seen as overused and tiresome.

Any attempt to create a meme that fails to meet the socially accepted standard of humor and wit will often fall flat or be seen as "forced." The researcher's

intention was not actually to create a meme *per se*, but as mentioned in the “procedures” section, the researcher could not find an image that he liked with JFK’s quote on it. The only option was to create one, but, having limited design skills, using a meme generator was preferable to designing the image oneself using photo-editing software. This choice ran the risk of violating the very eloquence standards the researcher was attempting to prove, and while the responses generally reinforced his hypothesis, the researcher believes he would have gained more preference for the astronaut photo had he not presented it as a meme.

Amazon’s Mechanical Turk format turned out to be somewhat more convoluted than the researcher expected, and he could not quite figure out how to structure the survey exactly the way he wanted. The main issue was that the entire survey seemed to be presented as one continuously scrolling page. This meant that the researcher could not ask the “trick” questions regarding attention spans and short-term memory as intended. The researcher is sure there is a way to structure the survey as multiple pages and to prevent backtracking (otherwise eliminating any reason to ask memory questions), but he could not figure out how to do it.

Writing the questions and choosing the response types without resorting to computer code was also not particularly user friendly. Instead, the researcher opted to just write the entire survey in HTML (see Appendix B) so that he had as much direct control as possible over its presentation. The upside to writing one’s own code is that the researcher was able to beautifully structure the final question with JFK’s quote. The researcher was able to embed the text, both image choices, and the YouTube video directly into the survey in a format that was easy to read, view, and

answer. Ultimately, the complicated creation process may have eliminated some of the data gathering options, but it meant that the final question worked perfectly and gave the researcher almost exactly the answers he had predicted.

Overall, a survey can — and in this case did — provide some useful data, even accounting for participant biases and self-reporting, but an actual experiment or exponentially larger data pool would probably be more useful. The researcher attempted to counter the limited data pool with PEW research statistics and other external data sources, but the primary data in terms of electronic eloquence seemed fairly limited and up to interpretation. Though the researcher also made an effort to ask questions that did not rely entirely on self-reporting, and thus eliminated some user bias, the survey still had some inherent limitations by default.

The one correlation that the researcher had hoped to directly prove — between smartphone use and a clear shift in electronic eloquence — was ultimately absent from the study, but a larger study over a longer period of time could potentially demonstrate the link the researcher attempted to find. The cognitive and behavioral shifts the researcher found clearly correlated with generational differences, but as those differences occurred because of technology use during respective childhood and adolescence, the researcher remains convinced that the advent of smartphones and other mobile devices will have a similarly profound effect on the current or next generation. It may simply be that the researcher focused on the wrong age groups and that children or teens might have provided different results. This is ultimately the most profound limitation of the study with regard to smartphone use in particular.

Results

In terms of age demographics, the results of the survey were heavily weighted toward the 25-34 age group, while the 18-24, 35-44, and 45-54 groups each numbered between 25 and 33 participants. Only 12 and 4 respondents identified themselves within the 55-64 and 65+ demographics, respectively. (Figure 1.) This meant that the researcher had to balance the number of responses for any particular question with the overwhelming bias toward the 25-34 demographic. Nevertheless, there still seemed to be clear generational differences between the overall 25-44 group and the smaller age groups to either side, even when accounting for the uneven age quantities. For example, younger participants almost always preferred to stream television content, while older (55+) participants largely preferred traditional broadcast television.

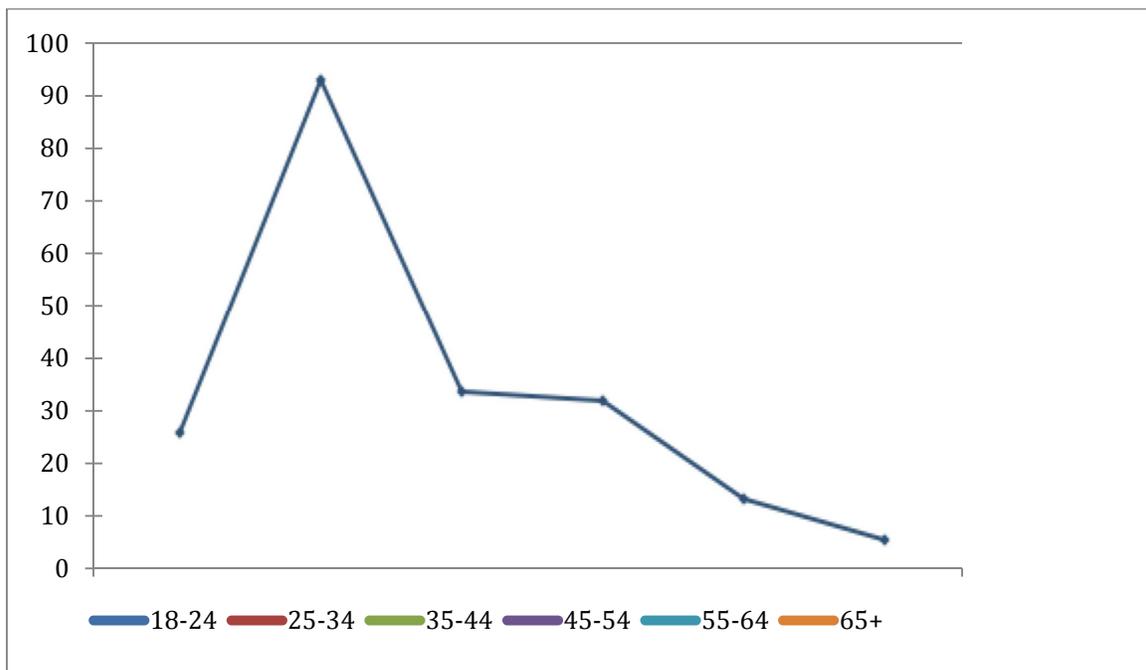


Figure 1

Male participants slightly outnumbered the female participants, 56 percent to 44 percent, respectively, which seemed a little odd, considering the fact that Amazon Mechanical Turk reports a female worker base of roughly 69 percent. Mechanical Turk's reported median worker age of 30 and their fairly high education levels (63 percent are college graduates), were both reflected in the survey results, however. If the researcher were to hazard a guess as to the discrepancy, it might be the technological focus of this thesis. The reason for that suggestion lies in the fact that the male participants were far more likely to report socializing with friends and family around a television or computer screen, which would probably revolve primarily around video games and sports, judging by the latest Pew Research Center statistics on teens and technology use. Females, however, largely reported that they preferred to socialize away from television screens and generally tend to show less interest in electronic devices themselves.

When participants did report their technology use, males tended to socialize around the devices themselves, i.e. video games and movies, while females largely used the devices to communicate each other or to plan events. The difference is that for the former, the device itself (or its connected screen) is the center of attention, while for the latter, the device is merely a tangential tool for socialization. In the survey results, male and female participants gave answers that were almost perfectly reversed from the other gender. Only a small number of females answered that they "always" or "often" socialized around a television screen, but far more of them responded with "never" or "rarely." For the males, those statistics were the opposite, and only two reported that they never socialized around a screen. This

seems to relate back to the Pew statistics on technology use, which stated that video games were a “key element of friendship” for 84 percent of boys in August 2015.

Males reported socializing with friends or family significantly more frequently than female participants, even though women tend to be more social, as previously stated. The apparent discrepancy almost certainly lies with a difference in definitions between the two genders. According to Pew, Males are far more likely to socialize over video games, and when they do, they are more often than not playing games over the Internet from different locations. Women, on the other hand, are far less likely to play video games, and they rarely play games online — preferring instead to use the games as ways to connect with each other in person. The statistics between the two genders are nearly mirror images of each other: 67 percent of boys play games over the Internet on a daily or weekly basis, and only eight percent never do. Conversely, 47 percent of girls never play games with friends online, and only eight percent do. Twenty-seven percent of the girls say they rarely play games online.

These stark differences between the two genders suggest that the women felt that they socialized with each other less often than the men did, but their relationships are probably deeper. When they socialize, the women responded that they met most often a couple times a week (22 percent) or on the weekends (18 percent), and 25 percent of them only met monthly or less often. The remaining third said they met with friends and family outside of work on a daily basis. (Figure 2) Their meeting times and aversion to centering around a television screen suggests that the female participants are more active and are socializing in person

— most critically while paying more attention to each other than an electronic device. The males, though they claimed to meet far more often in person — 38 percent and 33 percent on a daily or weekly basis, respectively — are far less likely to be paying attention to each other rather than an electronic device. The 19 percent who reported meeting on the weekends, and the mere 11 percent who said they met monthly or less, are probably forming deeper relationships than the 70 percent of their peers who frequently socialize by focusing on a television screen. (Figure 3)

This is not to pass any form of judgment, as this researcher generally falls within the 70 percent category, but it is an important point to stress.

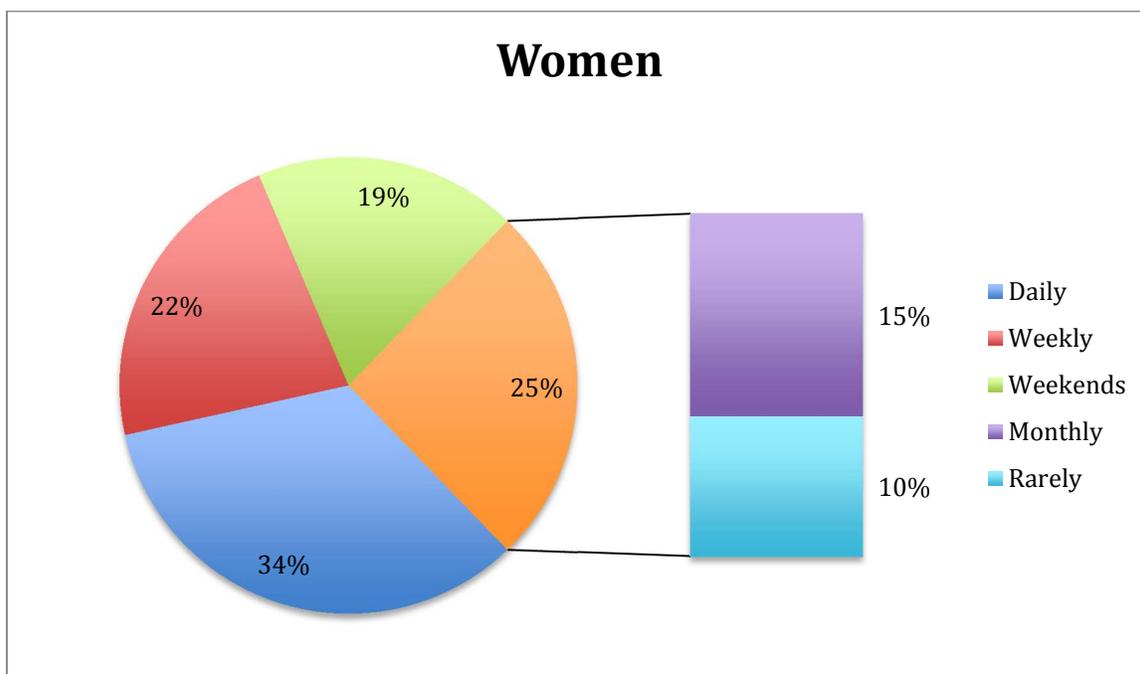


Figure 2

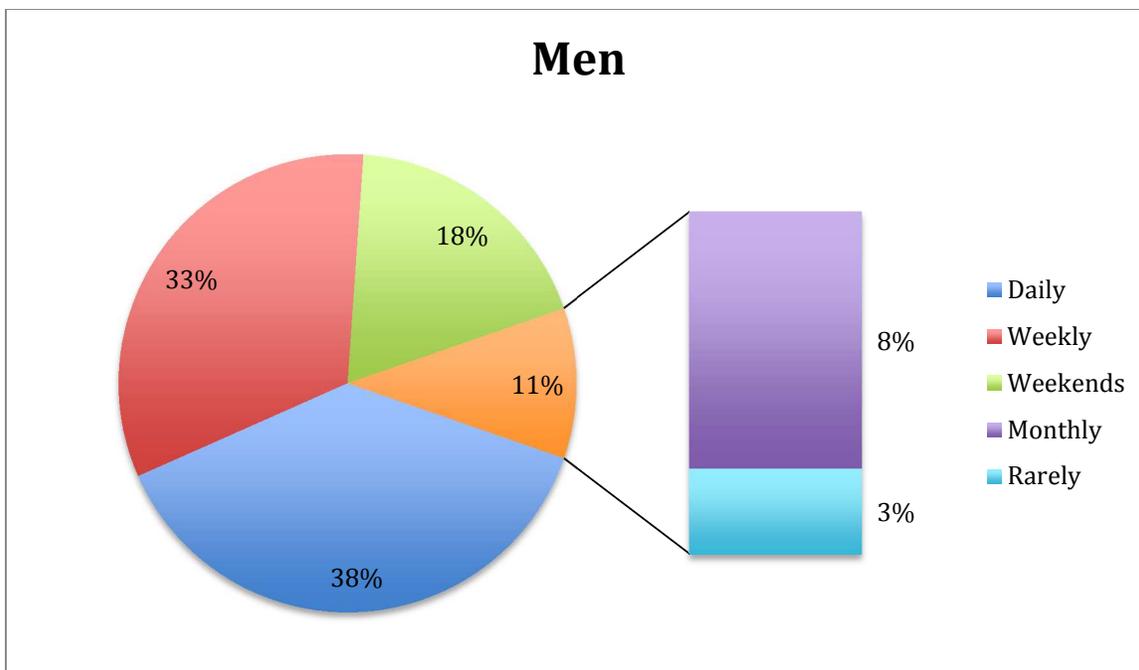


Figure 3

In terms of social media use, male and female respondents did not show a major difference in frequency, although females did have a slightly higher tendency to check social media more often. Seven percent more female participants said they checked social media “multiple times a day” than the male participants, but the latter were slightly more likely to check their accounts “once per day” (four percent more than females) or “once or twice a week” (five percent more than females). Between the top two categories, female participants tended to use social media slightly more frequently, but the difference is so small that it does not seem to be significant.

Another significant difference between male and female participants, however, related to their preferred medium for reading. More than half of the women surveyed (54 percent) preferred printed books, magazines, and other

periodicals, while only 30 percent preferred to read electronic books or articles. The men were exactly reversed, however, with 54 percent preferring to read on electronic devices, and only 29 percent preferred printed materials. Fifteen percent of both men and women said they just preferred video content to reading, with the non-readers being almost exclusively younger participants.

Oddly enough, the male participants showed a significantly higher tendency to say they read articles and books thoroughly as opposed to skimming them (60 percent to 37 percent, respectively), while female participants responded largely the other way around (53 percent to 43 percent). The remaining respondents for both genders said they preferred not to read. The “skim” versus “thorough” responses were roughly the opposite of the anticipated results. The researcher expected most participants to say they generally skimmed articles rather than reading them thoroughly, but he expected more of the women to say they preferred to read thoroughly than the men — especially given the fact that most of the women said they preferred printed rather than electronic content.

Comparing the results to other variables, the researcher could not find a clear reason for the unexpected result. The male and female participants shared roughly the same exact levels of education as well as the same age ratios. The researcher had expected to find some sort of difference between those variables, but obviously they cannot account for the discrepancy. The researcher also checked the participants’ answers against the amount of time each one spent taking the survey, and the men did take slightly more time overall compared with the women. This might back up their responses regarding skimming versus reading, but the

difference was only about 10 seconds. Amazon Mechanical Turk workers are highly motivated to complete tasks as quickly as possible so that they can make more money. This is obviously one of the strengths of the crowdsourcing site. It just seemed interesting that the women tended to complete the task slightly faster and said that they tended to skim articles, but there may also be absolutely no correlation between the two.

Another clear difference between male and female participants pertained to their preferred social media content styles. The men preferred funny content over practical (things like recipes and “life hacks”) or serious (e.g. news) posts — 53 percent versus 28 and 19 percent, respectively. The women had a much stronger preference for practical content, however, at 49 percent, with funny posts receiving most of the other answers (42 percent). Only nine percent of women chose serious content over the alternatives. This does not seem to have any correlation to the skim versus thorough question, but it does reveal a distinct difference between the two genders on social media. (Figure 4)

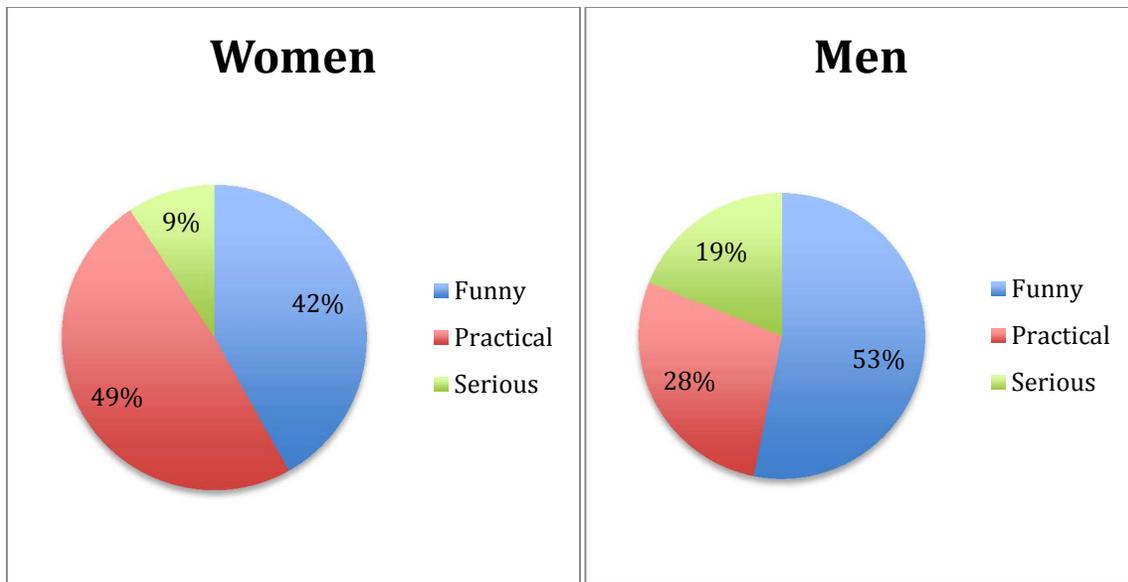


Figure 4

Finally, men and women slightly differed over the question regarding President Kennedy’s moon quote. The women were evenly split between the two images (36 percent to 36 percent), and only 17 percent preferred the video. The plain-text quote came in last, as expected, with only 11 percent. (Figure 5) The men were largely split between JFK’s portrait with 33 percent and the video of his speech with 31 percent. Only 19 percent preferred the “meme” with the astronaut on the moon, and 17 percent preferred the text. (Figure 6) The lack of interest in the “meme” was somewhat expected, as mentioned in the earlier “limitations” section, because it violated the very standards of eloquence the researcher was trying to demonstrate. Had he designed that particular image a little differently, it would almost certainly scored a little higher, but the strong preference for the video somewhat surprised me. A better-designed photo on the researcher’s part might have “stolen some of the vote” from the video, but it is still worth mentioning that both images together totaled more than 50 percent of the men.

Given the limitations with the “meme”-style image, the researcher had expected slightly more of the women to choose the portrait of JFK over the astronaut, but that was not the case. The researcher had also mistakenly anticipated that the image of a smiling face — not to mention whose it was — would have won out over the “cooler” photo of a faceless man on the moon. Instead, it seems that the women were more forgiving of the researcher’s Internet *faux pas* regarding the meme — taking a tired format reserved for humor and wit and using it for a serious, inspirational topic instead — while the men, who strongly preferred funny content to begin with, were less interested in the image. Either way, the researcher’s larger assumption was proven correct in that both images combined were significantly more popular with each gender than either of the other formats.

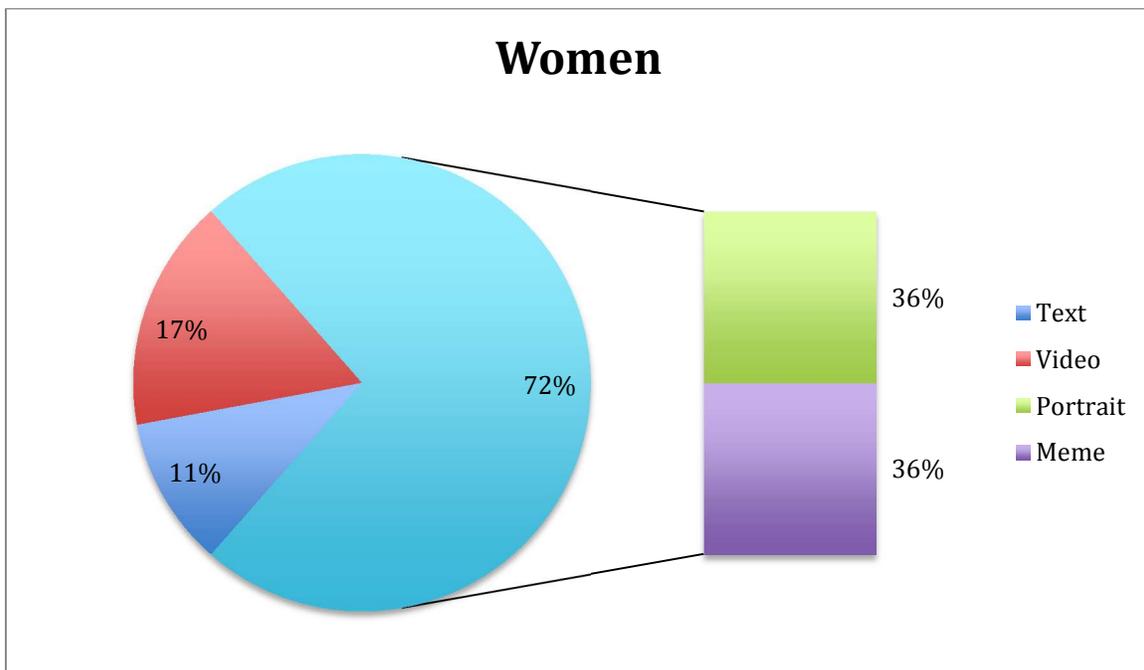


Figure 5

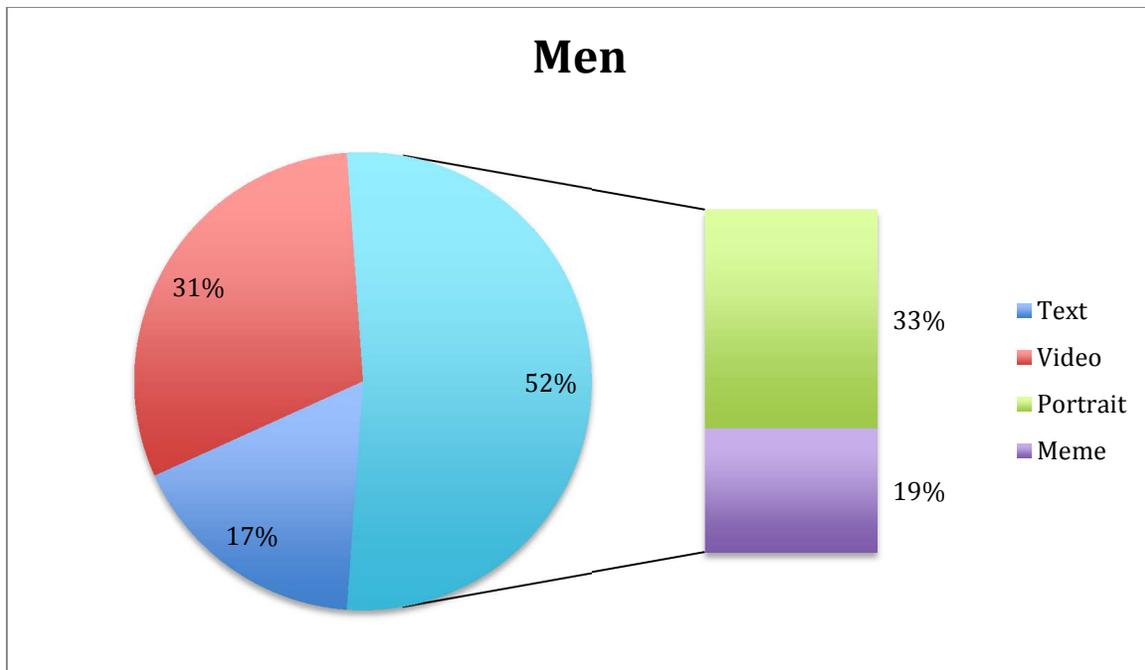


Figure 6

While the researcher found more differences between the gender results than he was originally expecting to see, the most dramatic differences were clearly generational. The age demographics were much harder to analyze, given that nearly 50 percent of the participants fell within the 25-34 age group. As mentioned in the methodology section, the median age of Amazon Mechanical Turk workers is 30, which is both a good age for this study and a limitation in terms of the sheer number of participants within that demographic. The website Data Cracker was extremely helpful in this regard, because it organized the data into helpful graphs and, most importantly, automatically analyzed the data while taking into account the unbalanced age demographics. This allowed differences among the smaller age groups to stand out alongside the exponentially larger 25-34 group.

The first clear difference between age groups related to social media use. While 86 percent of participants said they used social media “multiple times a day” or “once per day” (62 percent and 24 percent, respectively), the youngest participants tended to use social media far more often, and the respondents who answered with “a couple times a week” or “rarely” were almost exclusively older. The average ages for the first two answers were 30 and 31, but the average age for “weekly” or “rarely” users was 36 and 42, respectively. (Figure 7) This matches national statistics on social media use, and it is the ultimate basis for this entire thesis: examining the impact of frequent social media use (primarily via smartphones) on younger individuals.

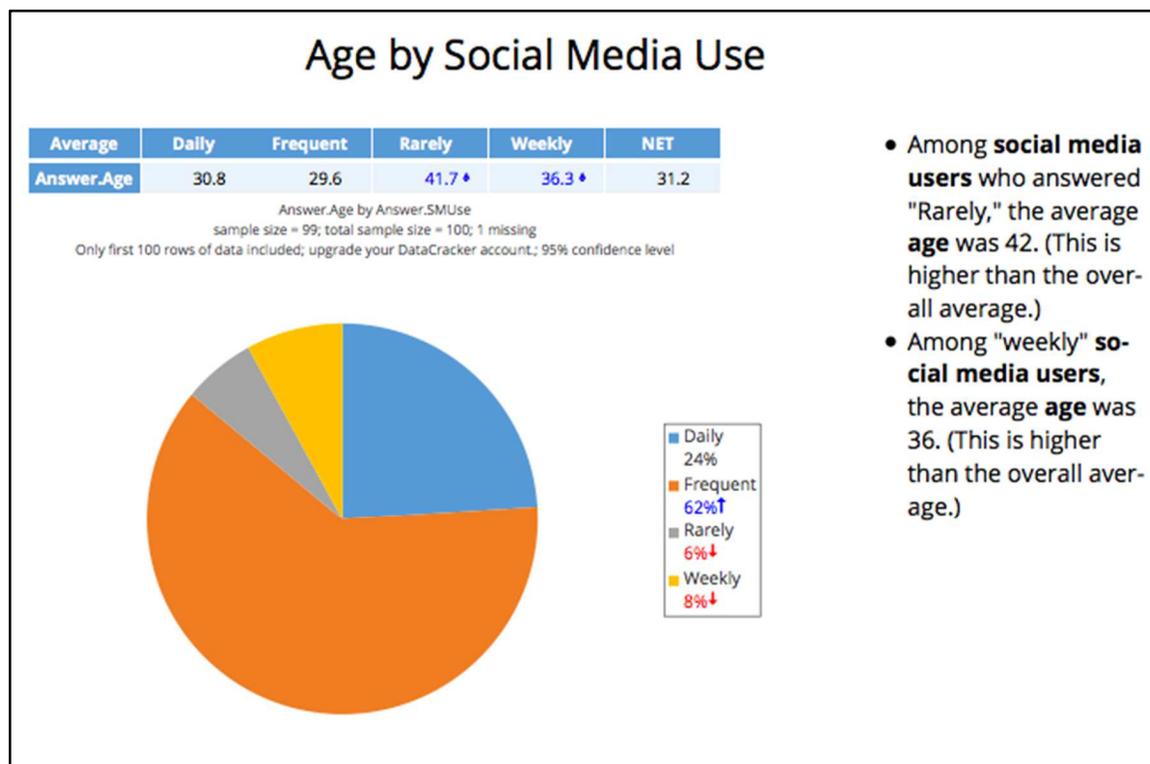


Figure 7

Interestingly, of the few non-smartphone owners surveyed, all of them were older than the average participant, and the average age of non-smartphone owners themselves was 47. These older participants were also far less likely to socialize around a television screen. Those who answered the latter question with “often” or “rarely” were very clearly divided by age. The average age of respondents who often spent time with friends around the TV screen was 24, while the average for those who rarely did so was age 38. The differences are even more apparent when examined in terms of streaming versus broadcast television preferences. Everyone surveyed from age 18 to 44 preferred to stream their content — at a roughly 73 to 27 percent split. For every age group above 45, the broadcast preference jumps to more than 50 percent.

As expected, younger participants preferred video content to printed or electronic books, magazines, and other periodicals, while older respondents clearly preferred printed materials. The average age for print readers was 34, but, while statistically significant, that number also includes a lot of younger respondents that lower the average. Among older readers — everyone over 45 years of age — 57 percent preferred printed materials, including all but one of the respondents over 65. Slightly more of the men over 45 preferred electronic media than the women, which reflects the overall gender trends mentioned previously.

The answers for the JFK quote were a little more unexpected, however. Not many participants preferred the video clip of the former president’s speech, as opposed to the block quote or the two images, but those who did were far more likely to be younger. Similarly, the few who chose the plain text version of the quote

were far more likely to be older. (Figure 8) All of this was to be expected. The strange part is that while younger men preferred the video more than older participants, the “meme” version scored most highly with women over 45. The researcher had anticipated younger participants to prefer either of the still images over the video, with print in last place (both of which turned out to be true) and the meme slightly ahead of the portrait (which was not true), but the researcher did not expect nearly half of the older women to prefer the astronaut photo over the portrait of John F. Kennedy or the block quote. (Figure 9)

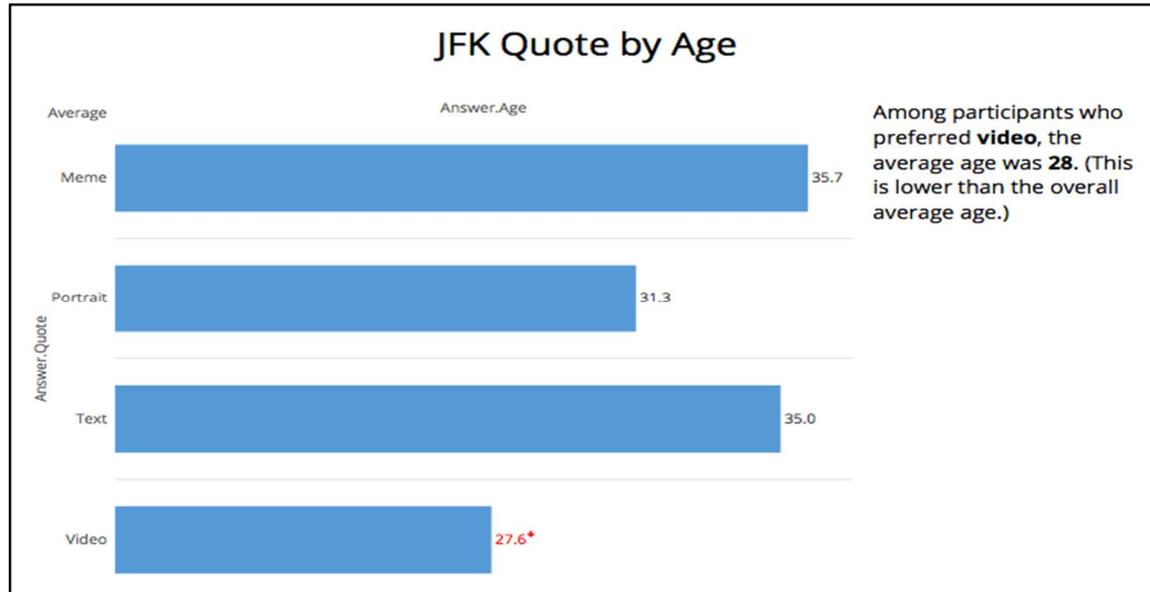


Figure 8

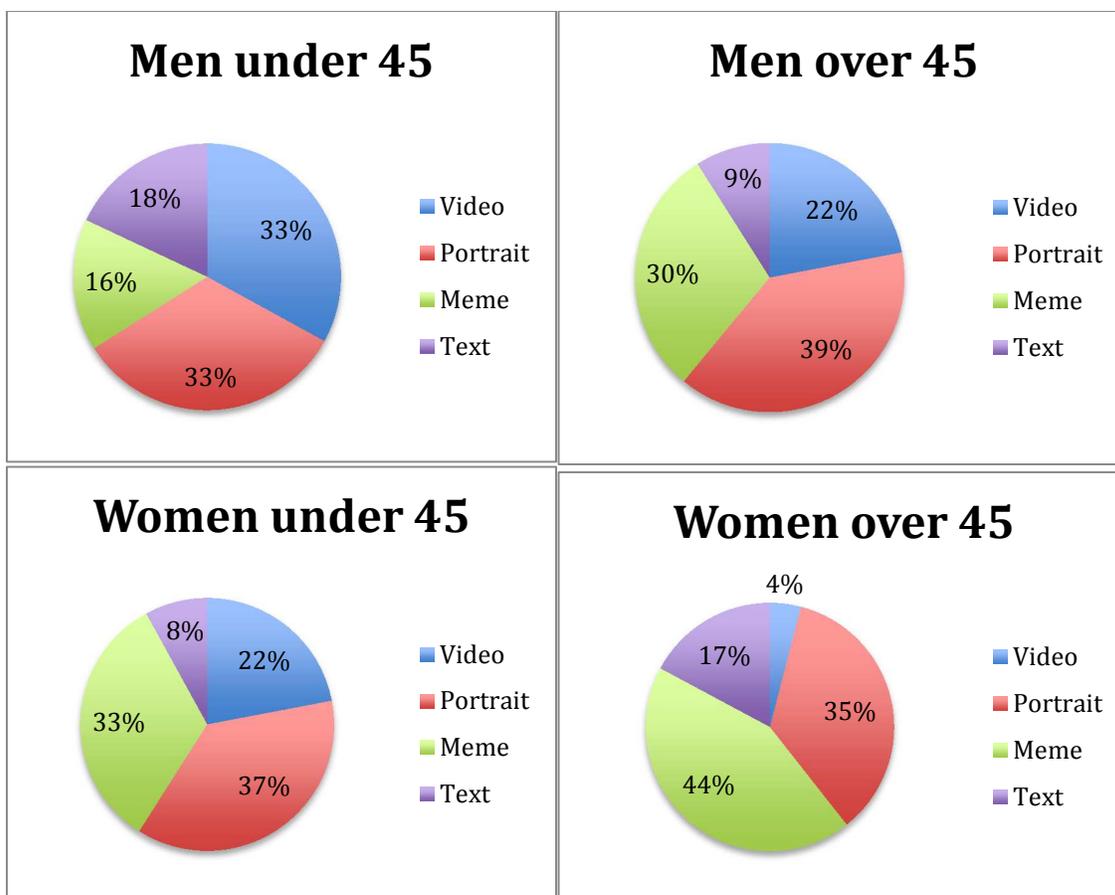


Figure 9

While the overwhelming majority of participants preferred the images rather than the plain text or even the video, the researcher cannot say for sure why a statistically significant majority of women over 45 preferred the “meme” style image. The researcher’s expectation overall was that younger participants would prefer the meme or portrait, middle-aged ones would choose the video, and the oldest respondents would select the block quote. That was not necessarily the case, however. The average age for the plain text quote was older, but so was the meme. The portrait had an average age squarely in the middle, but the participants who chose the video tended to be significantly younger. This was not the clear answer

the researcher was hoping for, although he does acknowledge the limitations of his choice of image style with regard to the “meme” version.

As mentioned in the “limitations” section, the researcher also asked participants questions about their preferred social media platforms and the types of content they liked best, but the data turned out to be more jumbled and less useful than anticipated. Nearly everyone used social media primarily to look at videos and photos, regardless of age, and all but a few of them were on Facebook. The top two answers, by far, for the reasons the participants liked to use social media were “keeping up with friends and family” and “checking the news.” A lot of other respondents also highly valued sharing their own opinions and reading others’ opinions, but all of that is to be expected. Overall, those three questions contributed little to the researcher’s findings.

Conclusion

Overall, there did not appear to be any statistical correlation between minimal to zero smartphone use and any other distinct variable, but there were also an extremely limited number of respondents who reported owning a smartphone for less than 12 months. This is due both to ubiquitous “smart” device ownership and a fundamental drawback of conducting an electronic survey through a relatively new platform. However, differences based on age seem to be readily apparent in the results — particularly with regard to variables like media preferences and whether they thoroughly read articles or just skim them. This ultimately comes back around to media technology, but the effects seem largely limited to technology available during youth and early adulthood. Either that, or the time frame required for psychological changes to occur later in life is much longer than simply owning a smartphone or tablet for a few years.

It could also be that older generations have formed patterns of socialization and relationships without reliance on electronic devices and thus naturally and subconsciously relate better on a direct, personal level. Younger generations, on the other hand, have largely grown up intertwined with electronic media, and thus have a hard time distinguishing between their digital and “analog” lives. Interacting with friends, family, and acquaintances with a screen in the middle seems perfectly natural — often entirely unquestioned. This is reflected in the fact that males respondents reported socializing with friends over the Internet or centered around a television screen on a daily basis, as if it were perfectly normal to spend time with

friends without actually seeing or truly paying attention to them. Nonverbal cues such as body language, subtle expressions, vocal nuances, and changes from personal behavioral baselines often go unnoticed amidst the constant flood of digital information and stimuli.

During the course of individual development, such an altered form of connection can result in digital fluency with a corresponding loss of nonverbal and emotional communicative competency. This may be the reason younger generations tend to pull out their mobile devices simply to avoid making eye contact or small talk with passing strangers. It is not from a place of vanity or rudeness but out of awkwardness and the discomfort of having to communicate in an unfamiliar — in essence nonnative — language: that of “analog” personal connection. How does one make proper eye contact or greeting without the intermediary of an electronic screen?

This may sound absurd, even to millennial readers, but the root cause does appear to be atrophied or nonexistent social skills. To use the term “social skills” in this context seems to be a bit inaccurate, however, considering that the same individuals communicate fluently through electronic media as the first true digital natives. There is a complex and undefined system of etiquette and social structure that exists in the digital realm, and as natives, millennial users tend to naturally follow these social norms without needing to be consciously taught the proper rules. Older generations, conversely, are often teased for their digital unfamiliarity and awkwardness — literal social awkwardness, but in the digital realm — even though they communicate fluently through “normal” (i.e. non-electronic) interaction. In

essence, the two cultures have reversed: younger people are socially awkward in-person but in their element online, while older adults are their children's mirror image socially.

This will require an update to Jamieson's theory of electronic eloquence, and it is the essence of McLuhan and Postman's warnings about unanalyzed psychological changes brought about by revolutions in communication media. Postman's entire thesis in *Amusing Ourselves to Death* is that we are doing enormous damage to society and our way of thinking with our mindless, visual consumer culture. It lulls us into faux-community, thus leaving each of us ever more isolated while we stare at our screens and imagine ourselves to be more closely connected than before. Interestingly, Postman suggests the power of imagery to be the reason ancient Israel was prohibited from creating any "graven images" for the purpose of religion.

I wondered then, as so many others have, as to why the God of these people would have included instructions on how they were to symbolize, or not symbolize, their experience. It is a strange injunction to include as part of an ethical system *unless its author assumed a connection between forms of human communication and the quality of a culture*. We may hazard a guess that a people who are being asked to embrace an abstract, universal deity would be rendered unfit to do so by the habit of drawing pictures or making statues or depicting their ideas in any concrete, iconographic forms. The God of the Jews was to exist in the Word and through the Word,

an unprecedented conception requiring the highest order of abstract thinking. Iconography thus became blasphemy so that a new kind of God could enter a culture (Postman, 1985, 9).

For all their strengths, overreliance on new media can generate a lack of tangible, emotional connection; a reduction in complex, abstract thought; and an emphasis on instant gratification — to the detriment of society if left unchecked. The answer lies in a conscious effort to set aside time away from our screens and give our full, undivided attention to the people, nature, and even printed books around us. For, to repeat McLuhan, “unconsciousness of the effect of *any* force is a disaster, especially a force that we have made ourselves.” (p. 248)

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Appendix A

Below is the image the researcher made for the survey. The “meme” style was not actually intended to be a meme *per se*, but the researcher’s graphic design abilities are limited. The other image shown to participants was a black and white presidential portrait of President Kennedy with text beside it. Both images were the same width in the survey.



Appendix B

Below is the fairly extensive HTML version of the survey for anyone interested.

```
<!-- Bootstrap v3.0.3 -->
<link href="https://s3.amazonaws.com/mturk-public/bs30/css/bootstrap.min.css"
rel="stylesheet" />
<section class="container" id="Survey" style="margin-bottom:15px; padding: 10px
10px; font-family: Verdana, Geneva, sans-serif; color:#333333; font-size:0.9em;">
<div class="row col-xs-12 col-md-12"><!-- Instructions -->
<div class="panel panel-primary">
<div class="panel-heading"><strong>Instructions</strong></div>

<div class="panel-body">Please fill out the questions below. It should take no more
than a few minutes. Thanks!</div>
</div>
<!-- End Instructions --><!-- Survey Body -->

<section>
<fieldset><label>1. What is your gender? </label>

<div class="radio"><label><input name="Gender" type="radio" value="Male"
/>Male </label></div>

<div class="radio"><label><input name="Gender" type="radio" value="Female"
/>Female </label></div>
</fieldset>

<fieldset><label>2. What is your age? </label>

<div class="radio"><label><input name="Age" type="radio" value="18" />18-24
</label></div>

<div class="radio"><label><input name="Age" type="radio" value="25" />25-34
</label></div>

<div class="radio"><label><input name="Age" type="radio" value="35" />35-44
</label></div>

<div class="radio"><label><input name="Age" type="radio" value="45" />45-54
</label></div>
```

```
<div class="radio"><label><input name="Age" type="radio" value="55" />55-64
</label></div>
```

```
<div class="radio"><label><input name="Age" type="radio" value="65" />65+
</label></div>
</fieldset>
```

```
<fieldset><label>3. Which of the following best describes your highest achieved
education level? </label> <select class="form-control" name="Education"><option
selected="selected" value="select one">- select one -</option><option value="Some
High School">Some High School</option><option value="Some college, no
degree">Some college, no degree</option><option value="Associates
degree">Associates degree</option><option value="Bachelors degree">Bachelors
degree</option><option value="Graduate degree (Masters, Doctorate,
etc.)">Graduate degree (Masters, Doctorate, etc.)</option> </select></fieldset>
```

```
<fieldset><label>4. Do you own a smartphone or tablet, and if so, for how long?
</label> <select class="form-control" name="SmartphoneOwnership"
size="5"><option>I don't own a smartphone or tablet</option><option>Less
than 1 month</option><option>6 months to 12 months</option><option>13-23
months</option><option>2-5 years</option><option>More than 5 years</option>
</select></fieldset>
```

```
<fieldset><label>5. How often do you use social media? </label>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Frequent"
/>Multiple times a day </label></div>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Daily"
/>Once per day </label></div>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Weekly" />A
few times per week </label></div>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Monthly"
/>A few times per month </label></div>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Rarely"
/>Rarely </label></div>
```

```
<div class="radio"><label><input name="SMUse" type="radio" value="Never"
/>Never </label></div>
</fieldset>
```

```
<fieldset><label>6. Which social media platforms do you typically use? (Check all
that apply:) </label>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Facebook" />Facebook </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Twitter" />Twitter </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Instagram" />Instagram </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Pinterest" />Pinterest </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="LinkedIn" />LinkedIn </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Video" />Video sites (Periscope, YouTube, Vimeo, etc.) </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Blogs" />Blogging sites (Blogger, WordPress, Tumblr, etc.) </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Forums" />Forums (e.g. Reddit) </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Wikis" />Wikis </label></div>
```

```
<div class="checkbox"><label><input name="SocialMedia" type="checkbox"
value="Other" />Other </label></div>
</fieldset>
```

```
<fieldset><label>7. If you use social media, rank your primary reasons (from 1-10: 1
being most important, 10 least important): </label>
```

```
<div class="input-group"><label><input label="Family" name="Reasons" size="2"
type="text" />. Keeping up with friends and family </label></div>
```

```
<div class="input-group"><label><input label="News" name="Reasons" size="2"
type="text" />. Checking the news </label></div>
```

```
<div class="input-group"><label><input label="OtherOpinions" name="Reasons"
size="2" type="text" />. Reading others' opinions on pop culture and public
events </label></div>
```

```
<div class="input-group"><label><input label="OwnOpinions" name="Reasons"
size="2" type="text" />. Sharing my own opinions on pop culture and public events
</label></div>
```

```
<div class="input-group"><label><input label="Photos" name="Reasons" size="2"
type="text" />. Sharing photos </label></div>
```

```
<div class="input-group"><label><input label="Videos" name="Reasons" size="2"
type="text" />. Watching videos </label></div>
```

```
<div class="input-group"><label><input label="Miscellaneous" name="Reasons"
size="2" type="text" />. Miscellaneous things like recipes and vacation ideas
</label></div>
```

```
<div class="input-group"><label><input label="Sharing" name="Reasons" size="2"
type="text" />. Sharing what I'm currently doing/eating/watching/etc.
</label></div>
```

```
<div class="input-group"><label><input label="Local" name="Reasons" size="2"
type="text" />. Getting local information like traffic updates, news, and the best
restaurants </label></div>
```

```
<div class="input-group"><label><input label="Other" name="Reasons" size="2"
type="text" />. Other </label></div>
</fieldset>
```

```
<fieldset><label>8. Which type of content do you most prefer? (Check all that
apply:) </label>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Videos" />Videos </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Photos" />Photos </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Articles" />News Articles </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Blogs" />Blogs </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Inspirational" />Inspirational quotes </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Memes" />Memes </label></div>
```

```
<div class="checkbox"><label><input name="Media" type="checkbox"
value="Other" />Other </label></div>
</fieldset>
```

```
<fieldset><label>9. Do you prefer more funny, serious, or practical content (e.g.
recipes, tips, or &quot;life hacks&quot;)? </label>
```

```
<div class="radio"><label><input name="Content" type="radio" value="Funny"
/>Funny </label></div>
```

```
<div class="radio"><label><input name="Content" type="radio" value="Serious"
/>Serious </label></div>
```

```
<div class="radio"><label><input name="Content" type="radio" value="Practical"
/>Practical </label></div>
</fieldset>
```

```
<fieldset><label>10. How often do you spend time with family or friends outside of
work or school? </label>
```

```
<div class="radio"><label><input name="Time" type="radio" value="Daily" />Every
day </label></div>
```

```
<div class="radio"><label><input name="Time" type="radio" value="Weekly" />A
few times a week </label></div>
```

```
<div class="radio"><label><input name="Time" type="radio" value="Weekends"
/>On the weekends </label></div>
```

```
<div class="radio"><label><input name="Time" type="radio" value="Monthly" />A
few times a month </label></div>
```

```
<div class="radio"><label><input name="Time" type="radio" value="Occasionally"
/>Not very often </label></div>
</fieldset>
```

```
<fieldset><label>11. When you do spend time with others, how often does that time
include playing video games or watching TV (movies, shows, sports or other live
events)? </label>
```

```
<div class="radio"><label><input name="Screen" type="radio" value="Always"
/>Almost always </label></div>
```

```
<div class="radio"><label><input name="Screen" type="radio" value="Often"
/>More often than not </label></div>
```

```
<div class="radio"><label><input name="Screen" type="radio" value="Sometimes"
/>Sometimes </label></div>
```

```
<div class="radio"><label><input name="Screen" type="radio" value="Rarely"
/>Rarely </label></div>
```

```
<div class="radio"><label><input name="Screen" type="radio" value="Never"
/>Never </label></div>
</fieldset>
```

```
<fieldset><label>12. Based on the previous question, do you usually watch various
media or play games on a: </label>
```

```
<div class="radio"><label><input name="Device" type="radio" value="TV" />TV
screen </label></div>
```

```
<div class="radio"><label><input name="Device" type="radio" value="Computer"
/>Computer monitor </label></div>
```

```
<div class="radio"><label><input name="Device" type="radio" value="Mobile"
/>Mobile device (smartphone/tablet/etc.) </label></div>
</fieldset>
```

```
<fieldset><label>13. I prefer to watch TV shows/movies... </label>
```

```
<div class="radio"><label><input name="Watch" type="radio" value="Streamed"
/>streamed: what I want, when I want it, without commercials. </label></div>
```

```
<div class="radio"><label><input name="Watch" type="radio" value="Broadcast"
/>live/recorded from regular broadcast TV. </label></div>
</fieldset>
```

```
<fieldset><label>14. How often do you read printed books or periodicals versus
electronic ones? </label>
```

```
<div class="radio"><label><input name="Print" type="radio" value="Print" />I
prefer print </label></div>
```

```
<div class="radio"><label><input name="Print" type="radio" value="Electronic" />I
prefer electronic media </label></div>
```

```
<div class="radio"><label><input name="Print" type="radio" value="Neither" />I
prefer watching video content more than reading </label></div>
</fieldset>
```

<fieldset><label>15. When you read a news article, do you usually read it thoroughly or just skim through and get the important details? </label>

<div class="radio"><label><input name="Read" type="radio" value="Thorough" />I read thoroughly </label></div>

<div class="radio"><label><input name="Read" type="radio" value="Skim" />I skim through </label></div>

<div class="radio"><label><input name="Read" type="radio" value="Neither" />I don't usually read articles </label></div>
</fieldset>

<fieldset><label>16. Which of the following do you prefer? </label>

<div class="radio"><label><input name="Quote" type="radio" value="Text" />"There is no strife, no prejudice, no national conflict in outer space as yet. Its hazards are hostile to us all. Its conquest deserves the best of all mankind, and its opportunity for peaceful cooperation many never come again. But why, some say, the moon? Why choose this as our goal? And they may well ask why climb the highest mountain? Why, 35 years ago, fly the Atlantic? Why does Rice play Texas? We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too. It is for these reasons that I regard the decision last year to shift our efforts in space from low to high gear as among the most important decisions that will be made during my incumbency in the office of the Presidency." - JFK's "Moon Speech" </label></div>

<div class="radio"><label><input name="Quote" type="radio" value="Portrait" /></label> </div>

<div class="radio"><label><input name="Quote" type="radio" value="Meme" /></label> </div>

<div class="radio"><label><input name="Quote" type="radio" value="Video" /></label><iframe allowfullscreen="" frameborder="0" height="315" scrolling="no" src="https://www.youtube.com/embed/g25G1M4EXrQ" width="420"></iframe></div>
</fieldset>

```
</section>
<!-- End Survey Body --></div>
</section>
<!-- close container -->
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  border-radius:5px;
  margin-bottom:5px;
}
</style>
```