

EXPOSURES II



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A Journal of Exploratory Research and Analysis

The research articles published here reflect the Capstone Research efforts of graduating seniors from the CSU Stanislaus University Honors Program. The articles present projects conceived from personal academic interests and mentored by faculty who are familiar with the research and scholarship driving these efforts of discovery.

While the stirrings of personal interest are a crucial element in the cultivation of sound research practices, we should not confuse these stirrings with the stirrings of sound research practices. The stirrings of sound research emerge only from a special growth in perspective, and the goal of good mentoring is to awaken these stirrings and override the restrictive limits of personal interests and attendant beliefs. We thank our faculty mentors, over a hundred so far, who have worked with our Capstone students over the past fifteen years to help them frame and conduct effective research projects.

In the process of acquiring new perspective in life, humans cultivate new orientations — new attunements, attitudes and convictions. Orientations provide a format for exposures. As researchers, we need to explore how these orientations operate to sensitize or desensitize people to blind spots in their understanding. Are there not issues, concerns, opportunities and challenges relevant to our lives that we can only appreciate *from somewhere else* —

from some other orientation? Growing older in life, good fortune is discovering new points of entry to our surrounding world. But we assimilate to new points of entry only by closing off or eclipsing *other* points of entry.

To see the world in a new light, to acquire new *exposures* to the world, means listening more attentively and becoming responsive in new ways. The capacity to respond to issues and concerns otherwise masked from view demands a special openness and attention to experiences we find strange and challenging. We seldom see things in a new light without first having the curiosity and disposition to explore surprising, unexpected, easily marginalized phenomena — nor without learning to discern otherwise hidden facets of our filtered social and personal constructions.

We trust this collection of articles will stir your interest in some timely topics. The goal of these writings is fourfold: to increase awareness of what is actually at stake, integrate this into the formation of compelling research questions, present findings based on analysis of criticism and formation of exploratory questions, and suggest how these findings might influence more positive developments. These articles reflect efforts to raise intellectual *curiosity* to the level of *sound research* with respect to topics and issues we hope will spark interest and further developments in the minds of our readers.



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Seniors in the Honors Program are encouraged to tackle complex problems using methods, insights and knowledge drawn from relevant disciplines. Honors Program faculty and capstone research mentors offer critical feedback and guidance along the way.

The main objective is for students to explore, gather, and analyze information effectively, and to share their reflections on the implications of what they have discovered. Group discussions help to promote thoughtful questioning and critical analysis. The primary goal is to communicate knowledge, judgments, and original perspective cultivated on the basis of careful inquiry, exploration and analysis.

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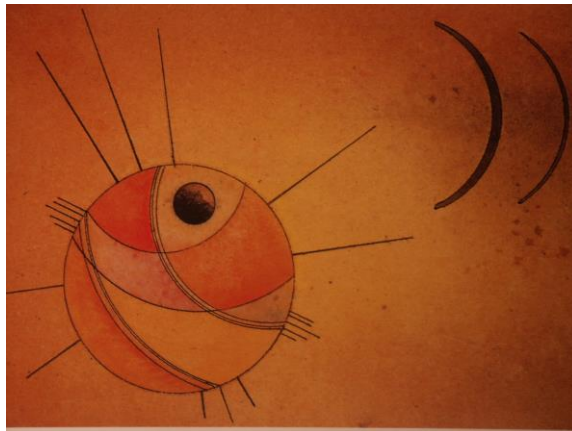
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HONORS PROGRAM COMMUNITY STATEMENT

The Honors Program at CSU Stanislaus is a community of scholars bound together by vital principles of academic openness, integrity, and respect. Through focused study and practice involving exploration and discovery across a variety of disciplines, the Honors Program upholds these principles of scholarly engagement and provides students with the necessary foundations for further research and inquiry.



Our interdisciplinary curriculum is integral to this work, and is intended to facilitate creative understanding of the irreducible complexities of contemporary life and knowledge. Personal and intellectual honesty and curiosity are essential to this process. So, too, is critical openness to difficult topics and respect for different perspectives, values and disciplines. The Honors Program aims to uphold these virtues in practice, in principle, and in community with one another.

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Defining Normal

Katie Segura

Abstract

Based on the available research, normal has traditionally been defined in terms of the abnormal. In other words, each term is used as a benchmark to describe the other, without which neither term could be defined on its own. This raises questions in the psychological community about the legitimacy of those definitions. In order to obtain a more comprehensive understanding of these concerns, a literature review was conducted, examining how the field of psychology has attempted to address this problem. According to the previous research, the term "normal" can have no set definition because its meaning is unstable over time due to such factors as consensus, social legitimacy in classification, trait confirmability, and negativity bias. The results of this study imply the need for further research into the consequences that may result from an inability to allow flexibility in the definition of "normal", as it suggests that a better understanding of how it is defined may help the psychological field avoid the misdiagnosis of abnormal and disordered behaviors in the future. More importantly, this research suggests that everyday people, and not just psychologists, should be encouraged to look beyond the symptoms and consider other factors that could contribute to misdiagnosis.

Introduction

In a critical discussion on "Effects of Psycho-diagnostic Labels, Depression, Severity, and Instructions on Assessment," Diana Herbert, Rosemary Nelson and James Herbert express concern that the accuracy of psychological assessment might be hindered by abnormal labels. According to the authors, after a diagnosis of behavior has been given, all consistent symptoms are remembered even when they are absent; likewise, any symptoms that are inconsistent are often disregarded when they are present (Herbert et al., 1988, p. 496).

This observation gives rise to several questions. For instance, how have changes in the psychological assessment process altered the perception of these disorders? More importantly, when *should* so-called "abnormalities" be classified as psychological disorders? Neither of these questions seem to be fully answerable without a prior claim to the definition of "normal." For this reason, researchers must ask another question—what is normal? However, this research does not intend to provide the absolute definition of "normal." In fact, following an examination

of all the evidence that has been thus far collected, further research into the matter should result in a strong argument for there being no set definition of normality, as the sheer number of published works that address the attempts for psychologists to provide a definition demonstrate that the classification and diagnosis of abnormal behaviors has been forced to change over time.

Because psychology suggests that the definition of "normal" will vary by time and place, how normality is *perceived* in any given circumstance is a more accurate way of approaching the question. Acknowledging that there are many different perceptions of what "normal" means is a central part of understanding so-called abnormal behavior. This research starts from the hypothesis that abnormalities simply cannot be accurately judged or determined without a proper understanding of what it means to be normal, which requires an examination of precisely how the current consensus in psychology determines when behavior crosses the thin lines between normal, abnormal and disordered. Unfortunately, the diagnostics and statistics used to determine this are not as cut

and dried as those who are not familiar with the field of diagnostic psychology might want to believe. For this reason, the research outlined here aims to help people become conscious of the present need for greater awareness in the field of psychology regarding how normality is defined and perceived within the field. It is important for people outside the field to acknowledge that perceptions of behavior – and the diagnostic labels provided by psychologists – should not be taken at face value. Only then can the question of normality be revisited.

The guiding hypothesis motivating this research implies that *normality can have no set definition in psychology*. Though this claim is deceptively simple, a review of the general opinion set forth in the current *Diagnostic and Statistical Manual of Mental Health* (or *DSM*) would suggest this reality is being ignored. In order to fully understand the true complexity of this issue, this study proposes to examine different views and research on specific concerns involved in the diagnostic and classification process.

Significance

Prior research illustrates and supports the claim that, unfortunately, the consequences of misdiagnosis may stem from an inability to define abnormalities and disorders properly. People's perceptions of normal, abnormal and disordered behavior are linked to one another in a way that implies a need to understand the basis for each perception before assigning labels or diagnoses. If people remember that the definition of "normal" is not set in stone, this could help avoid costly mistakes and consequences from misdiagnosis — such as social stigma, stereotypes, and discrimination. That said, the newly revised *DSM-V* has recently been released with some significant changes. The fact that the field of psychology still requires an updated classification system speaks to the fact that the perception of behavior as normal, abnormal, or disordered might always be open to change.

This paper provides a meta-analysis of other research studies that support the concept of a variable definition of "normal" and it also introduces several new concepts to clarify why this is so. It also provides examples of several factors often not taken into account by everyday people when psychologists are attempting to provide diagnoses based on the current ideas of when to classify behaviors as normal, abnormal, or disordered. These significant factors to consider include (among others) *consensus*, *legitimacy*, *causation*, *explanation*, and *confirmation*.

Research Question and Design

The question this study asks is this – if the definition of normal is not set in stone, what else (besides the current *DSM*) should be considered when attempting to define it? As this involves working on researching issues that pertain to psychology's ability to define normality and how it relates to (and differentiates from) both abnormal and disordered psychology, a meta-analysis of other studies will have a definite emphasis on demonstrating exactly how and why the definition of "normal" and its variability over time is important in psychology. Beyond that, the information I plan to obtain will include: general information pertinent to the field's ability to provide such distinctions, studies specifically targeting stipulations found in the *DSMs*, and research suggesting alternative views for addressing questions of normality.

To put the claim into context, this research will begin by providing an idea of the general discussion and background on issues with normality through a review of scholarly texts and articles emphasizing analysis of behavior and normality. However, in order to generate a successful argument for the claim that normality cannot have a set definition, this review will also focus on studies that re-evaluate, contradict and even criticize the generally accepted ideas of normality that are frequently cited in general reference texts, including past editions of the

DSM. This literature review of general and specific issues in psychological diagnostic assessment and what is found will show that many psychologists seem to back the idea that normality cannot have set, definitive boundaries due to: *diagnostic consensus* and *social legitimacy*, *causal classification*, the *explanation effect*, and *trait confirmability*. Thus, the validity of others' claims will ultimately support the claim for normality's lack of definition and the need for alternative measures of psychological diagnoses.

Literature Review

The Gale Encyclopedia of Psychology helps define the research claim with a detailed discussion of normality, normal distribution, and abnormal psychology. According to Bonnie Strickland (2013b), normal "represents the characteristics typical for...most members of a particular group", and the so-called norm is merely a statistical average that leaves us with a quantitative definition (p. 460). Furthermore, although the numbers may differ individually, the statistics are predictable as a group, and so are placed in normal distributions that are then used as measurements of behavior in psychology (Strickland, 2013c, p. 459).

It is worth emphasizing the cumbersome prevalence of statistics in the attempts to define normal. According to James J. Gallagher (1955) in "Normality and Projective Techniques", normality was best surmised as a "statistical point of view" even fifty years ago, with normal people seen as those who conform to the distribution mean – now referred to as the normal distribution (p. 259). Unfortunately, research shows that statistics appear to have maintained a central role in normality. W. John Livesley and Kerry L. Jang (2005) seemed to have noticed this troublesome reality when they published "Differentiating Normal, Abnormal, and Disordered Personality" and pointed out that "statistical evidence alone is neither a

necessary nor sufficient criterion for disorder" (p. 262). In other words, disorders cannot merely be defined by simple statistical variations. In order to properly validate the research claim, perceptions of normal, abnormal, and disordered psychology must all be taken into consideration.

Differentiating and Relating Normal, Abnormal and Disordered

Livesley and Jang's research study emphasizes the importance of differentiating between the three above classifications of personality. While the proposed project does not exclusively deal with the issues that come with attempting to diagnose personality disorders, in particular, the general idea of the article focuses on the differences between these three classifications in the overall sense of psychology. Throughout the study, the emphasis remains on the analysis of these set classifications and how they relate to one another. In their conclusion, Livesley and Jang (2005) surmise that in terms of personality, normal personality and personality disorder are "seen to reflect different levels of the same continua" (p. 265).

This ultimately hints at the apparent necessity of defining normal in terms of the abnormal. Strickland (2013a) describes abnormal behavior as that which is "considered maladaptive or deviant by the social culture where it occurs" (p. 1). Strickland (2013b) also contends that *without previously set standards, normal and abnormal are defined in terms of one another*.

Other research studies strongly suggest that there is a notable recurrence of this concept that normal and abnormal cannot be entirely separated from one another in our attempts to understand them. In "Understanding and Managing Abnormal Behavior: The Need for a New Clinical Science", Stravynski and Connor (1995) affirm that psychology has always attempted

to “relate abnormal to normal processes” (p. 605).

Likewise, in an article titled “Some Correlates of a Social Definition of Normal Personality”, Merl E. Bonney describes six current criteria for evaluating mental health versus mental illness, which include an awareness of the following conditions: whether or not someone is under psychiatric treatment, their social adjustment according to the norms, their psychiatric diagnosis, subjective estimations of their happiness, objective measurements of their personal adjustment, and evidence of their stress management and striving towards self-actualization (Bonney, 2006, p. 415). This exemplifies how abnormal is distinguished in terms of a social view of normal.

Modification of Definitions over Time and Studies that Target Specific Issues with the DSM Classification of Normal

To say that normality can have no set definition would suggest that it must be open to modification over time. In her article, “What is Wrong with the *DSM*?”, Rachel Cooper (2004) attempts to make a claim that there is no “tidy definition for ‘disease’” (p. 7). She cites the *DSM-IV* as putting a bit of a disclaimer on its definition of disorder, when it states that “no set definition adequately specifies precise boundaries for the concept” (p. 8). Cooper also makes a valid point when she notes that the definition of mental disorder originated from the mid-century debates over homosexuality, which continued until a noted psychologist insisted on including a condition of distress when defining disorders (Cooper, 2004, p. 6-7). Stravynski and Connor (1995) also use the example of homosexuality to demonstrate how an altered social definition is thus able to change official classifications (p. 605). It is safe to imply that such changes in perception may be responsible for current concepts of what it means to be normal. Several other

researchers were also able to generate such insight into how perceptions and definitions have thus far come about in psychology.

Now, as the current classification system of mental disorders, *The Diagnostic and Statistical Manual of Mental Health (Fourth Ed.)* – also known as the *DSM-IV* – provides an understanding of the *current* methods used to differentiate and diagnose behavior. Indeed, one of the many purposes of the *DSM* is to help psychologists classify disorders according to type. Note that the emphasis lies with mental disorders in the *DSM*. For the purposes of this research, the *DSM* serves only to provide background information and a record of current ideas on disordered psychology. A good way to overcome this limitation is to examine the studies that critique the *DSM*, itself.

Others’ responses to the *DSM* have proven more insightful than the actual text in some cases. In an article titled “Understanding and Managing Abnormal Behavior: The Need for a New Clinical Science”, Ariel Stravynski and Kieron O. Connor’s (1995) understanding of the *DSM* centers on the idea that classification systems are simply the results of a group of psychologists coming up with diagnostic criteria by the way of *consensus* (p. 605). This leads to the question of *social legitimacy* in the classification process. The authors believe that the legitimacy of abnormal labels really depends on a cultural consensus, not one formed by a select few professionals (Stravynski, 1995, p. 605). Stravynski and Connor are not alone in their criticism. In “The Categorical Representation of Personality Disorder: A Cluster Analysis of *DSM-III-R* Personality Features” Leslie C. Morey (1998) is quick to point out that, although many specific issues have been dealt with and changed in the *DSMs*, the underlying assumptions are still there.

Research Addressing Distinct Issues in Classification and Definition

Bonney (2006) notably lists 11 traits that supposedly differentiate those who are “normal” from those who are not, including “forthrightness and spontaneity” (p. 418). Now, whether or not these traits are actually legitimate tells for normal behavior is irrelevant. What is important, however, is this idea of using traits as a criterion in evaluating behavior. According to the APA (1994), traits are “enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts” (p. 630).

In an article entitled “The Confirmability and Disconfirmability of Trait Concepts Revisited: Does Content Matter?” Tausch, Hewstone and Kenworthy emphasize the important role of *trait confirmability* when examining behavior. According to Tausch et al. (2007), “trait ascriptions help people to explain others’ behavior, predict others’ future behavior, and guide their own behavior towards others” (p. 542). The authors explain how, simply because it is rewarded, socially desirable behavior occurs more frequently regardless of individual dispositions. This means that because of the high frequency of positive traits in society, they have little informational value to researchers. The research in this article not only led to the authors’ assertion that positive traits are difficult to confirm, but also to the belief that negative traits – while easy to acquire – are hard to lose, and that the opposite goes for positive traits (Tausch et al., 2007).

The article also gives an explanation for the *negativity bias*, which states that “negative events impact more heavily on impressions because they are in greater contrast when compared...they appear more extreme and novel than positive events” (Tausch et al., 2007, p. 543). The authors’ insist that it is instinctual to be more aware of potentially

threatening behavior, which results in a bias towards remembering negative traits (Tausch et al., 2007). So then, how can we define normal without first filtering it through the abnormal? Again, researchers have a hard time attempting to clearly define normal or abnormal without referencing the other.

There are several other issues in the attempts to classify abnormal behaviors. In “What Makes a Mental Disorder Mental?”, Jerome Wakefield (2006) defines “mental disorder” as a “harmful mental dysfunction...[which] is a failure of the capacity of some mental mechanism to perform a function for which it was biologically designed” (p. 123). His research focuses on the ineffectiveness of *causal classification*, which refers to when underlying dysfunctions are the terms by which a disorder is classified (p. 125). The problem here is that cause is often being confused with the definition. In their article, “Understanding Behavior Makes it More Normal”, Woo-Kyoung Ahn, Laura R. Novick, and Nancy S. Kim raise a similar concern with the *explanation effect*. According to the authors, this is when “providing explanations for abnormal behavior might make the behavior look more normal by making it appear more likely to occur or more prevalent” (Ahn et al., 2003, p. 746). In other words, an explanation of a behavior may lead to the false perception that the likelihood of an occurrence is high, and therefore normal.

Conclusion

This research was conducted in such a manner as to uncover the perception, not the definition, of “normal.” This is because common sense tells us that the perception, and therefore the definition, of normality has varied over time. A literature review of classification systems and *DSM* criticisms has revealed the reasons that there can be no set definition. Perhaps there is a statistical commonality or generality. Perhaps there is a

typical state of being given a particular situation. However, psychologists seem to agree that numbers and statistics are an insufficient way to measure normality in a general population due to underlying psychological factors in those who would be doing the measuring and classifying. Any definition of normal must remain open and available for change and continuous modification, as it is inevitably produced out of a necessity for a measurement or benchmark of something else — namely abnormal and disordered.

Previous research into the implausibility of adequately defining normality has generally failed to incorporate the variety of possible explanations. This study has gathered these ideas together in the hope that future research into diagnostic change takes them into account. Simply acknowledging the problem is not enough anymore and psychologists need to be encouraged to look beyond the traditional means of diagnosis.

Unfortunately, this usually does not happen until the public becomes more aware of the problem. Hopefully, this research will provide people with the means to better understand what goes into a psychological diagnosis and how easily it can go astray.

A broader implication of this research is that an understanding of the variability of normality could help reduce discrimination and psychological misdiagnosis by increasing public awareness about the normality inherent in abnormality. A potential limitation of this study is that, while the implications are worldwide, the sources are largely from western cultures. There has also not been a lot of research conducted yet on the new DSM-V. Perhaps future research can examine whether or not the newest edition has made any significant gains in developing more progressive diagnosis procedures that do not rely on the binary definitions of normal and abnormal.

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Structures and Goals: Philosophy and Games

Jake Magneson

Introduction

Games are everywhere. They continuously permeate our lives in a myriad of forms. We play games, spectate games, comment on games, talk about games; our lives will be shown to be led through games. Despite our permeation in games, the question of what games can mean to individuals has largely gone unexamined. This research is an attempt to explore what games can mean to individuals in their lives, as people live their lives. The primary focus of understanding the role of games in human life has been centered on Game Theory, and how games interact with the choice of the player, or actor, involved. The intention of this paper is to offer an alternate more humanistic examination of games and their relation to how people can develop meaning in life. To do so, first several basic characteristics seen in games will be identified and analyzed. Ultimately, to uncover how games might relate to a theoretical goal of human life that games hold, Aristotle's conception of happiness as the goal of human life will be explored in relation to games. Finally a return to games will be made in order to see how games might aid in achieving the goal Aristotle sees for human life.

Methods

This research will attempt to trace ideas and concepts regarding games back to prior authors to attempt to gain insight into what purpose games might have in and for human life. The texts used, in order of their appearance in the article, are Mark Wolf's *Medium of the Video Game*, Aristotle's *Nicomachean Ethics*, and Drew Hyland's *The Question of Play*. While each of these texts offer insights into games, Aristotle's

conception of happiness, *Eudaimonia*, is particularly important in seeing how games might develop meaning throughout an individual's life. Wolf's *Medium of the Video Game* highlights basic characteristics that can be used to identify games. The basic goal of human life, and what that goal means is identified by Aristotle's *Nicomachean Ethics*. Finally Drew Hyland's *The Question of Play*, highlights the phenomenological concept of being-in-the-world and how that concept might affect how an individual approaches the world around them.

Games

When initially considering what a game is, examples are easy to come by. Board games, and sports, for instance, are easily identifiable games. Furthermore, these games bring with them motivation for play. People look to games for entertainment, relaxation, business, social interaction, fun, mental or physical engagement and more. Yet not all games are so easy to identify or to have their importance circumscribed. Consider folding laundry: It is normally deemed a chore, a task which people need to do throughout their lives. Yet the act of folding laundry contains within it a process and pattern that one must develop. People do not start out experts in the folding of laundry. It takes years for them to perfect the craft, and, as with any task that can be mastered, there comes a certain pride at having attained that mastery. What one can see in the process of folding laundry is the mastery and development of a certain skillset. Naturally, in learning and perfecting a set of skills, a certain amount of happiness in the form of pride and accomplishment arises. Yet, another

example of such an experience can be seen in language. Aside from fitting nicely with the definition of games that will be posited shortly, one can see more traditional aspects of a game in language. There are resources which must be applied to achieve a certain outcome. Symbols and sounds must be used properly and organized in such a way that communication is possible. These examples are disparate though. They are of tasks that seem unrelated to games, yet when identified in a different light, clearly seem to be games.

It would seem from these two prior examples that, if nothing else, the common notion of games is unclear, because there are underlying assumptions regarding what constitutes a game. An alternate way of distinguishing games is identified by Mark J.P. Wolf in his book *The Medium of the Video Game*. While primarily a work examining how video games as a medium of entertainment developed, Wolf opens the book with an examination of the terms video and games. About games, he writes that there are essentially four key elements that can be used to identify them: Conflict, rules, player ability, and a valued outcome (14). These are basic structures of games. Games can be seen to use, or emphasize different structures. For the purposes of this paper, which examine games in general, each of these aspects will be considered in their own light in the following paragraph.

Conflict is central to a game. It engages players with the content of the game and motivates them to continue playing. Without an opposing team, a game of baseball is nonsensical. Conflict is clearly important to what a game is, yet it is rules which are most often cited in defining a game. Rules perform a few different tasks in games. The first is an agreement between the player and the game. In order to resolve a conflict, the player is bound to abide by the rules, which will allow for the conflict to

be resolved. Rules are the framework and foundation by which a game functions. In a game of Connect Four, the rules do not allow players to play four pieces on their turn, they only allow the playing of a single piece. Thus through these rules the game is given a structure and a kind of orientation. Strategies and actions the players are allowed to perform have limits and must be directed in a different way, in order to resolve the conflict, than they would otherwise. The fourth structure of a game is the valued outcome. Where conflict seems to bring players into a game, it would mean nothing without a valued outcome that player's strive for. Similarly, rules are abided because the outcome of the game is important and desired; it has meaning for the player. Where the baseball game would be nonsensical without the conflict of the other team, and the game of Connect Four would be totally different without the specific way that rules orient it, neither game is played at all without a valued outcome. Lastly the element games that Wolf identifies as player skill may be more clearly interpreted in light of those who play games. To have skilled players for a game, players are first required. Games then require players. What one might mean by skill is up for debate. For instance, someone in a sport might be considered very skilled at his or her sport. However, if that individual is found to have made unfair advantages for themselves by breaking the rules of that sport, their skill is called into question. As a mean road, player skill will be considered the accomplishment of an individual in operating within a game's parameters. A skilled player of a game is skilled through their mastery of the systems of the game. Just as a skilled artisan understands the tricks of their trade, a skilled player has cultivated their knowledge of the game in question.

This basic architecture of a game is easily extrapolated outside of the normal

bounds of a game. Fields of study can also be seen to fall within this very pattern. Archeology and history both have a unique set of protocols that their respective fields of study operate by; each sees its position in the world as resolving some conflict and striving towards some valued outcome. In this way even larger structures have these basic characteristics. Language for example can be seen as a game. The English language has rules that are abided by, which orient language in a certain way. When someone uses language they want to achieve clear communication. This framework, made from the above characteristics, is extremely pervasive throughout our lives, as has been stated multiple times. To explore a possible answer as to why this structure permeates human life, Aristotle's concept of *Eudaimonia* will be examined.

***Eudaimonia* and Happiness**

The question that Aristotle seeks to examine in his *Nicomachean Ethics* is largely how and why an individual would lead an ethical life, and what an ethical life might be. That is to say: What does human life appear to strive towards? To open onto such a broad topic, Aristotle begins the first book of his *Nicomachean Ethics* by attempting to ascertain what types of goals or ends human life strives for. He begins by drawing a distinction between ends, goods, and production, "Wherever there are ends apart from the actions, the products are by nature better than the activities." (Aristotle, 1). Put another way, we want what we strive for enough to carry out the activity it takes to get it, and so it follows that people must prefer to have the ends of their actions rather than the actions themselves. It also follows that the ultimate good, or goal of action, would also be what other goals are sought out to help accomplish. For instance a baker might have a goal to go to a store and buy some flour. This goal obviously can also be seen as a means to his ultimate

end of baking. To help find out what that ultimate end might be, or what the ethical life might strive towards, Aristotle reasons that "the ends of the ruling sciences are more choice worthy than all the ends subordinate to them." (Ibid). If one frames the search for the goal of human life in terms of a product or good, it also follows that to find this good the 'ruling', or highest, sciences must have their goals made clear. It is not enough to identify individual activities in relation to the goals they seek, but rather to look at an order of activities, a science, in relation to other orders of activities, other sciences.

The ultimate science, the ultimate system or order of activity, for humans would likely have our highest product in mind (Ibid). To remain focused on the topic of this paper though, the question might be shifted to: If the greatest good that people strive towards is seen as the ultimate goal of our actions and other ends, what might that be? Aristotle identifies that ultimate good as already bring identified by most people: It is happiness (Aristotle, 3). For Aristotle's analysis, happiness is an end which is not sought out for an 'in order to' of any other end. To better understand this line of thinking which lead Aristotle to this conclusion it is helpful to think back to the example of the baker. We left off with the baker seeking to bake as his ultimate goal, which begs the question: Why does the baker want to bake? In baking the baker will produce the good of his or her trade, demonstrating a certain mastery of skills. In one case, the baker bakes because it gives him a sense of fulfillment, or perhaps happiness. In another case, if the baker bakes for a job, then the baker wants to make money which will allow for a roof over head, food to eat, or other goods. Why are these things sought out? To avoid hunger, and cold. Why is this desirable? So that the individual will be happy. In most

cases, the cold and hunger bring about discomfort, suffering, and, ultimately, unhappiness. This behavior can be seen in different behaviors as well. If a poet becomes poor, and as a result hungry and cold, in the pursuit of their craft, then it stands to reason that what makes that poet happy, is not comforts of food or warmth, but rather the pursuit of poetry as a means to an end, which ultimately contributes to happiness.

Digging deeper into Aristotle's thought, the sense of happiness that Aristotle describes is not quite the same as an ordinary conception of the word. What is significant about Aristotle's happiness is that he develops it to move beyond the idea of happiness as gratification, pride, or more generally, satisfying some want. This is regardless of whether or not that want it to serve in public office, or to own the newest thing. Aristotle writes that, "happiness is a certain sort of activity of the soul in accord with complete virtue" (Ibid, 16). This conception of happiness, *Eudaimonia*, has three distinct and important parts: It is an activity of some sort, it is of the soul, and finally it is "in accord with complete virtue". Thus, happiness seems to be an activity regarding the soul, but is nothing if not done by and through complete virtue.

For Aristotle, the virtues are required to be developed in the leading of an ethical life. A person must be virtuous to lead the ethical life, which is also to say that happiness is found through the virtues. Aristotle writes that to aspire to be a virtuous person in a particular character trait an individual must make a habit of doing the virtuous act (Aristotle 19-20). Habit and practice are key to the development of a virtue such as bravery. If our baker is to be a brave baker, then he must practice bravery through brave acts. The more the baker is brave, the more bravery becomes part of his character, and, by extension, the more likely

the baker is to be brave in his actions. Virtuous behavior is not something which can necessarily be pointed to, or rather, it is not something which is easy to attain. Virtue must be developed if it is to allow an individual to act in such a way as to produce happiness. Thus, ultimately, happiness is sought out by the virtues, but through and because of an attitude that individual must adopt: An attitude, or stance, which seeks to develop and nurture is what is finally the means to attaining the end of happiness.

Games as Bastions of Meaning

In order to examine how the basic structure of games, identified earlier, might interact with Aristotle's concept of *Eudaimonia*, its now necessary to examine ways in which people interact with games. For this section two general interactions of games will be identified and discussed: Games as escapism, and games as a bastion of meaning.

The first way that some can approach games is through escapism. Approaching games in this way is easy to conceive. Playing games as a means of escaping from the current situation an individual is in. There are two questions to explore from this type of approach to games. The first is what an individual might acquire from approaching games in this manner? It would seem, at a cursory level that the person in question is relaxing in some way, depending on what kind of game is being played. This leads to the second question: Why do games have this effect on an individual? It is easy to see games as an empty experience, or one which distracts from more important pursuits in life. A game of solitaire played alone can leave an individual feeling as though he or she wasted their time idly. Again, there certainly seem to be some truth in these ideas, but it is the assertion of this paper that perhaps there is something under the surface

of individuals playing games which is worthy of more investigation.

In order to answer this second question then, it is important to return to the original analysis of games and keep in mind what was put forth there: The structure of games, consisting of rules, conflict, player ability, and a valued outcome, is pervasive far-reaching in human life. What is universal about examining games in this light is that games are a means of more explicitly dwelling in this structure. That is to say, it is through games that this basic structure appears most clearly, and, having appeared more clearly, can be seen to permeate human life. Games are an activity which explicitly operates through and by this structure. The answer to the second question above then, may be that games allow one to take refuge in the basic structure, like someone seeking shelter in a storm. No longer is a game of solitaire on the computer about winning that game of solitaire, or simply escaping into the game. The game of solitaire has the potential to have this underlying structure seized upon by an individual, and further, to have that structure developed.

As a means of clarifying this type of language and what is being stated about games, Drew Hyland's work *The Question of Play* offers an interesting insight which will allow a clearer perspective on games. For Hyland, play is not just an activity, but rather, "It is a mode of comportment toward things, a mode of being-in-the-world" (Hyland 45). Play is an attitude, or a stance which is distinctive and alters the way in which one views his or her surroundings (Ibid). The phrase being-in-the-world is a philosophical term that describes the way that one is in regards to the world. The baker has a particular being-in-the-world, which directs and shifts the way in which he or she relates to other people, the landscape around them, or the objects at hand. The

baker takes on a certain direction towards his or her ends, or goals, and is thus directed in everything that he or she does. In taking up an end or goal, this orientation in the world can shift and change with respect to these new goals. While Hyland focuses on play specifically as a comportment, this idea can be applied to a way in which one might take up the games around them.

When one plays then, they take up an attitude, or directedness, in regard to their world, which orients them to view the world in relation to the goal of play. This same kind of insight can also be seen in a particular way of taking up games, of directing oneself towards games in sense. For Aristotle, it was the cultivation of the virtues which allowed one to achieve a state of happiness in their lives. It is the cultivation of the virtues which is critical to attaining happiness, because through practice of the virtues one can attain the right habits which further strengthen an individual's cultivation of virtue. A directedness towards games then is important, because it aims at the cultivation of the structural meaning inherent in games.

Conclusion

In examining games, and how they contribute to the meaning individuals form in life, we have examined not only games, but how and why individuals seek meaning in their lives. It has been shown that games can be seen in light of basic characteristics, namely rules, player ability, conflict, and a valued outcome. These characteristics form the structure of a game which holds meaning for individuals. We see in Aristotle that the one goal people have in life is the attainment of happiness, through a development of the virtues. Further, two examples of how individuals can relate to games as bastions of meaning have been shown: A relation through escapism into a tight controlled structure of meaning, or, within this structure of meaning, the structure is taken

up and developed. Development and cultivation of this kind, where they constitute a stance that one takes up in his or her particular being in the world, can allow an individual to adopt a stance similar to the one identified by Aristotle in regards to the cultivation of the virtues. Ultimately it is this orientation which seeks to cultivate and develop a structure which allowed for the attainment of Aristotle's *Eudaimonia*. It is the valued outcome which is so important in the development of the virtues, because that valued outcome is what Aristotle identifies as the ultimate good that people strive for:

Happiness. People care about games and play games for a valued outcome, but they do so through a set of rules, to resolve a set conflict, and with a particular level of skill. This interpretation of games contributing to the meaning of life, the ultimate goal of life, is, in the end, one which sees the goal of human life as the attainment of happiness through a stance of development and cultivation. This stance can be accomplished in the structure of games, and, because the structure of games is pervasive in our lives, this stance of cultivation and development applies to the experience of life as whole.

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Using Bikram Yoga for Stress Management in the Daily Lives of College Students

Sarah Gordon

Abstract

College students experience higher-than-normal levels of stress. Chronic exposure to stress may lead to physical and mental illness. Introducing a regular practice of Bikram yoga, a form of yoga performed in a hot room developed by Bikram Choudhury in the 1970s, could be an effective stress-management technique for college students. Traditional yoga is an established alternative therapy for promoting health through meditation, reduction of the stress hormone Cortisol, and release of beneficial mood-stabilizing neurotransmitters. Preliminary studies show that Bikram yoga can be profoundly beneficial in the same areas as traditional yoga. However, little is known about the effect of stress reduction when implemented into the routine of the college student. This study aims to identify the physiological and psychological benefits experienced by college students during an eight-week Bikram yoga intervention, in which they will attend a 90 minute Bikram session twice a week. The control group will continue their normal exercise routines twice a week. All subjects will be evaluated prior to the intervention, weekly, and upon completion for their stress-related indicators using the Perceived Stress Questionnaire (PSQ), a College Student Stress Scale (CSSS), a Stress-related Physical Health Symptoms Checklist, and a Behavioral Risk Factor Surveillance System. Both groups will have their weight, resting heart rate and blood pressure, blood oxygen saturation (SpO²), and Cortisol measured within 10 minutes of each Bikram yoga session or the control exercise activity. Through comparison of the test and control group, the findings should indicate a significant reduction in the college student's perceived stress and overall health indicators, as well as any stress-related symptoms. The implications of positive results would be encouraging for student recreation centers to implement a Bikram class on campus, and could apply to other populations who could benefit from a stress-reducing exercise program.

Introduction

Stress is a very significant problem in regards to the health of our current society. College students experience very high levels of stress and often lack the time or resources to manage their stress effectively (Misra & McKean, 2000). Many alternative therapies have been studied for stress relief. Yoga has been around for centuries and is often acknowledged for its stress relieving properties (Sharma, 2014). Bikram Yoga was developed by Bikram Choudhury in the 1970s as being the perfect combination of Hatha Yoga postures (Choudhury, 2007). It is practiced in a heated room, which enhances the effects of the yoga. This study will examine the literature presented in other research regarding the negative impact of

stress on college students, how Yoga practice is effective against stress, the documented health effects of Bikram Yoga, and how this information could be applied towards a stress management technique used by college students.

Background and Significance

Stress is defined in medical terms as a physical or psychological stimulus that can produce mental tension or physiological reactions that may lead to illness ("Stress", 2007). Recent reports from US college students indicate an increase in stress (Misra & McKean, 2000). A Canadian study (Adlaf et al., 2001) showed the average college student possessed higher reported stress symptoms than the average person in the

general population. Pedersen (2012) determined that academic stress is related to the hours spent studying, anxiety relating to grades and testing, and inadequate attention to areas of personal concern (i.e. time management, finances, relationships, and health).

The persistent exposure of the student to stress is expected to some extent, yet it becomes a problem when it leads to unhealthy consequences (Rizzolo, Zipp, Stiskal, & Simpkins, 2009). Short term stress response is functional and can enhance reactivity and performance (Donovan, Doody, & Lyons, 2013). However, long term exposure to stress hormones such as cortisol places a strain on the sympathetic system. Systemic fatigue to this exposure contributes to over half of all disease processes.

Physical manifestations of stress come in various forms of illness such as headaches, sleep disruption, decreased immunity and susceptibility to infection, gastrointestinal disorders, cardiovascular strain, diabetes, cancer, and pain (Donovan et al., 2013; Sharma, 2014; Ross, Bevans, Friedmann, Williams, & Thomas, 2014). Stress also manifests in the form of mental illness causing anxiety, depression, or suicidal ideation (Donovan et al., 2013; Misra & McKean, 2000). Pedersen (2012) also indicates that stress “spill-over” can impact other areas of the college student’s life such as intra-personal relations, family obligations, work or school performance, alcohol abuse, and poor perception of health. The foundations of stress management integrated into a student’s overall wellness can continue throughout their life and career (Rizzolo et al., 2009).

Physical activity has a direct effect on stress indicators such as pulse and heart rate (Bruning & Frew, 1987). When used as an intervention for stress in the workplace, Bruning and Frew (1987) found that 30 minutes of aerobic activity 3 days a week had

a significant impact on physiologic determinants of stress. They also found that when this was combined with relaxation and meditation methods used for 15-40 minutes a day, there was an even more significant impact on pulse rates. While their study was used to determine the effectiveness of these measures in the workplace, this could be translated into a stress management intervention for college students.

The intervention I am suggesting for this study would utilize Bikram Yoga for stress experienced by college students. Yoga has already been studied in the general population and shown to alleviate depression and anxiety (Simard, 2009). While other studies have examined the effects on stress with the practice of other forms of yoga, little is known about how effective Bikram Yoga would be specifically in regards to college students. Many recent studies involving Bikram Yoga have highlighted some promising health benefits this research will investigate for their application to this problem. The aim of this study is to identify the implications of using Bikram Yoga to help manage stress in the lives of college students.

Literature Review

An electronic search was performed of the following databases: CINAHL, MEDLINE, PUBMED, and EBSCO. Key words that were used include: Bikram yoga, Yoga, Stress, Health effects of stress, College students and stress. This search resulted in over 50 articles, of which 18 were selected based on content that applied to the research at hand. This information was analyzed and synthesized into a comprehensive review of stress management using Bikram yoga.

Yoga. The first mention of Yoga was from 3000 BC in Sanskrit, meaning to yoke or join together (Field, 2011). Yoga combines stretching, strengthening, compression of internal organs, deep breathing, and meditation. Research findings indicate Yoga

reduces the body's response to stress with an improvement in perception of stress, self-confidence, and an overall sense of well-being (Rizzolo et al., 2009).

Ross et al. (2013) demonstrated that Yoga improved interpersonal relationships. This is accomplished in several ways. First, the practitioner of yoga experiences self-transformation and with this comes patience and understanding. Second, they develop a strong community within their fellow practitioners. Next, they develop coping mechanisms for difficult times. Finally, the Yoga takes them on a spiritual journey which develops a sense of oneness with others.

Field (2011) reviewed the physiological and psychological effects of Yoga practice. They found it significantly impacted the patient's health by reducing pain caused by arthritis, migraines, and lower back issues. This is mainly due to the stretching and compression, but it is also thought to change the body's perception of pain, known as the Gate theory. The Gate theory is used to explain other therapies, such as massage or acupuncture, which delays the signal of pain reaching the brain. Patients experiencing chronic pain tend to have some form of depression as well. The Field (2011) study also identified the role Yoga plays in other diseases such as coronary artery disease, hypertension, autoimmune disorders, asthma, diabetes, multiple sclerosis, and cancer. Improved balance, flexibility, strength, and weight loss are positive physical effects of Yoga. Freedom from illness and pain contribute to the individual's sense of well-being which in turn reduces stress. The psychological effects of practicing Yoga include reduced stress, anxiety, depression, and less sleep problems. In the study by Mehta and Sharma (2010), they found various types of Yoga interventions to be effective at treating depression and anxiety.

Bikram Yoga. Bikram yoga, a form of Hatha yoga, was developed by Bikram Choudhury

in the 1970s (Abel, Lloyd, Williams, & Miller, 2012). It is a combination of 26 postures, performed over 90 minutes in a room heated to 105° and with 40% humidity. Guru Bikram Choudhury testifies to its health benefits, as well as numerous practitioners (Choudhury, 2007). Bikram (2007) said he felt it was his "Karmic duty" to bring this type of yoga to America and relieve the "Americans' biggest problem" of unhappiness.

Recently published scientific studies revolving around the specific practice of Bikram yoga have shown a number of physiologic and psychological benefits. In the study conducted by Brian Tracy of Colorado State University, he found a regular 90 minute Bikram session had a similar effect as moderate exercise such as brisk walking (Dodge, 2014). In a previous study conducted by Tracy in 2008, he found that just one session improved balance and strength for people who had never tried Bikram before (Dodge, 2014). Abel et al. (2012) found that long-term Bikram yoga practitioners (> 1 yr) had lower resting heart rates and blood pressure regardless of the frequency per week they attended.

After an eight-week, 20 session Bikram program researchers observed measurable changes in mindfulness, perceived stress, and physical fitness (Hewett, Ransdell, Gao, Petlichkoff, & Lucas, 2011). They concluded that this evidence suggested that Bikram yoga could have a profound effect on stress and chronic stress-related illnesses. Kudesia and Bianchi (2012) demonstrated Bikram practitioners experienced less sleep interruption. Currently, Massachusetts General Hospital (2014) is conducting a study attempting to prove previous hypotheses that Bikram Yoga has profound effects on depression. Principal investigator Maren Nyer, PhD, believes the "regular practice of hot yoga may regulate certain physiologic functions that could contribute to the reversal

of a depressed state. They will assign subjects to an eight-week program and measure the participants' reported depression, in addition to the physiologic markers of depression. Researcher David Mouscholon, MD, PhD hopes that "hot yoga proves to be effective...and safe treatment option for people who have not benefited from regular antidepressants" (Massachusetts General Hospital, 2014).

Methods

All of this promising research regarding Bikram yoga's health effects point in the direction of using the practice for stress management in college students. I am proposing a study that examines in further detail if a regular program of Bikram yoga could show significant impact on self-reported stress and physical manifestations such as pulse, heart rate, blood pressure, inflammation, and/or release of stress hormones such as cortisol.

The sample for this study will be obtained by single-blinding a group of student volunteers into a test group and control group. All volunteers must be currently exercising two to three times a week and free of risk factors such as cardiovascular problems. The test group will be assigned to an eight-week pilot program consisting of 2 classes per week, whereas the control group will conduct their regular exercise routine twice a week. A baseline stress score will be established for each subject using the Perceived Stress Questionnaire (PSQ), a College Student Stress Scale (CSSS), a Stress-related Physical Health Symptoms Checklist, and a Behavioral Risk Factor Surveillance System (Feldt, 2008; Largo-Wight, Peterson, & Chen, 2005; Pedersen, 2012). The Behavioral Risk Factor assesses mental and emotional wellness associated with risky behaviors. Baseline physiologic measures will include initial weight, resting heart rate (HR) and blood

pressure (BP), blood oxygen levels (SpO₂), and stress hormone levels (cortisol).

The intervention for the test group will consist of attending a 90-minute Bikram session twice a week, while the control group will continue their normal daily activities. Classes will be attended at least one day apart to prevent fatigue. The subjects will be asked to refrain from caffeine and alcohol before yoga sessions and drink adequate fluids the day of activity. Test group will have their weight, resting heart rate and blood pressure, SpO₂, and Cortisol measured within 10 minutes of their session. Control group will have their physiological measurements taken twice a week upon completing their exercise regimen. Once a week and again at the end of the intervention, the test and control subjects will be asked to complete another PSQ, CSSS, physical symptom checklist, and Behavioral Risk factor scale.

Anticipated Results

Descriptive statistics of the study will be analyzed for patterns relating to a change in reported and measured symptoms of stress. The following results could be possible:

- a) no change in the test group's stress following the intervention
- b) test group will experience significant decrease in stress
- c) test group will experience significant increase in stress
- d) control group will experience a significant (+/-) change in stress

Conclusion

It is the hope of the researcher that the intervention of Bikram yoga for stress levels measured in college students will be reduced. The compelling nature of the previous literature identified in the review section implicates that stress reduction should occur. The main strength of this study is the generalizability of this intervention to other

vulnerable groups. Since Bikram yoga is standardized and the conditions vary little from one studio to another, the health effects recognized within this study could apply to other individuals. Limitations of this study include the narrow focus of the population

studied and potential for dropout rates in sample. Therefore, further research studies may also extend into application of this intervention in the professional setting for healthcare workers, who also experience high levels of job-related stress.

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The Nefarious Injury: Traumatic Brain Injury in Football and its Potential Impact on the NFL Brand

Ty R. Kennedy

Introduction

The problem of traumatic brain injury in football is a complex, multifaceted problem that not only involves the players, but also the industry behind the game and our society as a whole. It is important to approach each individual issue surrounding this problem with the understanding that all components are interconnected in some way, shape, or form.

Before we begin our discussion, let's look at the story of Steve Gleason, a retired NFL player who is facing a 'fourth down and long' situation. Steve played for the New Orleans Saints for most of his career including the tumultuous time proceeding Hurricane Katrina. When the Saints did return home to the Superdome on September 9th 2006, excitement consumed the city. People needed something to cheer for.

The atmosphere was electric that night in the sold-out Superdome. In the first possession of the game, the relentless Saints defense gave no ground to the visiting Atlanta Falcons, forcing them to punt the ball from their own 16-yard line. What happened next elevated the spirits of an entire city.

The ball was snapped to the punter and a hole opened up in the middle of the field, Steve Gleason of the Saints charging through it. Flinging out his arms and sacrificing his body, the ball ricocheted off the numbers on his chest and bounced into the end zone where the Saints recovered it for a touchdown. Pandemonium ensued.

That play, immortalized by a statue outside the entrance of the Superdome, was the highest high for Steve Gleason, but now he is living through the lowest low. He is now 37 years old, retired, and living with

Amyotrophic Lateral Sclerosis (ALS or better known as Lou Gehrig's disease). The neurological disease has taken over most of his physical abilities; he can no longer eat, speak, or perform simple daily activities. Eventually it will claim his life.

Everyday is a battle for Steve and his family. Not only do they deal with the challenges imposed by his condition, but also the uncertainty of how exactly Steve got ALS. Was his disease brought upon by the hits he received playing football? He might never know.

Steve Gleason is one of many retired National Football League players who are suffering from neurological and degenerative brain diseases. Across America there are 66,000 college football players and over one million high school football players (Keating 2012) and everyday, every down, those players are being exposed to substantial hits to the body and head, each carrying the potential to cause traumatic brain injury.

Tragic stories of former NFL heroes suffering from degenerative brain and neurological diseases are being connected to traumatic brain injury through new medical findings. It is no surprise then that media attention on the topic has largely increased. The complex problem has now made its way out into the public and is causing many parents to be hesitant in signing their kids up for football, affecting not only youth leagues but also the NFL. But to begin our understanding, let's start at the source of the problem, traumatic brain injury.

Understanding Traumatic Brain Injury

Traumatic brain injury, synonymous with the more commonly used term concussion, is

outlined by the Sports Concussion Institute as a complex pathophysiological process that affects the brain due to a direct blow to the head or an indirect blow to the body. The brain basically floats inside the cranium with cerebral spinal fluid acting as a “shock absorber” for minor impacts. However a concussion is a major impact and one that cause damage to the brain. (Sports Concussion Institute, 2012).

In a 2008 interview by Brainline, Dr. James Kelly outlined some of the most common concussions and how they affected each part of the brain.

One of those most common concussions is caused by a direct blow to ones head, for example a boxer taking a punch directly to the forehead. The impact caused by the punch rapidly accelerates the head backward. As previously stated, the brain is not connected to the cranium and as the head accelerates backward, the frontal and temporal lobes of the brain crash into the rigid bone of the anterior of the cranium causing what is referred to the “coup” (French for blow) concussion (Brainline, 2008).

The countercoup concussion is similar to the coup concussion but it is different that the area affected is opposite the blow. This causes injury to the brain in twofold. This type of concussion typically occurs when someone falls backward and strikes their head on the ground. The floating brain tissue crashes up against the back of the skull causing a compression injury while instantaneously there occurs a depression injury in the front of the brain. The compression injury in the posterior end of the brain affects the cerebellum and occipital lobe causing a loss in balance and sometimes blurred vision. That is coupled with the injury to the anterior end of the brain that causes memory loss and personality changes. Many people can relate to this if they have ever fallen backward and hit their head but have a massive headache at the front of their head (Brainline, 2008).

Another common concussion scenario is a rotational concussion. Imagine a receiver being hit as he catches a ball while turning his head from left to right and then being struck from an angle on that right side that causes his head to whip back to the left. In an occurrence like this the head violently rotates from side to side. The brain is connected to the spinal cord in the posterior of the skull very much like a spinning noisemaker. The posterior part of the brain does not move so violently but it is the prefrontal part of the brain that is whipped back and fourth causing shearing and straining of brain tissues especially those in the temporal lobes. The front of the brain travels greater distances than the rest of the brain (Brainline 2008).

The most common areas of the brain affected by traumatic brain injuries are the frontal and temporal lobes. The frontal lobes control personality, planning, creating, and other functions that are considered to be high-level cognitive functions. The temporal lobes retain memory functions and certain language functions. Memory function and some communicating function can be injured permanently if the injury is severe enough (Brainline, 2008).

The Link to TBI and Irreparable Injury

If given proper time and treatment, a single traumatic brain injury will heal 100% or close to it. The danger lies in a new concept of mild traumatic brain injury, the subconcussion. Bales states in his 2013 study that “Subconcussion is a cranial impact that does not result in known or diagnosed concussion on clinical grounds.” (Bailes, 2013) It is these smaller blows to the head, hits that are unavoidable due to football’s physical nature that can be the most harmful.

They almost always go unnoticed by medical personnel and players alike because they occur with such frequency. For example at the beginning of each play, linemen start from a three-point stance before crashing up

against each other, often leading headfirst. This happens every play in every game at every ability level.

The result is many professional football players experiencing early onset of Alzheimer's disease, dementia, Parkinson's disease, and in extreme cases like Steve Gleason, ALS. Of these diseases, the pattern of a buildup in tau protein and neuron damage is clearly evident. Neuron damage stems from the "breakdown in the cellular recycling systems of the spinal cord and brain, resulting in the nervous system slowly losing its ability to carry brain signals to the body's muscular system." (Mullen, 2011).

The link between mTBI and tau proteins occurs similarly to that of neuron breakdown, at the molecular level. mTBI disturbs cellular metabolism, damages a cell's structure, and may alter biochemical and vascular autoregulation. Overall, this injures a cell's axonal membranes, thus interrupting axonal transport through a progressive process leading to neuron damage and buildup of tau protein (Bailes, 2013). This idea is backed up by recent autopsy findings and studies on retired NFL players.

Dr. Gary Small and his team at UCLA found that in the brains of retired NFL players older than the age of 45 there was a higher occurrence of abnormal tau proteins than the normal population. According to Dr. Small "Early detection of tau proteins may help us to understand what is happening sooner in the brains of these injured athletes. Our findings may also guide us in developing strategies and interventions to protect those with early symptoms, rather than try to repair damage once it becomes extensive." (Audiology Online 2013)

For some people that damage is beyond repair. While Steve Gleason cannot be completely convinced that his condition was brought upon him by playing professional football, there have been 27 cases of NFL

players being diagnosed with ALS, (USA Today, 2011) a number much higher than that in any other professional sport and exponentially higher than the normal prevalence rate which is about six to eight cases per 100,000 people. (ALS Association, 2004)

Professional Football Industry in America

The National Football League has a rich history filled with stories of game winning plays, players who are now legends, and cities cheering on their teams to victory. If baseball can stake its claim to be America's pastime, then football is most definitely America's primetime. Every week fans show up by the thousands, and tune in by the millions to watch their teams do battle.

And at the center of all the excitement is the physical nature that is fundamental to the game. Violence and physicality are major parts of the identity of the NFL and it has only recently started to shy away from its glorified physicality. From 1986 until 2009 the opening sequence for every Monday Night Football game was the helmets of the respective teams crashing together and exploding (Thomas, 2010). Touchdowns win the games just as the speed and athleticism of the players capture our imaginations, but nothing makes the games as fun to watch as the hard hits and personal sacrifice the game requires on each play.

NFL games are exciting to watch. Last year's Super Bowl broke its own television rating record from 2012 with 111.5 million people tuning in to see the Seattle Seahawks blowout the Denver Broncos. 115.3 million people watched Bruno Mars and the Red Hot Chili Peppers during the halftime show, beating out previous years that featured Beyoncé and Madonna (Patten, 2014). Besides the spectacle of the Super Bowl, even regular season football games outdraw most sports. The week-to-week excitement and

unpredictability can be attributed to the parity of the teams in the league.

The concept of parity is very important to the NFL's product on the field. Parity among the teams provides closer scoring and more exciting games, therefore maximizing revenue, and resulting an overall healthier league. It is parity, and the cooperation amongst the franchises to reach this parity, that results in the best product for the fans but also the greatest profit for each franchise in the league. In a study done in 2007, two economists conclude that, "From the players' perspective, the parity increases the pool of funds available for salaries. From an owner's perspective, team parity enlarges the fan base and increases profit." (Pantuosco & Stone, 2007)

The NFL achieves parity by schedule adjusting, establishing a draft so that the lesser competitive teams get to draft the better players, salary caps (and floors) to insure every team has equal financial leverage to acquire the same amount of marquee players, and different sorts of revenue sharing through the league's Collective Bargaining Agreement. These efforts by the league have resulted in eight different teams winning the last ten Super Bowls.

Today, professional football in America is a very sound and profitable industry. Many would argue that the NFL is the best professional sporting league in the world. However, this did not just come about through fortune. The NFL has invested much of its resources, especially in the past twenty years, on developing its overall brand and turning a game on a field into a national spectacle.

The NFL as a Brand

As the NFL grew throughout the 1970's and 1980's, it faced a large brand problem centered on its image. NFL Films and other ways of marketing were not only failing to

effectively engage its own fans, but also the potential new fans that could be attracted to the sport. The league was seen as too traditional and masculine making it hard to attract women and other groups of people. The powerful appeal of the game alone was not bringing in enough new fans and the league risked potentially losing a new generation of football fans (Oriard, 2007).

The NFL responded in 1994 by hiring former MTV co-president Sara Levinson as the new president of NFL Properties. Levinson completely changed how the NFL was marketed to the American public. Before Levinson, the NFL's main focus was public relations and how the game of football sold itself and thus could be used to sell other products. Levinson more or less abandoned that idea and began to promote the NFL itself more aggressively. The result was a dramatic increase in overall popularity, which included people from all ages and genders, and a dramatic increase in revenue from bigger TV contracts to more merchandise sold (Oriard, 2007).

First, Levinson conducted a "brand audit" to evaluate who the fans of the NFL actually were. The audit identified three distinct and targetable groups of people: hard-core fans, women and children, and casual fans. Marketing efforts mainly consisted of promoting the sport and the league to women and children as well as casual fans while at the same time not alienating its hard-core fans.

Of chief importance, Levinson and her team wanted to attract more women and children to football. The "Play Football" campaign encouraged children, both boys and girls aging from six to fifteen, to participate in flag football leagues around the country. The overall purpose of this initiative was "to turn kids into NFL consumers" and it had a profound effect with flag football programs around the country growing from 350,000 total participants in 1994 to 5 million in 1999.

The “Football for Her” product line targeted the women in the group (Oriard, 2007).

Levinson and her team also marketed the NFL itself to its fans, both casual and hard-core. The “Feel the Power” campaign aimed to make football more intriguing to casual fans such as women and teenagers by using humor and hyperbole to humanize the league’s players. The “Pledge Allegiance” campaign targeted those hard-core face painting, beer drinking fans that loved watching their team play on Sundays (Oriard, 2007).

This all had a profound effect on sports fans across the country. Professional football first passed Major League Baseball as America’s most favorite spectator sport by a narrow margin in 1965, but nearly two generations later in 2005, the margin was almost two to one (Oriard, 2007). In a 2003 poll, 59 percent of Americans claimed that they “followed” professional football.

Now, the league is faced with a public relations problem much more grim and much larger than the problem it faced in the 1980’s. That problem of course is traumatic brain injury. The growth of football, which now seems to be relatively inelastic, depends on the solution to this problem.

Society and a Change in Perception

Ten to twenty years ago, when players took the field they knew that they were putting themselves in danger of breaking bones or dislocating joints. Although some of these injuries are very serious and can be devastating on a player’s body, most can be easily diagnosed, treated, and healed. What these players did not know however was how they were at risk of a “nefarious injury”, one that they could not feel or be diagnosed with until it was too late (PBS, 2013).

Just this past summer, the NFL recently settled with the NFL Player’s Union in a \$765 million settlement over concussions. In the settlement, the NFL allocated \$675 million

dollars to be used as compensation to the retired players and their families, \$10 million for education and research, and other funds for appropriate expenses (Alternative Dispute Resolution Center, 2014).

Settlements like this, coupled with new medical findings, are making parents much more apprehensive about putting their children on the field. This apprehension is starting to become a trend across the country and is no more evident than in youth football participation rates.

Participation in Pop Warner Football nationwide has fallen 9.5% from 2010-2012 and is continuing to follow this pattern (Fainaru, 2013). Julian Bailes, the medical director of Pop Warner football and a neurosurgeon, told ESPN’s *Outside the Lines* that parental concern about head injuries is “the No. 1 cause” for the large percent drop in Pop Warner players since 2010 (Doyel, 2013).

The National Federation of State High School Associations, the governing body of high school sports in America, is also trying to save high school football by creating new rules to make football safer. In October, they passed a set of recommendations and guidelines aimed at reducing the time players are exposed to full contact in practices. The recommendations suggest that players should be exposed to no more than thirty minutes of full contact per day and not having full contact practices on consecutive days (National Federation of State High School Associations, 2014).

But recent participation rates suggest that action now is too late for some young athletes and parents. David Leonhardt of the New York Times states that “The number of boys playing high school football has fallen 15 percent over the last six years in both Minnesota and Wisconsin, according to the National Federation of State High School Associations. The decline in Colorado has

been 14 percent. It has been 8 percent in Massachusetts and Maryland, 7 percent in New York and 4 percent in California.” (Leonhardt, 2014)

Declining participation rates don't directly point to the conclusion that parents are preventing their kids from playing football, but it must be more than a coincidence. A recent poll conducted by the RAND Corporation stated that only 56.5 percent of parents in America say are comfortable with letting their child play football compared to 91.4 percent in baseball and 95.3 percent in basketball (Carman & Pollard, 2014).

So what does this mean to the NFL? This decline in participation echoes the same problem the NFL hired Sara Levinson to fix twenty years ago. If the next generation does not play football, they are much less likely to become consumers of the NFL. Instead they will play other sports and have a greater chance of becoming consumers of those other sports.

Putting the Pieces Together

In a sense, the problem has almost made its way full circle from the injury on the playing

field, to the coroner's office, into the media, into parents' decision making, and ultimately back to football by declining youth involvement.

Traumatic brain injury is repairable but multiple instances of TBI can cause severe damage possibly leading to neurological diseases. This has some parents worried about sending their kids out to play football when many other sports are received as less violent and just as worthwhile.

This problem of traumatic brain injury is paramount to the growth of the game and the National Football League. The decisions the league makes today will ultimately have greater effects twenty years from now.

But there is a silver lining to this story. The NFL is a league of immense resources and medical advancements in both technology and understanding can perhaps lead us to ways to make football safer. As the great Green Bay Packers coach Vince Lombardi once said, “People who work together will win, whether it be against complex football defenses, or the problems of modern society.”

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The Barefoot Movement: A Natural Approach to Maintaining Equine Foot Health

Loretta Lane

Introduction

Since the domestication of horses, man has been using them for work, pleasure and sport. In an attempt to protect the foot, horse owners will shoe their horse.⁵ Regrettably, these shoes may have dire consequences on the horse's overall health, and are not always the best option. Horses that are shod (wear shoes) tend to be more prone to injuries and illnesses such as founders and navicular disease. Though having a horse shod appears to have benefits from an outsider's point of view, research shows that a natural barefoot trim is an alternative healthy approach to keep your equine's feet healthy.⁴ Horses that have been previously shod, need to undergo a transition period of approximately a year before being completely sound with a barefoot trim. This transition process is made easier by implementing a better diet, allowing more turn-out, and by protecting the horse's temporarily sensitive feet with hoof boots.² I aim to provide substantial evidence that barefoot trims are a healthy, natural option for horses.

Purpose

The purpose of this article is to educate horse owners on the effects that having a horse shod has on a horse's overall physical health, and to bring light to the benefits of a barefoot trim. Decisions regarding shoeing and barefoot trims alike tend to be made merely on desired craftsmanship rather than scientific evidence. This article aims to provide substantial evidence for the benefits of keeping a horse barefoot, by drawing from previously conducted studies. The goal is to not only encourage, but support new thinking in how horses can be cared for.

Why People Have Horses Shod

It is thought that shoes aid in protection for a horse when they are exposed to unnatural conditions and diets. Horses are shod to protect and support the foot, and to give the horse traction when walking on tough or slick surfaces.⁶ The practice of having a horse shod stems from tradition. The methods of shoeing are derived from innovative craftsmanship methods and a trial and error based process.¹ There is scant scientific evidence supporting the 'need' for a horse to be shod.

Many farriers (horse hoof experts) argue that shoes are necessary, as the growth rate of a horse's foot is slower than the rate at which the hoof is worn down when they are being used for work or sport. If a hoof becomes too short or worn down, the horse will experience great pain and not be able to walk comfortably. It is thought that the shoes prevent this rapid wearing of the foot so that the horse can continue to work comfortably.²

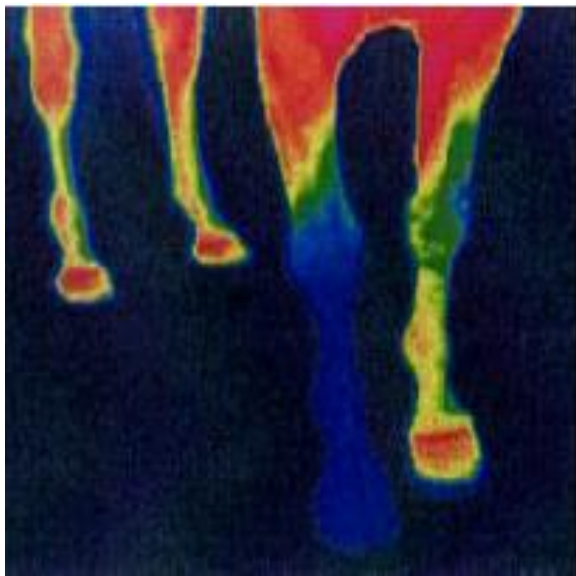
Another reason for having horses shod has to do with the history of their domestication. Since the domestication of ungulates, these hooved animals have been shod. It is difficult to trace the exact time in history when horses were first shod, but it is thought that the first shod horses were those used by knights in the Middle Ages in Europe. The Knight's horses had to live in dirty, moist, small stalls for months at a time. In that time, not much was known about anatomy or physiology, so the Knight's made their best efforts in protecting their horses' feet by creating shoes to protect the feet. Today, most horses are highly sought after and perhaps prized animals that are kept in more sanitary and spacious environments, thus it is time to rethink our reasons for shoeing horse.⁵

How a Horse's Hoof Works

Properly functioning hooves are necessary for a horse to have good blood flow and shock absorption, both of which are crucial to a horse's overall health.⁴

When a horse runs, the heel of the hoof hits the ground, and in a swift rolling motion, the tip of the hoof touches the ground shortly thereafter. During this movement the frog, the soft inner part of the hoof, hits the ground and pushes blood up through the foot and leg. If the frog is unable to make full contact with the ground, such as on a shod horse, improper circulation is eminent.⁴

The following thermal image shows a horse that has only been shod on one foot. The front right leg is the only one that has been shod, and as evident by the blue coloration thermal image, improper circulation has occurred. Overtime, this poor circulation can lead to joint damage. Additionally, good circulation is necessary for wounds to heal. If this horse were to be injured from the knee down, there would not be substantial blood flow for the wound to heal.⁷



In addition to proper blood flow, good shock absorption is important for a horse's tissue and joint health. When a horse lands on

the ground (whether they are walking, trotting, cantering or jumping), the blood flow, flexion and natural padding in the horse's foot allow for shock absorption. Shoes prevent these natural occurrences. In 1983, Luca Bein conducted a study focusing on the shock absorption of shod and non-shod horses. His findings showed that shod horses lose 60-80% of their natural shock absorption, resulting in joint damage. Additionally, shod horses experience three times the impact force when merely walking on hard land. These vibrations, occurring at 800 Hz, send a shockwave up the horse's leg inevitably causing damage to soft tissues in the foot and lower leg.⁴

Dangers of Shoeing

There are two main types of shoeing, the well-known method in which the shoe is nailed into the hoof wall, and a lesser-known and less-practiced method in which the shoe is placed onto the horse's foot while it is hot, so that the shoe binds to the horse's foot. This method is called hot shoeing, and is not practiced by many farriers as it is recognized as a method that takes immense skill, for if it is done wrong it will cause irreversible damage to the horse. For this reason, this paper will not discuss the dangers of hot shoeing, but will focus on the more widely used method of nailing the shoe to the horse's hoof wall.

If a shoe is nailed improperly to a horse's foot, then the horse may experience great pain and the foot may abscess if the nail is driven into a part of the foot with nerve endings and tissue. This is possible if the farrier is inexperienced or if the horse moves as the farrier is nailing the shoe onto the foot.

Aside from the dangers of the process of shoeing, there are potential problems that may arise from having a horse shod. There are multiple diseases of the foot that occur in horses that are shod, some of which are thought to be directly caused by the horse

having been shod. The following are a small collection of these diseases that are detrimental to a horse's health, which ultimately result in the horse having a poor quality of life.

White Line Disease: As a shod horse walks, the toe is pulled forward and away from the coffin bone. The white line stretches and eventually it does not hold the wall of the hoof and the bone together properly. It is thought that 75% of domesticated shoe horses experience this condition that will cause lameness.⁸

Navicular Disease: complex degeneration of the navicular region of a horse's foot that oftentimes leads to lameness in the two front feet. This disease is brought out by frequent hard work that is hard on the horse's feet.⁹

Laminitis: rotation or deformity of the coffin bone, ultimately penetrating the sole of the hoof. This debilitating disease is often untreatable, resulting in the need to euthanize the horse.

Transitioning from Shod to Barefoot

For a horse to be transitioned from having been shod, to going barefoot, it is the responsibility of the owner to consult a veterinarian and farrier before taking their horses shoes off for good. There are, however, a few measures that must be taken into consideration when transitioning a horse. A horse that is used to having shoes will have more sensitive feet at the beginning of the transition period. During this sensitive time, the horse's feet can be comforted with the use of hoot boots or gloves.⁴ There are multiple types of boots on the market, all of which are designed to give added protection to a horse's sensitive foot. Additionally, the owner should try to start the transition period when the ground in their area is the softest. This will allow the horse to get used to walking directly on land as their feet build up their natural strength again. During and after the transition

period, horses should also be allowed as much turnout time as possible. Turnout is a term used to describe time in which a horse is allowed to freely roam a pasture, rather than being kept in a small stall where they have little room to walk. Horses were meant to roam over large expanses of land throughout the day, so allowing them to do this as much as possible is good for the natural health of their feet.³ Lastly, horses are grazers, yet most horse owners feed their horses twice a day for convenience. For the sake of a horse's foot and overall health, he or she should either have access to pasture they can graze on, or they should be fed three times a day in a way that makes their food time consuming to eat. A simple way to do this is to put their hay or alfalfa in a net-feed bag, which slows the horse down when it eats.⁴

If a horse is ridden in a soft arena during the transition period, it is beneficial for the horse to be walked on a hard surface approximately 20 minutes before and after the ride. As the horse's foot is transitioning and adapting to being barefoot, the hard surface will aid in encouraging proper blood flow. This extra measure in allowing the horse's foot to transition is only necessary temporarily, during the transition process. Once the horse is sound, it may be ridden as normal.⁴

Perhaps the most important factor in transitioning a horse to being barefoot is the implementation of barefoot trims. Barefoot trims can be done by a farrier, or by the horse owner if he or she decides to be trained in the practice. Though there are literature resources available to educate owners on how a barefoot trim should be done, it is important for the owner to be trained by a professional in the equine podiatry field. Barefoot trims differ from trims performed on shod horses in two major ways. First, the frequency of the two methods differs greatly. Shod horses receive trims on average every 6 weeks, while a horse undergoing this transition process will require

minimal trims every 2 weeks. Second, the trim itself is different. “Less is more” with a barefoot trim, which allows for the hoof to retain its natural shape. With the hoof being trimmed more frequently, and with smaller amounts being taken off, the horse’s hoof will become tough and resilient. ⁴

By giving a horse more turnout, changing their diet, regularly trimming their feet and protecting their temporarily sensitive feet with hoof boots or gloves, the transition period should take about one year, as that is how long it takes for a hoof to completely grow out, regenerating all new hoof tissue.

A study conducted by Clayton et. al focused on the changes that a hoof undergoes when transitioning from having been shod to being barefoot. In the study, a total of 7 horses were transitioned from a shod state to a

barefoot state over a 16 month period, with the progress being carefully documented at 0, 4 and 16 months. The results showed that the barefoot trim proved to be morphologically beneficial to the horse’s health. ¹

Conclusion

While it is true that horses have been shod by their owners throughout modern history, we need to rethink our reasons for this practice. Having a horse shod can have detrimental effects on its overall health, while a proper barefoot trim allows a horse’s hoof to function properly. Though a barefoot trim may require more time and investment on the owner’s part, it pays off in the long run because the horse’s overall foot health will be healthier, and the horse’s longevity will increase.

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Addressing Parking Issues at CSU Stanislaus: Alternatives to Consider for a Long-term Transportation Plan

Boden Holland

CSU Stanislaus has spent a considerable amount of time and resources to examine the issue of parking in relation to future demand and cost. Several committees have been assembled and reports issued to try and solve this issue. However throughout all of these reports there was little consideration given to examining alternatives or trying to mitigate these future costs. This study identifies possible alternatives to the university's traditional plan of increasing infrastructure by reviewing current and proposed San Joaquin valley transportation plans. Original research was also used in the form of surveys that were designed to gauge student opinions on the topic. Results collected from the survey suggest that students already consider the cost of transportation to be significant and that they are willing to use some alternatives. Given the relatively small sample size and time constraints the results were not used to generalize results to the broader student body, but they did serve as a guide to suggest future actions by the university. The university and the student body have an obligation to research alternative, especially when even a 5% decrease (300 new spaces) in parking demand would save between 4.5 - 6 million dollars. If the university looks at the alternatives proposed in this report they have the potential to save the student body and the institution a substantial sum of money, while simultaneously reducing the carbon footprint of its commuter population.

Introduction

Modern convention would lead us to believe that single occupancy transportation will continue to be the main mode of transport for Americans in the future. However, the bell curve for oil production is slated to begin its decline within the coming decades. As a result, petroleum powered vehicles will

become increasingly difficult to afford, and therefore this model of single occupancy transportation is untenable. California State University Stanislaus campus master plan calls for the production of multi-million dollar parking facilities to accommodate the parking needs of future students. A notion that seems ill advised considering the volatility surrounding the transportation environment. Unfortunately it would appear that most universities operate under this business-as-usual model, where accommodation and increasing infrastructure is the solution to rising student enrollment. Before building these structures universities should take pause and think about where their students are coming from, and their modes of transportation might change in the future. This perspective should be at used any institution where a majority of its population commutes from elsewhere. According to the CSU Stanislaus Ad Hoc parking task force draft report (2015) up to "85% of students, faculty, and staff drive as their primary mode of transportation to campus." A number like this is concerning when one factors in the growing cost of transportation. With that in mind this study identifies possible alternatives to the university's traditional plan of increasing infrastructure by reviewing current and proposed San Joaquin valley transportation plans, and conduction original research to understand students perspectives on this issue.

Before moving forward its important to note that this research is predicated upon the theory that fuel prices will continue to rise as the energy landscape becomes increasingly complicated and volatile. Sources such as the International Energy Agency, World Energy Outlook and Medium Term Oil and Gas Markets all concluded that the future of oil

production remains unclear. These organizations also acknowledge that there are significant challenges to sustaining the production of cheap oil resources. IEA Chief Economist Dr. Faith Birol summarizes some of the issues surrounding oil production by saying: On the supply side the cheap oil era is over... The bulk of cheap oil in the (industrialized) countries has been exploited and what is left is deep-water offshore and the oil sands in Canada, which require higher price levels in order to be profitable (Miller, 2010). There is much more to be said about the challenges facing future oil production, however the complexities and variables involved with predicting oil futures is beyond the scope of this research.

Methods

The research findings contained in this article derive from two major components. The first is a review of current and future transportation plans deemed relevant to CSU Stanislaus. The second comprises results from a survey designed to gauge student interest in the subject of school transportation and possible alternatives. Selection criteria for the original research utilized a convenience sampling method. The survey population was limited to students attending the Turlock campus of CSU Stanislaus and was achieved by obtaining the permission of instructors to administer surveys in Business classes. The survey instrument (appendix A) was designed to gain insight into student transportation patterns, costs and opinions on transportation alternatives to and from school. Respondent selections of transportation alternatives were considered when making suggestions for future transportation planning. Surveys were distributed from late August 2014 through November 2014, and filled out using a hard copy version and then input digitally by the lead researcher. Google Forms software was used to summarize the data and provide a report of participant responses. Calculation of average distances commuted, mpg, year of

vehicles, and subsequent costs required the use of *fuelconomy.gov* and independent calculations. Average commuting distances were calculated using the respondent's reported point of departure and calculating the round-trip distance between that city and CSU Stanislaus. When calculating the mean, outliers such as those who reported living within 15 miles or greater than 45 miles from campus were excluded. All of the information gathered from the survey can be found using following the link: (goo.gl/9HIQkS). The information that has been made publicly available does not contain personal identities, and thus complies with IRB protocols.

CSU Stanislaus Master Plan for Transportation and Parking

According to the CSU Stanislaus campus master plan (CMP) parking report (2008), "the campus is expected to undergo a 100% increase in student enrollment over the next 20 years, 42% over the next 10 years" (p.6). By this reports own estimations new parking structures will need to be created by 2017, and "most new campus parking will be housed in parking structures, these facilities currently cost \$15,000-20,000 per space" (p.8). This plan also highlights the advantages to reducing the use of single occupancy vehicles, stating that even a "5% change in current behavior over the life of the master plan would reduce the need to construct around 300 new spaces, a savings of \$4.5 to \$6 million dollars in today's costs; a 10% change doubles that savings" (p.8). While these projections are significant they still revolve around the idea that most students will be able to afford getting to and from school by way of personal vehicle in the coming decades. Mention was made of potential cost saving benefits of a reduction in on site parking demand, yet there was no mentioned on just how to bring about said savings. The CMP also alluded to possible changes in the education structure such as

increasing online courses as having a potential easing effect for parking around and on campus, but no explanation was given about how significant this impact might be.

Environmental Impact. Trying to reduce the environmental impact of the campus continues to be a major focal point for the university, and the California State University Stanislaus Physical Master Plan Update Environmental Impact Report (2009) lays out several initiatives aimed at reducing and identifying such issues. The main focus of this report looked at how campus expansion goals create environmental impact, and what remedies can be used to mitigate potential consequences. While the university does acknowledge transportation as a potential issue they sum up this problem in the environmental impact report by saying: The long term impacts of growth and development of the CSU Stanislaus campus on transportation demand are less clear as a result of evolving educational and communications technologies, improvements in broadband internet services and other technologies that affect the delivery of educational services (p.18). Subsequently the environmental impact report concludes the section of air quality stating that: While there are no specific policies or goals in the CSU Stanislaus Physical Master Plan Update that addresses the issue of Air Quality directly, the emphasis on developing on-campus housing opportunities will result in lower commuter volumes and reduced travel related emissions (p.86). The idea that on campus housing will have a significant impact on travel related emissions is unlikely given the universities current commuting population. CSU Stanislaus planned parking expansion suggests that increased student housing will not reduce the amount of vehicles on camps. Also contained within the environmental impact report are projections on carbon emissions as a result of construction projects, but nothing is mentioned about the carbon emission

produced as a result of the student commuting patterns to and from school. Admittedly such questions might have been beyond the scope of this report, but it still worthy of consideration when trying to determine the overall environmental impact of a campus.

Ad Hoc Parking Task Force. During the fall semester of 2014 CSU Stanislaus created an Ad Hoc Parking Task Force to review the current parking plan and make recommendations based of the tasks forces examination of the issues. This Ad Hoc Parking task force preliminary report (2015) laid laid out several different options that are aimed at solving the parking issue on campus. According to this report, growth rates at CSU Stanislaus are still projected to outpace the available student parking by the 2019/2020 academic year. This means that the construction of new parking facilities is still necessary to adequately meet projected demand. There were several suggestions put forward by the committee such as mandatory parking fees, a tiered parking program and working with local transportation authorities to increase public transit to campus were just a few of the options put forward by the committee. A majority of the proposed options were focused on the idea of how to increase parking fees with the minimal amount impact on the student body.

San Joaquin Valley Transportation Options and Plans

Larger perspective transportation related planning can be found in the San Joaquin Valley blueprint integration plan (2012). This report establishes “a long range vision for a more efficient, sustainable, and livable future for the Valley” (p.2). It does so by working with individual cities to identify needs for residents. In addition to providing support to local municipalities this agency also identifies valley wide solutions to develop its smart growth principles. While nothing is mentioned specifically about CSU Stanislaus, general concerns related to lack of available

transportation for valley residents was also mentioned.

Stanislaus County (2014) released a report detailing future plans to “address the growing and changing needs of the region” (p.53). One area of research that was discussed in this report included transportation plans and policies. Broken up into different categories these plans identify the impact that different investment

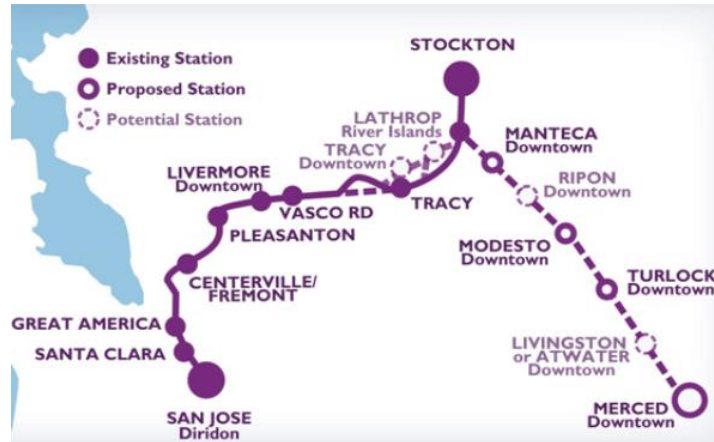
strategies would have on the region. All relevant aspects to commuting populations in the valley are covered with the primary goal of reducing green house gas emissions. Included in this plan is the possibility of

increased investments in public transit systems as a way to expand options for valley residents while reducing green house gases. Out of the four investment strategies option number four labeled as “More Change” has they most drastic shift in resources when compared to the current distribution of spending. This investment strategy uses a Roadway, Transit, Bike/Pedestrian and aviation split with the distribution of funds being 56%, 38%, 5% and 1% respectively. This is in comparison to the historical spending trend of 77%, 18%, 4% and 1% for the same categories. These investment strategies have the potential to transform the transportation infrastructure within Stanislaus county, especially when the Regional Transportation Plain Sustainable Communities Strategy has a total revenue source of \$4,458,424,387 to invest on transportation in the county.

In regards to ride sharing programs there is currently one option that is available to anybody within Stanislaus, Merced and San

Joaquin Counties. The ride-sharing program is called commute connection and can be located by visiting commuteconnection.com. This web service is supported by the three local transportation agencies and is a resource that connects individuals who are commuting to similar locations. The site boasts that it has over 9,000 register commuters in the three areas that it supports. It also offers emergency

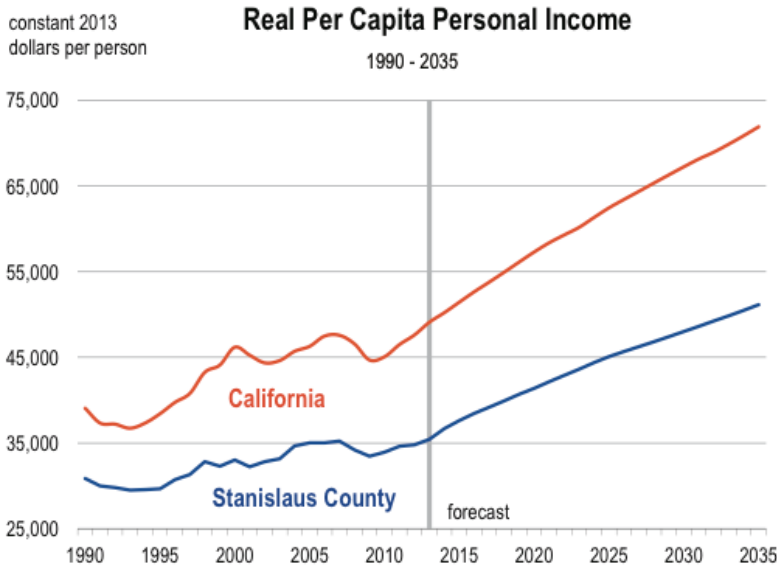
transportation if something happens with your scheduled carpool. This program can be used by any student who wants to find others commuting to and from school.



San Joaquin Regional Rail Commission is also paining on a expanding the Altamonte Corridor Express (ACE) line. This proposed option is being called “ACE Forward” and it would extend mass transit rail services into the San Joaquin Valley. Under this plan services would be run from as far south as Merced downtown through Turlock, Modesto, Ripon and Manteca with a connection to the current ACE line in Lathrop. Figure.1 shows the current and proposed rail expansion project, and how this planed rail line can connect local communities to the greater bay area. According to the Regional Economic Impact of Ace Rail System Expansion into the San Joaquin Valley, the planed expansion in the area is to “include track improvements on the existing line to increase reliability and extending service to Modesto by 2018, and to Merced by 2022”(14). No specific date was given for the expansion into downtown Turlock, but it can reasonably be assumed that expansion into Turlock would take place within the 2018-2022 timeline.

In an effort to mimic student research into public transit options this study looked at the amount of time it would take to get from downtown Modesto, Stockton and Merced to CSU Stanislaus using Google maps. From these three locations it would take approximately 1h 26min, 2h 22min and 3h 9min respectively. According to Google maps the same distances would take 15min, 45min and 32 min by using a car. It was also estimated that it would take less time to ride you bicycle from Merced and Modesto than it would to use public transit. These are all one way commuting times. Yes, faster public transportation options might exist, but their schedules and location are often difficult to locate. These factors deter students from considering public transportation as an option.

Stanislaus County Demographics



It is important to consider the demographics of Stanislaus County when evaluating the population's vulnerability to an

County Economic and Demographic Indicators

Projected Economic Growth (2014-2019)

Expected retail sales growth:	13.3%
Expected job growth:	9.0%
Fastest growing jobs sector:	Professional Services
Expected personal income growth:	16.3%

Expected population growth:	4.8%
Net migration to account for:	25.6%
Expected growth in number of vehicles:	7.7%

Demographics (2014)

Unemployment rate (April 2014):	12.3%
County rank* in California (58 counties):	51st
Working age (16-64) population:	64.0%

Population with B.A. degree or higher:	16.5%
Median home selling price (2013):	\$175,000
Median household income:	\$44,053

Quality of Life

Violent crime rate (2012):	549 per 100,000 persons
County rank* in California (58 counties):	46th
Average commute time to work (2014):	28.3 minutes

High school drop out rate (2012):	13.4%
Households at/below poverty line (2014):	17.7%

* The county ranked 1st corresponds to the lowest rate in California

increase in transportation costs. Demographic data provided by California Department of Transportation's Socio-economic Forecast 2014 highlights some of the challenges this area faces when compared to other counties within the state of California as seen in Figure 2 and 3. Further data provided by *U.S. News & World Report Education* shows the percentage of students who apply and receive financial aid. In 2013 81.5% of students at CSU Stanislaus applied for need-based aid, while only 12.2% of these applicants' needs were fully met. However 67% of students did receive some sort of need-based financial aid, with another 34.7% of students receiving need-based self-help aid. These financial aid statistics combined with area demographic data provides an insight into the financial standing of students and residents in the county, and how students are susceptible to fluctuations in transportation costs.

Consideration must also be given to San Joaquin Valley's air quality and the population's increased risk of illnesses that are associated with air pollution. According to the California

Environmental Protection Agency (2005) report, a survey conducted by the California Health Interview “shows a 24% higher prevalence of asthma in children in the San Joaquin Valley than in the rest of the state and a 19% higher prevalence for adults.”(4) While a reduction in students on the road would have a relevantly minimal impact on the overall emissions in the San Joaquin it is still worth consideration given the areas poor air quality.

Results

By the end of November 2014 a total of 120 surveys were distributed and collected. Results from these surveys (see appendix B for a breakdown by individual questions) have been used to guide alternatives that

the price per gallon of gasoline, may have impacted student responses. The data also showed that, when given the option to choose between motorized and non-motorized alternative methods of transportation, students overwhelmingly selected motorized transportation. Using this method resulted with a mean of 45.37 miles. However, the number of students who responded that they lived in Turlock is proportional to the number of people who selected walking and bicycling as a viable alternative. This study extrapolated the commuting distance reports to determine the approximate amount that students would spend on transportation according to the American Automobile Association (AAA) driving costs study (2013) as seen in figure 4.

AAA Average Costs Per Mile (2013)

Based on Driving 15,000 miles annually	Small Sedan	Medium Sedan	Large Sedan	Sedan Average	Suv 4wd	Minivan
Cost Per Mile	46.6 cents	61.0 cents	75.0 cents	60.8 cents	77.3 cents	65.3 cents
Cost Per Mile	\$6,967	\$9,151	\$11,248	\$9,122	11,599	\$9,795
Price based off Students commuting patterns and average number of days spent on campus (per year)						
	\$1,903	\$2,491	\$3,062	\$2,483	\$3,156	\$2,666

should be investigated by the university. The percentage of respondents of seniors, juniors, sophomores and freshmen was 40%, 34%, 10% and 15% respectively. 74% of the students who responded to question five already considered the cost of transportation to be a significant expense. Yet 58% of these same students also said that a 25% increase in fuel prices would not undercut their ability to afford the cost of transportation. One possible theory to explain these results was the declining price of gas during the months of August-November 2014. During this period gas prices averaged \$3.60 per gallon for regular unleaded gasoline in the state of California (according to the US Energy Information Administration historical full price data). Just four months before, between April-July 2014, the average price of regular unleaded gasoline was \$4.13 per gallon. This 53 cent drop, reflecting a 13% reduction in

Costs for students who commute to campus was determined by multiplying the average number of days students spent on campus (3.47 days) by the average commuting distance and a 30 week academic year. Depending on vehicle type the average cost that students are paying per year ranged from \$1,903-\$3,156. Information on student vehicles was also gathered to see average year and fuel efficiency. Out of the 120 students who responded the average full efficiency of the vehicle 24.44 mille per gallon, while the average model year being a 2005.

Recommendations

Before making recommendations this study will identify what modes of transportation are not as necessary for the university to focus on. Data collected from the survey showed that students currently favor automotive forms of transportation over

alternative methods such as walking and bicycling, due in large part to the long commuting distances. This coupled with the fact that the city of Turlock already has plans underway to revamp the cities walking and bicycle paths makes further investment by the university unnecessary. Instead it is suggested that the university continues its current work with the city to make sure student needs are met during the planning process. But bicycling and walking should not be the main focal point when developing alternatives to single occupancy transportation.

Reports from local and regional transportation agencies support the use and funding of public transit. And it seems that the university is in a position to take advantage of these local resources. Developments in local transit options such as the ACE forward line can also have a substantial impact on the way students get to and from campus. Potential implications of this one option alone could result in no longer having to build new parking facilities on campus, and instead as an alternative students could have reduced rates on transit passes included in their tuition. Toor (2003) laid out possible solutions to incentives the use of multimode transporting such as: de-incentivizing students to park on campus by raising parking rates, taking non motorized travel seriously, pursuing partnerships with local governments, and implementing transit pass programs for students and faculty (p. 139). The report also discussed how other universities that have used the "transportation demand management" or TDM, and the savings associated when implementing these plans rather than just increasing infrastructure to accommodate students. His report found that: good economic analysis of transportation options for university communities will generally show that an economically efficient transportation policy will rely less on parking

and more on transportation alternatives compared to most universities' current practice (p. 140). Further research is necessary to determine if these options would be viable.

Limitations of the Study

Before drawing conclusions from these survey results, it is important to recognize limitations that might have hindered the effectiveness of the study. The convenience sampling method resulted in a survey population comprised primarily of upper-division business majors. Given the selective nature of respondents and the sample size of 120 individuals, the overall results cannot reliably be extrapolated to the larger CSU Stanislaus student population. It is also possible that during the course of this research potential or current alternatives were not adequately examined, suggesting further research is necessary before narrowing the selection of alternatives.

Conclusion

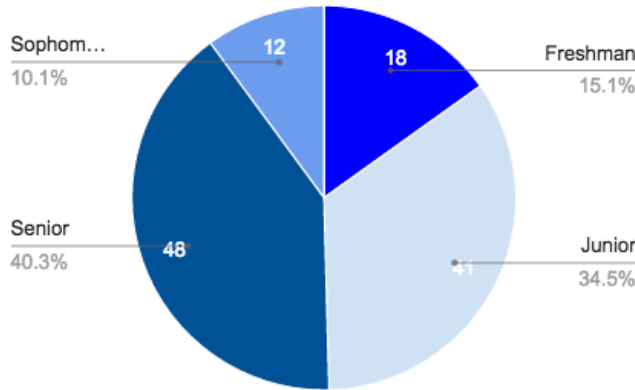
Understanding the transportation challenges that CSU Stanislaus and its students will face in the not too distant future was the ultimate goal of this research. This research offers an idea of what students might desire for transportation options. Yet a declarative statement should not be made about what option best suits the university until further research is conducted. Raising parking fees and building a parking garage reflect the easiest methods for the university to use, but we must stop and ask if this is the best decision for future generations of students. There is likely no silver bullet to solve CSU Stanislaus parking issues. Instead, the university should adopt a multimodal transportation strategy to insure that students of the future are still able to enjoy the dynamic experience of sitting in a classroom to learn.

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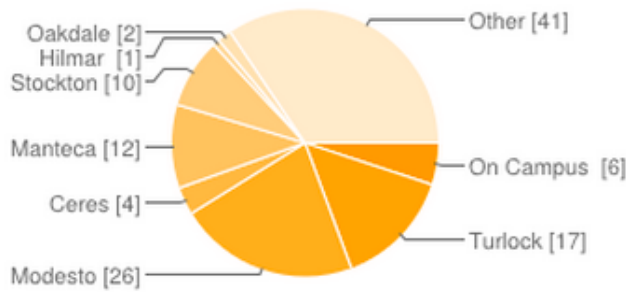
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Appendix A – Survey and Results

What is your current academic status?

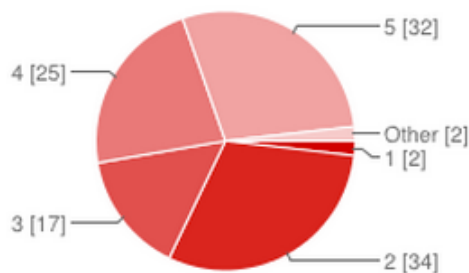


Where do you live?



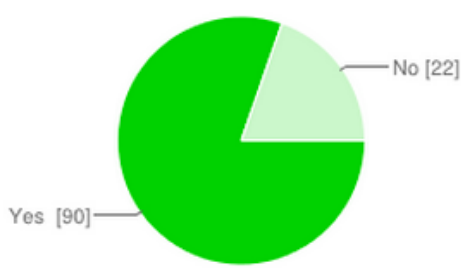
On Campus	6	5%
Turlock	17	14%
Modesto	26	21%
Ceres	4	3%
Manteca	12	10%
Stockton	10	8%
Hilmar	1	1%
Oakdale	2	2%
Other	41	34%

How many days a week do you commute to the CSU Stanislaus Turlock Campus?



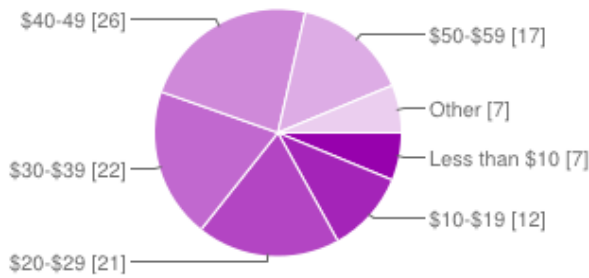
1	2	2%
2	34	28%
3	17	14%
4	25	21%
5	32	26%
Other	2	2%

Would you consider the cost of transportation to and from school to be a significant expense?



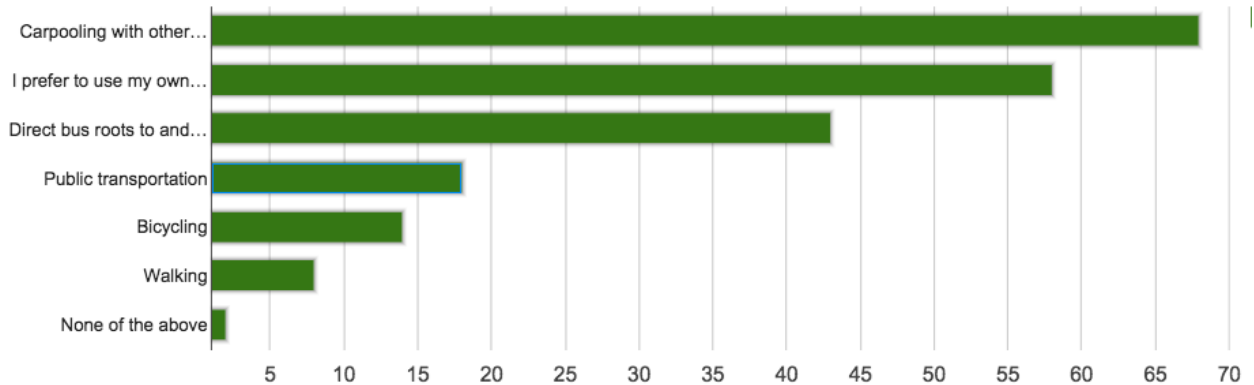
Yes	90	74%
No	22	18%

Approximately how much do you spend on transportation to and from school every week?

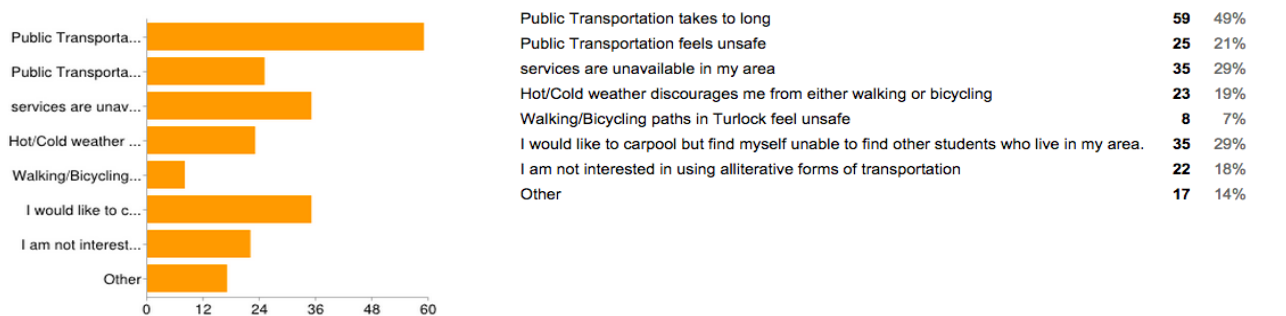


Less than \$10	7	6%
\$10-\$19	12	10%
\$20-\$29	21	17%
\$30-\$39	22	18%
\$40-49	26	21%
\$50-\$59	17	14%
Other	7	6%

Would you be willing to use the following alternatives to driving (select all that apply)



Please select from the following reasons that are possibly preventing you from using alternative forms of transportation.(select all that apply)



Conspiracy Theories: Psychology Behind Flight MH370

Sara Moundi

Abstract

Recent research into the psychology of conspiracy theories has emphasized the importance of belief systems in the acceptance or rejection of conspiracy theories. As for the acceptance of conspiracy theories, a plethora of research has made the argument that the public buys into the idea of conspiracy theories because we as human beings need to be able to make sense of the world around us. We are curious of the unknown and cannot leave any questions unanswered. Many researchers have confirmed that this is the reason behind why people believe in conspiracy theories so this has become the 'accepted universal' as to why conspiracy theories are developed. However, there is scarce information available as to why people believe the particular conspiracy theory (or explanation(s)) that they do. This paper will use experimental data to analyze the top twelve conspiracy theories associated behind what happened to the Malaysia airlines flight number MH370 and the different personality types that would lead one to come to each conclusion.

Introduction

The significance of this study is to understand why people think what they do. Conspiracy theories have been around since the beginning of time. The explanation that many credible researchers, such as Marina Abalakina-Paap, have reached regarding why humans come up with conspiracy theories is that we constantly need to be able to make sense of the world around us, but there is little research behind why each person believes what he or she does. This paper looks at the twelve most popular theories that people have come up with for the explanation of the disappearance of the MH370 flight. The MH370 flight was a Malaysia airlines flight that disappeared on March 8, 2014 as it was flying from Kuala Lumpur, Malaysia to Beijing, China. There were 227 passengers and 12 crewmembers on board this flight. Through the extensive efforts of experts and search teams there still has been no confirmed debris or crash site of the plane, but there have been many conspiracy theories that have surfaced addressing what many think happened to the plane. This paper will address how the twelve most popular conspiracy theories associated with the MH370 disappearance correlate with the big five personality traits. The hypothesis

is that each personality trait will correlate with specific conspiracy theories leading to the conclusion that personality factors into one's belief system.

Past Research

Other research that has been done which compares to this study was on conspiracy theories behind the 9/11 terrorist attacks by Michael J. Woods and Viram Swami. Woods' research he came to the conclusion that people come to believe in conspiracy theories because of the power of suggestion. He used different conspiracy theories behind the 9/11 attacks and simply just presented them in different ways. Woods found that the way the media or other external sources present ideas to people has a major role on persuading them to believe it. Woods use the same surveying tactics that this study suggests but his main focus does not examine the psychology behind conspiracy theories and why people believe the things that they do. Woods addresses this and measures conspiracy theories using personality factors but that was not the emphasis of his study. Another study that was done by Viram Swami focused looking at the actual psychology behind conspiracy theories. Swami uses the big five personality factor along with many other

demographics and descriptive statistics (such as age, ethnicity religion, etc.) to find a correlation between that and conspiracy beliefs. Swami's research tends to focus more on other descriptive statistics and not solely on personality. The focus of this research is exclusively on conspiracy theories and the big five personality factors. Because he was measuring more than just personality, Swami used a 17 item big five personality questionnaire and this research will use a 46 item questionnaire. This research will conduct a more comprehensive investigation to understand the personality types of individuals and then aim to find a more accurate correlation between personality types and different conspiracy theories.

Materials and Methods

In order to test the notion of this experiment, a survey will be conducted that measures the participant's personality type, and then list the top twelve conspiracy theories associated with the MH370 disappearance where the individual will state how much they believe in each theory. The conspiracies that are used in the survey were found on the comment sections of various online news articles. Samples were taken from news articles posted between March 8th and October 15, 2014 on four mainstream news websites: ABC (American Broadcasting Company) News, CNN, the *Independent*, and the *Daily Mail*. The four news sites were selected on the reasoning that an ideal sample would not be restricted to a single country, journalistic style, or ideological position, as well as for more practical reasons, such as search capabilities, comment archiving and unpaid access.

The following twelve conspiracy theories will be used:

Alien Abduction: This theory suggests that space aliens are behind the disappearance of the flight. It has been claimed that some passengers' cellular

phones were ringing when they were called and satellites showed no mid-air explosion.

MH370 and MH17 were the same plane: This theory suggests that the plane that crashed in a field in Ukraine was the lost MH370 flight and not flight MH17, which was scheduled to depart from Amsterdam and arrive in Kuala Lumpur, Malaysia.

The plane was shot down: This theory suggests that the plane was accidentally shot down by US-Thai joint strike fighters in a military exercise in the South China Sea. This theory also claims that search and rescue efforts were deliberately sent in the wrong direction as part of a cover up.

Asian Bermuda Triangle: This theory suggests that the area where MH370 vanished is on the exact opposite side of the globe to the Bermuda Triangle and the plane disappeared there.

The CIA is behind it: This theory was suggested that in this day and age there is no way that a plane can just disappear and the American CIA is covering something up that it does not want the public to know.

9/11 style hijacking mission: This theory suggests that Israeli agents planned to crash the Malaysia Airlines plane into a building and then blame it on Iranian forces.

High-tech hijacking: This theory suggests that MH370 was the product of the world's first cyber hijacking, accomplished by accessing the airplane's flight computer and reprogramming the speed, altitude and direction of the plane.

Cracks in the plane: This theory suggests that slow decompression of the cabin left pilots and passengers unconscious. Pilots would not have been

able to put their oxygen masks on in time and passengers would not have been able to detect any oxygen deprivation.

Microchip 'Kinesis KL-02' motive: Kinesis KL-02 is the world's smallest microcontroller. Twenty tech employees working for Freescale Semiconductor, the company that invented the microcontroller and is currently testing it, were on board the flight. Drone technology using the microcontroller changed the course of the flight and left it undetectable. The flight landed in Diego Garcia in the Indian Ocean. The motive was to prevent the technology from falling in the hands of Iran because it would have become a nightmare for Israeli defense forces.

US Military Base: This theory suggests that MH370 landed at a US military base in Diego Garcia, which is located in the Indian Ocean.

Life Insurance Scam: This theory suggests that someone on board the flight bought a huge sum of life insurance and wants family to gain from it.

Pilot Suicide: This theory claims that the captain of the plane hijacked the plane on a suicide mission after his wife left him.

Based on a cognitive psychological standpoint, the big five personality factors will be used to establish a correlation between the participant's belief or denial in the top twelve conspiracy theories. The big five personality traits are the five basic dimensions of personality as proposed by personality psychologists:

Extraversion: This trait includes characteristics such as excitability, sociability, talkativeness, assertiveness and high amounts of emotional

expressiveness.

Agreeableness: This personality dimension includes attributes such as trust, altruism, kindness, affection, and other pro social behaviors.

Conscientiousness: Common features of this dimension include high levels of thoughtfulness, with good impulse control and goal-directed behaviors. Those high in conscientiousness tend to be organized and mindful of details.

Neuroticism: Individuals high in this trait tend to experience emotional instability, anxiety, moodiness, irritability, and sadness.

Openness: This trait features characteristics such as imagination and insight, and those high in this trait also tend to have a broad range.

The survey will be assessed using two scales: The first will be a 46 item big five questionnaire, which was created by University of California Berkeley professor Oliver John; this questionnaire assesses the big five personality factors on a 5-point scale (1= strongly agree, 5= strongly disagree). The second will be a MH370 conspiracy belief scale that will be a 12-item scale based on a review of most popular MH370 conspiracy beliefs. Participants will state whether they believe each statement is true or false based on a 9-point scale (1=completely false, 9= completely true).

This experiment will aim to survey 500 participants and the participants will be recruited at random via email. Because this is a lengthy survey, it will take place online. Participants will be required to sign an informed consent form and then continue onto the survey itself.

Expected Results

The analysis of the survey results will be done using a multivariate multiple linear regression on the SPSS program. The results of this

examination of MH370 conspiracist theories can be predicted by a number of personality and individual difference variables. From research that was done conducting a similar experiments involving conspiracy theories behind what happened with the 9/11 terrorist attacks, it is expected that the belief in more radical conspiracy theories will be negatively associated with personality factors of agreeableness and neuroticism, while openness to experience, extraversion and conscientiousness will have a positive association. This experiments is expected to yield the same or very similar results.

Discussion

This research on conspiracy theories could be considered a great stepping-stone for the field of psychology. Other research that has been done aiming to explain the psychological reasoning behind conspiracy theories is that of the 9/11 terrorist attacks. The 9/11 research was not done as extensively as this experiment is because the goal of these other studies was not to solely find a correlation between conspiracy theories and the big five

personality factors; there were many other factors involved. The reason why much research has not been done behind the psychology of conspiracy theories is because this is a grey area in psychology. It is ambiguous because it is not something that can be measured using numbers and it can be difficult to interpret; this does not mean that we should not try to understand the psychology behind conspiracy theories. This research can maybe further verify what was found in the study of the 9/11 terrorist attacks and future research can also be conducted with a different set on conspiracy theories so we can have a definite reasoning for why people believe what they do. There is not enough research available to fully verify the findings of this experiment or others like it. More research needs to be done so that the findings of these studies can be looked at as cold hard facts and not just a couple of congruencies among a couple of studies. This study is just one more step towards the goal of proving that there is a scientific reasoning behind why we believe what we do.

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Mental Health On College Campuses

JoEllen Reece

Introduction

This article draws on past studies, surveys and statistics to illustrate the vital need of mental health services on college campuses. Colleges have the responsibility to educate their student population on the importance of mental health while also providing and informing students about the effective mental health services available to them. Mental health services on college campuses offer individual professional psychological counseling, peer-to-peer counseling, programs to educate students and bring awareness to mental health, and a multitude of other services. Well-rounded and effective mental health services can have a lifelong impact on individuals as well as benefits that reach far beyond the college campus.

Mental health is defined by the World Health Organization as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.” Mental illness results in the lack of mental health. The National Alliance on Mental Illness (NAMI) defines a mental illness as “a medical condition that disrupts a person's thinking, feeling, mood, ability to relate to others and daily functioning.” Serious mental illnesses are the most prevalent diagnoses and they include attention deficit hyperactivity disorder (ADHD), bipolar disorder, borderline personality disorder, major depression, obsessive-compulsive disorder (OCD), panic disorder, posttraumatic stress disorder (PTSD), and schizophrenia.

Prevalence of Mental Illness on College Campuses

In developed countries, mental illnesses account for a larger portion of disability than any other group of illnesses. Mental illness affected nearly 20 percent of individuals age 18 to 25 within the past year (NAMI, 2012). This percent is greater than that of cancer or heart disease. Unlike illnesses that strike more often later in life, mental illnesses affect both youth and young adults in significant percentages. 75 percent of lifetime cases of mental illness begin by age 24 (NIMH, 2005). With nearly half of the individuals between the age of 18 and 24 enrolled in college, college campuses are at the heart of this issue (United States Census Bureau, 2013).

With such a high prevalence of mental disorders comes the demand for services and programs to treat those personally affected by a mental illness. The National Survey on Drug and Health (NSDUH) found that just over half of the adults in the United States with a serious mental illness receive treatment. The number decreases when looking specifically at young adults, age 18-29, with just over 40 percent receiving treatment (NIMH, 2008). This results in just slightly more than half of the college-age individuals with a mental disorder ever receiving treatment for their mental illness; the numbers are alarming.

Barriers preventing students from seeking treatment vary from campus to campus and student to student, but many students reported that he or she believed treatment was not needed, lacked the time to receive treatment, believed in self-management of the mental illness, or was fearful of the stigma that would be associated with having a mental illness and

seeking treatment for it (Czyz, Horwitz, Eisenberg, Kramer, & King, 2013).

Effects of Mental Illness

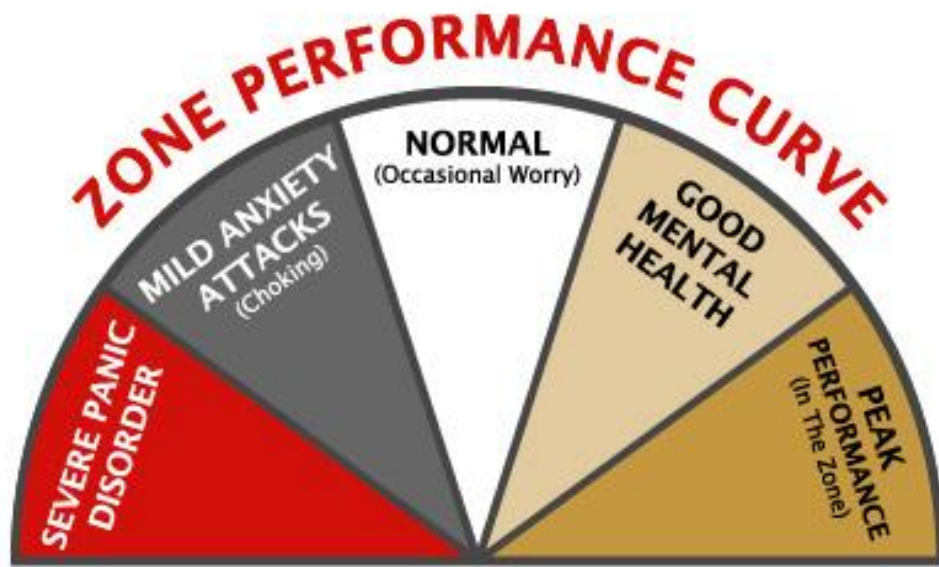
The effects of mental illness reach far beyond the individual that is personally affected by it. Looking slightly beyond the individual, one can see that close friends, family, employees, and fellow students can see the effects of mental illness too. The ripple effect continues as colleges, companies, and societies are placed with the burden of caring for individuals who currently do not have the ability to function in day-to-day tasks of their life.

On college campuses, poor mental health results in poor performance by college students. Graduation rates are a key factor in determining the success rate of a college. A study of first-time full time students who began seeking a bachelor's degree at a 4-year institution found approximately 60 percent of students graduate within six years (Institutional Retention and Graduation Rates for Undergraduate Students, 2014). This number includes all students with and without a mental illness. A survey titled *College Students Speak: A Survey Report on Mental Health* found 64 percent of the students with mental illness dropped out of college. The

total number of students who drop out of college would be greatly reduced by addressing the students that are dropping out due to mental health concerns. The reason for 50 percent of students with a mental illness dropping out was that they did not access mental health services and support (NAMI, 2012). College mental health services can reform their outreach services to address these student concerns.

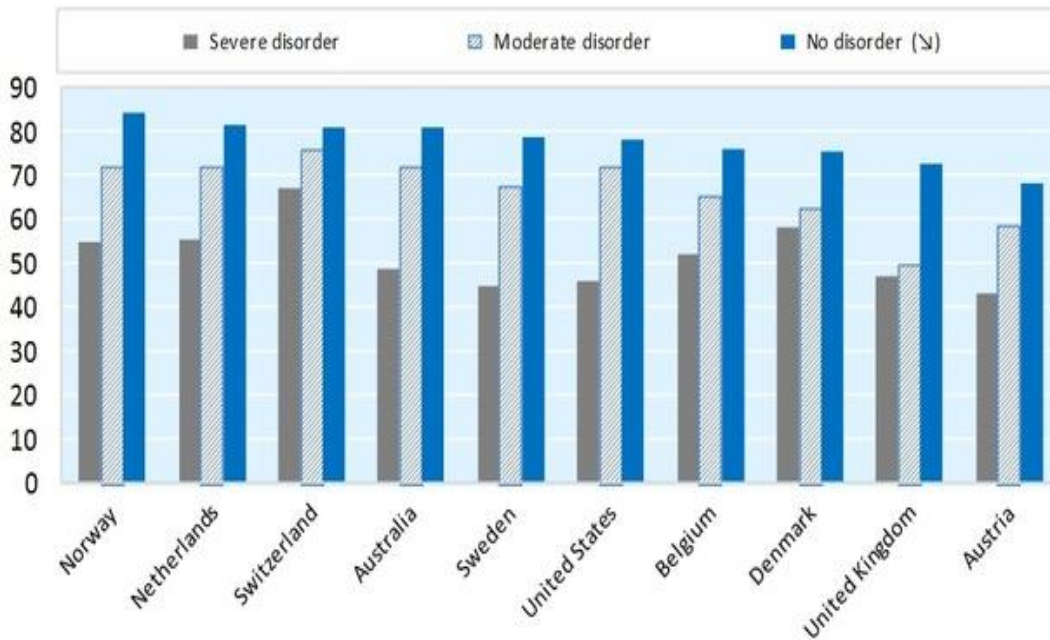
Furthermore, college success rates also factor into career development and preparation. The United States unemployment rate for people with a mental illness is 15 percentage points lower than those without a mental illness. Individuals with a mental illness are two or three times more likely to be unemployed than their counterparts without a mental illness (PBS).

When colleges are not effectively addressing mental health on their campus, they are not adequately preparing their students for the expectations beyond graduation. The impact of not adequately addressing mental health results in a loss of wages. Serious mental illnesses cost the United States at least 193 billion dollars annually in lost earnings (NIMH, 2008). Providing effective mental health services is a good investment.



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Employment rate* for people with and without a mental disorder



* Paid or self-employed work of at least one hour per week

With budget constraints at the core of the issue in determining which student services remain and which are removed, California State University, Stanislaus has continued to invest in the mental health of their students by providing a variety of services and outreach programs. Included in the cost of tuition, students are provided psychological services by professional licensed staff and student support groups through the PEER Project – raising awareness with campus wide programs. Campus tour guides and new student orientation leaders inform and support the use of these services to new and visiting students. With the support of student leaders, the student body culture is more likely to adopt a similar supportive attitude. This coupled with a diverse platform to reach the variety of students; CSU Stanislaus values the mental wellbeing of their students and strives to provide effective resources to students (College Report, 2012).

Mental Health Initiatives

Recent college campus shootings have brought national media attention to extreme cases. Changes are being implemented in public policy as awareness of the need for effective mental health services increases. Nationally, the Mental Health Parity and Addiction Equity Act (MHPAEA) of reformed mental health benefit requirements to align more similarly to other health benefit requirements. MHPAEA, along with the Affordable Care Act of 2010, seek parity in mental health initiatives and increased services to millions of Americans. In California, the Mental Health Services Act (MHSA), originally known as Proposition 63, was passed in November of 2004 to impose a one percent income tax on personal income over one million dollars (California Department of Health Care Services, 2012). The funding then goes primarily to the county level to increase and improve programing for mental health. Colleges have the

responsibility to educate their student body and increase awareness of the importance mental health.

Mental health programs help to educate the student body on the importance of mental health, the benefits of seeking help when needed, and the process by which one may receive treatment. Education and open dialogue begins to reduce stigmas associated with mental illness and seeking help. A mental illness does not equate to the definitive nature of a person. By understanding mental health, one can better understand how to separate our perceptions of a person from the illness they suffer.

Many students with poor mental health do not seek treatment or are reluctant to seek out resources available to them. With greater understanding of the behavior of students who seek help on individual college campuses, improvements to the process by which outreach, awareness and intervention strategies are used can be adapted to become more effective in communicating with the larger student body. Improving intervention strategies and treatment for mental illnesses on college campuses is beneficial to the individuals personally affected and will surely contribute to the success rates of the college. The impact of effective mental health services can then reach out beyond the college sphere.

If you or someone you know experiences a life crisis, whether or not the crisis is accompanied by thoughts of suicide, the option is present to call the National Suicide Prevention Lifeline at 1-800-273-8255. One can also reach out through this online link: <http://www.suicidepreventionlifeline.org/> to get information on mental health services in your area. CSU Stanislaus students can reach out locally to the Student Counseling Center at (209) 667-3381 to receive free and confidential professional counseling.

For a detailed description of disorders that constitute mental illnesses, one can refer to

The Diagnostic and Statistical Manual of Mental Disorder Fifth Edition (DSM-5) published by the American Psychiatric Association. (But see the article in this volume by Katie Segura, which discusses possible shortcomings of these definitions.)

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Robin Burton

“She left this for you.” Her mother's soft, timid voice rang in Sarah's ears every time she looked over to the scratched up black laptop sitting on top of her desk, under a few papers from school. She often forgot it was even there, but occasionally the light would hit the shiny silver lettering of the computer's brand name in just a way that it would catch her eye as she lay on her bed. That shimmer would draw her attention that night as she idly flipped through channels with near mechanical patterning: *1...2...3... click 1...2...3... click.* The pretty light was a welcome distraction from the mundane routine she found herself in. Fine.

Lifting herself from the twisted mess of blankets and sheets, she walked silently to her desk, brushing aside the papers with chicken-scratch handwriting and off-centered xeroxed copies. Her chair made a soft squeaking noise as she sat, lifting the lid of the nearly forgotten piece of technology, the bright backlight coming on with the push of a button. For a moment, she thought perhaps it should have been dead, not having been charged since receiving it some weeks ago, but the luminosity emitting from the screen showed no sign of dimming.

Sarah's sister Angela had left her the computer when she left two or three weeks ago, as Sarah always complained about having to use the family computer in the living room. She could remember commenting that her mom was too noisy when she cooked and her dad watched 'the game' – how many 'the game's could there be?! – up too loud and shouted too much. She couldn't get anything done! So, Angela left the beat up old Acer for her little sister, and this was the first time it was being used since. It wasn't that Sarah didn't have homework to use it for nor that she didn't just want to

browse the net, but the laptop became a reminder that her sister had left. Everyone knew Angela wasn't happy there, but to go so abruptly and so far... Sarah couldn't help but feel abandoned.

That feeling of loneliness flared up as she opened the only web browser Angela had installed: Internet Explorer. She couldn't help but shake her head as it loaded, shaking her head slightly as the default home page came into view. Angela never was particularly tech-savvy. In fact, Sarah was the one who had to help her sister pick out the computer, as she couldn't have told you the difference between MAC and Windows. Laughing to herself at the thought, Sarah casually began scrolling through Angela's bookmarks, trying to decide whether or not to delete them. On one hand, she wouldn't ever need them, but they were silly reminders of her: makeup review sites, free movie sites, and... what was that? Sarah's eyebrows furrowed together as she looked at the bookmark named “Sarah's Facebook.” Her Facebook? Why would Angela have that bookmarked? She clicked it, only to be brought to a state of even more confusion. What came up wasn't Facebook, but a site called “Survivors”. Survivors? Sarah's mind immediately jumped to cancer, but Angela hadn't mentioned being sick. She didn't have too long to ponder it before her eyes scanned the rest of the site: it wasn't a cancer survivor site, but one for domestic abuse victims.

Domestic abuse victims? Why would she have something like this in her bookmark tabs, and rename it to “Sarah's Facebook” no less? Angela left herself logged into the site, and so she went snooping around, fueled by curiosity, worry, and a need to put that worry to rest. Angela probably wanted to help a friend or something... right? Finding her sister's activity history, Sarah browsed

through the chronologically set up list beginning nearly two years ago; it started with views of posts made by others, but then Angela began replying to the posts that she was reading. Her first comment read: "That sounds horrible! I can give u some makeup tips to cover the bruising if u want. Did he even say sorry after? Derrick always does and so I forgive him. Hard to stay mad u know? xoxo – Angie."

Sarah could feel her stomach twist and turn as she read her sister's reply. Derrick had hit her? The guilt of her ignorance surged through her body, goosebumps forming on her arms as the hairs on the back of her neck stood up straight. Despite the goosebumps, her face was blazing, a slight red tint coming to it as anger and embarrassment stung her cheeks and locked her jaw. Angelina was a cosmetologist, and thus could obviously hide any bruising inflicted upon her, but she should have noticed *something* – they were sisters, after all! Despite the guilty nausea that was beginning to set in, Sarah's eyes kept locked on the computer screen, looking for something to make her believe that there had been a mistake or things had at least gotten better. Before she read Angela's next comment, which was made about two months after the first, she clicked on the post it responded to, reading it slowly:

November 3, 2012 4:56am

Posted by: Reida C.

I don't know what to do. He keeps saying sorry. He keeps saying he loves me – he was just angry. And I believe him. I've seen this kinda stuff on TV, and I promised myself I'd never be that girl... but I am. I know I am, and that's the worst part. I'm scared and I hate him when he starts yelling, and I cry and cry and scream when I feel his fists hit my face... but then the rage passes, and he starts to cry, and I can't stand seeing him like that. I love this man. He's a good

man. He's just lost sight of that, I think. I was there before the alcohol and I want to be there after. I've seen the man he can be. I can't leave him, even if I go against what I believe in. How do I help him?

Angela's comment read simply: "Can give makeup tips... but talk to him. Tell someone. 'Sorry' doesn't mean nothing if he did it again. Trust me. xoxo -Angie."

There was barely a pause before she found herself clicking on a post Angela responded to a few months after that one, her hand having a mind of its own as it brought her to the new page, her eyes taking in the digital words spelled out across the web page:

February 15, 2013 10:01am

Posted by: Erick H.

What kind of man am I? My wife wears the pants in the relationship: she makes all the decisions and takes care of the bills and all that shit. I mean I work and whatever, but she still calls me a lazy piece of shit, yelling at me to grow a pair, just because I'm not top dog at my job. It's not like I wanna work there forever anyway dammit! But it doesn't matter. I'm not good enough for her. I'm too lazy. Too weak. Too whatever the hell she's pissed about that day.

The other day I was just chillin on the couch after work when she got home. Apparently I was supposed to do the dishes before she got home. I don't even remember her telling me to but either way. She flipped out on me, calling me useless, selfish, all that junk. Then she lost it. I guess it upset her that I didn't seem upset, so she just started hitting me with her bag, and man that shit is heavy. I had a huge bruise on my cheek that night. When I pointed it out, she just said I deserved it for not doing what I was

suppose to. Man, I feel like a prisoner in my own house – in my marriage. If I divorce her, I'll have nothing but I don't know if I can keep doing this. I'm tired of getting screamed at and insulted and now beaten. This is so fucked up!

Angela's reply came not too long after the post was made:

“She doesnt have the rite 2 do that 2 u. They say 2 b a man and tough it out but thats not rite! She cant treat u like that. Wat about ur feelings??? U can alwys message me 4 help! xoxo -Angie.”

The sound of a sharp and sudden inhale momentarily drowned out the background noise made by a random and forgotten program on the TV as Sarah's lungs burned from her having been holding her breath. Her left arm stung just above her elbow as she brought herself back into reality, a sympathy pain for the OP of the survival story. Survival story. These were *survival* stories, because with each post, someone lived through something horrific, was given another day when someone who should love them and protect them turned against them, betraying them and hurting them. These strong people, who are seen as weak and unable to make the “right” decision, were coming to grips with what was happening to them and fighting for their right to live. While people complained about trivial things like being a few minutes late for work or not having enough milk for their cereal in the morning, these people were just happy for another day as they searched in themselves for the will to survive.

With elbows resting on the desk just in front of Angela's laptop, Sarah hid her face in her hands as she took another deep breath, attempting to register all the horrors she had just read, the realizations she had begun to come to about the reality of her sister's relationship, of her life. She thought back to the missed calls from Angela, placing so

much more importance on them now than she had back then, wishing she hadn't placed so much more importance on this or that than on time with her sister. Why was it so easy to lose track of what is really important in life?

Lifting her head back up, Sarah repositioned herself in her cheap IKEA-bought office chair before scrolling through more of Angela's activity history, reading through comment after comment, unable to bring herself to read the story they were in response to. Finally, she couldn't scroll anymore. After a moment of mental preparation, she clicked to read this survivor's story:

October 1, 2013 6:43 pm

Posted by Katie R.

He raped me again. Someone please tell me what to do because I can't do this anymore. No one seems to think that your boyfriend can do this to you. I told like 2 people and they both acted like I was the one that was wrong because I should always want to please him. Sex isn't something you owe in a relationship. No still means no. I'm scared to go to the cops, because I always hear about them acting like the chick was asking for it. Like it was her fault. Brushing it all off. What if they do that to me? What if he finds out and the cops dont wanna help me and I have to deal with him by myself? I'm so scared. Someone please help me. I can't do this anymore. I feel like the only way out is to be dead. I don't wanna die. Please. Help.

Angela's reply: “Ur so strong. I cant imagine having 2 deal w/ that... Get help girl dont put up w/ his shit!! Im here if u need nething. Srsly tho GET OUT NOW!! While u can! It's not 2 late 4 u. xoxo -Angie”

She didn't give herself time to let that story sink in, if she did, she knew she would lose her nerve to read the very last thing

Angie posted; not a comment, but a post of her own. Her story. The sound of her clicking on Angie's story echoed in her ears as her mouth ran dry and her heart began to race. Her hands trembled as she brought her knees up to her chest and she rested her chin atop them, curling herself into a ball as she read the most important story of them all:

June 6, 2014 3:03am

Posted by Angie C.

I dnt kno y I let this go on 4 so long. I dnt have much time 2 rite so Imma make this short. So many of u say u stay b/c u see good in them. B/c u love them. Plz stop lying 2 urself. I finally realized that my fiance is garbage who will never be nething else. Hes beaten me 4 yrs, taken me from my family, n' it needs to stop. 1 way or another it needs 2 stop. I am going 2 get away from him or die trying... I dnt mean that figuratively. If I tell ne1 Im scared he will hurt my family. Im alone. My wonderful mom and amazing sis live 3 miles away but I feel like im on an island. Plz n e 1 who reads this kno that u r worth something. If u let anyone keep hurting you in any way it wnt stop. I promise. It wnt stop. So take care of u baby... or they will. I have 2 go b4 he wakes up. Wish me luck. I luv u all for everything uve done for me.

Xoxo
-Angie

The entire world seemed to disappear around her as her eyes stayed glued on the final punctuation mark of her sister's writing. Hot tears streaked down her face, running her mascara and stinging her eyes, making them red and puffy. She felt as though she might vomit, but her throat felt too tight to allow anything to pass, should anything come up. The horror and guilt wrapped her in a veil of fear and misery, which only intensified as she knew that what she felt could not come close to comparing to the fear and misery Angela had to have been enduring. Missed calls. Canceled plans. She could have gotten Angela away from him on so many occasions, but she had been blind and stupid, too wrapped up in her own life to see that her big sister needed her.

Wiping the tears from her face, Sarah reached across her desk with a trembling hand, picking up a white tri-fold piece of paper, looking intently at the picture of Angela printed on it, just under the words "In Memory of Angela Rogers." More tears formed and fell from her face, drops landing on the paper, causing the ink to bleed ever so slightly. With a deep breath, Sarah stood and left her room, her steps slow and shaky as her nerves refused to relent.

"Sarah! What's the matter?" Her mother's voice only welled more tears in her eyes as she inhaled to speak, having to force the words out, voice cracking as she did.

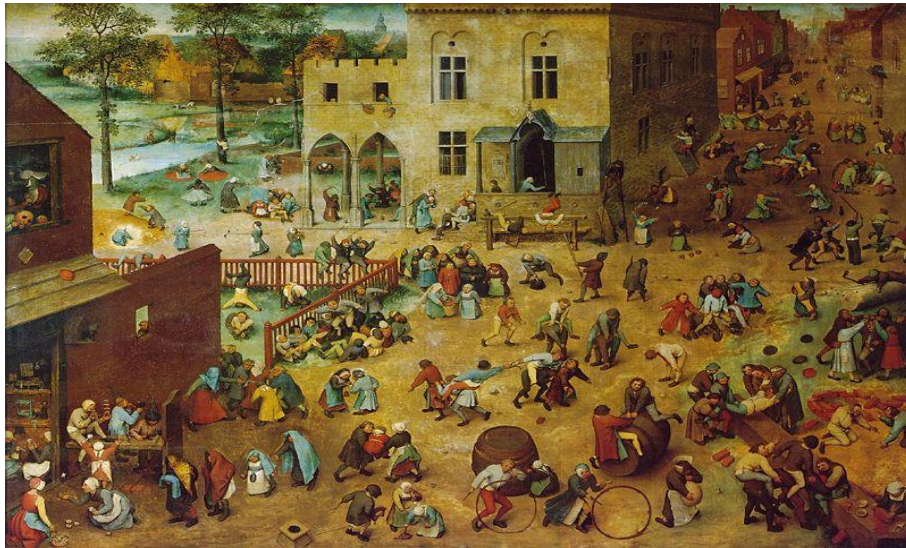
"Mom, I need you to take me to the police station... Now."

Traditional Toys in the Age of Digital Technology: Applying Symbolic Interactionism to Children at Play

Shaun M. Gephart

Abstract

Traditional toys and digital playthings are blending more seamlessly within the modern childhood experience. Families with children are increasingly exposed to technology while some either prefer or are unable to access basic technological devices. Educationalists and parents alike understand the importance of exposing children early to a mixture of educational values through playing with toys and if possible, carefully with technology. Through case study, the article includes a symbolic interpretation by observation and interviewing children in the nursery. The purpose of investigation: exploring whether children exposed with digital technology causes them to be less original in their imagination and creativity during time in the nursery.



Children's Games (Bruegel 1560)

Introduction

The picture above represents the historic importance and seriousness of playtime. The Flemish painter, Pieter Bruegel the Elder, painted "Children's Games" in 1560, depicting the physically energetic and imaginative engagement of girls and boys during the 16th-century. Upon closer examination, the painting itself provides nearly 200 peasant children engaged in nearly 80 different games and play activities over a

period of time. Bruegel's work isn't simply an encyclopedia of children's games (a window into the amusements and recreations of the past), but illustrates from the adult perspective the importance and seriousness children place in creative and imaginative activities.

Bruegel recognized the importance of childhood imagination through open-ended and unadulterated creative freedoms. Scholars and educationalist have deliberately argued the importance of childhood imagination and

creativity through play. However, with the progressive changes in capitalism, companies have reformulated the childhood experience. Specifically, throughout each period, the childhood experience has altered its appearance with technology. Currently, children often spend less time working up nature, through discovery and exploration, given the design of popular toys which provide families with personal, inclusive [toy] entertainment. Although traditional toys, today, can be played with outside, the design of toys is commonly structured around indoor play with digital technology. Before industrialism, children often spent their days outside, unbothered by total parental supervision, leaving them exposed without much filtration, to the world. Today, children spend less time outside with traditional toy and more with digital media inside. For instance, in 2008, American children, eight- to eighteen-year-old reported more than six hours of daily media use in households (Donald F., and Ulla G.). That's more time spent on a single activity other than sleep!

Literature Review

Currently, technology is ingrained within the lives of many children. Reportedly in 2011 half of children, in the United States, as old as 8-years gained access to mobile devices, like Smartphones, iPods, or an iPad or other tablets (Goldstein, 2013). Further in 2013 the American Academy of Pediatrics, mentioned the average 8- to 10-year-old spends nearly 8 hours a day with a variety of different media, and older children and teenagers spend 11-hours per day with media (Strasburger and Hogan). Experts and educationalist suggest there are growing "digital divides" in terms of access to technological resources with children. Those differences are associated with income and education which greatly factor into childhood experience. These factors are suspected of contributing towards that child's motivations for fully utilizing technology imaginatively

and creatively. Although traditional toys and digital playthings can provide similar learning experiences, it's important to understand neither of these should be considered "luxury" commodities. Low-tech as well as high-tech are essential cultural integrators. As digital technology becomes central to society, it can no longer be considered luxury goods because of its importance in daily life (Hargittai. 2011).

These sweeping changes reinforce the importance of toys in society. Toys are not only precursor to familiarizing children with their future environment, but indicate that playful interaction with objects is necessary for social and cultural solidarity (Goldstein, 1994). Given the considerable integration of technology in society, researcher have consistently explored whether children, who play with electronic toys, play less creatively or imaginatively than children who play with more traditional toys (Bergen 2004, Plowman et al. 2010). Although these studies don't provide significant clairvoyance on the subject, other studies examined whether media inhibits children's imagination, determining if there is less originality and more imitation during fantasies ((Götz et al. 2005). Furthermore, critics and educationalist argue that children are no longer able to engage in authentic, spontaneous play, that the narratives, symbols, and scenarios of their pretend play have been taken over by the media, depriving children of the opportunity to develop their imagination and autonomy (Levin and Rosenquest 2001, Marsh 2002).

Traditional Toys and Digital Technology

This section includes the conceptualization of traditional toys and digital technology. While technology is advancing with capitalism, toys themselves take on new roles in which children foster cultural and social relevance. It's important to understand technology is impregnated within the paradigm of social relevance. This means children are growing

up with technology earlier and younger and their creativity and imagination are wrapped up within digital culture. With those changes, there are growing ambiguities to the definition of toys given the raise of modern technology.

According to Dr. Michael Cohen, a developmental psychologist and the President of the Michael Cohen Group LLC (MCG), “It is a question of function rather than structure.” For instance, a phone is structured (designed) specifically to communicate with others, but Smartphones have many functions (i.e. internet, games, apps, etc). Under these circumstances how something is used identifies it or determines whether it is a toy. Furthermore, Dr. Cohen exclaims, toys are “traditionally a miniature version of something in the adult world that children use to play with.” Essentially, then, toys are anything analog without electronics that has been designed for children. On this view, construction sets, stuffed animals, plastic dolls and action figures are traditional toys.

On the other hand, digital technology isn't as simple because it depends wholly on the design and purpose of the device. Children are exposed to media through digital technology. In modern society, digital media is increasingly part of the childhood experience and must be included in digital technology. I use the term digital playthings/digital technology because it best describes the electronic devices utilized both in the adult and childhood daily life. For instance, children in the United States have increasing access to internet, video games, television programs, computers, and various other electronic devices. Using this distinction, I will refer to “traditional toys” and “digital technology” when analyzing the case study.

Methodology

This study is designed to investigate the differences between traditional toys and digital playthings on a child's creativity and

imagination. Using symbolic interactionism (an exploration method of inspection), it is possible to understand the creative and imaginative meanings children engender from current digital technology and traditional toys. The relevance of symbolic interactionism allows investigators to analyze the meanings children gather through social interaction and interpretation of objects, events, and behaviors. This concept is borrowed from Herbert Blumer (1969), who studied under George Herbert Mead (the grandfather of symbolic sociology).

In *Symbolic Interactionism: Perspective and Method*, Blumer discusses three basic principles. Firstly, he mentions human beings (conscious and aware) act towards things on the bases of their meaning. In this case, children draw meanings from traditional toys and digital technology through playfulness. Secondly, the meaning of things arises out of social interaction with others and things. Children, like adults, make different meanings while interacting with others, traditional toys, and digital technology. Lastly, the meaning of things are handled and modified through an interpretive process. Essentially, children take it upon themselves to interpret the moment through self thoughts of dialogue.

In accordance with Blumer's principles, investigators gathered data through participant observation, qualitative interviews, and context of sources. In order to collect data, investigators documented all events where children either interacted and/or mentioned exposures with traditional toys and digital technology while in the nursery. Investigators documented the frequency children mentioned digital technology and traditional toys and meanings children interpreted during playtime with traditional toys and digital technology. Furthermore, Investigators gauged the imagination and creativity of children while in the nursery by interacting and observing their behaviors. This included arts and crafts both

unstructured and structured within the confinements of the environment.

Case Study: Nursery

Main investigation started mid-February 2013 at the Church of the Brethren in Modesto, California. Each session was documented with note cards, scratch paper, and photography with children in the nursery while shadowing the nursery-head (NH) or voluntarily substituting during the NHs absence. Each session held place on Sundays between 9:45am until 12:15pm. During specific holiday weekends (i.e. Easter, Halloween, etc) children still attended normal nursery times. The average attendance age of children ranged between three and eight years of age with 2 to 3 children attending on any given Sunday. Children were allowed open-ended play with few restrictions on the types of activities. However, the church promoted non-violence and peaceful resolutions, meaning children or adults weren't allowed to bring in suggestive materials while in the nursery. The children often held the opportunity to play outside with prenatal/adult supervision so long as it remained recreational under the standard guidelines of the church. Lastly, the nursery itself consisted of various toys engendered towards early child development ages 2-6: soft and hard blocks, dolls, playhouse (kitchen props, a shopping kart), children's books, infant toys, coloring tools (crayons, markers, chalk, etc.). The church did not provide children with digital technology while in the nursery.

Participant Observations— Investigators used face-to-face interaction with children while in the nursery. The variables used in gathering data were conversations and interactions with children. In the mornings, investigators usually arrived at church at 9:15am to prepare and arrange the nursery promptly. The children participated in Sunday school until 10:00am, giving the NH sufficient time for preparations. Once the children arrived, they were allowed free-range

activities within confinement of the nursery. Children were often timid while in the presence of their parents before fully submersing themselves in playful activities. Once parents gave their children permission to play, children became more spirited, interacting with the NH and other children in clamorous and vivacious ways.

The children often discussed popular digital games while in nursery. On most occasions, children discussed their experiences with the popular game Minecraft, a 2009 sandbox construction video game where users virtually explore randomly generated worlds. Children shared their Minecraft experiences considerably with others familiar with the game. One participant consistently mentioned the character "Herobrine" in their Minecraft game. This character has been regarded as fictitious in Minecraft, meaning there's no possible way Herobrine can exist in any unmodded client or server within the game (minecraftwiki). Although participant "A" elaborated on his Herobrine experiences, other children in the group denounced the likelihood of Herobrine's appearance (Figure 1).



Through recognizing the social meaning of Herobrine, participant "A" tried elevating he's popularity within the group by inferring he witnessed the character. Although this competitive pattern for attention with digital technology varied between children,

investigators gained a sense for how children were exposed to media or digital playthings through socialization.



Figure 1. Children in the first image are playing with nursery blocks (constructing a puppet show) while children in the second image are playing with LEGOs while discussing Minecraft.

Qualitative Interviewing— investigators asked children open-ended questions in regards with their experiences with toys and technology. Not all participants responded to each question given their absence or inability to understand the prompt. Firstly, children (ages 3-8) were asked their favorite toys. Investigators received various responses including: Barbie, Monster High, My Little Pony, Dora the Explorer, Thomas the Tank, Minecraft Creeper, Dolly, and LEGOs. Although their toys fell under the definition of traditional toy, children favored toys that were referenced from media or digital technology, meaning children were formally or informally exposed to T.V. shows and video games. Children were modifying the meaning of “favorite toy” through “interpretive process” and associating it with popular digital media (Blumer). Furthermore, studies have suggested children develop differently with content in media (i.e. watching television or playing video games). For instance, children exposed to “Dora the Explorer” are associated

with increased vocabulary and expressive language skills while children exposed to “Teletubbies” are associated with decreases in both measures (Linebarger and Walker, 2005). Essentially, the meanings from media (shows) or digital technology (video games) are carried through traditional toys which children engender through play.

Secondly, interviews were followed up with asking children about their favorite activity at home. Children answered mainly with “watching television”, “playing games on their tablet”, and “apps on the internet” while traditional toys and outside activities were hardly mentioned. One child mentioned their favorite activity as “being outside and riding [their] my scooter”. This child was part of Family Promise, a low-income and homeless outreach program supported by the church. Although children had mentioned their favorite traditional toys, children reported considerably more involvement with digital technology. Finally, investigators questioned children about their personal utilization and intentions with technology. Children older than three, who favored media and technology, understood how to download applications, access files and programs, and used the internet for recreational activities. One participant (age-4) explained when they’re bored at home they’ll lay in bed with their “parents tablet and watch Netflix”.

During another interview, a participant (age 4) brought their iPad (a touch screen device) into the nursery to display their understanding of digital technology. As the child navigated the main screen, accessing an application file, she began to play Subway Surfers, an “endless running” mobile game released in spring 2012. During the course of the demonstration, the noise of the room softened substantially, until most of the children huddled around the participant and her iPad with silent astonishment. Suddenly, children in the nursery were cheering and providing advice while playing the game.

Although children played together with traditional toys (i.e. blocks, LEGOs, dolls), at no other point while in the nursery had traditional toys provided children with similar awestruck amazement. Eventually, children were taking-turns playing with the iPad. The meaning of the situation had changed through the social interaction (Blumer). Children recognized the excitement of the iPad in the nursery, given its unusual place were digital technology wasn't typically accessible.

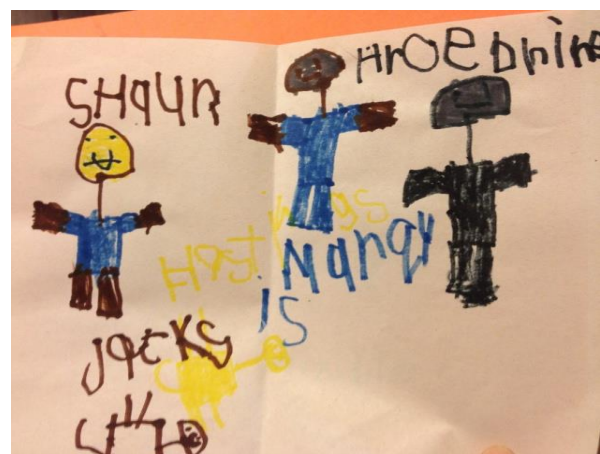
Context—anything written, visual, or spoken was analyzed by investigators. Occasionally, children requested either the NH or investigators to read books from the nursery library, a small shelf consisting of nursery rhymes, fantasy, intro biblical [basic bible stories], and folktale novels. These events were insufficiently measured given their spontaneous and infrequent nature. Either the investigators weren't present during sessions, or the nursery head couldn't document their findings. Furthermore, children moderately, participated in drawing sessions with NH and investigators. Participants were freely able draw either inside or outside on the patio sidewalk without restrictions on their imagination or creativity. Children often drew people, objects/things, and animals they were familiar with either formally or informally.

During one session, investigators asked children to design their own superhero characters in order to gauge their originality of imagination and creativity. Only one child (age 5) fully participated. Investigators told the participant to draw something "original", explaining, "it could be anything [they] you imagine". After a few second, she decided to draw a female superhero using yellow, red, and purple crayons (Figure 2). By thinking to herself, she handled the situation through interpretative process (Blumer). Once finished, she wrote "Super Girl" next to her drawing and held it up to explain, "This is Super Girl. She's the cousin of Superman".

Investigators often experienced that children used images from digital media while being creative and imaginative.



Figures 2a and 2b. *In the upper frame we see a drawing of Super Girl by the 5-year old while in the lower frame we see a drawing of Herobrine (from Minecraft) by a 6-year old.*



Furthermore, the toys children brought were typically part of series (i.e. Batman, Star Wars, Disney etc). The nursery head and investigators both noticed children brought in toys that held aggressive and suggestive meanings. For instance, one child brought in their LEGOs attached with weapons (i.e. guns, swords, bows, lasers, rockets, etc). Once children started playing with these toys, they mimicked the characteristics associated

with them in media. During one session, children divided the LEGO characters from “good” and “bad” while building prisons. One child began acting aggressively (verbally and physically) towards others while playing imaginatively with these toys. Essentially, the children were acting towards the toys on the basis of the meanings those toys had for them (Blumer). Although LEGOs are considered a traditional toy, their brand includes characters from environments in media. Essentially, the meanings of toys associated with media transferred the message to the child through play. Violence is one of the greater concern regarding influences of technology among educationalists and parents. According to Huesmann (2009), Pak (2009), and Comstock (1994), young children develop beliefs about social norms and acceptable behavior based on the content of their experiences. Activates associated with violence are suggestive proponents for social acceptance of normal aggressive behaviors.

Discussion and Conclusion

The study wouldn't have been possible without the permission from the ministers and members of the church. This allowed investigators to approach their research through groundwork methods. Essentially, investigators used inductive approach and later build towards their theory. This applied greatly while working with children and parents in the nursery, which allowed investigators to explore and examine as much as possible. This study mainly used participants associated with the Church of the Brethren in Modesto. However, it didn't ascertain the income and education of parents associated with the children in the nursery. In future studies, it would be beneficial to include a cross-comparison with children from different socioeconomic and geographic locations. . If anything, this study provided basic groundwork in examining the effects of digital technology on children's imagination and creativity.

Children were more likely to borrow or imitate characters from media instead of being original in their imagination and creativity. Most of the toys children brought in already held developed stories about the characters or environment. Although children were given unstructured play, their toys already held specific meanings, which the children often ended up playing out through structured roles. When children were playing with nursery toys without background information on the characters or environment, children often developed their own personal stories and narratives. This would suggest that creativity and imagination are influenced by the meanings associated to digital media through experiences with traditional toys.

By using Blumer theory of symbolic interactionsim, investigators determined traditional toys were seemingly tied with digital technology while in the nursery. Although children acted towards traditional toys and digital technology on the base of their meanings, children's imagination and creativity weren't substantially obstructed by digital technology. Although children mentioned their favorite traditional toys, their toys were mainly associated with digital technology. Characters were derived from T.V. shows and video games, which suggests the children were exposed from an early age to digital media. Furthermore, there was no significant difference between age and time spent with digital technology and traditional toys. However, children reported that their favorite activity at home involved using digital technology rather than playing with their favorite toys.

Lastly, it would be premature to ignore possible influences that may have caused unusual behaviors in this case study. For instance, the presence of investigators in the nursery could have influenced the children to behave differently than they normally would behave. Children were timid of investigators at the beginning of the study. As investigators

continued to participate, children began showing more interest in spending time with the investigators while in the nursery. Furthermore, parents of the children associated in the study held the belief that children should have balanced interactions with digital technology and traditional toys because both provide different opportunities

of play, which they perceive to be important to young children growing up in society. These parents are aware that media is highly invasive in their child's experience, and most have developed procedures for reducing their children's exposure to violent and suggestive digital media.

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eMarketing: Marketing to Generation Y

Briana Blakemore

Companies are continually studying different ways to identify and attract potential customers and maintain a lasting relationship with current customers. As more and more potential and current customers are using electronic media, companies are resorting to eMarketing as a way to reach target segments. Generation Y, also known as Echo Boomers or Millennials, is the largest upcoming generation since the Baby Boomers, with roughly 71 million people in the U.S. and 1.75 billion people worldwide (Sullivan, 2004, p. 10).

Generation Y is an influential consumer group whose eMarketing preferences are not completely understood. Although the exact years differ between sources, most research identifies Generation Y to have been born between the years from 1980 to 2000 (Beekman, 2011, p. 16). Weightily influenced by technology and the internet, this consumer group has evolved very differently from previously generations, which makes it a difficult group to target (Lester, Forman, & Lloyd, 2005, p. 126). Specifically, two research questions are addressed in this paper:

- Why should eMarketing be used to reach out to Generation Y?
- What is the best way to reach Generation Y through eMarketing (e.g. social media advertisements, email promotions, ect.)?

My second research question will be answered through the use of a survey.

Background

eMarketing, or electronic marketing, refers to the use of marketing principles and techniques through electronic media. eMarketing includes all the activities that a business controls by the internet or digitally with the desire to attract new business, retain

current business, and develop its brand identity (What Is EMarketing and How Is It Better than Traditional Marketing?). The advantage of using eMarketing is it helps organizations in the promotion of products and services in a very customized and cost effective manner (Joshi, 2013, p. 17).

No matter what kind of business, eMarketing cannot be ignored. Businesses can reach millions of people each year in ways that it could never have been possible before. The widespread use of the internet for purchasing almost any product has redefined the way businesses advertise and interact with their customers (What Is EMarketing and How Is It Better than Traditional Marketing?).

Why eMarket To Generation Y?

Generation Y is currently one of the largest demographic groups and will soon outnumber the Baby Boomer generation; it is also the largest consumer group in U.S. history (Taylor & Consenza, 2002, p. 393). In the United States alone, there are over 70 million people who are considered to be in Generation Y, with over \$200 billion in purchasing power (Sullivan, 2004, p. 10). The majority of their purchases are made on clothes, shoes, jewelry, sporting equipment, entertainment, health and beauty aids, and food (Barbagallo, 2003, p. 65). Their generational impact on society, culture, business, politics and economics in the next three decades will be similar in scale to that of the Baby Boomer generation. The size of this generation has already had an intense effect on the retail industry (Kim & Ammeter, 2008, p. 7). As more people within Generation Y graduate college and get jobs, their earning potential as a whole will make them even more important as a powerful consumer group.

Even though targeting different generations have always been a challenge for marketers, Generation Y has created a more difficult challenge because they are not as influenced by traditional media as previous generations (Valentine & Powers, 2014, p. 598). They were the first generation that grew up in a media-saturated world and therefore, respond to advertisements differently (Valentine & Powers, 2014, p. 599). As shown in Figure 1, the element that makes Generation Y the most unique is its technology use.

Generation Y	Generation X	Boomer	Silent
1 Technology use (24%)	Technology use (12%)	Work ethic (17%)	WWII/Depression (14%)
2 Music culture (11%)	Work ethic (11%)	Respectful (14%)	Smarter (13%)
3 Liberal/tolerant (7%)	Conservative (7%)	Values/moral (8%)	Honest (12%)
4 Smarter (6%)	Smarter (6%)	'Baby boom' (6%)	Work ethic (10%)
5 Clothes (5%)	Respectful (5%)	Smarter (5%)	Values/Morals (10%)

SOURCE: Pew Research Center, Jan 2010.

Figure 1: What makes generations unique?

People in Generation Y typically enjoy technology and the social interaction they receive through activities like instant messaging, blogging, texting, and emailing (Kilber, Barclay, & Ohmer, 2014, p. 82). A recent survey conducted among Generation Y revealed that 83% of them keep their cell phones close, or near 24 hours a day, seven days a week (Bannon, Ford, & Meltzer, 2011, p. 61). A similar report showed that Generation Y has spent 30,000 hours on the Internet or playing video games by the time they are in their 20's (Tapscott, 2008). Through extensive research, the internet has proven to be Generation Y's medium of choice, just as network television was for Baby Boomers (Neuborne, 1999). For this reason, many companies are relying less on traditional media advertising and more on eMarketing (Ciminillo, 2005, p. 43).

Methods

I conducted this study to identify which types of eMarketing channels have an influence on and are preferred by Generation Y. This study was performed by conducting a survey. A convenience sample was used because it allowed me to obtain basic data and trends without the complications of using a randomized sample. The eMarketing channels that were considered in the survey were: email marketing, social media marketing, display marketing, mobile marketing, and search engine marketing. Since the aim of convenience sampling is easy access, I used students at CSU Stanislaus that I have easy access to in order to get students to answer my survey.

I surveyed 100 people who were between the ages of 20 and 37. I surveyed 100 people because the number of people responding to an answer could be easily converted to percentages and displayed on graphs. Most researchers consider an acceptable margin of error to fall between 4% and 10% at the 95% confidence level. The margin of error for this survey is 9.8%, with a population size of 71 million people and a 95% confidence level. The age group of 20 to 37 was chosen based off of the age of Generation Y in a major source that I have been using in aiding this study.

My survey consisted of nine multiple choice questions. In order to form my survey questions, I used a question bank comprised of questions created and certified by survey methodologists. I used a question bank in order to minimize bias and give me the most accurate responses to my survey questions.

Results

The first survey question pertained to the overall effect of eMarketing advertisements. It was found that 61% of respondents admitted that an eMarketing advertisement has influenced them into buying a product. This question was included in the survey to

validate that eMarketing can be lucrative for a company. With 61% of people saying that they have been influenced by eMarketing, companies should definitely look into investing in this form of marketing. The results are shown in Figure 2.

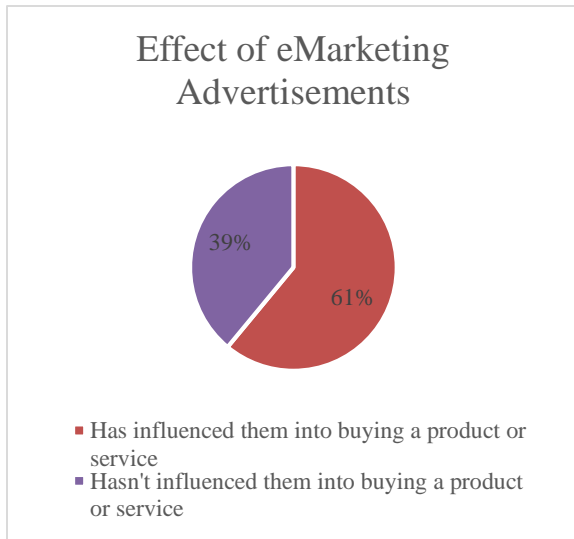


Figure 2: Effect of eMarketing Advertisements

The second survey question addressed eMarketing channel preferences. The eMarketing channels that were considered in the survey were: email marketing, social media marketing, display marketing, search engine marketing, and mobile marketing. I directly asked which form of marketing they prefer to be exposed to. I provided examples of each of the types of marketing in order to educate respondents who were unsure of what each type of marketing entails. Email marketing ranked first with 36% of respondents choosing it. This may be due to the fact that people can sign up to receive promotional emails instead of being advertised to without consent through other forms of marketing (which wouldn't be the case if it was spam email). Some people even wrote on their surveys that they prefer email marketing for this reason. Social media marketing and search engine marketing tied to rank second with 24% each. Display marketing followed with 13%. Lastly, mobile marketing ranked last with

only 3%. Based off of these results, companies should heavily invest in email marketing, along with social media marketing and search engine marketing; mobile marketing does not prove to be preferred with these results. The results are shown in Figure 3.

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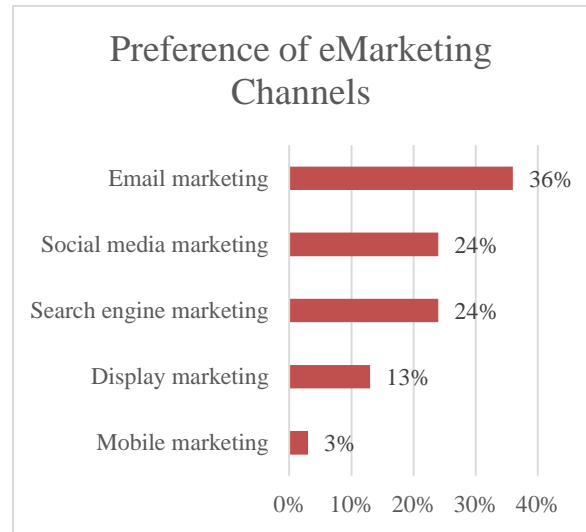
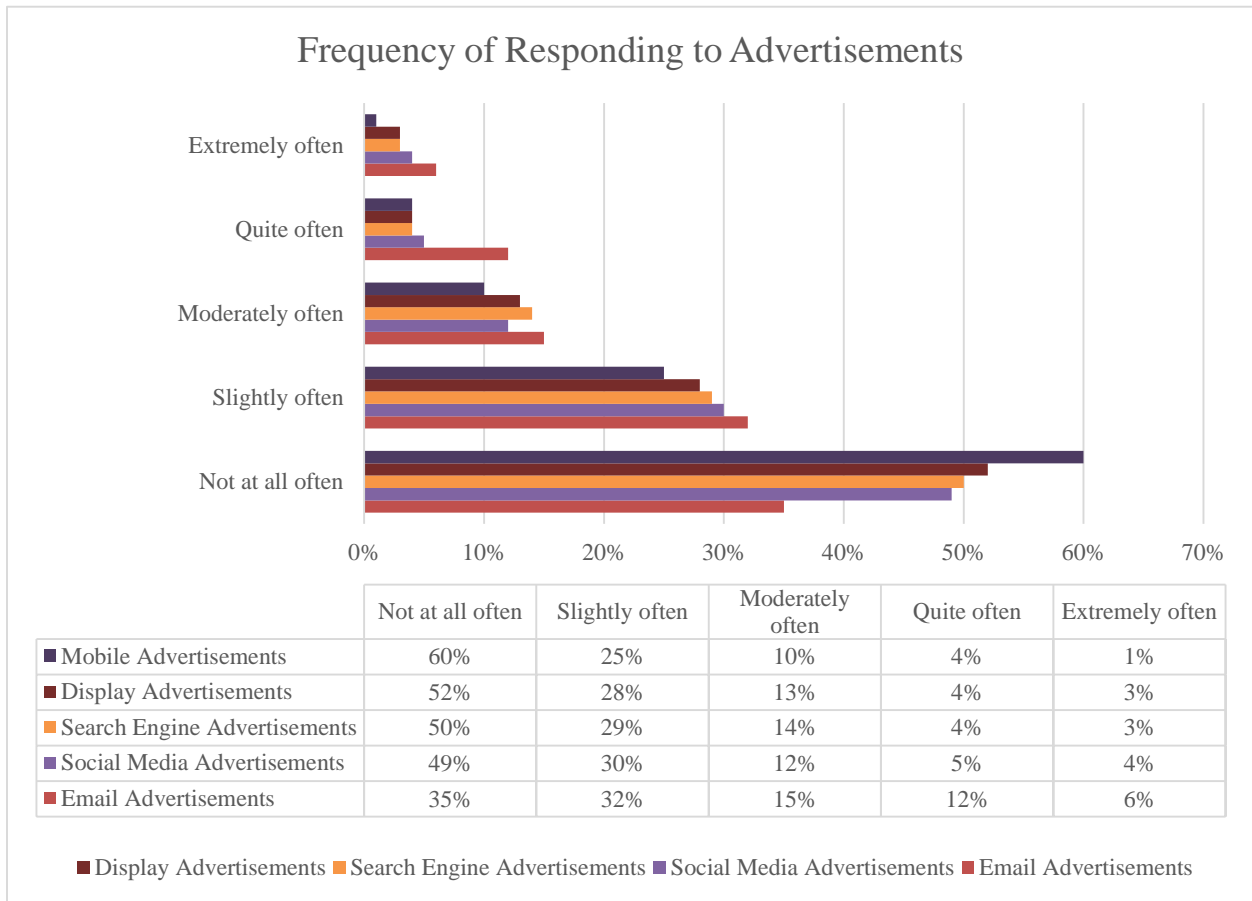


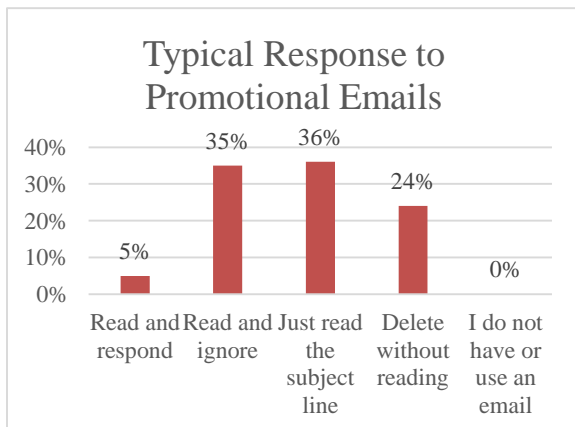
Figure 3: Preference of eMarketing Channels
 seventh survey questions asked the respondents how often they actually click on different types of advertisements. These questions were worded significantly different than the previous question because they indirectly asked people which type of advertisement is the most effective on themselves. Email marketing ranked first with 18% of people saying they click on email advertisements either extremely often or quite often. Ranked from most effective to least effective, people said they use click on the following advertisements either extremely often or quite often: social media advertisements (9%), search engine advertisements (7%), display advertisements (7%), and mobile advertisements (5%). The results for these questions are combined and shown in Figure 4.

Figure 4: Frequency of Responding to Advertisements



The eighth survey question focused on how people typically respond to promotional emails. 5% of people said that they usually read and respond to promotional emails; in the previous question, 6% of people said they click on email advertisements

Figure 5: Typical Response to Promotional Emails

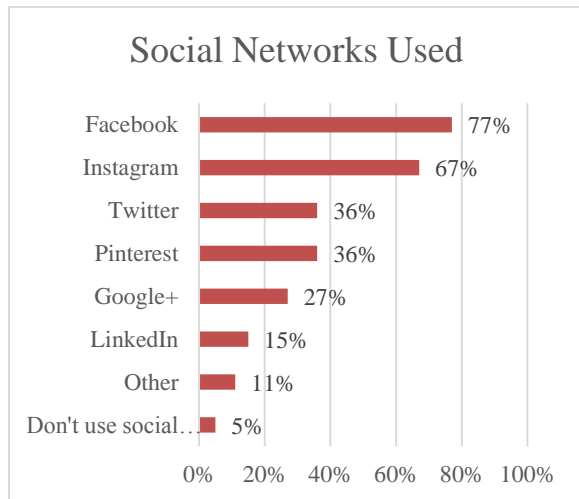


extremely often, which is a similar result. 35% of people said they typically read and ignore promotional emails and 36% of people said that they just read the subject line. Only 24% of people delete promotional emails without reading the email. The fact that these results show that only 24% of people delete without reading promotional emails and 0% do not have or use an email, supports the use of email marketing as a whole. The results are shown in Figure 5.

The ninth and final question focused on which social networks people use. 77% of respondents use Facebook and 67% use Twitter. Based off of these results, companies might want to invest the most in advertisements on Facebook and Twitter, in regards to social media advertising. Even though it still may be beneficial for companies to invest in other social networks

to reach Generation Y, these two social networks seem to stand out from the rest and should be the most heavily invested in. The results are shown in Figure 6.

Figure 6: Social Networks Used



Conclusions

eMarketing can be an effective way to draw in Generation Y consumers. In order to gain a better understanding of Generation Y as a consumer group, I conducted a study that has provided an overview eMarketing preferences and media habits of Generation Y consumers. Although the research in regards to eMarketing preferences was done on a small-scale, it does provide an initial examination on this subject that has not been previously reported. The research findings

described in this article could be used by companies in formulating their target marketing strategies for Generation Y, which forms a large portion of the population today.

There are limitations on the study that should be noted as well as directions for future research. In terms of limitations, the use of a non-random student sample has to be considered. Even though the respondents to the survey are a part of Generation Y, they are college students and represent a subset of the general population; therefore, it would be necessary to replicate the research with a larger and random sample. The survey was only given to students at CSU Stanislaus, which is a limitation because people who live in other geographic locations outside of the university's general area were not involved. Furthermore, future research is necessary to confirm the findings contained in this paper. The results of the present research provide some initial findings on the media habits and eMarketing preferences of Generation Y; however, the nature of the research design limits the findings. Additional research that considers the media habits and eMarketing preferences of Generation Y would be beneficial to companies and marketers seeking to reach this important market segment.

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Cloud Computing and Small Businesses

Brent Maynor

Introduction

Cloud computing is a technology that medium and large businesses are embracing as the new way of doing business. They are reducing hardware costs, software costs and IT costs by changing over to Cloud services, and it's just good business to do so. So with the majority of medium to large businesses making the transition to Cloud services, why is it that on average, only 30% of small businesses are using Cloud services (Comcast, 2014)? It has to be asked, if the medium to large businesses are changing significant portions of their business over to Cloud services, why are the small businesses not doing the same thing? If Cloud computing is such a great technology that reduces costs, improves security, and lets the business scale their services up or down as needed, why are small businesses continuing to do 'business as usual' and falling behind the rest of the business world?

In this paper, I plan on finding out how many local small businesses are using Cloud services, how many plan on using them in the next five years, and why those currently not using Cloud services have not changed over like their medium to large business competitors.

Research Questions

The key questions shaping this research are:

- What do small businesses stand to gain from embracing Cloud computing?
- Why have such a large percentage of small businesses not made the migration to Cloud computing?
- What Cloud services, if any, do small businesses plan on using within the next five years?

Background

Cloud computing involves distributed computing over a network where a program or application may run on many connected computers at the same time. It specifically refers to a computing hardware machine or group of computing hardware machines, commonly referred to as a server, connected through a communication network such as the Internet, an intranet, local area network, or wide area network. Any individual user who has permission to access the server can use the server's processing power to run an application, store data, or perform any other computing task. Therefore, instead of using a personal computer every-time to run the application, the individual can now run the application from anywhere in the world. The server provides the processing power to the application and the server is also connected to a network via internet or other connection platforms to be accessed from anywhere (Williams, 2010).

The term "the Cloud" is essentially a metaphor for the virtual computing. Companies have made the phrase "in the Cloud" even more popular as a way to refer to software, platforms and infrastructure that are sold as a service through the Internet. The provider has actual servers which host products and services from their remote location so the end-users don't have to. They can simply log on to the network without anything being installed. The major models of Cloud computing services are known as software-as-a-service, platform-as-a-service, and infrastructure-as-a-service. These Cloud services may be offered in a public, private or hybrid network. Google, Amazon, IBM, Oracle Cloud, Rackspace, Salesforce, Zoho, and Microsoft Azure are some of the biggest Cloud vendors.

Network-based services, which appear to be provided by real server hardware, and are in fact provided by virtual hardware simulated by software running on one or more real machines, are often called Cloud computing. Such virtual servers do not physically exist and therefore can be moved around and scaled up or down on the fly without negatively affecting the end user.

Significance of Cloud Computing

Cloud computing is a fairly disruptive phenomenon that could have the potential to make IT organizations more responsive to changes in the market. Cloud computing promises economic advantages, speed, agility, flexibility, infinite elasticity, and innovation (Murugesan, 2011). Cloud services have grown in popularity over the past couple of years with Cloud computing becoming the number one strategic trend (Wiens, 2014). Cloud computing, is a computing mode in which providers remotely deliver a variety of IT-enabled on-demand capabilities to consumers.

Workforce management solutions provided via the Cloud, provide web or mobile access to workforce management applications that help organizations significantly reduce their workforce costs. These applications can take advantage of cost efficiencies such as shared components and may also embrace the on-demand infrastructure of a Cloud to provide additional services when needed.

Methods of Research

Data on Cloud services, its benefits and risks, was obtained by individual research from technology journals such as IEEE Security & Privacy, I.T. Professional, and books written by experts on Cloud computing. Additional data will be obtained from websites specializing in Cloud services, interviews with professors in IT, interviews with IT techs currently using Cloud services, and surveys from local businesses on their current cloud

service usage and planned Cloud service usage. I surveyed local businesses that included local restaurants, travel agencies, auto repair stores, local grocery stores, electronic stores, and furniture stores. The information from the surveys and interviews will be put into graphs to show how small businesses plan to use Cloud services, how they currently use Cloud services, or if they do not plan on changing their standard operating procedures by switching to Cloud services.

Results

Through my literature review and surveys with local businesses, I have found that 65% do not use Cloud services in any aspect. 82% of surveyed businesses had heard about some of the different Cloud services available, but as the results show, a large number are still unwilling to move their business into the virtual world for various reasons. Through the interviews, I have analyzed the results of the information provided from the small businesses and the following graph shows the percentage of these businesses using Cloud services and which services they use, have used, or plan on using in the next five years.

While 65% of those surveyed don't use cloud services in any form, Cloud services have still managed to make their way into the small business world. 43% of those businesses surveyed plan on expanding their business to the internet via E-commerce to help them sell their products and services. Web Hosting, which is leasing a domain name from a company and/or having another company maintain their website for them, is expected to increase by 37% with those surveyed in the next five years. This can easily be explained because designing and maintaining a website is not an easy task. Small businesses can let larger companies do this for them, save time, and increase sales with a well designed and maintained website by companies that specialize in this. From my interviews and research, I have found that

most small businesses plan on expanding into Cloud services in one aspect or another to try to increase their competitiveness and increase their profitability.

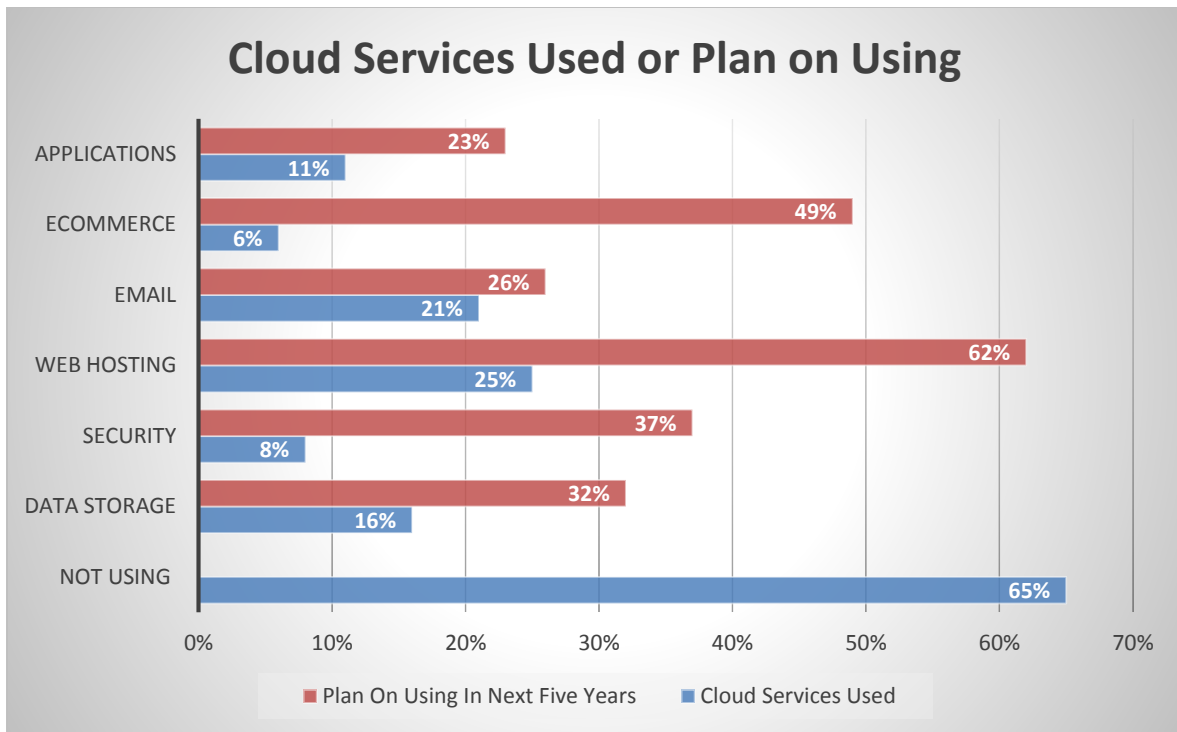
There are several different reasons why those that are using Cloud services started using them and also why those not currently using Cloud services would use them in the near future.

Before doing my research, I had expected that cost savings would be the primary reason behind small businesses moving to the Cloud, but as the graph shows, I was mistaken. 52% of businesses surveyed are more worried about being able to adapt with the times to keep their business current than saving a few dollars. Cost benefits was at 48%, which does show that cost is still a major factor when considering moving some of their business functions to Cloud services. 36% of those businesses surveyed would be willing to use Cloud services as a means of added security to their business, but even those who considered moving because of the added security did have reservations because of the recent security breaches that have happened to large companies. While these cases are high profile, they are in fact rare because of the level of security they have. Small businesses are more likely to fall victim to identity theft attempts than larger companies because the small businesses just doesn't have the resources to actively prevent attacks. Green technology and disaster recovery were 8% and 5% respectively, but still play a role. As the Green movement gains ground over the years, I would expect more businesses having this reason in mind. Disaster recovery was only 6% because most small businesses don't expect any kind of disaster to befall them. When asked if they could recover from a fire or small flood from broken pipes, only those 5% utilizing disaster recovery were certain they could reopen their business in less than 10 days or even reopen at all.

Conclusion

Every large corporation was, at one time, a small business. With the services that are available via the Cloud, every small business has the potential to be the next large corporation. Small businesses make up 57% of the country's private sector work force (Groth & Bhasin, 2011). With the majority of the workforce being employed by small businesses, it would be expected that these businesses would be trying to take advantage of any benefit they could to gain more business and increase profitability. In most cases, this is just not true. As this research has shown, 65% of the businesses surveyed do not currently use Cloud services of any kind. These businesses are falling behind their competitors that are adapting, and they are losing money that could be used to expand their business into other areas.

With such a large portion of small businesses not using Cloud services, I looked for a common reason. Through my surveys and interviews, I found that the vast majority of small business owners are middle aged or older with no business degrees and most had not heard of any Cloud services other than what their smart phone does. I believe it is a combination of just being out of touch with current technologies and not having the training and knowledge gained from a degree that is contributing to the disproportional amount of small businesses not using Cloud services. There are ways to counter this and bring more small businesses into the fold of this expanding technology. Free educational and training classes offered to small business owners by their peers that are business and technology experts would help to rectify this Cloud computing knowledge deficiency. Small businesses would then have the chance to embrace the new ways of doing business and help them achieve their growth potential.



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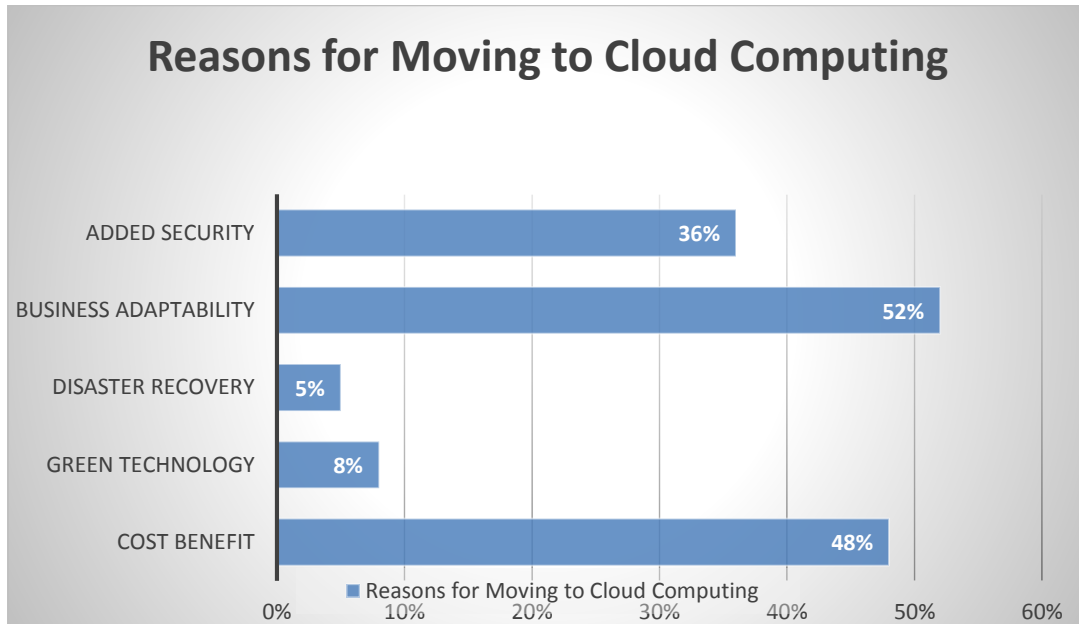
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EXPOSURES II

2015