

FEMALE PERCEPTION OF COMIC BOOK SUPERHEROINES

by

DEANNA KAYLIN BOWEN

KIM BISSELL, COMMITTEE CHAIR

JENNIFER GREER

ANNELIESE BOLLAND

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ABSTRACT

An increase in comic book popularity through television and movies using original print characters and storylines is occurring. There are millions of dedicated fans and a billion-dollar industry riding on the success of superheroes that have their origins in the comic books. As such, the characters are highly influential to today's youths. Using the principles of Social Identity Theory and Identity Theory researchers can begin to understand the differences between perception and identification within groups of involved fans. This study measured female participants' perception and identification with comic book characters based on their grouping as a comic book reader, as cosplay participants, and as convention attendants through an analytical survey. Using 120 t-test with adjusted alpha levels, this study found that female comic book readers and convention attendants have a more positive perception of female comic book superheroes than female participants who do not read comics or attend conventions.

Keywords: social identity theory, identity theory, comics, the superhero genre

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CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
LIST OF TABLES.....	v
INTRODUCTION	1
CHAPTER 1 LITERATURE REVIEW.....	4
CHAPTER 2 METHOD.....	17
CHAPTER 3 RESULTS.....	26
CHAPTER 4 DISCUSSION.....	34
REFERENCES.....	42
APPENDIX A.....	46
APPENDIX B.....	48
APPENDIX C.....	49
APPENDIX D	60
IRB CERTIFICATE.....	61

LIST OF TABLES

Table 1 Image types and depictions.....	21
Table 2 Measures.....	23
Table 3 Comic book images readership t-test.....	29
Table 4 Comic book images cosplay participation t-test.....	31
Table 5 Comic book images convention attendance t-test.....	33

INTRODUCTION

At the height of their popularity in the 1960s, comic books reached hundreds of thousands of readers every month. In 1965, DC's *Superman* comic alone sold an average of more than 800,000 paid circulation copies per year (Diamond, 1965). In recent years, the sale of print comic books has begun a slow upward climb after a market crash in the early 1990s and the surge of the Internet. In 2014, the Top 300 comics reached combined digital and print market size of 82 million units sold in North America (Comichron, 2014). While print sales remain low compared to the 1960s, the popularity of the characters has not waned. If anything, the rapid growth of high-quality movies and television shows by Marvel and DC Comics indicates that the market is still strong for the heroes of the comic book universe. For example, on October 26, 2015, CBS premiered *Supergirl*, the first female-titled superhero cable-television program since Lynda Carter's portrayal of Wonder Woman in the 1970s. *Supergirl* debuted as the highest rated fall television show in 2015, bringing in 12.94 million viewers, with 58% of the younger demographic (18-34) being female (Kissell, 2015).

From the start of the Golden Age of Comics to today, critics have noted that the content of the comics can influence and change the minds of their primary audience: youths. Researchers must look at the representations of women in these books and how those portrayals correlate with how women see themselves and are seen by others. To this purpose, this study employs a combination of Social Identity Theory (SIT) and Identity Theory (IT) principles to understand the relationship between reader characteristics and perception of female comic book heroes.

This study focused on determining if there was a relationship between comic book readership and audience identification with female superheroes in comic books. The main focus of this study was to determine if comic books, an untapped research field, have potential in academic research, specifically in the area of female readers, a growing faction of readership despite traditionally being a minority.

This study examines how female readers perceive female superheroes. To meet this end, SIT and IT were used as a basis for understanding the impact of comic book women on readers. Both theories address the effect of a rift between the perceived ideal and the reality. The primary focus of this study was to examine how comic book images stimulate audience response, positive or negative? Furthermore, do those who have read comic books in the past, attended comic conventions, or participated in costume play (cosplay) have a different perception of female heroes? This was accomplished using three research aims. Research Aim I is to determine whether differences in perception exist between readers and non-readers with respect to stimuli depicting images of female superheroes in comic books. Research Aim II is to determine whether differences in perception exist between cosplay participants and non-participants with respect to stimuli depicting images of female superheroes in comic books. Research Aim III is to determine whether differences in perception exist between convention attendees and non-attendees with respect to stimuli depicting images of female superheroes in comic books.

As the comic book fan base continues to grow through the expansion of character fans through television and movies, the original material is more important now than ever. In a recent survey conducted by comicsbeat.com, “The Facebook universe of self-identified comic fans grew to a new high of over 24 million fans in the United States. Of that 24 million, women

account for 46.67% of that population.” Despite the nearly half of women reading and enjoying comics, women remain underrepresented in the material and the creation process. Tim Hanley (2014) reported on bleedingcool.com that in August 2014 only 9.5% of people working on DC's titles were female and only 9.8 % of the people working on Marvel's titles were female. This means that while men are no longer the overwhelming majority of readers, female characters are still being catered to the wants of men.

The impact of the presentation of female comic book characters to readers needs to be examined. Going forward, researchers should conduct numerous surveys similar to the Pennell and Behm-Morawitz (2015) research to ascertain the impact on readers both male and female. In a collection of essays titled, *What is a Superhero?*, Jennifer Stuller (2013) contributed an essay titled, “What is a Female Superhero”. Her closing words summarize the need and reason behind researching female superheroes:

We need to expand our ideas about what constitutes a female superhero, especially women- no matter how kick-ass, capable, smart, or skilled they may be- are typically limited to the supporting roles of love interests, temptresses, and sidekicks and exist, in relation to the male hero, as a damsel in distress, kid sister or cousin, daughter, caretaker, or nurturer. Women, of course, can be these things, but we can also be more -- so much more. (p. 20)

While the previous sections have dealt with the history of comic books, Chapter 2 gives a brief overview of the two theories, a summary of previous comic book analysis, and defines how the theories can be used to understand the relationship between comic book readers and the comics. In Chapter 3 the methods for this study are described. In Chapter 4, the results of the study are presented. Finally, in Chapter 5, the results are discussed.

CHAPTER 1 LITERATURE REVIEW

A Brief History of the Comics and Their Creators.

Before there was Superman, there were the pulps. They were targeted at the lower-wage earning working class and featured daring tales of adventure and romance in the U.S. during the 1930s (Wright, 2001). Known by comic book historians as The Platinum Age, the first comic book, in the form readers recognize today, started in 1933 when Maxwell C. Gaines combined a collection of newspaper funnies into a booklet (Rhoades, 2008). This is where the ancestors of Detective Comics (DC) and Marvel got their start; reprinting funnies and newspaper strips in compilation form (Rhoades). Jerry Siegel and Joe Shuster read these and more as two poor, kids in Cleveland, Ohio. Together, they created an idea that would define an industry and spark a pop culture icon for generations, Superman.

After the 1939 debut of Superman, the first comic book titled after a character, The Golden Age of comics had officially begun. Quickly, hoping to continue to capitalize on their success as well as introduce a character with new depth, DC launched *Batman* in 1940 (Wright, 2001). While Batman lacked super powers, he was the ultimate fighting machine, relying on a host of gadgets to compensate for his lack of x-ray vision, super speed, or invulnerability. Reading the Batman and Superman comics William Marston saw a need for a female hero to bring in another demographic of readers (Rhoades, 2008).

Enter the Female Powerhouse: Wonder Woman. William Moulton Marston, a psychologist best known for inventing the lie detector, believed that young girls needed a role

model who could compete with the super boys and fight for feminine values (Wright, 2001).

He created Wonder Woman: strong, smart, exceedingly beautiful and dedicated to peace for all.

She entered the comic book scene in 1941, just before America entered World War II, wearing her star-spangled underwear and carrying her lasso of truth. She was determined to bring peace to man's world and rouse her fellow women to progressive social work (Wright).

Wonder Woman combined fierce strength with love, and gave women a relatable figure that only fought when she had no other choice. However, Wonder Woman had problems from the start.

Marston liberally used bondage in his comic, often having Wonder Woman bound and gagged by ordinary men despite her super strength and superior intellect. For a change of pace, he would have Wonder Woman bind her foes. Critics saw her as an object of male sexual fantasies and fetishes (Madrid, 2009; Wright).

After the war ended, Wonder Woman lost her purpose for being in America, and the comics reflected this. The death of Marston in 1947 left the Amazonian princess in a precarious situation. Her comic took a turn for the worse: her costume became less modest, her feats were less impressive, she stopped talking to young girls about empowerment, and she lost her group of fierce, fighting, female pals. Her powers were not reinstated until 1972 after *Ms.* magazine featured the woman of might on its cover as she was when she was on the level of the rest of the supers (Madrid, 2009). Since then, Wonder Woman has had many transformations and one television show. In contrast, her male counterparts, Superman and Batman, have starred in more than a dozen television and movies each. While they have also undergone changes in their lifetime, they have not been stripped of their power and self-respect as Diana has.

The Ladies of the Comic Book Universe. In a medium designed by men for men,

female characters often fall into stereotypes. The overarching theme seen in costume. Often clad in leather, lace, spandex, and high heels, comic book women do not appear properly dressed for saving the world. Sexualization of the female form stretches across all aspects of the comic book world, not just the superheroes. For example, Jessica Rabbit, the Bond girls, and the too-often-used female victim in a horror comic all dress scantily (Madrid, 2009). Beerman succinctly defines the relationship of most super women, “female superheroes are characters like a male character, but who simply happen to be women, serving more as a sidekick or supporting character to the lead, male, superhero (such as Supergirl),” (2012, pp. 201-213).

Female heroes and characters in the comics have a hard time being individuals when they are forced to dress in glorified lingerie. Their depictions are changing as more women take up positions as writers and illustrators as well as readers. Madrid agrees, however, “comic books have always been primarily targeted to a heterosexual male reader. As a result, female superheroes must look attractive to these readers. And in the world of male fantasy, attractive equals sexy. So revealing costumes are fitted onto idealized bodies with large breasts, tiny waists, and impossibly long legs,” (2009, p.290).

Social Identity Theory

Those who study Social Identity Theory (SIT) primarily examine social groups and the interactions within the group and with other groups, what Tajfel and Turner (1986) call interpersonal and intergroup behavior. The theory states that group identity has an effect on an individual’s personal identity, motivations influence for group behavior, and group biases effect an individual’s opinions. Tajfel and Turner argue that a social group could be any size, and ultimately an individual who identifies with a certain group will form personal views around the

group's mentality. Additionally, the researchers postulated that high-status groups would go to extreme measures to maintain their status in an effort to maintain or gain "positive distinctiveness," which to the average person on the street could be described as popularity or esteem. Building on the idea of positive distinctiveness, the two psychologists postulated that those in an ingroup would see themselves as heterogeneous and those in the outgroup as homogeneous and vice versa (Tajfel & Turner). The members of the group an individual is a part of will seem different while the members of other groups will be lumped together under a broad umbrella. This is necessary for when the competition between groups begins in the game of positive distinctiveness. Groups as a whole and as individuals want to feel good about them and will resort to attacking a competing group's reputation to make them look and feel better (Tajfel & Turner).

Using the original ideas and further development of these ideas, researchers such as Becker, Ferguson, and Ford (2008) applied the SIT to their theories of human behavior and interaction. Becker's (2004) study explored the impact of television's intrusion of Western body ideals on women in Fiji. Her findings suggest that the encroaching American culture in that country was related to the upsurge in body shaming, eating disorders, and emphasis on worth being defined by the physical form (Becker). She hypothesized that the ingroup, in this case, was American culture as represented by television, and the outgroup was the Fijian women. The members of the outgroup had lowered self-esteem as a group and as individuals after being exposed to the portrayals of American women. They sought out ways to have social mobility to be a part of the new ingroup by changing their appearance and disidentifying from the traditional culture (Becker).

In another application of SIT, Hoewe (2014) focuses on the use of SIT to identify how people will identify others. “This study predicts that the need for positive ingroup identity coupled with perceived ingroup heterogeneity and outgroup homogeneity will encourage White participants to misidentify Middle Eastern-looking men (i.e., the outgroup) as the perpetrators of crimes, violent crimes in particular,” (Hoewe, pp. 161-162). The findings were not as she expected, four out of five hypotheses were not supported, but the findings did support the ability of SIT to understand the everyday actions of people as they make judgements and interact with members of other groups (Hoewe).

Identity Theory

Stets and Burke (2000) argue that SIT needs to be integrated with another theory, Identity Theory (IT), in order to improve both theories’ power to explain motivations and group behavior. They argue that SIT is incomplete because it focuses on the group rather than the individual. Being ignorant of the individual identity lessens the effectiveness of the theory as a whole. The same is said of Identity Theory (Stets and Burke). Identity Theory, according to Stryker and Burke (2000), is the understanding of “the parts of a self-composed of meanings that persons attach to the multiple roles they typically play in highly differentiated contemporary societies,” (p. 284). They posit that identity theory can explain social movements, social expectations, and conflicts caused by differentiating societal roles. For example, they cite studies that concern the division of identity in women stemming from the conflicting roles of mother, working member of society, and family (Stryker & Burke). This research closely resembles the use of SIT to understand the effect of a lack of positive distinctiveness on a group member. Identity Theory also has several layers of research within it, but for this study only a basic

understanding of the general meaning of IT is needed as it relates SIT.

Stets and Burke (2000) argue that identity theory and social identity theory are similar enough as to be easily combined to create an accurate and well-rounded view of the self. “We suggest that being and doing are both central features of one's identity. A complete theory of the self would consider both the role and the group bases of identity as well as identities based in the person that provide stability across groups, roles, and situations” (p. 234). Their argument centers on creating a complete look at the self through personal and group identity. Both must be understood in congruence. The question then, is do female readers identify with the comic book characters they view and do they find them to be the desirable ingroup?

Comic Genre Content Analysis

Researchers have analyzed the sexualization of women and the well-known stereotype that women are the weaker superheroes with powers that are more mental than physical. Madrid (2009) sums up the reasoning behind a majority of female super heroes' powers being mentally generated as a reaction to the gender stereotype of women being physically weaker than men and the need to appear beautiful. It is easier to stand in a provocative pose and use telekinesis or telepathy than to hammer through a horde of villains, especially when wearing glorified lingerie (Madrid). Out of the many female heroes circulating the publication throughout history a small percentage have dominantly physical powers. A few notable female bruisers with enhanced strength who prefer to fight with their fists are Wonder Woman, She-Hulk, Power Girl, Supergirl, and Ms. Marvel. This does not include characters such as Black Canary and Batgirl who use gadgets or enhanced abilities as well as normal human strength and martial arts to defeat their villains.

“The superwoman’s story often emphasizes ‘love; be it romantic, filial, platonic, or as an ethic,” (Stuller, 2013, p. 21). In this interest, the superwoman is often dressed to impress the object of her love or, in most cases, the reader’s sexual fantasy. In a book dedicated to the tough women of comics Inness (1999) wrote, “Tough women continue to be difficult to find in more recent comic books, which contain many supposedly tough women who actually are little more than overly endowed caricatures with large guns and skimpy costumes,” (pp. 144-145). As the majority of authors on the topic of sexualization of women in comics have found, a super woman’s power is subverted by her sexualized image. It is nearly impossible to take a woman in star-spangled panties seriously. James Warren’s *Vampirella* demonstrates the unnecessarily sexualized costume more than any other. The blood substitute sucking, yet virtuous hero was shown as the good girl with a naughty streak a mile wide. Her greatest draw was her look, “...Vampirella’s red swimsuit. With its cutaway front that laid her breasts and stomach bare, the costume consisted essentially of two straps and a G-string, with a tiny gold bat applique perched coyly above the crotch. A pair of spike heeled boots and long black dominatrix tresses completed the look,” (Madrid, 2009, p. 147). While most other lady heroes are drawn with more clothing, they are still not representative of the average woman or a practical wardrobe.

The Comics Code: Concern for the Sexualized Imagery

According to Inness, comic books have been avoided by serious literary critics since their beginnings. “In addition to being perceived by many as shoddy entertainment undeserving of critical attention, comic books are often considered perverse and lewd, a view that has persisted throughout much of this century,” (Inness, 1999, p. 140). Since their start critics have been incensed by the sexualized nature of comics. Frederic Wertham, a noted psychologist in the

1950s, took up his torch and pitchfork, and led the charge against the comic book publisher's. It is thanks, in part, to his dedication to preventing the spread of corruption in youths that the Senate Subcommittee on Juvenile Delinquency conducted its investigation of the comic book industry in 1954. Wertham's *The Seduction of the Innocent* was used as a major reference in the trial as well as his personal testimony. He acted as the leading psychology reference to the case. However, he was not pleased with the outcome of the hearings (Nyberg, 1998). The committee elected to allow the comic book publishers to regulate themselves much as they had allowed the movie industry to regulate themselves. This trend has continued with Internet sites and gaming creators (Wright, 2001).

However, despite being retired in recent years, the code changed the way publisher's thought about comics. It woke them up to the influence they could have on young minds. While Wertham was an extreme critic, some of his observations were true then and remain relevant today, especially when it comes to the sexual objectification of women. In his 1954 manifesto, *Seduction of the Innocent*, Wertham calls into question the morality of the most popular female hero of that time period, Wonder Woman. Wertham calls into question her leggy and buxom figure. In addition to attacking Wonder Woman for her anti-feminist tendencies, he rightfully calls out the advertisements shown in comics that promised to make readers look better, feel more confident, and get attention for a price. He cites ads that guaranteed to help skinny girls get curvy, evaporate blackheads, and help boys stop losing their chance for a date (Wertham). The ads in the comics made promises they could not keep to make children more sexually appealing like the characters in the books they were reading.

Social Identity and the Comics

As with a majority of research in the communication field, social identity theory focuses on the impact of mass media on the human experience. Specifically, work is being done on the importance of representing minorities, including race, religion, sex, gender, and sexual identification in the media. Research in minority studies is growing increasingly prominent in identification theory, identity theory, framing, and agenda setting, as well as social identity theory. Women in particular have become an object of interest, after all half of the world's population identify as female. Hanley (2014) compiled an assessment of current research findings and determined that researchers have found mass media is controlled by a disproportionate number of heterosexual, white males. This causes strife due to a lack of representation and diversity in the representation of anyone who isn't a heterosexual, white male. Through the concepts of SIT researchers can look at the impact of this negative, non-existent, or stereotypical representation on women.

It was previously discussed how women are misrepresented, stereotyped, and forced into the role of sexual fantasy for male pleasure. From group perspective, women reading these comic books would naturally want to identify with a character they can see themselves in, often this means identifying with a character of the same gender. Having thus been sorted into a group, a female reading these comics would proceed to see their group in a negative light keeping them from reaching any level of positive distinctiveness, which has been shown to be vitally important for personal and group satisfaction. The lack of group satisfaction and inability to use social mobility methods through a lack of other groups in the comic book sphere, a reader could develop a negative self-outlook.

Additionally, another effect could take place similar to the results Becker (2004) saw in

the women of Fiji. The overly sexualized and impossibly thin women in comics could act as a perceived ingroup as the women on TV did in Fiji. Young women reading these comics would strive to meet the expectations of the ingroup as seen in the Fijian study by dieting and extreme exercising resulting in body dysmorphia, eating disorders, and low self-esteem. The increasing popularity of costume play (cosplay) could exacerbate the problem. Cosplay is for some a pastime, but for others, it is an art-form. Fans of comics and anime can buy or make an accurate representation of their favorite comic book character, which they proceed to wear to conventions or meetings of other fans. For some, the need to represent their character includes having the appropriate body size. It is a logical progression from costume to physical form. Dedicated fans will continue to seek out ways to accurately take on the identity of their characters (Lamerichs, 2010). The rise of convention attendance and cosplay popularity will be an interesting addition to the possibility of future research in the comic book universe for mass media communication effects.

Brown (2000) defines SIT as “a classic social psychological problem of the relationship of the individual to the group and the emergence of collective phenomena from individual cognitions” (p. 746). SIT is closely related to Self-Categorization Theory where “it is shown how uniform behavior can result from the internalization of the same group concept and categorical attributes by ingroup members,” (Brown, p. 746). Further, Brown postulates that the starting point for Tajfel & Turner's work in 1986 was the hypothesis that social identity comes from group membership. The impact of not meeting your ingroups ideals can cause discontent and deprivation of self-esteem. In addition, the apparent homogeneity of an ingroup can intimidate and cause lowered body image if in order to be a part of the ingroup that a reader idolizes; they

are required to fit the homogeneity of a body type that is not theirs. Belonging to a group that is often given negative distinctiveness may impact how the individual feels as a member of that group. Seeing the women in the comics drawn in unrealistic proportions or watching the television and movie portrayals of characters could cause lowered self-esteem from a lack of ingroup homogeneity.

In a study focused on film, Pennell and Behm-Morawitz (2015) administered a survey to female college students after the students watched clips from popular superhero movies that portrayed women in stereotyped roles. Pennell and Behm-Morawitz used social cognitive and objectification theories to look at how the representation of females in the roles of the superheroine and the victim in X-men and Spider-man franchises impacts egalitarian gender role beliefs, body esteem, and body competence. They tested their hypothesis using a survey of college women after viewing a montage of film clips depicting either Mary Jane as a victim or the women of the X-Men as superheroines. They found viewing the heroine figure had a greater impact than the victim negatively impacting women's perceptions of their bodies (Pennell et al., 2015). However, they found that viewing these clips for both types had no significant effect on how women perceived the importance of physical appearance to the self. Also, viewing the victim resulted in less egalitarian beliefs about women's roles in society and the exposure to heroes had no significant impact. While Pennell and Behm-Morawitz studied the impact of film and used different theories than this study applies, it demonstrates the impact that comic book inspired characters can have on a woman and her beliefs.

Self-Identity and Comics

It can't be said with certainty that mass media is the cause of any behaviors, a researcher

can determine if readers identify with characters in media, and if they think of the character positively or negatively. This is the objective of this study with the hope that future research can expand the findings. Female readers categorize themselves into various groups based on their interests. For example, they may consider themselves to be DC or Marvel fans, while some may only be loyal to a particular character. Whatever the group, readers classify themselves into fan groups commonly known as a “fandom.” These fandoms are an example of the Identity Theory's prediction of the development of a self-identity through the categories and groups they take part in. In short, “each person over the course of his or her personal history is a member of a unique combination of social categories; therefore, the set of social identities making up that person’s self-concept is unique,” (Stets & Burke, 2000, p. 225). The addition of the comic book fandom is every bit as important as a group such as choir, athletics, or academics in defining a person’s identity. Researchers must take into account the level of group identification when looking at audience perception and identification with characters from the comic book genre.

Based on the literature, the following research aims and hypotheses have been created:

(Research Aim I) Do frequent female comic book readers respond differently to stimuli than non-frequent readers?

(H1) Frequent female comic readers will perceive the female comic book character more positively than non-frequent comic book readers.

(H2) Frequent female comic readers will identify more with the female superhero than non-frequent comic readers.

(Research Aim II) Do women who participate in cosplay respond differently to stimuli than non-cosplayers.

(H3) Cosplay participants will perceive the female comic book character more positively than non-participants.

(H4) Cosplay participants will identify more with the female superhero than non-participants.

(Research Aim III) Do women who attend conventions respond differently to stimuli than non-attendees.

(H5) Convention attendees will perceive the female comic book character more positively than non-attendees.

(H6) Convention attendees will identify more with the female superhero than non-attendees.

CHAPTER 2

METHOD

This study examines relationships between female readers' opinions about comic book images and the identification with the female characters depicted in a survey. In the current study, an analytical survey was used to ascertain respondent perception and identification with comic book characters.

Participants and Procedure

Participants. This survey was administered online to female participants between the ages of 18-25 through the University of Alabama Communication and Information Sciences (C&IS) participant pool. Additionally, participant recruitment took place through comic book fandom pages (Marvel, DC, Feminism, SampleSize subreddits) found on social media sites such as Tumblr, Reddit, Facebook, etc. This age group is ideal given the recent trend in comic book sales figures. Comic book retailers report a 15% increase in female readers ages 17-26 (ComiXology, 2013). The number one readership remains males ages 27-36, but the rise in female readers shows a changing trend in the comic book market as a whole.

This survey collected data from 368 participants through an online survey distribution. Participants were not asked to read the entirety of the comic for this study. Instead they were shown eight single images of female superheroes or villains, following a methodology used by television, magazine, and advertising research (e.g., Ferguson, 1981; Asemah, E. S., Edegoh, L. O., & Ojih, E. U., 2013). To determine the previous comic book readership, participants were asked to disclose their entertainment media consumption involving comic books.

Procedure. Five main constructs were measured in this study. Three main reader characteristics as the independent variables: comics book readership, cosplay participation, and comic convention attendance were measured. Two reaction constructs were measured as the dependent variables: identification with comic book characters and perception of female comic book characters. Participant demographics measured. Each section, featuring the eight comic book images and the reaction questions, were loaded on separate pages to reduce confusion. After each section the participant was warned that they would not be able to return to a previous section to change their answers.

The researcher recruited participants from the C&IS undergraduate participant pool at the University of Alabama using the provided distribution channel to request their participation. Students were asked to participate in the study outside of class. The C&IS students were informed of a credit received for participation in the introduction (see Appendix A). Participants recruited through social media were asked to volunteer to help further understanding of the comic book genre (see Appendix B). The participants were asked to follow the link to an online questionnaire. All participants were asked to read an informed consent statement before taking the questionnaire (see Appendix A). The survey was comprised 35 questions measuring female comic book readership, demographics, convention attendance, and cosplay participation (see Appendix C). Due to the lack of previous research in this area, the variables and questions were of original design. While this choice may lower the reliability of results, the relative non-existent previous research requires new scales to be developed. After completing the questionnaire the women were debriefed and thanked (see Appendix D).

Justification for analytical surveys for data collection. While face-to-face interviews,

telephone interviews, or an observation of a focus group may have worked for this study, a survey was deemed the best option. Surveys allow researchers to reach a large group of people in an effective way. Surveys, particularly online surveys, can be easily administered, cost effective and highly organized. This method was chosen because of the nature of the population.

Surveys in research are “chiefly used in studies that have individual people as the unit of analysis” (Babbie, 2007, p.244). This study, of course, centers completely on individual responses.

An analytical survey method was chosen to investigate how a response variable (i.e. female participant perception) is related to a particular explanatory variable (i.e. readership, cosplay participation, or convention attendance). An analytical survey was appropriate since this study did not seek to describe a population, but rather compare group responses. Had this survey sought to make a general statement about participants’ involvement in comic books and their fandom then a descriptive survey would have been in order. As it was despite the risk of uneven sample sizes between the two groups, and causality is impossible to determine, an analytical survey is the most appropriate for the present study.

An online survey method was chosen as the method of data collection because it can be more efficient and cost effective than a print survey. However, online surveys come with the risk of abandonment and response rate (Dominelli, 2003). Abandonment is a significant concern, however using the Qualtrics system allowed the researcher to determine when the participant abandoned the survey. The survey has been streamlined using skip question to reduce fatigue, alleviating or at least reducing Dominelli’s concern: “the rate of abandonment is influenced by the participant’ perceived burden of survey participation” (p. 413). Student participants were

offered participation credit if they completed the survey. Non-students were not compensated.

Measures

Demographics. First, participants were asked to identify their sex (male, female), their age, their level of completed education (e.g. 1= less than a high school degree, 2= high school graduate, 3= some college, 4= associate degree, 5= bachelor's degree, 6= master's degree, 7= doctoral degree, 8= professional degree), and their race/ethnicity (e.g. white, black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Latino/Hispanic, Other) see Appendix C. This study only sampled female participants between the ages of 18-25. Participants were asked to report sex so that men who inadvertently attempt to participate were removed from the sample prior to data analysis.

Comic book consumption. First, participants were asked to report the days per week they spend reading comic book media (combining print and online versions) (e.g. 0-7 days per week). If they reported never having read the material, they were skipped to the end of the survey block. The format of the index was adapted from two previous studies measuring magazine and television consumption (Bissell, 2006; Harrison & Cantor, 2006). The participants indicated frequency of consumption with a five-point scale (0 = never; 1 = rarely; 2 = sometimes; 3 = often; 4 = regularly). The women were divided into two subgroups: (a) participants who reported reading comic books prior to the study (readers) and (b) those who did not (non-readers). This division made it possible to answer research questions related to past readership and current identification.

Comic character assessment. Participants were then asked to view eight images of female superheroes taken from current comic book covers. The images were viewed in full color

and the same images were used for each participant. The images were selected by the researcher at random based on three criteria. First, the images were all covers from currently running DC and Marvel titles. Second, they were from a female titled series or a team titled series. Lastly, they featured a female prominently on the cover. The comic book characters and their publishing house are defined in Table 1.

Table 1

Image types and depictions

Image Number	Type	Woman Depicted	Publication
Image 1	Comic	Harley Quinn	DC Comics
Image 2	Comic	Mockingbird	Marvel Comics
Image 3	Comic	Poison Ivy	DC Comics
Image 4	Comic	Psylocke	Marvel Comics
Image 5	Comic	Mystique	Marvel Comics
Image 6	Comic	Elektra	Marvel Comics
Image 7	Comic	Kitty Pryde	Marvel Comics
Image 8	Comic	Wonder Woman	DC Comics

Participants were first asked to rate character attractiveness, character weight, character appeal, and peer group appeal. They were also asked to rate positivity as a role model and feeling of similarity and identification to the character see Table 2. Participants were asked to respond on a 10-point response format ranging from one extreme to another (David & Johnson, 1998). For example, participants were asked to rate attractiveness on a scale from “I find this character to be extremely attractive” to “I do not find this character attractive at all.” The same wording was used consistently to avoid prompting audience responses (Appendix C). To help better illustrate

the determination of perception, the questions used in the study are supplied in Table 2 as well as a note for each item to identifying what construct it was measuring. It became clear upon analysis that there was not a positive end point for thinness/weight, therefore it was discarded from further analysis. Additionally, during review it was noticed that the language dealing with role model status could confuse participants, therefore it was also eliminated from analysis. Discarding these two questions' data will be discussed further in Chapter 4.

Involvement. To measure involvement, participants were asked if they participated in costume play (cosplay) and engagement in comic-book conventions (yes/no). If they responded 'yes' they were directed to additional question regarding cosplay and conventions.

Participants were asked to answer seven questions about their average participation in cosplay, sewing, dieting, and other cosplay-related activities (e.g. 1= never, 2= yearly, 3= monthly, 4= weekly, 5= daily). The level of involvement was narrowed to two categories: cosplay participant and non-participant. Additionally, they were asked five questions about their activities at fan conventions such as panel attendance, autograph signings, and surrender purchases (e.g. 1= never, 2= sometimes, 3= about half the time, 4= most of the time, 5= always). The level of involvement was narrowed to two categories: convention attendee and non-attendee.

If participants reported that they did not participate in either cosplay or attend comic-book conventions, they were skipped to the end of the survey block.

Table 2

Measures

"Using the scale below rate the woman depicted in the above image."

Measuring participant perception of the depicted woman

She is extremely unattractive.	1 2 3 4 5 6 7 8 9 10	She is extremely attractive.
She is not at all appealing to me.	1 2 3 4 5 6 7 8 9 10	She is extremely appealing to me.
This woman would never appeal to me peer group.	1 2 3 4 5 6 7 8 9 10	This woman would always appeal to my peer group.

Measuring participant identification with depicted woman

I do not identify with this woman at all	1 2 3 4 5 6 7 8 9 10	I identify with this woman extremely.
I do not feel at all similar to this woman.	1 2 3 4 5 6 7 8 9 10	I feel extremely similar to this woman.

Data Analysis

Three research aims with accompanying two hypotheses each and one additional research question were answered and tested in this study. To answer Research Aim I to determine if frequent comic book readers respond differently to stimuli than non-frequent readers, two hypotheses were offered. To test the two hypotheses (a) Frequent comic readers will perceive the female comic book character more positively than non-frequent comic book readers (H1) and (b) Frequent comic readers will identify more with to the female superhero than non-frequent comic readers (H2), independent samples t-tests were run (with 24 t-tests conducted to measure perception, H1, and 16 t-tests conducted to measure identification, H2).

Because of the number of t-tests, alpha adjustments were made for significance interpretation. Using an alpha of .05, the probability of making a Type 1 error when conducting

24 t-tests is .70. Using an alpha of .01, the probability of making a Type 1 error when conducting 24 t-tests is .21. Using an alpha of .0022, the probability of making a Type 1 error when conducting 24 t-tests is .05. Thus, the accepted alpha for significance for H1 is .0022.

Using an alpha of .05, the probability of making a Type 1 error when conducting 16 t-tests is .55. Using an alpha of .01, the probability of making a Type 1 error when conducting 16 t-tests is .15. Using an alpha of .0032, the probability of making a Type 1 error when conducting 16 t-tests is .05. Thus, the accepted alpha for significance for H2 is .0032. In order to reject the null hypothesis, at least half of the t-tests must show significance.

Next, Research Aim II to determine if people who participate in cosplay respond differently to stimuli than non-cosplayers, was answered using independent samples t-tests. Additionally, to test the next two hypotheses, (a) Cosplay participants will perceive the female comic book character more positively than non-participants (H3) and (b) Cosplay participants will identify more with to the female superhero than non-participants (H4), independent samples t-tests were run (with 24 t-tests conducted to measure perception, H3, and 16 t-tests conducted to measure identification, H4). Significance was identified using an alpha of .0022 for H3 and of .0032 for H4 (see justification for H1 and H2). In order to reject the null hypothesis, at least half of the t-tests must show significance.

Third, Research Aim III to determine if people who attend conventions respond differently to stimuli than non-attendees, was answered using independent samples t-tests. Additionally, to test the next two hypotheses, (a) Convention attendees will perceive the female comic book character more positively than non-attendees (H5) and (b) Convention attendees will identify more with to the female superhero than non-attendees (H6), independent samples t-tests

were run (with 24 t-tests conducted to measure perception, H5, and 16 t-tests conducted to measure identification, H6). Significance was identified using an alpha of .0022 for H5 and of .0032 for H6 (see justification for H1 and H2). In order to reject the null hypothesis, at least half of the t-tests must show significance.

CHAPTER 3

RESULTS

In this study, three research aims were addressed and six hypotheses were tested using a survey completed by female participants recruited at The University of Alabama and through comic book fan sites such as Facebook pages, Twitter accounts, Tumblr blogs, and Reddit subreddits. Eight comic book images were presented to participants.

Demographics

In this study, there were 368 female participants, aged 18-25. The sample was majority white (87.2%) and a majority (45.7%) were currently pursuing their first degree in a four-year university. Interestingly, in this study, many participants identified as a high school graduate (26.7%), indicating that they were not currently pursuing a college degree or had obtained a college degree. In this sample, many participants were 18 or 19 (49.7%). Of the 368 participants, 104 (28.3%) indicated that they read comic books in the past. Initially, the intent was to divide the comic book readers into subgroups (based on the frequency of comic book readership; e.g., days per week); however, due to lack of variance, comic book readership groups remained dichotomous (readers and non-readers). A similar modification was made for the 48 convention attendants and 51 cosplay participants. For clarity's sake, the following results section will be divided into the three research aims and their subsequent hypothesis.

Demographics were also examined to determine if there were any significant differences between the groups age and racial breakdown. Using an independent sample t-test for each

independent variable (i.e. readership, convention attendance, and cosplay participation), none of the groups were there significant differences in race. Another set of three t-tests was run to look at age with the alpha level set at 0.05. Cosplay participants (M=21.41) showed no significant difference of means to non-participants (M=21.11) with the alpha level set at 0.05. Comic book readers (M=23.03) showed a significant difference of means to non-readers (M=20.15) with the alpha level set at 0.05. Convention attendants (M=22.81) showed a significant difference of means to non-attendants (M=20.82) with the alpha level set at 0.05. Additionally, another set of three t-tests was run to look at the level of education completed by participants in the different groups. Cosplay participants (M=3.41) showed no significant difference of means to non-participants (M=3.11) with the alpha level set at 0.05. Comic book readers (M=3.6) showed a significant difference of means to non-readers (M=2.94) with the alpha level set at 0.05. Convention attendants (M=3.67) showed a significant difference of means to non-attendants (M=3.05) with the alpha level set at 0.05. Readers and convention attendants are then expected to be an older group of individuals having completed a higher level of education than those who are not involved in reading comic books and attending conventions.

Research Aim I

Research Aim I sought to determine if frequent comic book readers respond differently to stimuli than non-frequent readers, two hypotheses were offered. Hypothesis 1 tested the relationship between comic book readership and audience perception of women in comics. A set of 24 independent samples t-tests were conducted to compare audience perception of female comic book characters for comic book readers and non-comic book readers. As previously identified, the alpha level for H1 was adjusted to .0022 due to the number of t-tests conducted.

To reject the null hypothesis for H1, at least half of the t-tests should be significant (12) with an adjusted alpha level of .0022. To reject the null hypothesis for H2, at least half of the t-tests should be significant (8) with an adjusted alpha level of .0032 see Table 3.

For Q1 (attractiveness), there were significant differences between comic book readers and non-readers for six of the eight images. For Q2 (appeal), there were significant differences between comic book readers and non-readers for six of the eight images. For Q3 (peer group appeal), there were significant differences between comic book readers and non-readers for all of the eight images. The total number of significant differences for perception of comic book characters by readers and non-readers (20) was enough to reject the null hypothesis. H1 is supported.

For Q4 (identification), there were significant differences between comic book readers and non-readers for one of the eight images. For Q5 (similarity), there were significant differences between comic book readers and non-readers for one of the eight images. The total number of significant differences for identification with a comic book character by readers and non-readers (2) was not enough to reject the null hypothesis. H2 is not supported.

Table 3 *Comic book images readership t-test*

Q	Readership		Readership													
	YES	NO	YES	NO												
	IMAGE 1		IMAGE 2		IMAGE 3		IMAGE 4		IMAGE 5		IMAGE 6		IMAGE 7		IMAGE 8	
	M		M		M		M		M		M		M		M	
Perception Items, $\alpha = .0022$																
1	6.63	6.19	7.32	7	7.32*	5.83*	7.15*	6.08*	6.55*	4.62*	6.6*	4.89*	6.92*	4.83*	8.17*	7.02*
3	5.42	5.06	6.28	5.74	6.39*	4.95*	6.6*	5.22*	5.97*	4.12*	5.83*	4.35*	6.36*	4.3*	7.72*	6.26*
5	5.87*	4.57*	5.97*	5.19*	6.05*	4.71*	6.26*	4.93*	6.1*	4.15*	6.01*	4.12*	6.44*	4.21*	7.77*	6.15*
Identification Items, $\alpha = .0032$																
6	3.6	3.41	3.92	3.68	3.73	3.27	3.94	3.73	3.65	2.97	3.64	3.24	4.63**	3.14**	5.34	4.6
7	2.99	3	3.27	3.72	3.63	3.42	3.85	3.82	3.4	3.04	3.39	3.31	4.46**	3.24**	4.86	4.44

N:B * $p \leq .002$

** $p \leq .003$

Research Aim II

Research Aim II sought to determine if cosplay participants respond differently to stimuli than non-participants, two hypotheses were offered. Hypothesis 3 tested the relationship between cosplay participation and audience perception of women in comics. A set of 24 independent samples t-tests were conducted to compare audience perception of female comic book characters for cosplay participants and non- participants. As previously identified, the alpha level for H3 was adjusted to .0022 due to the number of t-tests conducted. To reject the null hypothesis for H3, at least half of the t-tests should be significant (12) with an adjusted alpha level of .0022. To reject the null hypothesis for H4, at least half of the t-tests should be significant (8) with an adjusted alpha level of .0032 see Table 4.

For Q1 (attractiveness), there were significant differences between cosplay participants and non-participants for two of the eight images. For Q2 (appeal), there were significant differences between cosplay participants and non-participants for three of the eight images. For Q3 (peer group appeal), there were significant differences between cosplay participants and non-participants for six of the eight images. The total number of significant differences for perception of comic book characters by cosplay participants and non-participants (11) was not enough to reject the null hypothesis. H3 is not supported.

For Q4 (identification), there were significant differences between cosplay participants and non-participants for two of the eight images. For Q5 (similarity), there were significant differences between cosplay participants and non-participants for one of the eight images. The total number of significant differences for identification between cosplay participants and non-participants (3) was not enough to reject the null hypothesis. H4 is not supported.

Table 4 *Comic book images cosplay participation t-test*

Q	Cosplay		Cosplay		Cosplay		Cosplay		Cosplay		Cosplay		Cosplay		Cosplay	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
	IMAGE 1		IMAGE 2		IMAGE 3		IMAGE 4		IMAGE 5		IMAGE 6		IMAGE 7		IMAGE 8	
	M		M		M		M		M		M		M		M	
Perception Items, $\alpha = .0022$																
1	6.95	6.24	7.34	7.08	7.26	6.18	6.78	6.38	6.53*	5.03*	6.39*	5.27*	6.06	2.96	8.13	7.25
3	5.87	5.07	5.96	5.92	6.25	5.3	6	5.63	6*	4.5*	6.12*	4.6*	5.31	4.78	7.77*	6.54*
5	6.38*	4.79*	6.19	5.33	6.57*	4.93*	6.35	5.22	6*	4.58*	5.98*	4.51*	6*	5.16*	7.92*	6.44*
Identification Items, $\alpha = .0032$																
6	4.18	3.36	4.04	3.72	4.49**	3.25**	4.35	3.71	3.96	3.06	4.2	3.23	4.31	4.72	6.13**	4.62**
7	3.51	2.91	4.06	3.49	4.49	3.33	4.47	3.73	3.9	3.03	4.16	3.2	4.25	4.88	5.98**	4.34**

N:B * $p \leq .002$ ** $p \leq .003$

Research Aim III

Research Aim II sought to determine if convention attendees respond differently to stimuli than non-attendees, two hypotheses were offered. Hypothesis 5 tested the relationship between convention attendance and audience perception of women in comics. A set of 24 independent samples t-tests were conducted to compare audience perception of female comic book characters by convention attendees and non- attendees. As previously identified, the alpha level for H5 was adjusted to .0022 due to the number of t-tests conducted. To reject the null hypothesis for H5, at least half of the t-tests should be significant (12) with an adjusted alpha level of .0022. To reject the null hypothesis for H6, at least half of the t-tests should be significant (8) with an adjusted alpha level of .0032 see Table 5.

For Q1 (attractiveness), there were significant differences between convention attendees and non-attendees for five of the eight images. For Q2 (appeal), there were significant differences between convention attendees and non-attendees for four of the eight images. For Q3 (peer group appeal), there were significant differences between convention attendees and non-attendees for all of the eight images. The total number of significant differences for perception of comic book characters by convention attendees and non- attendees (17) was enough to reject the null hypothesis. H5 is supported.

For Q4 (identification), there were significant differences between cosplay participants and non-participants for two of the eight images. For Q5 (similarity), there were significant differences between cosplay participants and non-participants for one of the eight images. The total number of significant differences for identification between cosplay participants and non-participants (3) was not enough to reject the null hypothesis. H4 is not supported.

Table 5 *Comic book images convention attendance t-test*

Q	ConAttendant		ConAttendant		ConAttendant		ConAttendant		ConAttendant		ConAttendant		ConAttendant		ConAttendant	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
	IMAGE 1		IMAGE 2		IMAGE 3		IMAGE 4		IMAGE 5		IMAGE 6		IMAGE 7		IMAGE 8	
	M		M		M		M		M		M		M		M	
Perception Items, $\alpha = .002$																
1	7.03	6.2	7.39	7.06	7.52*	6.1*	7.14	6.3	7.07*	4.89*	6.81*	5.16*	6.89*	5.2*	8.39*	7.17*
3	5.92	5.04	6.13	5.88	6.3	5.27	6.36	5.56	6.33*	4.4*	6.14*	4.56*	6.25*	4.69*	7.91*	6.48*
5	6.41*	4.74*	6.34*	5.28*	6.49*	4.9*	6.63*	5.14*	6.47*	4.46*	6.28*	4.42*	6.55*	4.58*	8.2*	6.35*
Identification Items, $\alpha = .003$																
6	3.89	3.4	4.18	3.68	4.05	3.31	4.35	3.71	3.78	3.08	3.88	3.27	4.54**	3.31**	5.88**	4.63**
7	3.28	2.94	3.66	3.55	3.87	3.42	4.15	3.77	3.57	3.07	3.64	3.27	4.63**	3.42**	5.32	4.42

N:B * $p \leq .002$ ** $p \leq .003$

CHAPTER 4 DISCUSSION

The present study was the first to examine superhero comic book media in their original print form. Prior to this study, researchers focused on demonstrating the possible media effects from superhero movies and television. Additionally, a large body of work has been dedicated to identifying and exploring a connection between social identification with fictional characters such as those found in magazines, movies, television, and books. However, no such study had been conducted using superhero comic book characters to the best of the researcher's knowledge. This study, thus, begins the research needed to push the comic book genre into the field of academic research of media effects. To this end, the study strove to determine if there was a significant difference in audience perception of female superheroes between three independent variables: (a) comic book readership, (b) cosplay participation, and (c) comic book convention attendance. Three research aims were defined in and six hypothesis proposed. Two of the hypothesis were supported according to the standards set according to the adjusted alpha level.

As shown in the results section age, race, and level of education were controlled for all six groups. Cosplay participants and non-participants showed no significant differences for any of the control variables. This could be due to the fact that they were the smallest group sampled. Convention attendants and non-attendants showed no significant differences when controlling for race. However, there were significant differences for both age and education level. Convention attendants were older and had completed more education than the non-attendants. Comic book readers and non-readers showed no significant differences when controlling for race. However,

there were significant differences for both age and education level. Comic book readers were older and had completed more education than the non-attendants. This is most likely due to the age and education level of the C&IS pool. Future researchers should control for the source that participants are pulled from.

Research Aim I

Two hypothesis were defined to determine if frequent comic book readers respond differently to stimuli than non-frequent readers. Hypothesis 1 (perception) was supported. Hypothesis 2 (identification) was not supported. The mean values compared between the two groups showed a tendency for comic book readers to have a more positive perception of comic book characters and identify more with them. Twenty significance differences in means were shown in the t- test results. According to social identity theory, which informed this study, comic book readers should have identified with the comic book characters and had a more positive opinion of their ingroup. This was partially supported. Female readers did have a more positive perception of the comic book characters; however, they did not identify with them. This goes against SIT and IT theory. Perhaps there is something else at work. It could be that the ingroup present is not the comic book heroes as was hypothesized. Rather the fan community is the ingroup. In which case the positive perception and the lack of identification could be explained. Future studies should seek to examine the identification of individuals within the fandom community in relation to other comic book fans.

Future researchers can clearly hone the language, stimuli, and increase population size to recreate this study. Given the confirmation of Hypothesis 1 found in the present study and the direction of the mean tendency for all of the questions there is a need for further investigation of

the relationship between comic book readership and perception of comic book characters.

The same can be said for identification, which in future research should be found using more questions and possibly directed at another ingroup. The number of perception versus identification should be equal.

Most interestingly, for all the image stimuli except Image 1 (Harley Quinn) and Image 2 (Mockingbird) Q1 (attractive) and Q5 (peer group appeal) were significant. This suggests that comic book readers find female comic book characters more attractive than non-readers, and they are more likely to think that their peer's would appreciate it. This begs the question, who are comic readers and non-readers classifying as their peer group? For future studies an effort should be made to determine how the participants classify themselves in relation to others because while identification did not show as much significance as perception the positive reception of the comic book stimuli in peer group estimation suggests that if the methodology had been different a significance could have been seen.

Research Aim II

Two hypothesis were defined to determine if frequent cosplay participants respond differently to stimuli than non-participants. Hypothesis 3 (perception) was not supported. Hypothesis 4 (identification) was also not supported. Although the mean values compared between the two groups showed a tendency for cosplay participants to have a more positive perception of comic book characters and identify more with them there was not enough significance shown in the t-test results. According to social identity theory, which informed this study, cosplay participants should have identified with the comic book characters and had a more positive opinion of their ingroup. This was not supported.

The cosplay population showed the most interesting significance grouping. While the cosplay population had the lowest number of significant mean differences between groups for perception (11), it had more significant mean differences between groups for identification (3) than readership. This could indicate that some aspect of costume play encourages identification with the character, which according to social identity theory is not an unusual response. The act of taking on a character's clothing, hairstyle, and mannerism is similar to the way a member of an outgroup appropriates the culture of the ingroup they perceive to be in a position of power (Tafjel & Turner, 1986). This warrants further study with a larger sample of cosplay participants.

Research Aim III

Two hypothesis were defined to determine if frequent convention attendants respond differently to stimuli than non-frequent attendants. Hypothesis 5 (perception) was supported. Hypothesis 6 (identification) was not supported. The mean values compared between the two groups showed a tendency for convention attendants to have a more positive perception of comic book characters and identify more with them. Seventeen significance differences in means were shown in the t- test results. According to social identity theory, which informed this study, convention attendants should have identified with the comic book characters and had a more positive opinion of their ingroup. This was partially supported. Though shown in fewer significant differences in means than readership and perception, convention attendants reported more positive perception toward female comic book characters. However, they did not identify with the female heroes. Similarly, to readership and identification, this could be due to their membership in an ingroup of fellow fans rather than comic book characters.

This lack of response to identification with the comic book characters needs further

investigation. Future researchers should attempt to attend a large convention such as San Diego Comic Con, The Atlanta Dragon Con, or any of the other conventions held year round.

This could also be helpful for diversifying the respondent pool for any of the three independent variable measured in this study.

Further Discussion

Familiarity with Comic Book Characters. In addition to the hypothesized information the researcher had the opportunity to test the six groups (reader/non-readers, cosplayers/non-cosplayers, convention/non-convention) familiarity with the comic character depicted in the stimuli. Those respondents who reported reading comics, going to conventions, or participating in cosplay were significantly more likely to be familiar with the character prior to entering the study for all of the image stimuli. When presented with a stimuli depicting Wonder Woman, who is universally well known, the reported mean score jumped for both groups of each independent variable. The respondents who were comic book readers, cosplayers, or convention attendants still maintained a higher mean tendency. It is clear that familiarity with the comic book character is associated with prior readership, cosplay participation, and convention attendance.

Comparing Magazine Images and Comic Book Images. In addition to the hypothesized information the researcher had the opportunity to compare the differences between comic book stimuli and magazine cover stimuli. Two additional images were included in the instrument instructing participants to answer the same response prompts as those given with the comic book images. The magazine images depicted Carrie Underwood and Kate Upton. The results were very interesting. In all areas, the direction of the means was reversed for comic book readers and non- comic book readers. For example, non-readers ($M=8.78$) responded that they

were more likely to be familiar with Carrie Underwood than comic book readers ($M=5.34$). Similar mean differences on a significant level were seen for all of the questions for both magazines cover images. This could indicate that non-readers hold a bias against comic book images in general.

Removal of Thinness/Role Model. During analysis the researcher realized there was no positive endpoint on the 10-point bipolar scale for weight (She is too thin...She is too fat). This made the question invalid. Therefore, it had to be removed from all further analysis. In the future it would be preferable to phrase questions about a female superhero's weight using phrases like, "Her body appears healthy/Her body appears unhealthy," or "She appears strong/She appears weak." Additionally, the researcher realized that participants who were familiar with the comics may know the backstory of some of the characters therefore, the stimuli images that depicted characters with questionable past actions in their story arc such as Mystique and Poison Ivy would not be considered good role models. Therefore, the question asking participants to rate the female as a good or bad role model were not going to generate consistent responses that could be considered valid data. It was removed from further analysis. In the future, researchers can strive to choose female comic book characters with a virtuous background, or avoid questions that lean too heavily on a character's moral judgement since comic book characters often have dark periods in their past canon.

Limitations

Method Error. The present study was limited in several respects. Most importantly, the possibility of a false rejection due to the number of analysis is possible. A total of 120 t-tests were run during the course of this analysis. The possibility of human error increases.

The researcher attempted to control for this by adjusting the alpha levels for each hypothesis. Additionally, an uneven division of respondents who reported being comic book readers, cosplay participants, or convention attendants forced the researcher to adopt a dichotomous independent variable rather than the originally planned continuous variable. Had there been a larger sample of these groups a more in depth analysis of frequency of readership or participation could have been conducted.

Sample Error. The sample of non-readers and non-participants was taken from a convenience sampling of the University of Alabama's College of Communications and Information Sciences participant pool, which entirely consists of communications majors, who may be familiar with media effects surveys from their coursework therefore leading them to answer differently from a general population. In addition to the lack of activity diversity, there was a lack of racial diversity as well. The study sample consisted primarily of white women. Without a more diverse sample, it is impossible to generalize the results across the general population. Previous studies have shown that there are different standards of beauty according to racial qualifications (Miller et al., 2000; Makkar & Strube, 1995). Albeit, the sample was primarily white and the stimuli featured white women as well. This could have helped or hindered depending on point of view.

Additionally, there were control variables that may be useful in future studies that were not used in the present paper. For example, controlling for participant sexuality was suggested by a participant in an email to the researcher. A homosexual or bisexual woman may view female characters as objects of sexual desire therefore skewing the results. Also, some characters who are considered, in some comic series, to be anti-heroes or reformed villains such as Mystique

might have accounted for some of the comic book readers outlying responses. Future studies should strive to avoid using images that could be interpreted as villains. Rather a two-part study examining superheroes and villains separately may be in order.

In this study three research aims were developed and tested using six hypotheses, two were supported. This study indicates that further research is needed. In addition to the support of two confirmed hypothesis showing a significant difference in female perception of comic book characters based on their involvement in comic book fandom, coupled with the direction of the groups' means indicate that further research using the comic book medium is necessary to continue to study media effects. With further development and implementation of the limitations seen in this study comic book research has the potential to become a respected branch of media effects research. This was the first step towards using comic book stimuli to look at body image relations, race and gender stereotypes, and presentation of LGBTQ characters.

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APPENDIX A

Informed Consent Statement Comic Book Media Exposure

The purpose of this survey is to learn students' opinions about the mass media, especially comics. Your participation is requested based on your enrollment in a course in the College of Communication and Information Sciences, which requires research participation for class credit.

What the study is about: The questionnaire will help determine the attitudes and opinions held about the media in ever day lives. This is very important information to have, and your participation in the survey is crucial in helping measure how people in this area feel about the issues.

What we will ask you to do: If you consent to participate you will be questions about your participation in cosplay and about your exposure to entertainment and superhero. The survey will be online and take about 25 minutes to complete. For all the questions in the survey, there are no right or wrong answers. The questions are simply opportunities for you to provide your own personal views and opinions.

Risks and benefits: There is the risk that you may find some of the questions about your feelings toward your own body to be sensitive.

Taking part is voluntary: Taking this survey is completely voluntary. By acknowledging the agreement statement below by clicking continue, you are indicating your consent to provide your opinions. If at any time you wish to stop filling out the survey, you may. You may stop at any time. Your answers will be confidential: Your identity will be kept completely confidential.

Any connection between your identity and your responses will immediately be eliminated. So feel free to be entirely honest and candid in your responses.

The researchers conducting this study are Kaylin Bowen and Dr. Kim Bissell. If you have any questions at any time, please feel free to call Kaylin Bowen at (334) 235-0078 or email at dkbowen@crimson.ua.edu. If you have questions later today or at a later date, you may contact Kaylin Bowen at (334) 235-0078 or email Kaylin Bowen at dkbowen@crimson.ua.edu. You can reach Dr. Bissell at kbissel@ua.edu.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. By clicking “Continue”, I voluntarily agree to participate in this survey.

APPENDIX B

Social media recruitment post

Hello, please consider participating in a voluntary survey to further our understanding of the role comic books play in everyday life. Researchers are looking for women ages 18-25.

Please follow the link, <http://bit.ly/2faperA> , to participate. Thank you.

APPENDIX C

Survey Instrument

Demographics

What is your gender?

Male Female

How old were you on your last birthday?

Choose one or more races that you consider yourself to be:

White Native Hawaiian or Pacific Islander

Black or African American Other

American Indian or Alaska Native Latino/Hispanic Asian

What is the highest level of school you have completed or the highest degree you have received?

Less than high school degree

High school graduate (high school diploma or equivalent including GED)

Some college but no degree

Associate degree in college (2year) Bachelor's degree in college (4year) Master's degree

Doctoral degree

Professional degree (JD, MD)

Media Consumption

On average, how many days per week do you read magazines?

0 1 2 3 4 5 6 7

On average, how many days per week do you read comic books?

0 1 2 3 4 5 6 7

Below, you will see a list of magazine publications currently being published. Please indicate how frequently you consume each of the items, in print or digital copy, by using the following scale. 5=regularly 4=often 3=sometimes 2=rarely 1=never

Allure

Bustle

Cosmopolitan

Glamour

Oh!

People

Self

Seventeen

Vogue

Women's Health

Below, you will see a list of DC publications currently being published. Please indicate how frequently you consume each of the items, in print or digital copy, by using the following scale. 5=regularly 4=often 3=sometimes 2=rarely 1=never

Batgirl

Batman

DC Comics Bombshells

Green Arrow

Green Lantern

Harley Quinn

Justice League

Suicide Squad

Teen Titans Go!

Wonder Woman

Below, you will see a list of Marvel Comics publications currently being published.

Please indicate how frequently you consume each of the items, in print or digital copy, by using the following scale. 5=regularly 4=often 3=sometimes 2=rarely 1=never

Agents of Shield

Black Widow

Captain Marvel

Ms. Marvel

Patsy Walker a.k.a. Hellcat!

Scarlet Witch

Spider-Woman

X-Men '92

Mighty Thor

MockingbirdTelevision Consumption

On average, how many days per week do you watch television shows on cable, Netflix, Amazon Streaming, etc.?

0 1 2 3 4 5 6 7

Movies

On average, how many days per week do you watch movies in the theaters, on television, on Netflix, etc.?

0 1 2 3 4 5 6 7

Audience Perception

Using the scale below, rate the female in the image above according to your own perceptions of her attractiveness, thinness, power, and your feelings of similarity to the model.

1 2 3 4 5 6 7 8 9 10

Extremely unattractive 12345678910 Extremely attractive

Extremely underweight 12345678910 Extremely overweight

Extremely unappealing 12345678910 Extremely appealing

I do not feel at all similar to this woman 12345678910 I feel extremely similar to this woman.

This woman is an extremely negative role model. 12345678910 This woman is an extremely positive role model.

This woman would always appeal to my peer group. 12345678910 This woman would never appeal to my peer group.

I do not identify with this woman at all. 12345678910 I identify with this woman extremely.

Using the scale below, rate the female in the image above according to your own perceptions of her attractiveness, thinness, power, and your feelings of similarity to the model.

1 2 3 4 5 6 7 8 9 10

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1 2 3 4 5 6 7 8 9 10

Conventions

How often on average do you attend comic book fan conventions?

Conventions are events such as San Diego ComicCon, Dragon Con, or KamiCon.

Never Yearly Monthly Weekly Daily

When in attendance at a cosplay convention please indicate how often you participate in the following activities.

Never Sometimes About half the time

Panel Discussion

Souvenir Booth Sales

Con Dances

Taking picture with cosplayers

Autograph Signing

Cosplay

How often on average are you involved or participate in costume play (cosplay)?

Cosplay is the act of taking on the identity of an animated or fictional character through carrying levels of costume, makeup, wigs, and/or character improvisation. Cosplay is often seen at fan conventions such as KamiCon and San Diego Comic Con, but is not limited to conventions.

Never Yearly Monthly Weekly Daily

Please indicate how often on average you are involved in the following types of activities.

Sewing Cosplay Costumes

Dieting to fit a Cosplay Inspiration

Attending Conventions in costume (DragonCon, KamiCon, etc)

Never Yearly Monthly Weekly Daily

CrossPlay

(CrossGender Costume Play)

Excercising to fit a Cosplay Inspiration

Not Permanent Appearance Alterations for Cosplay (Wigs, Makeup, Temporary Tattoos,etc.)

Permanent Appearance Alterations for Cosplay (Hair Dye, Piercings, Tattoos, etc.)

Appendix D

Debriefing Script

Thanks for participating in this study. We thought you'd like to know a little bit about what we were interested in studying. We wanted to get a sense of how much entertainment and comic books affect you and people like you.

We measured your exposure to entertainment publications by asking you to identify your frequency of consuming magazines and comic books.

We measured your attitude about comic book characters.

We measured your engagement with cosplay and convention activities. Now, we would like to ask for your help one more time.

Please, don't discuss this study with your classmates. Thanks.

IRB CERTIFICATE

October 31, 2016

Deanna Kaylin Bowen
Department of Journalism
College of Communication & Information Sciences
The University of Alabama
Box 870172

Re: IRB # 16-OR-291 (Revision) "Representation of Women in the Superhero Comic Book Genre"

Dear Ms. Bower:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, August 25, 2016, not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,

A black rectangular redaction box covers the signature of the sender.

Office of Research Compliance

IRB Project #: 16-02-291

UNIVERSITY OF ALABAMA
INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS
REQUEST FOR APPROVAL OF RESEARCH INVOLVING HUMAN SUBJECTS

I. Identifying information

	Principal Investigator	Second Investigator	Third Investigator
Name:	Demna Kaylin Bowen	Kim Bissell	
Department:	Journalism	Journalism	
College:	C&IS	C&IS	
University:	Alabama	Alabama	
Address:	1142 Jackson Ave Tuscaloosa, AL 35401	490 Phifer Hall	
Telephone:	334 235 0078	205 348 8247	
FAX:	N/A	N/A	
E-mail:	dkbowen@crimson.ua.edu	kbissell@ua.edu	

Title of Research Project: Representation of Women in the Superhero Comic Book Genre

Date Submitted: 8.21.16
Funding Source: None

Type of Proposal: New Revision Renewal Completed Exempt

Please enter a renewal application

Please attach a continuing review of studies form

Please enter the original IRB # at the top of the page

UA faculty or staff member signature: _____

II. NOTIFICATION OF IRB ACTION (to be completed by IRB):

Type of Review: _____ Full board Expedited

IRB Action:

Rejected Date: _____

Tabbed/Pending Revisions Date: _____

Approved/Pending Revisions Date: _____

Approved-~~this~~ proposal complies with University and federal regulations for the protection of human subjects.

Approval is effective until the following date: 8-24-17

Items approved: Research protocol (dated _____)

Informed consent (dated _____)

Recruitment materials (dated _____)

Other (dated _____)

Approval signature: _____ Date: 10/31/2016