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"Hoodies or Hoodlums?"- An Investigation of Hoodies on the Perception of Character

Original Article

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Abstract: The everyday effects of stereotyping are frequently discussed by social and behavioral psychologists, and the purpose of this study was to evaluate the effect of clothing on perception. More specifically, this study tested the hypothesis that a preexisting stigma associated with hoodie wearing facilitates biases in judgement. Participants were presented with one of four image sets- hooded male, unhooded male, hooded female, and unhooded female- and were asked to address the personality, behavior, and future goals of the displayed individual in a short paragraph. Pennebaker's Linguistic Inquiry Word Count (LIWC), an online linguistic analyzer, was employed to justly quantify participants' responses. The program enabled the creation of terminology dictionaries separating utilized language into categories of "education/career," "illegal/socially rejected" behavior, and "sports" terminology. LIWC analyzed responses and calculated the percentage of descriptors from each category as a function of the total word count of each response. An ANOVA test can be utilized to determine the statistical significance between three or more variables and has been used to test different hooded conditions on different descriptor categories utilized by participants within this study. Results from an ANOVA across all conditions indicated a significant difference in the usage of "illegal/socially rejected" descriptors when comparing hoodie and non-hoodie responses $F(3, 143) = 9.05$, $p<.0001$. A one-way within group ANOVA revealed significant usage of "education/career" descriptors when presented the unhooded female image $F(2, 104) = 26.99$, $p=.001$. A one-way within group ANOVA supported significant usage of "sports" terminology when presented the unhooded male image $F(2,110) = 10.75$, $p=.001$. The results of this study demonstrated that hoodie wearing plays a role in precipitating negative first impressions from others as well as surfacing potential biases toward the perception of contrasting genders.

Keywords: bias • character • apparel • adolescents

1. Introduction

From a young age, we are taught to "Never Judge a Book by Its Cover", but is it inevitable? If it is true that a judgement can be made in as quickly as 100-milliseconds of exposure, as supported by Princeton psychologists Janine Corinth Willis and Alexander Sunnyvale Todorov [1], it seems undeniable that this old proverb stands to address some general truth.

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Researchers of various sciences have attempted to explain the occurrence of first impressions, along with the elements that come into play during their formation. From an evolutionary standpoint, the ability to make quick judgements in situations may exist as a survival mechanism to protect an individual from a perceived threat. Charles Darwin asserts that those most fit for survival live longer and therefore have more time to reproduce and pass on beneficial traits to successive generations [2]. Being able to identify potential threats allows an individual to avoid confrontation with something harmful: plants, animals, relationships, etc, [3]. In terms of human nature, being able to identify cues of trustworthiness or lack thereof at first glance can aid an individual in making positive relationships and avoiding others with more ill-natured aspirations [4]. Psychologists have also weighed in on the issue. It appears that the majority of experts in the field are in agreement that the facial appearance of an individual plays a crucial role in other's initial perception of their personality and characteristics. For instance, psychologist Frank Schab asserts, "it only takes the duration of an eye blink to size up another person in terms of attractiveness and trustworthiness." Over the next three seconds, people form a more "complete" conclusion about a new acquaintance relating to their presumed personality and competence. His writing further references the impact of the halo effect on first impressions, or what he refers to as "snap judgements," [5]. The halo effect is the tendency of an impression in one area - in this case physical attractiveness- to influence a similar impression in another area - in this case personality. Though it is controversial how accurate a first impression could be, with some papers supporting their accuracy and others rejecting it, it appears evident that first impressions do exist and do have a tendency to make a lasting impression [6].

It is hard to pinpoint the exact causes of a first impression, but researchers have attempted to identify significant contenders. Gibson viewed perception as a bottom-up process, defining an impression as the perception of sensory information [7]. In a later study, Little et al. specifically focused on the sensory input of facial symmetry and physical attractiveness and concluded that the more beautifully perceived a face was, the more favorable the person was to participants [8]. Howlett et al. further investigated the impact clothing choices had on the wearer's first impression and found that minor changes in attire can dramatically affect perceived inferences and impressions [9]. Civile and Obhi studied clothing impact when they conducted a study to see if students wearing police uniforms showed biased attention toward different faces, ethnicities, and the presence of a hoodie on an individual [10]. Their study revealed little to no statistical significance differentiating descriptions when presented individuals of varying facial features and ethnicities, but rather showed a bias towards hooded individuals. The results of this study revealed that participants paid closer attention to hooded individuals than unhooded people. This may have something to do with the representative heuristic, or mental shortcuts in which some decisions are made by comparing newly acquired information to preexisting mental prototypes. In both [11] and [12], it was found that the word "hoodie" is associated with negative connotations and criminal activity, likely through media portrayals and stereotyping. This further ties in with the tragic death of 17-year-old Trayvon Martin back in 2012. As detailed in "A Tale of Two Hoodies" by Erynn Masi de Casanova and Curtis L. Webb, III [13], Trayvon Martin wore a dark gray hooded sweatshirt on his way home from a nearby convenience store when he

was shot and killed by a local neighborhood watchman, George Zimmerman, who wrongly suspected that Trayvon was involved in recent bank robberies [14]. People, including TV personality Geraldo Rivera, speculated that the hoodie was to blame for Trayvon's death, and though Rivera's remarks were controversial and were later retracted in a heartfelt apology, this anecdote may be explained by the theory described thus far [15]. The goal of this study seeks to analyze if the presence of a hoodie increases an individual's negative bias in a first impression due to stereotypes based off of preexisting representative heuristics since it appeared that the term "hoodie" carried a negative stigma [16]. I hypothesized that an individual wearing a hoodie would be perceived as more likely to be involved in illegal or socially rejected behavior than hoodless individuals and the goal of my study was to see if a simple fashion trend could have detrimental impacts on how others perceived the wearer.

2. Methods

2.1. Participants

Participants in this study included 144 students at a suburban, middle class high school in New York. Participants included 86 females and 58 males between the ages of 15 and 18 and all participants in this study were volunteers. Volunteers were recruited through their science classes and participation did not include incentives or remuneration.

2.2. Materials

Informed consent forms were used containing information about procedures, benefits and risks of participating, voluntary participation, and contact information of the researchers. The purpose of this study was clearly explained on the consent form. Throughout the entirety of this study, participants' names were kept anonymous, and one could only participate after returning a completed participant agreement form. Participants were also able to withdraw their consent and participation at any time during the study. Participants were also presented with a brief post-study questionnaire, which collected demographic information, such as age and ethnicity, and presented a 5-point Likert scale asking how often they wear hoodies in their daily life, and when wearing a hoodie, how often they wore them with the hood up. This data was not analyzed statistically, but was used to look for the presence of hoodies in current teen fashion. Pennebaker's Linguistic Inquiry Word Count software and Excel Spreadsheets were used to analyze participant responses.

2.2.1. Design and Procedure

This study required the development of four unique image sets-male wearer with hoodie, male wearer without hoodie, female wearer with hoodie, and female wearer without hoodie- with the hoodie conditions as the experimental groups and the no hoodie conditions existing as a control. Gray t-shirts were worn by the individuals presented in the unhooded image sets, and gray hooded sweatshirts with the hood up were utilized for the hooded conditions, and an image set consisted of a front and side view of the presented individual, as depicted by Fig. 1.

To avoid a confounding variable between experimental and control groups, the same male was used to generate both the hoodie and no hoodie male conditions, and the same female respectively. The male and female utilized in the images are of a similar age, ethnicity, and were both asked to wear gray clothing in the images. The four image sets were labeled with the male no hoodie condition as scenario 1 (Fig. 1(a)), the male hoodie condition as scenario 2 (Fig. 1(b)), the female hoodie condition as scenario 3 (Fig. 1(c)), and the female no hoodie condition as scenario 4 (Fig. 1(d)), and the image sets were formatted on separate slides of a Google Slides presentation.

Scenario #1: Male with no hoodie

Scenario #2: Male with hoodie

Scenario #3: Female with hoodie

Scenario #4: Female with no hoodie

Figure 1. **Four unique image sets were used, namely male wearer with hoodie, male wearer without hoodie, female wearer with hoodie, and female wearer without hoodie. Gray t-shirts were worn by the individuals presented in the unhooded image sets, and gray hooded sweatshirts with the hood up were utilized for the hooded conditions, and an image set consisted of a front and side view of the presented individual.**

Each participant was given a scenario number and response number to label their work throughout the study. They were randomly assigned one of the four scenarios to respond to and were presented with the same set of directions allotting ten minutes for the participant to create a backstory for the individual in the presented image set. Participants were asked to write a synopsis addressing their perception of the presented individual's personality, behavior and future goals, and recorded their responses in a Google® Doc unique to their survey identifying code during the time given. After the data collection, three general categories were created and clear-cut terminology was assigned to each of the three categories: "education/career" terminology, "illegal/socially rejected" terminology, and "sports" terminology. To reduce bias while producing this terminology dictionary, words or phrases were only added if they belonged to the category by definition: "education/career" terminology included career titles and university names, "illegal/socially rejected" terminology included activities that would result in disciplinary action in schools (Juuling, smoking, underaged drinking), or legal offenses (crimes, robbery,

killing, stealing), and "sports" terminology included terms like athletic and specific sports names.

Pennebaker's Linguistic Inquiry Word Count software, or LIWC, was used to fully analyze the terminology within participants' responses. The terminology dictionary was uploaded to LIWC and, one at a time, each scenario's language was analyzed by the program. LIWC calculated the percentage of language used in each category out of the total word count of each individual response. For example, if 10 words in a 100 word response referenced "illegal/socially rejected" behavior, 10 percent of that response focused on "illegal/socially rejected" behavior. The analyzed information was added to Excel Spreadsheets so graphs and tables could make sense of listed data sets.

3. Results

Participants responded to one of four scenarios: 37 students responded to scenario 1 (male no hoodie), 37 participants responded to scenario 2 (male with hoodie), 35 participants responded to scenario 3 (female with hoodie), and 35 participants responded to scenario 4 (female no hoodie). Table 1 represents the mean number of "illegal or social rejected" terminology as described by participants across each of the four scenarios. The main terminology category analyzed in this study was the occurrence of "illegal/socially rejected" vocabulary in participants' descriptions.

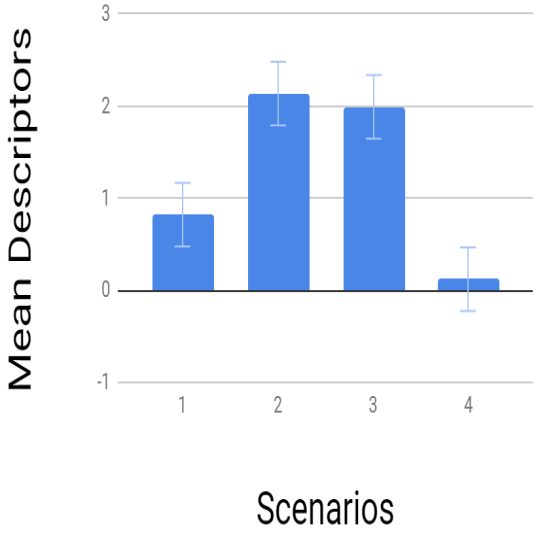

Figure 2. **SEM Illegal/Social Rejected Descriptors, where Scenario 1 is 'male no hoodie', Scenario 2: 'male with hoodie', Scenario 3: 'female with hoodie', and Scenario 4: 'female no hoodie'.**

Figure 2 indicates that the mean (M) number of "illegal" descriptors were greatest for images shown with hoodies (scenario 2 and 3) regardless of image gender. A one-way between subjects ANOVA was conducted to compare the effect of hoodies on participant usage of "illegal/socially rejected" terms in their descriptions. Results from the ANOVA indicate that there was a significant difference in usage of "illegal/socially rejected" descriptors

when comparing hoodie and non-hoodie images F(3, 144) = 9.05, p<.0001. Table 1 also contains the mean (M) number of words recorded for each descriptor when the image shown was a male wearing a hoodie. The results indicate that males with hoodies were more frequently associated with "illegal/socially rejected" descriptors when compared with "career" or "sports" descriptors. A one-way ANOVA revealed a significant difference between each categorical group descriptor, F(2, 37) = 8.91, p=.000262. In addition, Table 1 identifies the mean differences in terminology used when the image was a female, wearing a hoodie. The results indicate that females with hoodies were more frequently associated with "illegal/socially rejected" descriptors when compared with the two other categories. The effect of "hoodie" was statistically significant between each categorical group, F(2, 35) = 5.541, p = .005. To further examine the data, independent-samples t-tests were conducted to compare differences of male and female participants' usage of "illegal/socially rejected" terminology depending on whether they were viewing a female or male with a hoodie image. Tables 2 and 3 illustrate the results of a t-test when participants viewed the "female with hoodie" image. There was a significant difference in the usage of "illegal/socially rejected" descriptors by both male and female participants when viewing a female hooded image; female participants (M=1.22, SD 2.60), male participants (M=3.15, SD 3.04); t(33)=2.05, p=.048.

Table 1. **Gender Participant Terminology Viewing Hooded Female Image**

Participant Gender	N	M	SD
Female	21	1.22	2.60
Male	14	3.15	3.04

Table 2. **T-test for Gender Participant Terminology Viewing Hooded Female Image**

t	Df	P one-tailed	P two-tailed
2.05	33	0.0241895	0.048379

An additional t-test was performed investigating the frequency of "illegal/socially rejected" descriptor usage by participants when viewing a male hoodie image. The results of this test did not reveal a statistically significant difference when comparing participants by gender; female participants (M=2.44, SD 2.26), male participants (M=1.56, SD 1.56); t(33)=1.36, p=.18. Categorical descriptors related to "education/career" were statistically analyzed between the four image scenarios. Table 1 highlights the mean usage of "education/career" vocabulary as well as the number of participants in each group. Each of the calculated means and SEM are highlighted in Figure 3.

A one-way between subjects ANOVA was conducted to compare the effect of hoodies on participant usage of "education/career" terms in their descriptions. Results from the ANOVA indicate that there was a significant difference in usage of these descriptors when comparing hoodie and non-hoodie images F(3, 143) = 5.57, p=.001. The data in table 1 also contains the mean number of words recorded for each descriptor when the image shown was a female not wearing a hoodie. The results indicate that females without hoodies were more frequently associated with "education/career" descriptors when compared with the two other categories. A within subjects

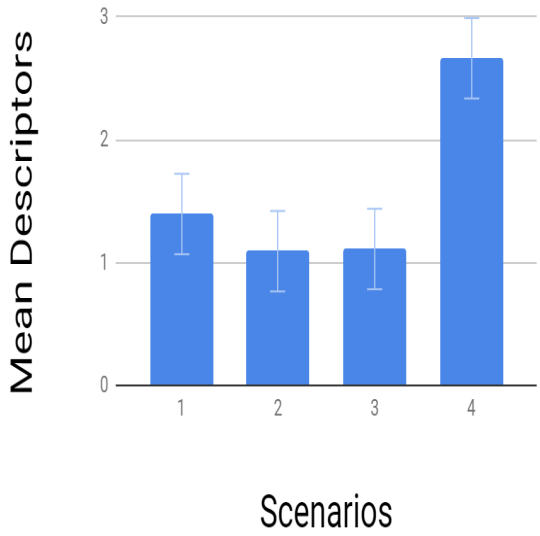

Figure 3. **Mean "Career and Education" Descriptors All Conditions, where Scenario 1 is 'male no hoodie', Scenario 2: 'male with hoodie', Scenario 3: 'female with hoodie', and Scenario 4: 'female no hoodie'.**

ANOVA revealed a significant difference between each categorical group, $F(2, 35) = 26.99$, $p < .0001$. An independent-samples t-test was conducted to compare differences between male and female participants' usage of "education/career" terminology for the no hoodie female image. The results of the t-test did not reveal statistical significance; female participants (M=2.79, SD 2.33), male participants (M=2.30, SD 2.19); $t(34)=0.63$, $p=.53$. Categorical "sports" descriptors were statistically analyzed between the four image scenarios. Table 1 reports the mean usage of "sports" vocabulary as well as the number of participants in each group. Each of the calculated means and SEM are highlighted in Figure 4.

Insert Figure 4 About Here

A one-way between subjects ANOVA was conducted to compare the effect of hoodies on participant usage of "sports" terms in their descriptions. Results from the ANOVA indicate that there was a significant difference in usage of "sports" descriptors when comparing hoodie and non-hoodie images $F(3, 143) = 17.34$, $p<.0001$. The frequency of "sports" descriptors was most prevalent in the male with no hoodie image. The data in table 1 contains the mean number of words recorded for each descriptor when the image shown was a male not wearing a hoodie. The results indicate that males without hoodies were more frequently associated with "sports" descriptors when compared with the two other categories. A within subjects ANOVA revealed a significant difference between each categorical group, $F(2, 37) = 10.75$, $p < .0001$. An independent-samples t-test was conducted to compare differences between male and female participants' usage of "sports" terminology for the no hoodie male image. The results of the t-test did not reveal statistical significance; female participants (M=2.33, SD 1.69), male participants (M=3.72, SD 3.95); $t(36)=1.39$, $p=.17$. In a post-study questionnaire, 86/127, ∼68 percent of the respondents admitted to wearing a hoodie "often" or "always" and out of these 86 participants, 41 of them - ∼48 percent - answered that when wearing a hoodie, they wear it with the hood up "occasionally", "often" or

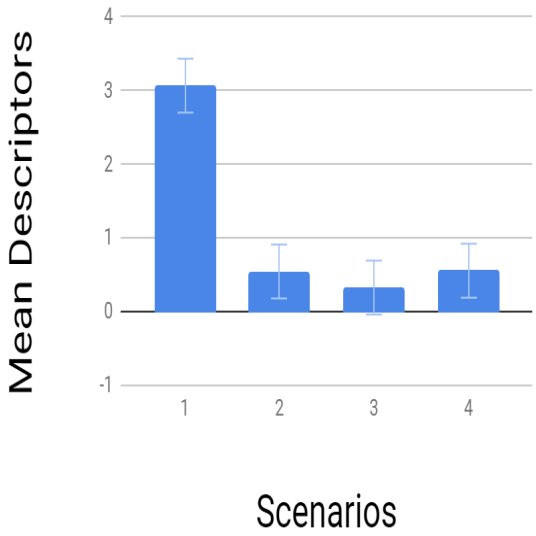

Figure 4. **Mean "Sports" Descriptors Across All Conditions, where Scenario 1 is 'male no hoodie', Scenario 2: 'male with hoodie', Scenario 3: 'female with hoodie', and Scenario 4: 'female no hoodie'.**

"always" when presented with a 5-point Likert scale asking these two questions, Figure 5.

Demographics Survey

Please check one of the following:

Age:
13 14 15 16 17 18

Gender:
Male Female

Ethnicity:
White/Caucasian Hispanic Black/African American Asian Multiracial Other

Post-Study Questionnaire

Respond to each of the items below using the following response scale:

1 2 3 4 5

Figure 5. **Post-study questionnaire.**

4. Discussion and Future Research

The findings suggest that hooded individuals are primarily judged as more likely to participate in "illegal/socially rejected" behavior than unhooded individuals, as shown in Figure 2. When the hoodie conditions were examined closer in Table 1, the use of "illegal/socially rejected" terminology was significantly favored by participants over "education/career" and "sports" terminology. This apparent relationship between "illegal/socially rejected" terminology and hooded images could indicate that this particular fashion trend may bear its own negative connotation and resultantly prompt more negative first impressions from others. Correspondingly, [17], considered the occurrence of stereotyping, stigmatizing, and potential demonizing of a hoodie wearer's intentions.

When comparing the results of this study to the Trayvon Martin tragedy, the possibility of a negative hoodie stereotype seems highly probable. Similar to the judgements made throughout this study, the fundamental attribution error and the halo effect appear to have had an impact on the watchman's views. Rather than concluding that Trayvon was most likely in a hoodie because of the weather, the neighborhood watchman overestimated the dispositional— or personality based— reasoning for Trayvon Martin's appearance by assuming the teen was involved in drugs and local crimes. Similarly, participants in the hoodie-condition scenarios of this study significantly favored "illegal/socially rejected" descriptors when describing their group's image supporting the idea that wearing a hoodie precipitates a more illicit first impression. This apparent stereotype can be concerning, especially with the current integration of hoodies into 2000s fashion trends [18]. The collected post-study questionnaire responses support the prevalence of hoodies in teenage wardrobes, and though just a small sample of the entire high school student population, the responses do suggest the popularity of hoodies and should increase discussion of wearing clothes that produce a suitable first impression. Though not the initial purpose of this study, the analyzed data further revealed significantly different perceptions of the unhooded images based on the gender of the presented wearer. As detailed by Figure 3, the "female no hoodie image" was described with "education/career" descriptors more than any other condition and when examined more closely, out of the three terminology categories, the "education/career" category was significantly favored over "sports" and "illegal/socially rejected" language when looking at the unhooded female image alone. Pre-existing research supports the idea that female students outperform males in effort and academic achievement in the classroom and different genders seem to embody different academic cultures, [19]. Future research may wish to focus on potential gender stereotypes associating females with having stronger work ethics than males and a more defined reasoning behind this occurrence. Figure 4 and table 1 present another unintentional stereotyping, indicating that participants favored "sports" terminology when describing "the male no hoodie" than when describing any other condition and further that within the one condition, "sports" terminology was significantly favored over the other descriptor categories. It's interesting that while females are unconsciously perceived as more work-based, public opinion seems to label males as more athletic, and future research may wish to expand upon the idea that women athletes are underrepresented in terms of media coverage as opposed to male sporting events and the consequences this

can have on society's perception of women involved in sports, [20]. In a world of social media, news feeds, and headlines, unconscious stereotyping is occurring more frequently, and part of the reason behind the still and single image design of this study lies in the idea of attempting to replicate this shallow sense of information gathering, [21]. Rather than presenting participants with the background and life story of the people in presented images, participants were solely given the image, and asked to make a judgement themselves. One of the difficulties in this particular study was the limited population to sample from and the small sample size. This research focused on the perspective of students randomly selected from one suburban New York high school, which may not be the best representation of the entire teenage population. Future research should look to replicate this study with various high school students across the country and look for differences in responses. Similarly, it would be interesting to see if teens from an urban or rural background had a different perception to the four different images than those from suburban neighborhoods. Another approach to future investigation could be to set up a cross-sectional research methodology comparing the terminology used by different age groups to describe the hooded vs. unhooded individuals. Further, the wearers in the images presented to participants in this study were of the same Caucasian race to eliminate speculation of wearer's intentions based on race, but future research may wish to compare the terminology utilized to describe Caucasian hoodie wearers with that used to describe African American hoodie wearers. This study despite revealing significant conclusions regarding perception and potential stereotypes merely scratches the surface of the multitude of research opportunities available in the field of first impressions. If clothing really does play a role in perceived persona, individuals need to be aware that dressing the part may play a crucial role in constructing the right impression. Adjusting a wardrobe to depict a safe and appropriate disposition could be a simple way to protect oneself from being interpreted as potentially dangerous or threatening from others without going to the extreme and altering one's entire appearance. It's important to be aware of the impression you portray, because despite trying to avoid it, people really do judge a book by its cover.

Conflict of Interest

Authors of this article declare that they have no conflict of interest.

Human Studies/Informed Consent

No human studies were carried out by the authors for this article.

Animal Studies

No animal studies were carried out by the authors for this article.

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