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INTUITION

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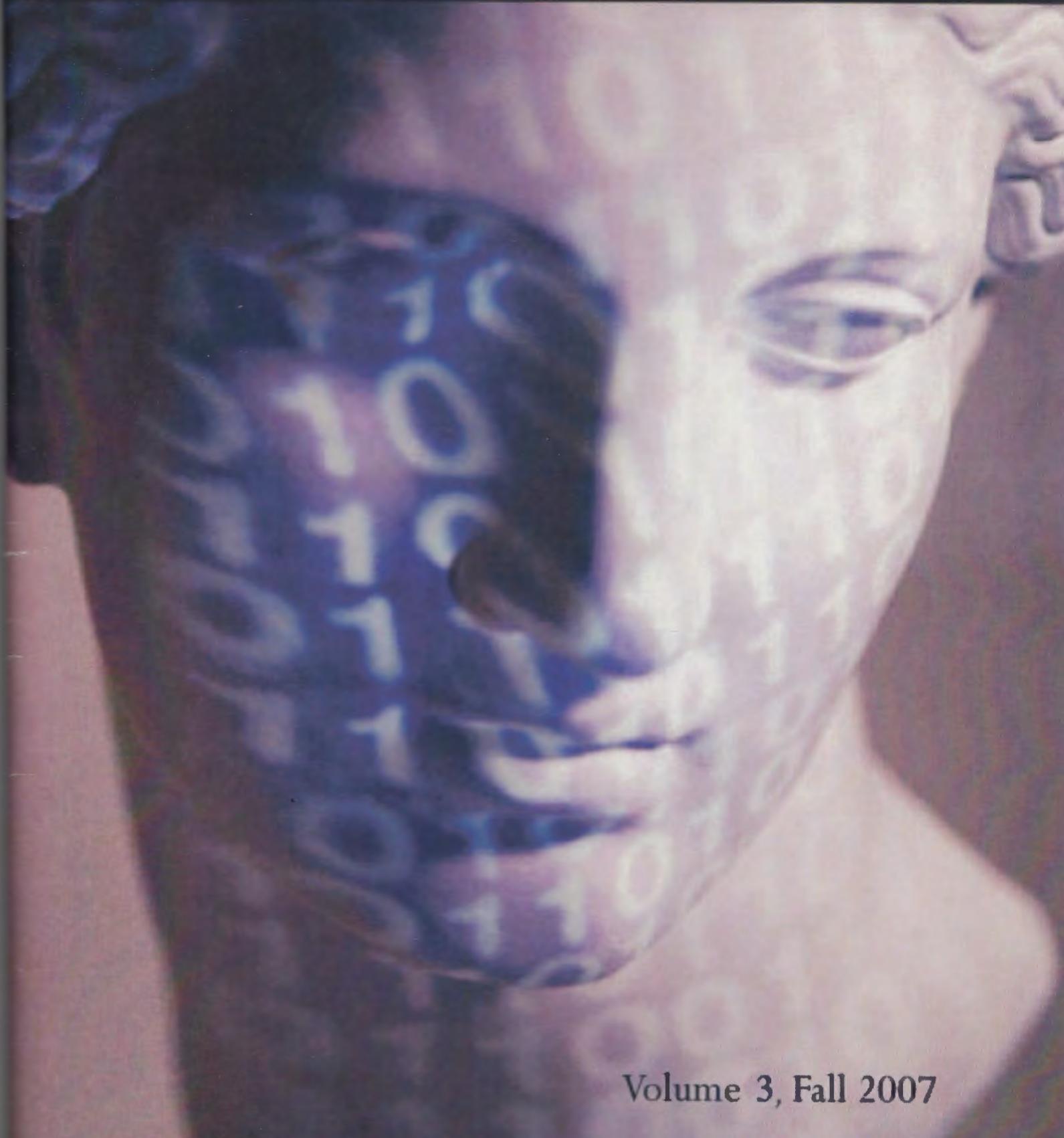
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Intuition

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From the Editor

Michael Walbridge

This year's issue of Intuition is the product of two generations of staff members. The entire staff that commenced work on this volume of Intuition had left by the time Intuition was finished. We were sad to see our founding faculty advisor, Dr. Harold Miller, leave. However, we welcome our new faculty advisor, Dr. Julianne Holt-Lunstad, with grateful, open arms. Without her assistance and advocacy on our behalf, this issue would never have seen publication. At one point, I was the lone staff member working on the journal, and finishing it was difficult. This journal wouldn't have been possible if it weren't for the last-minute work requirements I ungraciously passed on to the current staff: Debra Young, Angela Salas, and Kiera McLane.

We're proud of the articles presented here. The authors had the aforementioned circumstances to deal with and made considerable revisions. Upon hearing a need of revision, one of the out-of-state writers of "The Effects of LDS Doctrine Versus LDS Culture on Self Esteem" took time out of a personal visit to Utah, while the other writers accommodated her as they all sat down on a Saturday and revised a paper they had already worked on in a class they had already passed at least months earlier.

Intuition is still in its infancy. The procedures, rules, and guidelines the journal operates by are not all explicitly written or stated. When I was talking with Michael Redd, the editor-in-chief who handed me the keys, and later with Dr. Holt-Lunstad, we agreed that instead of a tiny student journal that students mainly join just to get credit or experience in editing or psychology, Intuition should be a journal where students can publish quality, otherwise unappreciated work, and that it should be one of the best places a student can go to gain a foothold in the institution of psychology and thus be better prepared for graduate school and eventually, being a psychologist.

Intuition still needs to perfect and formalize the process it uses to recruit staff members and acquires submissions; yet, it continues to be published with quality articles gracing its pages. That it does so despite obstacles is a testament to the tenacity of the students and advisors who work on the journal, and most of all, to the hard work and patience of those who submitted to us.

An Interview with
Dr. Edwin E. Gantt

Michael Walbridge

Dr. Edwin E. Gantt, a BYU Associate Professor of Psychology, is one of the student body's favorite members of the BYU Department of Psychology. He was awarded the Teacher of Honor Award by the Brigham Young University Student Honor Association in 2002. His unique perspective has influenced numerous students to consider psychology from alternative points of view and from within the context of revealed latter-day truths. Dr. Gantt is particularly interested in examining the various (and often problematic) ways in which empathy, altruism and religion have been conceptualized and explained in many of the major schools of contemporary psychology and psychotherapy. Some of his works include "Empathy. Encyclopedia of Human Development" and "Hedonism, suffering, and redemption: The challenge of a Christian

How did you decide to pursue psychology?

I always wanted to teach. I'd enjoyed it for a very long time, and still do. I knew I wanted to teach particularly after having served a mission. I originally wanted to be a history teacher, but after taking a couple of psychology classes I decided to explore that subject more. I don't know that there was an exact moment, but it became increasingly clear that I wanted to teach at the collegiate level. I mean, I'd always loved teaching, and I'd always loved doing lots of reading, and I tolerate writing—it all began to fall into place. I had flirted with the idea of teaching high school or seminary, but opportunities and my inclinations pointed me to teaching at a university. I had good mentors and looked up to them, and I wanted to do the kinds of things they were doing.

You received your PhD from Duquesne University, a Catholic school in Pennsylvania. Tell me about that.

While I was an undergrad, and while I was in the master's program at BYU, I worked with Dr. Richard Williams, who had helped me shape in my mind the aspects of psychology I was most interested, which are the historical and philosophical aspects. There are a limited number of places to pursue those areas, and especially regarding the questions I had concerning agency and human meaning's place in psychology. I ended up leaving BYU and transferring to Duquesne because of its unique philosophical perspective. I feel I did good work there, got good training in not just clinical psychology (which is what the program was), but in

contemporary phenomenological philosophy and natural science and human science approaches to psychology.

At the undergraduate level, you teach History of Psychology, Critical Issues in Psychology, LDS Perspectives and Psychology, and Psychology of Religion.

I also have taught the introductory course since coming to BYU, and Personality and Social Psychology at Duquesne. I even teach the occasional Book of Mormon course here.

That's interesting—most professors teach two to five, but you teach seven. Some have said your courses are very similar—particularly Critical Issues and LDS Perspectives. I was in the latter course once and in it you said yourself that some faculty questioned the need for it. How would you respond to the accusation that your classes are highly similar?

Oh, I wouldn't view it as an accusation. For me, critical issues in psychology, such as its status as a science, its commitment to reductionism and determinism, and its conception of – or even neglect of -- agency, morality and God, are critical issues everywhere. They aren't just for a critical issues class—they are critical to every part of the discipline, especially regarding psychology from an LDS perspective. If students are going to be educated, have an informed imagination and the ability to tackle various dilemmas and debates in our discipline, they need to be aware of these issues— I'd especially hope they would have a sound grasp of

the issues after graduating coming from this university. The core concerns in all of my classes are the same. The context, process or avenue for approaching these issues and concerns may be different, but they're still relevant in all the areas I teach. I bring these issues up in my introductory course, not just a psychology of religion course.

Which one of all these is your favorite to teach?

I remember someone asking Dr. Bruce Brown why he introduced each of his children as his "favorite" and his response was "because they all are." I'd have to say that all of my classes are my favorites. So, it's all of them. I have said to a 353 class that they are my favorite class, and then said the same thing to my 311 class the same week. I don't think I could teach if I weren't passionate about the subject matter and about the students.

From your perspective, how have the LDS Church and the field of psychology cooperated and how have they clashed?

I think the church and psychology share similar sentiments. I think most psychologists are decent, caring people who want to help reduce suffering. I think the church is deeply committed to people as well. They both are interested in relieving the suffering of those who suffer from, for example, domestic violence or addiction. They've been able to work together in accomplishing these goals. On the other hand, whether intended by any individual psychologists or not, the discipline in many of its theories and practices is hostile to religion in general, and the LDS church in particular. It is reflective of the conflict of secularism and naturalism against religion, a conflict that you see in other disciplines and fields as well.

I think psychology has been instrumental in propagating a worldview in which the God of Abraham, Isaac, and Jacob is irrelevant—one that is corrosive to faith. It's been a principle purveyor of a worldview that is egoistic and self-oriented, rather than theistic and other-oriented.

A change of subject—what is your history with hockey and how exactly did you get involved with the Ice-Cats?

I think my involvement with hockey seems a little bit of a mystery sometimes to my students and my colleagues. I didn't grow up with it, actually. A friend in graduate school in Pittsburgh introduced it to me and I was immediately hooked. I was impressed with the speed and skill involved. So, I started skating and playing. I got my kids involved. It has become a whole family thing. I got to BYU and there was a student on the team in one of my classes. He saw me wearing a hockey tie, which isn't exactly a common item on this campus, and he asked me if I liked hockey. "Yes, I love it," I said. "Would you like to be the faculty advisor for our team?" he asked. I asked what it entailed. It was simple and mainly had to do with making sure their grades were up. I immediately said that I'd do it. A month later, the head coach was gone, the assistant coach was made head coach, and they needed another coach to help out as an assistant. It was a very steep learning curve. I've now been head coach of the IceCats for two years. I recently had my 150th overall career win as a coach, including all levels of youth hockey, high school, and college. I am also nearing my 300th game.

I think the main reason I like coaching and playing is because it's tremendously relaxing. Even though it can be stressful, it's very different from what I'm usually doing—what I do as a coach tends to have more immediate effects, as opposed to teaching students or writing papers, where the effects of the work I do there in my field and job may not be apparent for weeks, months, or years.

Or decades, perhaps?

Yeah, even decades. Having a paper that I have slaved over and think well of get published, connecting with my students and having a class go really well, or just beating Utah State again . . . It all brings joy.

Sounds like it. In state rivalries are always fierce, especially in Utah.

Yes, they are. Hey, we can keep talking about hockey if you want.

Well, I'll guarantee I'll mention you beating Utah State.

Okay, good.

**What advice would you give to undergraduates major-
ing in psychology?**

I gave a talk at a Psi Chi dinner about six years ago,
and the advice I gave there remains the same. Take
advantage of the opportunity you have before you to
study widely and broadly. Major in psychology if it's
your passion, but make sure to study outside of it, too.
If you do, I promise you it will come to bear fruit.

I asked how many students at that dinner were dou-
ble-majoring. None of them were. I asked how many
minors there were. A few hands showed. I asked how
many were minoring in something outside of the so-
cial sciences. Only two hands were left. People should
study psychology in as broad a way as possible.

**By "broad way", do you mean "psychology and the
way it interacts with other disciplines, other parts of
life"?**

Yes. Study the way it mixes. And study literature,
study art, philosophy, business, whatever else you like
and find interesting, but make sure you study something
else, too. An Engineer once came to me and said "Well,
I was an engineering major but I like psychology now,
so I gave it up." I told him, "Don't simply give it up!
You like it, right?" He said he did, and asked why he
shouldn't give it up. I told him, "Because if you be-
come a psychologist, one day you'll have a depressed
engineer walk into your office." Of course, I'm not
talking about just engineers. I'm talking about other
parts of life.

Psychologists with more imaginative, informed, and
varied backgrounds are better psychologists. I take a
cue from William James. He was a physician and phi-
losopher, not just a psychologist. Freud and Jung had
other interests and professional training, too. The best
psychologists always have.

** editor's note: The Ice Cats officially became a part of the
BYU sports family in the 2007-2008 school year. Con-
sequently, Dr. Gantt is now the coach of the BYU Cougar
Hockey Team.*

Samantha Anderson

Samuel D. Downs

Kaylene Faucette

Josh Griffin

Tracy King

Staci Woolstenhulme

How Accents Affect Perception of Intelligence, Physical Attractiveness, and Trustworthiness of Middle-Eastern-, Latin-American-, British-, and Standard-American-English-Accented Speakers

Accent Prestige theory states that accents are used as cues to judge characteristics of the accented speaker. In this study, four accents were recorded and later played for the participants: Standard-American, Middle-Eastern, Latin-American, and British. Participants filled out a questionnaire rating perceived intelligence, trustworthiness, and physical attractiveness of the recorded accent , as well as a demographics questionnaire. The authors predict the following: Middle-Eastern- and Latin-accented speakers will be rated lower on the three scales than standard-American-accented speakers, and the British-accented speaker will be rated higher. Statistical significance was obtained on physical attractiveness ratings and on intelligence ratings. p<.05. The results do not support accent prestige theory. The authors call for further research to be conducted to discover the real affect of accent on perception.

The accent prestige theory suggests that people use a speaker's accent as a cue for judging characteristics of the accented speaker (Fuertes, Potere, and Ramirez, 2002). The theory posits that an individual who speaks with a standard accent, the accent of the dominant group in society, will be rated better than non-standard-accented speakers (regional or foreign). Any accent other than the standard accent produces a different response in the listener. This response to accented-speech leads the individual to begin to develop judgments about the speaker.

The judgments formed using accent prestige theory are divided into two categories. First, the category of status dimension contains characteristics that are used to classify a person in relation to perceived status, such as intelligence, education, social class, and success. The second, category of solidarity dimension, is used to rate the speaker in areas of friendliness, trustworthiness, and kindness. The standard accent will be rated higher in both dimensions by individuals who speak the standard accent. The non-standard-accented individuals will also give higher ratings to standard-accented speakers on the status dimension, but rate those who speak in an accent similar to their own higher on the solidarity dimension (Feurtes, Potere, and Ramirez, 2002).

However, judgments are not being made solely on the accent. Instead, the accent leads to judgments about ethnicity and socioeconomic status. The theory purports that judgments are mediated by the status and solidarity dimensions. Thus, the status and solidarity dimensions allow for judgments made not on the accent itself, but on the ethnicity and social class that the accent implies (Foon, 2001; Fuertes et al., 2002). The implications of this claim of accent prestige theory include a basis for prejudices based on accent as a clue to ethnicity and socioeconomic status. These prejudices would be applied without face-to-face contact because the judgments are based on accent. These prejudices would include both negative and positive stereotypes. Because the accent mediates judgments on ethnicity, the theory states that accents of politically and historically strong nations, as well as the dominant accent, will rank higher than other accents because the accent is a cue to less prejudiced ethnicity and higher socio-economic status (Bayard, Gallois, Pittam, & Weatherall, 2001).

In order for the accent prestige theory to be utilized, it is important to first note that individuals have the capability to distinguish between speakers with different accents or dialects. In a study conducted by Thomas and Reaser (2004), the ability of European-American individuals to identify African-American voices was supported. This research showed that listeners used past associations between accented speech and ethnicity to make judgments about the accented individual based on preconceived judgments about individuals with that accent. By attaching these preconceived judgments to

the speaker, the listener begins to pre-judge the speaker without knowing much about the speaker.

Two studies support accent prestige theory as a vehicle to pre-judge speakers. Fuertes (2000) found that participants in the United States ranked Hispanic accented counselors poorly and were less willing to commit to long-term therapy with a Hispanic accented counselor than with a non-Hispanic counselor without an accent. This judgment was mediated by the two dimensions posited by accent prestige theory. This study supports the accent prestige theory by showing that standard-accented speakers are rated higher than non-standard-accented speakers in both the solidarity and status dimensions. In the second study by Foon (2001), standard-accented individuals were rated higher on the status dimension but lower on the solidarity dimension, especially when information about social class was given. Foon speculated that since social class was given, the raters did not use accent to form a judgment about social class. Without the need to use accent as a cue, the solidarity scores did not correspond to accent but to the given social class. This study confirms accent prestige theory by showing that where more relevant information (social class, in this study) is available, listeners will not use accent to from judgments. However, without the more relevant information, listeners fall back to judgments based on accent. These studies suggest that listeners use accent to form pre-judgments about the speakers solidarity and status; they lead to the idea that being able to identify ethnicity by voice creates opportunities for discrimination using preconceived judgments based on ethnicity as accent prestige theory posits.

As mentioned earlier, accent prestige theory suggests that individuals with accents from historically and politically strong nations will be rated higher by individuals who speak the majority and the minority accents. For example, Latin-American accented individuals would rate standard-American accents higher because America is perceived as a politically stronger nation. However, in the study where Hispanic and non-Hispanic counselors were rated, Hispanic participants did not rank Hispanic counselors differently than Caucasian counselors, suggesting that accent may not affect perception due to historical or political considerations (Fuertes, 1999). However, findings from a contradictory study suggest that visual cues were used instead of purely audio cues. In this study, nine Mexican-Ameri-

can readers with different levels of accentedness were evaluated by 43 Mexican-American and 37 Anglo-American high school students. As the level of accentedness increased from speaker to speaker, the raters gave significantly lower status ratings. This study suggests that Mexican-Americans with the same accent as the speaker will rate Mexican-Americans lower based on their level of accentedness.

A third supporting study was done in Australia to measure the perceptions of British-, American-, Australian-, and New Zealand-English accented speakers. The researchers discovered that the participants rated their native accent below speakers of British-English and American-English, yet above New Zealand-English speakers (Bayard et al., 2001). These results are consistent with accent prestige theory because England and American can be considered more politically powerful than New Zealand. The latter two studies' findings fit the concept of the accent prestige theory that accents of politically and historically stronger nations will rank higher than others.

There are three main gaps in the research on accent perception. First, much of the research about accent and perception is out-dated, as can be seen by looking at the reference section of the few contemporary articles on the subject (Foon, 2001; Fuertes et al., 2002; Podberesky, Deluty, & Feldstein, 1990). Much of the research was done in the 1960s and 1970s, and prejudices have since changed. Due to the thirty-year gap in research, it is likely that ethnic minorities are viewed differently than they once were. Continuing research on accent perception will allow a more accurate assessment of current prejudices. Likewise, many of the accents studied in past research have entered the U.S. mainstream; and, with the current political backdrop, research needs to be done on other accents such as Middle Eastern accents. The attack of September 11, 2001 and the war in Iraq have radically changed the political climate, and discrimination against people with a Middle East background may have resulted. Furthermore, the current debate over immigration laws may have affected perceptions of Latin-American individuals. Thus, we have included a Middle-Eastern and a Latin-American English accent in the study. Second, as the review of previous research shows, there is still debate about how accent affects perceptions as discussed in the preceding paragraph. Further research must be done to conclude what impact accent has on perceptions because of the

confusion in previous and current research. For this reason, we include British accent to represent a country of historical and political importance. Third, research also lacks investigations about what effect increased contact with other ethnicities might have on perceptions resulting from accent. Since the sample population includes participants who have served missions for the Church of Jesus Christ of Latter-day Saints (LDS Church) among other ethnicities, the current study may be able to draw some conclusions about the effects of contact with other ethnicities. The research under consideration will shed light upon all three concerns.

We hypothesized that Latin-American speakers would be rated lowest on the trait of intelligence with Middle-Eastern speakers next, followed by standard-accented speakers, and then British-English speakers. Intelligence represents the status dimension. Latin-American speakers were hypothesized to be lowest because most Americans have contact with Latin-American speakers and prejudices against Latin-Americans. This increased contact with prejudices against Latin-Americans may result in them being viewed as less intelligence because of the susceptibility to prejudices. Middle-Eastern speakers followed because of the current political climate. We hypothesized that British-speakers would be rated highest because the accent represents a country of political and historical importance. On the trait of trustworthiness, the lowest ratings would be given to the accent of the Middle-East (because of the current political climate), followed by the accent of Latin-America (minority accent), and then the accent of Great Britain, and last, the accent of standard-American. Trustworthiness represents the solidarity dimension. The standard-American accent was hypothesized highest to test the supposition that nations of political and historical importance would rate higher. In this case, the hypothesis represents a counter to the predictions of accent prestige theory. Finally, on the trait of physical attractiveness, Middle-Eastern accent would be rated lowest, Latin American next, then standard-American, and finally, British accent rated highest. The Middle-Eastern and Latin-American accent were hypothesized as lowest because of the political climate, and the British accent as highest because cultural stereotypes that individuals with a British accent are more attractive.

Method

Instruments

Accented recording. The recording included a voice speaking about a calculator. The recording was played in one of four accents: Standard-American, Middle-Eastern, Latin-American, or British. Four males were used to record the four accents and the vocal characteristics were not controlled because we did not have the equipment to do this. The recordings did not differ in any other significant way.

First Perception of Accented Speech Questionnaire. A 20-item questionnaire was developed and given out to participants to test their perceptions of a certain accent. The scale is composed of a 7-level rating system, with one being "extremely high", four being "moderate", and seven being "extremely low". Participants were given instructions to rate the speaker solely by what they heard on the audio clip. The questions were designed to test levels of intelligence (questions 1, 4, 5, 10, 14, and 15), physical attractiveness (questions 2, 9, and 13), and trustworthiness (questions 6, 8, 11, 16, 18, and 20). Using Cronbach's alpha, internal reliability for the questionnaire was established with scores of .891, .822, and .582, respectively. The remaining questions were dummy questions intended to disguise the true purpose of the questionnaire.

Demographics questionnaire. Participants filled out requested demographic information about their current year in school, ethnicity, age, gender, if they served a religious mission, if they speak another language, if they have lived in an area where foreign-accented English speech is common, and if they have lived outside of the United States.

Participants

A sample of 123 Brigham Young University (BYU) students ranging from freshman to seniors was recruited. Three participants live in Provo, Utah but do not attend BYU. Total number of participants is 126. Participants were volunteers from various psychology classes and an economics class at Brigham Young University. Some participants were also obtained through off-campus religious groups. Each volunteer received a free brownie for his or her participation.

Procedures

The participants were randomly divided into four groups which listened to one of the following accents: Standard-American accent, Middle-Eastern accent,

Latin-American accent, and British accent. The experiment was done on two different days with two accents being presented in two separate classrooms each day. The administrator informed the students that research was being done on the psychology of marketing techniques, and, therefore, the participants would be listening to a tape about a calculator. The informed consent form was then handed out and each participant filled one out; then, the form was collected. Next, the participants listened to the accented tape recording. After the recording, the participants were given a questionnaire asking them to rate the following traits of the accented voice: intelligence, trustworthiness, and physical attractiveness. Also, some questions asked about marketing techniques to mask the real intent of the questionnaire. After this questionnaire was completed and collected, the participants were given a demographics questionnaire to complete. This questionnaire was also completed and collected. The participants were then debriefed on their participation in the research, thanked, and dismissed. They were asked not to speak with other people concerning the research until after all groups had participated. For each group, the entire procedure was finished in approximately 20 minutes.

Results

The independent variables in this study are the four accents (of Middle-Eastern, Latin-American, British, and Standard-American), serving a mission for the LDS church, speaking a foreign language, living in an area with accented English speech, and having lived outside the United States (3 months or more). The dependent variables were analyzed using independent factorial analysis of variance (ANOVA). For the post hoc examination, Tukey HSD was used. The criteria for statistical significance was an alpha level of .05 ($p<.05$). All four groups fit a bell curve as a whole and when divided into the subgroups of intelligence, trustworthiness, and physical attractiveness. Missing data was deleted because participants did not complete entire survey (n=2).

The number of participants per group is as follows: standard-American accent, n=30; Middle-Eastern accent, n=32; British accent, n=34; and Latin-American accent, n=30. See Table 1 for the mean and standard de-

viation of each rating, and average age of each group.

The physical attractiveness scale was the only scale that showed any significant differences between accents, with the Middle-Eastern accent being rated higher than the standard-American accent, p=.005 and df=3,126. The Middle-Eastern accent was rated as more physically attractive than the standard-American accent (see Table 1). Also, on the physical attractiveness scale, the rating between the standard-American accent and the British accent approached significance at p=.058, and the rating between the Latin-American accent and the Middle-Eastern accent approached significance at p=.052.

The groups are similar regarding other aspects that could affect the results. Participants who served a mission for the Church of Jesus Christ of Latter-Day Saints did not differ significantly from participants who did not serve a mission. Neither did ratings of participants who speak a foreign language differ from ratings of participants who do not. Likewise, participants who lived in an area where an accented-American speech was heard did not rate differently than participants who had not lived in such an area. However, participants who have lived outside the United States did have an interaction on the intelligence scale with the British accent, p=.024 (df=3,126). People who have lived outside the United States rated the standard, Middle-Eastern, and Latin-American accents higher than those who had never lived out of the country. However, the British accent was rated lower by people who have lived outside the United States (see Figure 1)

Discussion

The purpose of our research was to investigate the influence of standard-American, British, Latin-American, and Middle-Eastern accents on listener's perceptions of intelligence, attractiveness, and trustworthiness. Our research tested three hypotheses. First, we hypothesized that persons with British-accented speech would be perceived as more intelligent, attractive, and trustworthy than persons with standard-American accents. Second, we hypothesized that persons with Latin-American accented speech would be perceived as the lowest relative to all accents in intelligence and attractiveness. Third, we hypothesized that persons

with Middle-Eastern accented speech would be rated lower than persons with standard-American accented speech in the categories of intelligence and attractiveness, and be rated lowest relative to all accents in terms of trustworthiness. All findings were non-significant, with the exception of persons with Middle-Eastern-accented speech being rated significantly higher than persons with standard-American-accented speech in terms of attractiveness. This finding is counter to what was hypothesized. The first hypothesis was not confirmed with significant statistical findings; however, persons with British-accent speech were rated higher than persons with standard-American accents in all categories. The second hypothesis was also not confirmed with significant statistical findings. In fact, persons with Latin-American-accented speech were not perceived as lowest in any category. The third hypothesis also was not confirmed with significant statistical findings. It was, however, found that persons with Middle-Eastern-accented speech were rated statistically significantly higher than persons with standard-American-accented speech. The above results indicate that revisions to the third hypothesis are necessary.

In a secondary analysis it was found that persons who had lived outside of the United States perceived persons with British-accented speech as lower in intelligence than people who had never lived outside of the United States. This finding was statistically significant, and was not part of any of our three hypotheses and suggests that revisions to the hypotheses need to account for demographic variations in the background of the listener, specifically in terms of having lived outside of the United States.

The above findings do not agree with past research on accent perception. Recent research done in the area of accent prestige theory suggests that, in the United States, persons with standard-American speech will be rated higher than those without standard-American speech (Fuertes et al., 2002). Based on our findings, accent prestige theory was not supported and, overall, persons with standard-American-accented speech were not rated higher than others. Accent prestige theory also claims that persons with accents from politically and historically strong nations will tend to be rated higher than persons from countries that are considered lower in status. This claim was not supported since the accent, British, representing a politically and historical strong nation was not significantly higher than any other accents. However, British accented speech was rated higher than standard-American accented speech (see also Baryard et al., 2001) in accordance with predictions of accent prestige theory. The theory also purports that judgments are not being made on the accent itself, but on the ethnicity and social class that the accent implies (Foon, 2001; Fuertes et al., 2002). Our findings do not support accents as clue to social class based on ethnicity due to the fact that persons with Middle-Eastern and Latin-American accents were rated higher in many categories than persons with standard-American and British accents. The findings are probably valid for the population studied. There are a few confounds and limitations that are addressed in subsequent sections.

Confounds

	Perceived Intelligence		Perceived Trustworthiness		Perceived Physical Attractiveness		Average Age of Participant
	Mean	SD	Mean	SD	Mean	SD	
Standard American Accent (n=30)	4.217	1.260	3.983	0.944	2.911	1.259	21.167
Middle-Eastern Accent (n=32)	4.538	1.021	4.448	0.853	3.969	1.225	23.000
British Accent (n=34)	4.387	1.161	4.456	1.009	3.775	1.444	21.177
Latin-American Accent (n=30)	4.372	1.102	3.994	1.023	3.078	1.467	20.500

Table 1. Descriptive Statistics of All Four Accents on All Three Trait Categories.
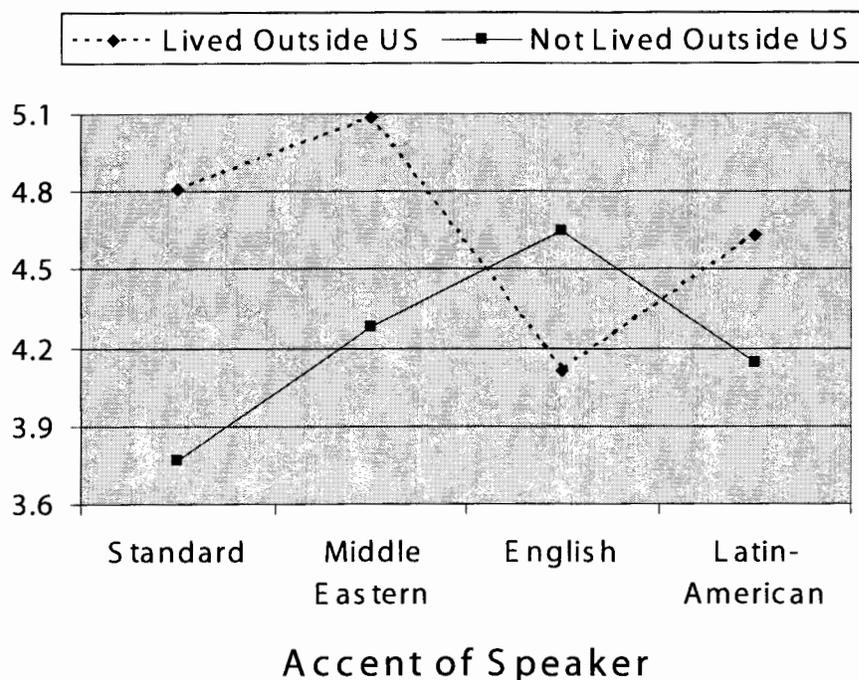
Figure 1. Interaction Between People Who Have Lived Outside the United States and Ratings of Intelligence.

A possible confound of the present study was failure of the deception technique. The audio sample presented to the participants was somewhat obscure in subject matter. The participants were told they were participating in a study concerning marketing techniques, but many questioned the purpose of the study during the study and commented about how the questions did not relate to marketing. It is possible that many quickly inferred that the true subject matter of the experiment was related to accent perceptions. This inference may have created bias because the experiments true nature was easily identifiable. If the subject were able to identify that accent perceptions were being studied then responses given might not reflect the true perception of the subject.

Another possible confound of the present experiment could be the audio recording. The persons reading the script did not read at the same pace. The difference in pace may have affected ratings on perception, especially intelligence. Of the four accents studied the Middle-Eastern accent was read at the slowest pace. This difference may have made it easier for listeners to understand the person on the recording, which may have produced higher ratings for that accent. Also, a slower pace might allow for listeners to focus on the content of the recording rather than the accent itself. The content of the script was intended to be neutral,

and should not have been the focus of the participants. If the participants focused too highly on the content of the recorded script then it did not fulfill its purpose and therefore could have affected results of the Middle-Eastern accent.

Limitations

A limitation of the study is the sample. The sample used consisted of students from a private university with a strong religious affiliation. The majority of participants in the study were of one race and one religion. Therefore, the results may not generalize to population of the United States. However, the sample does represent the religious population at the university. In a world religion that teaches tolerance, it would be expected to find less prejudice.

Another limitation is the script of the audio recording. Because the script contains instructions on the care and maintenance of calculators, there is lower external validity. Daily contact with others does not deal with calculators. A more generalized topic would result in higher external validity.

Implications

The perceptions of accented speech may influence our personal and professional relationships. Listeners are unconsciously, or perhaps even consciously, influ-

enced by the presence of accents when making judgments about physical attractiveness and maybe other personal characteristics. Future research in this area should be focused on increasing awareness and dispelling stereotypes of accented speech. The more aware we become of the way we judge others, whether consciously or unconsciously, the closer we come toward alleviating stereotypes and prejudices. Accents in particular are frequently encountered in our society, and we must have a clear picture of the effect these accents have on the various types of people that make up our multicultural society.

It is interesting to find that despite the political atmosphere, prejudices against Latin-Americans and Middle-Easterners have not surfaced on the whole. We found no evidence to support the prevalence of prejudice in any part of the study. This is surprising given the political climate. We are at war in the Middle East, and in the middle of new legislation on immigration due to the millions of illegal aliens that have crossed the border from Latin America. Despite these political issues we found that the hypothesized prejudices were not upheld in our sample population.

Future Research

While the results of this study are encouraging to believe prejudices are not strongly prevalent, further research must be done to truly confirm this idea. A parallel study could be conducted at a university with no religious affiliation to see if religion truly did influence the results. On a broader scale, it would be interesting to see if these results are localized to America or if there are global implications. For example, the French are known for their nationalism and pride in their language. At the same time, France has a very large population of African and Middle-Eastern immigrants. A study of this magnitude may have global implications in world where cultural boundaries are dissolving.

Interestingly, our findings supported this idea of cultural boundaries dissolving because people who have lived outside the United States seemed less susceptible to making judgments based on accent. Because this finding was not a hypothesis in the current research, further research needs to directly test this finding. If further research does support this finding, it may mean that as individuals encounter customs and lifestyles of other cultures, prejudice will decrease.

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Ego Depletion: A contributing factor of hopelessness depression

Ego depletion is mental exhaustion from regulation of conflicting internal desires. We hypothesized that this exhaustion would cause a pessimistic outlook on future-event thinking. Eighty-one university students were given a simple reading task designed to deplete the egos of half the subjects (experimental group) and have no effect on the other half (control group). Following the task they were given the Future Events Scale (FES) to assess how positive or negative they viewed their future. Those who were ego-depleted scored lower on the FES (p< .044) than those who weren't. This suggests that ego depletion is part of the causal chain of hopelessness depression, because those with a lower score on the FES have a more hopeless attitude.

There are a number of factors that contribute to a person becoming hopeless. Intermingled in the contributory causes of having a negative outlook on life and attributing life stressors to stable, global, and internal causes, is the possibility of another contributory cause. This contributory cause is a state called ego depletion which induces a mental weariness where the amount of energy the self has to use for further acts of controlled regulation and volition has been reduced (Abramson, L. M., Metalsky, G. I., & Alloy, L. B., 1989; Schmeichel, B. J., Baumeister, R. F , Vohs, K. D., 2003).

The theoretical foundation, upon which ego depletion is built, is in Sigmund Freud's personality theory. The ego part of ego depletion is the "self" part of the personality used for many different tasks, including regulating thoughts, emotions, impulses, sustaining physical stamina, and persisting in the face of frustration or failure (Baumeister, R. F., Bratslavsky, E., & Muraven, M.1998; Schmeichel, et al., 2003). One part of the personality that needs to be regulated is called the id. The id can be thought of as the pleasure seeking, instinctually driven part of the personality. Many human impulses to act come from the id's pleasure seeking behavior, which wants to achieve this as quickly and immediately as possible through the reduction of discomfort, pain, or tension. The id will satisfy these desires without any consideration about what is right or wrong or beneficial for the person. An example of this would be making the choice "Do I eat this doughnut, or do I follow my diet and eat plain oatmeal?" It is the job of the ego to act as the regulator of the id in order to protect the self from harm. According to Freud, the major parts of the personality (of which id, and ego are a part) all operate from an energy source. These acts of controlled regula-

tion by the ego draw on this limited strength or energy. As the ego tries to regulate/mediate one impulse, it will have less ability to regulate subsequent impulses. This will cause a temporary reduction in the self's capacity or willingness to engage in controlled self-regulation (Baumeister et al., 1998; Baumeister, 2002; Moller, A. C., Deci, E. L., & Ryan, R. M., 2006), creating a state known as ego depletion.

Ego depletion is often induced by a test involving resistance of an id impulse (e.g. wanting to break testing rules for convenience sake), followed by a cognitive test (e.g. a frustrating puzzle) to measure whether ego depletion has occurred. Those who are in an ego depleted state will give up sooner, for example, on the frustrating puzzle, than the control group who are not in an ego depleted state (Baumeister et al., 1998, 2001; Polivy J., 1998). It has been found that even five minutes of resisting an id impulse in a laboratory setting was enough to reduce by half how long people made themselves keep trying to solve unsolvable puzzles (Baumeister et al., 1998). From these findings it is clear that an ego depleted state is (at least) a state of mental weariness where the amount of energy the self has to use for further acts of controlled regulation and volition has been reduced (Schmeichel et. al, 2003). Ego depletion individuals show symptoms of retarded initiation of volition, lack of energy, apathy, psychomotor retardation, and difficulty in concentration (Abramson, 1989).

Ego depletion shares some of the symptoms of hopeless depression. Hopelessness depression is a subtype of depression, and has the symptoms of retarded initiation of volition, sad affect, suicide, lack of energy, apathy, psychomotor retardation, sleep disturbance, dif-

ficulty in concentration, and mood-exacerbation negative cognitions (Abramson et al., 1989). Ego depleted individuals with symptoms of mental weariness and lack of volitional will (Baumeister et al., 1989) mirror the hopelessness depression symptoms of retarded initiation of volition, lack of energy, apathy, psychomotor retardation, and difficulty in concentration.

Hopelessness depression is different from regular depression in that a hopeless state is a sufficient contributory cause to the symptoms of hopelessness depression (Abramson et al., 1989). Hopelessness can be defined in a dichotomous way, as an individual giving dreaded events the status of inevitably happening while desired future events will inevitably not happen, and then treating those events as reality. It is the feeling of inevitability that makes the individual stop putting forth effort (Andersen, 1990; Andersen, Spielman, and Bargh, 1992; Andersen, and Limpert, 2001; Strunk, Lopez, and DeRubeis, 2006; Reich, D. A., & Weary, G., 1998) which is a state of hopelessness. It is this apathy and lack of volitional will in hopelessness that we believe is strongly correlated to those same symptoms in ego depletion and will then tie ego depletion to hopelessness depression through the causal link of hopelessness.

Because of the similarities in the symptoms of ego depletion and hopelessness depression we will examine the possible relationship that has been hinted at by many researchers. For example, Wichman, A. L., Reich, D. A., & Weary, G. (2006) felt that negative perceptions could be maintained by fatigue and intrusive thoughts, while Baumeister et al. (1998) felt that pathological passivity (e.g., hopelessness depression) might have some element of ego depletion. We hypothesized that non-depressed individuals who are ego depleted through the attention control editing exercise, would generate less positive future thinking much like a person in the hopeless stage of hopelessness depression (as measured by the Future Events Scale).

Method

Participants

Data were collected from 81 undergraduate students (36 males, 45 females) in individual and group sessions. They ranged in age from 18 to 45 with an average age of 21.26. Most of the participants came from psychology classes and received extra credit or regular class credit for their participation. Others were undergraduate students who were randomly recruited on campus or at their homes, and participated of their own will, without incentive. Consent was received from the Institutional Review Board at Brigham Young University.

Materials and Instruments

To conduct the experiment participants were given packets that contained the following: an informed consent form, instructions for an ego depletion task, the ego depletion task itself (Baumeister et al., 1998), the Future Events Scale questionnaire (Anderson S. M., 1990; Wichman et al., 2006), and three demographics questions, in that specific order. The consent form was signed by all participants and was received by the experimenters.

The task was to read a random text (specifically, half a page of an article on racial profiling out of a psychology journal) and to cross out instances of the letter e while following either the control group instructions or the experimental group instructions. The experimenters did not alter the text in any way for either group.

The control group packets contained instructions to simply cross out all instances of the letter e in the text, with no regulation. This task is quickly and easily learned and requires little conscious effort (Baumeister et al., 1998). The experimental group packets contained instructions to cross out e's with these two stipulations: to not cross out any e's that were adjacent to any other vowel, and to not cross out any e's that were one letter removed from any other vowel. For example, participants would have been unable to cross out the e's in shoe and megaphone. This task requires significantly more conscious effort and was found through manipulation checks done by Baumeister et al. (1998) to be a valid means of ego depletion.

Finally, the packet contained the Future Events Scale. This is a questionnaire consisting of 26 statements, in a category scaling format, concerning events that could possibly occur in any participants future (e.g. To be stuck in a boring and unfulfilling job, to be very lonely when I am old, to live the lifestyle I have always dreamed of). Participants rate the events on an 11 point scale (-5 is extremely unlikely, +5 is extremely likely) according to how likely they feel it is that the events will occur to them during their lives. There are

13 positive and 13 negative events. The scoring is done by subtracting the summed ratings of the likelihood of the positive events from the summed ratings of the likelihood of the negative events and taking that number's absolute value. The higher the number, the more pessimistic is the view of the participant. The score is used to assess levels of optimism and pessimism and has implications for clinical practice (Wichman et al., 2006).

The demographics questions concerned participant's age, gender, and whether subjects had served LDS missions or not. The data related to these questions showed that they had no significant effect on the dependent variable.

Procedures

Most participants were informed of the study by in-class announcements and through the BYU Research Participation System on the web. Some were approached on campus by the experimenters and asked if they would be willing to participate. All those recruited on campus were asked to come to specific classrooms during a two hour time period. They were told that they could come anytime during the two hours because the experiment would be running continuously. Some participants arrived in groups as large as thirty and others came alone. When large groups came the experimenters welcomed them in and introduced the experiment to the entire group at once. When individuals came in they were welcomed, seated, and given an introduction to the experiment quietly in order to avoid disturbing any participants already present.

In order to ensure random assignment and an equal number of participants in the control and experimental groups, the packets were ordered alternately (one control, one experimental, etc.) and distributed to participants in that order. The experimenters then deceived the participants by telling them that the study was designed to measure language abilities by assessing how well they could comprehend and follow instructions. They were told that inside their paper packets was an instruction comprehension task requiring them to read a random text and cross out particular instances of the letter e according to the instructions given them. They were further told that the experimenters knew how many e's were to be crossed out and that they would be rated on

their comprehension according to how many e's they crossed out correctly.

After the ego depletion task was completed, the participants simply turned the page in their packet and filled out the FES questionnaire. When they finished, they brought their packets back to the experimenters. They were then given either a verbal or written debriefing, thanked, and then excused.

This procedure was followed for all participants recruited on campus. The experimenters recruited roughly one fourth of participants by going to participants homes and inviting them to participate. In these cases the same procedure was followed, with the only difference being that participants were working through the packets in the comfort of their homes rather than a classroom. These participants cooperated of their own will and were not given any incentive.

Results

Manipulation check.

Baumeister et al., (1998) performed the manipulation check of scoring participants on a 25-point scale assigned to the two condition groups on the cross out the e's task. Baumeister found there to be a significant difference in the reported concentration needed in the difficult-rules condition compared to the easy-rules condition. Further evidence was supplied by monitoring the participants as they worked on the cross off the e's task. It was visually evident that the experimental group often showed signs of frustration, where the control was not evident

Approaching hopelessness depression

The general linear model (GLM) univariate analysis of variance with the experimental condition (ego-depletion vs. control condition) as independent variable and

Table 1

Gender	Mean	N	SD
Male	36.83	36	25.959
Female	23.02	45	28.537
Total	29.16	81	28.114

Gender as the Independent Variable

the future event scale as the dependent variable showed a significant difference between the experimental conditions, <p 0.044 (See table 1).

Additional analysis

Because we did not control for gender differences in prediction of future events a GLM with univariate analysis of variance with gender as an additional factor was conducted female and male participants did not differ in their scored level on the FES, F=0.005, p=.941 (see table 2)

Discussion

Our study supports a relationship between an ego depleted state and a state of hopelessness which is part of the symptoms of hopelessness depression. An individual in an ego depleted state was more likely to score lower on the Future Events Scale, and therefore, was less hopeful about their future. The symptoms of apathy, lack of energy, and lack of volitional motivation found in the individual with in an ego depleted state are the same as some of the symptoms of hopelessness and hopelessness depression.

In the study that outlined the original hopelessness theory (Abramson et al., 1989), a diagram (see figure 1) was used to diagram the relationship of the causal factors in an etiological chain. We have used a similar (albeit a more simplified diagram; figure 2), but have added ego depletion in its possible relationship to the contributing factors of hopelessness depression, with the relationship to the sufficient cause of hopelessness as our hypothesized finding. We will discuss in the implications section, some of the possible relationships of ego depletion in the causal chain to hopelessness depression.

Alternate explanations and limitations

A confound concerning the experimental sample should be addressed. It is that we did not assess the participant's mental states before they engaged in the experiment. This has two implications for the study.

The first is that due to the fact that participants were all students, they may have had a greater degree of immunity to ego depletion than the average person. According to past research on ego depletion, the mind may

Table 2

Group	M	SD	df	F	P
Experimental	22.34	27.780	82	4.201	0.044
Control	34.79	27.869			

Groups as the Independent Variable

act like a muscle which develops strength through consistent and effective exercise over long periods of time. This strength is stored in a type of mental energy reservoir (Baumeister et al., 1998; Muraven M., Tice, D. M., & Baumeister, R. F., 1998). Students spend a great deal of their time engaging in mental exercise. Therefore, is it possible that their mental energy reservoirs are very large and full of strength. This suggests that our student participants may have had an immunity to ego depletion and the independent variable did not have the expected effect.

The second is that due to the many ego depleting activities typical of student life, participants may have arrived at the experiment already in an ego depleted state. Students are often compelled to regulate their minds during lectures and study sessions. This would result in a natural ego depletion, which the participants in our study would not have been exempt from. Because we did not assess whether they came to the experiment having already been ego depleted before we gave them the ego depletion task, we cannot be totally sure that the resulting scores on the FES questionnaires were due to the ego depletion task.

Another limitation is that there was no manipulation check conducted by our team. However, we took the crossing out the e's task from Baumeister et al. (1998), who ran several manipulation checks that affirmed its validity. We considered this evidence enough that the task would be a sufficient independent variable and that it was useful for our purposes.

Implications

Since we feel that ego depletion is part of the causal chain leading to hopelessness depression, learning how to strengthen the ego so that it does not become depleted could lower the chances of developing hopelessness, and consequently, hopelessness depression (Deutsch, Gawronski, & Strack, 2006; Galliot, Baumeister, & Schmeichel, 2006; Polivy, 1998). Baumeister et al.

(2003) also suggested that practicing simple exercises that require volition control (e.g. concentrating on correct posture, getting adequate sleep, and seeking positive experiences) as ways to increase resistance to ego depletion's effects. There are many segments of society that could benefit from learning to strengthen their egos.

Two of the segments are those suffering from addiction, and those suffering from psychotic symptoms, especially delusions. People addicted to substances or practices that are harmful, can be taught to avoid situations that deplete their ego, leaving them more vulnerable to giving in to an addictive behavior. Those suffering from delusions tend to be resisting impulses to act upon voice commands, or are wearied by the constant effort required to concentrate on the world around them over their conflicting inner world. Both groups could be given exercises (such as concentrating on correct posture throughout the day) as a method of strengthening the ego against depletion and strengthening them against developing depression, a problem they are especially susceptible to.

Ego depletion has a foundational role in the formation of hopelessness depression, and is integral because it magnifies the effects of every step in the formation of hopelessness depression. Our simplified modification of the original Abramson (1989) figure (figure 2) shows how we theorize ego-depletion is related to the different stages in the causal chain (other than hopelessness) leading to hopelessness depression, i.e. stressors, and negative cognitive style.

Ego depletion could increase the effects of stressors. Stressors' magnitude would seem to have a greater impact to one who is already been ego-depleted from past situations. They could therefore stabilize, globalize, and internalize the cause or severity of the stressors and could increase the draw-down on ego energy reserves.

An ego depleted state, combined with the effects of stressors, could also possibly serve as a basis for the negative cognitive style. When people view their stressors through the lens of a negative cognitive style, they do so because they are ego depleted; they learn to feel hopeless because their experience has shown their inability to solve their problems repeatedly. Ego depleting events can build upon one another, plunging one deeper and deeper into a depleting well of strength, where the normal forms of having that strength regenerated (Baumeister, 2003) were insufficient because of

the depth of the depletion. Negative cognitive style becomes inevitable because the individual is in a constant state of mental weariness and volitional retardation and is constantly being reinforced to think that they cannot escape, because, they in fact, are not escaping. They are forced to stabilize, globalize, and internalize the problems of life that come their way.

Future research possibilities

Future research should focus on what the strength or energy is that, when depleted, gives the symptoms of ego depletion. It would be good to examine further relationships to all of the links in the causal chain leading to hopelessness depression, such as people's reactions to stressors (including a negative cognitive style), the nature of hopelessness, and of course, and the nature of the depression family with ego depletion viewed as a causal factor, or foundation for all of them. In addition to controlling one's posture, an especially helpful area of research could be to discover the most effective means of strengthening the ego.

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The Halo Effect and Religiosity: Are Attractive People Perceived as More Religious?

A photograph rating study assessed religiosity perceptions relating to the halo effect. The halo effect is a phenomenon describing the tendency that people have to attribute positive characteristics to those possessing other, unrelated positive characteristics. In the preliminary study, subjects from BYU rated the attractiveness of photographs of college-aged men and women. The primary study used the photographs with the highest and lowest attractiveness ratings. Subjects rated them on a scale of perceived religiosity. As hypothesized, attractive females received higher religiosity ratings then unattractive females. Attractive males received higher religiosity ratings than unattractive males. Attractive females received the highest religiosity ratings. This study adds evidence that attractiveness affects the perceptions of religiosity as predicted by the halo effect theory.

Many times a day, people make quick judgments even when information is limited. The basis of these judgments comprise of the person's own past experiences, including experiences that are not easily recalled in conscious memory. This process of judging is known as implicit cognition. When these judgments are made regarding other people in a social context, particularly regarding their character, the judgments are known as implicit social cognition (Greenwald & Banaji, 1995). One aspect of implicit social cognition is the halo effect, a term first used by Edward Thorndike. He discovered that people who had certain positive traits, such as a pleasant voice, were more commonly perceived as having other positive characteristics, such as kindness (Greenwald & Banaji, 1995). Succeeding studies about the halo effect have focused on the role of perceived attractiveness. Those who are more physically attractive are viewed as having more positive traits (Abel & Watters, 2005).

Attractive people are perceived as having traits that lead to success in school and in the workplace. In school settings attractive people are considered to be more intelligent and have more initiative (Chia, Allred, Grossnickle, & Lee, 1998). These individuals are also perceived as having a higher level of success in school performance. Studies have shown that readers will rate essays more preferably if they believe the author to be attractive (Olson & Marshuetz, 2005; Reed, 1999). In employment situations, the halo effect causes people to notice traits that are useful for success in the workplace. Because attractive people are perceived as having more intelligence and initiative, employers are more likely to hire those they deem attractive, even when other applicants are equally qualified (Chia, et al., 1998).

In addition to achievement, attractive individuals are perceived as having positive traits such as interpersonal skills and moral values, which lead to success in social contexts. Perceived interpersonal skills and traits that have been linked with attractiveness include persuasive communication (Brownlow, 1992), extraversion, and an increased likelihood to receive votes when running for election (Riniolo, Johnson, Sherman, & Misso, 2006). Attractive individuals are also perceived as having higher moral values, including trustworthiness (Darby & Jeffers, 1988). The perceived expectancy of having higher moral values affects the way others react to them. People are more willing to disclose personal information to attractive people and be more honest around them (Reed, 1999). Also, people are more likely to help those that are considered attractive (Harrell, 1978; Riniolo et al., 2006).

Additionally, the halo effect predicts that attractive people will be perceived as having other positive morals. This is shown in a study by Dion, Berscheid and Walster (1972), where they examined the idea that "physical beauty is the sign of an interior beauty, a spiritual and moral beauty" (p. 285). Spiritual and moral beauty are traits generally associated with being religious.

Meta-analysis of halo effect studies has shown that attractive women are seen as having more positive traits than attractive men (Eagly, Ashmore, Makhijani & Longo, 1991). For example, explicit verbal statements in

television commercials link beauty and good outcomes more commonly with females than with males (Eagly, et al., 1991). Darby and Jeffers (1988) asked subjects to rate photographs of women based on the likelihood that those women had committed a specific crime. The women who were more attractive were more likely to be judged by the subjects as being innocent of the crime, more likely to receive a lesser punishment, and more likely to be perceived as happier and intelligent. In addition, a recent study (Ross, 2004) showed that subjects rated attractive females as more feminine than unattractive females, whereas the perceived masculinity of attractive and unattractive males was equal. These examples demonstrate the cultural perception that feminine beauty is commonly linked to positive traits.

A shortcoming of halo effect studies is that male targets have been largely neglected, even when, in the general population, the studied trait is more commonly expressed in males. In the study examining perceived criminality, males and females were shown photographs only consisting of women (Darby & Jeffers, 1988). Because of the disproportionate use of female targets over male targets in halo effect studies, there is a general imbalance in the literature (Greenwald, 1995). In order to add to the literature, our study compensated for this imbalance by including male targets as well as female targets.

We tested physical beauty as it relates to spiritual and moral beauty, narrowly defined as religiosity. We operationally defined religiosity as being morally virtuous and showing belief in and reverence for God. We hypothesized that perceived attractiveness would increase the subjects' perception of religiosity in both sexes. We also hypothesized, based on past research, that this attractiveness-based increase would be greater in female targets.

Method

Participants

The two groups of subjects recruited for this study served as attractiveness raters and religiosity raters, respectively. The first group consisted of 47 students and the second group consisted of 57 students, all recruited from undergraduate BYU courses.

Materials. All photographs were headshots taken from a photograph database kept by Dr. Mark Allen of BYU students (class of 2002) who gave consent to have their photographs used in psychological studies. The images were loaded into a computer display program for sequential viewing. A scale corresponding to each photograph appeared on the screen where subjects could select a rating from a six-point scale. The experiments were carried out in multiple sessions in BYU computer labs, equipped with 40 personal computers. The instructions for completing the ratings (as well as a definition of religiosity in the context of our study for the religiosity raters) were projected onto a large screen in the lab. All subjects were offered candy as compensation.

Procedure

Subjects read and signed consent forms prior to participation. Instructions for completion of the study were projected on a large screen. The subjects were allowed to proceed at their own pace while viewing each photograph. The attractiveness raters were asked to rate the attractiveness of the targets in 120 photographs. They rated the photographs according to a six-point scale ranging from highly unattractive to highly attractive based upon their impressions of the targets. From the rating scores of the 120 photographs, we selected a sub-set of 80 photographs with ratings that fell most consistently at either extreme of the scale range, which served as target stimuli for the religiosity raters. This selected sub-set consisted of a balanced proportion of 20 males and 20 females falling nearest the upper end of the scale, and 20 males and 20 females falling nearest the lower end of the scale.

The religiosity raters were explicitly not told that the photographs had previously been rated for attractiveness, nor were they informed that attractiveness had any role to play in this experiment in any other way. After being shown an operational definition of religiosity, raters began assigning ratings on a six-point scale ranging from not religious to extremely religious. Each religiosity rater was shown all 80 photographs, and thus the independent variables of gender and attractiveness were repeated measures variables in a 2x2 complex design. The photographs were shown one at a time in a random order that was different for each subject.

Results

The raw data from each condition were compiled and inspected for outlier scores. As a result, 80 data points were eliminated from the analysis, due to 1 participant scoring the same throughout the entire survey. The remaining data were analyzed with a two-way ANOVA. The analysis revealed a main effect for both gender [F (4, 63) = 9.05; p < 0.003] and attractiveness [F (4, 63) = 150.99; p < .00001] factors. However, the interaction between the gender factor and the attractiveness factor was not significant [F (4, 63) = 0.46; p < 3.84].

An inspection of the data reveals that the differences in means between the attractive and unattractive groups and the males and females, while small, are statistically significant. The mean for the attractive group (M=4.19) was significantly higher than that of the unattractive group (M=4.10; p<.004). The mean for the females (M=4.33) was significantly higher than the mean of the males (M=3.96; p<.001). See Figure 1.

Discussion

We hypothesized that perceived attractiveness would increase the subjects' perception of religiosity in both sexes. The principle findings are that (a) attractive targets had a higher religiosity rating than unattractive targets, and (b) female targets had a higher religiosity rating than male targets. The analysis of variance (ANOVA) test indicates that attractiveness was a significant factor in predicting perceived religiosity.

The finding that attractive targets received a higher rating than their unattractive counterparts was consistent with our hypothesis. These results add to past halo-effect studies which indicate that attractive individuals are perceived as having other unrelated, positive traits. More specifically, this finding supported the work of Dion et al. (1972), which stated that physical beauty is related to an interior, moral beauty, such as religiosity. This perception is manifested in our study through a higher religiosity rating for attractive people.

A closer look at each group's relation to the halo effect and our hypothesis revealed that both groups of female targets (attractive and unattractive) had a higher religiosity rating than either group of male targets. This supported our hypothesis on a cross-gender level and reaffirms that females are attributed with more positive characteristics than males.

Our study had two possible confounds. One confound was that the clothing and accessories worn by the targets could have affected the results. We did not control for the formality of targets' clothing. In a study by Brase and Richmond, it was shown that formal attire increased perceptions of trustworthiness in physicians (2004). Considering the possibility that formal attire af-
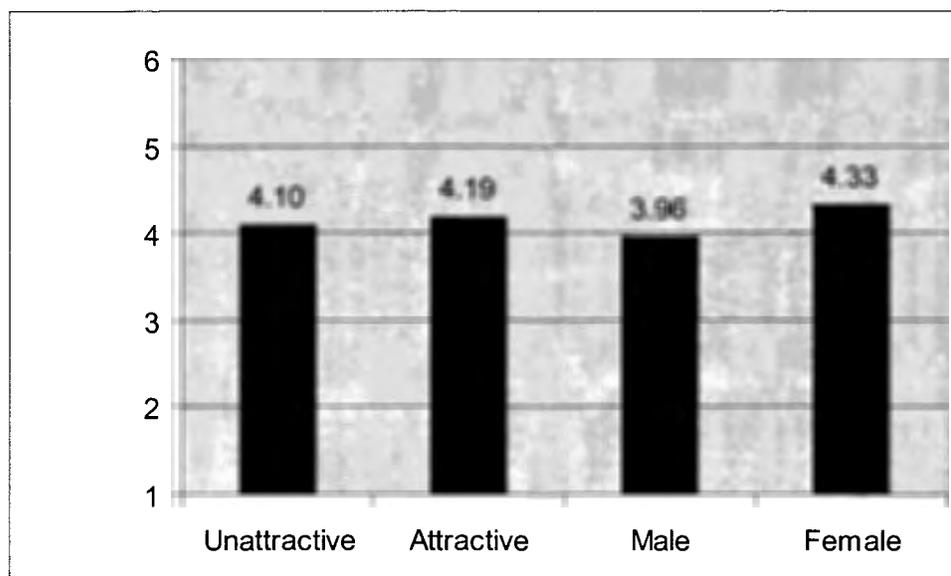

Figure 1. *The mean perceived religiosity scores across attractiveness and gender.*

fected our ratings, we reviewed the photographs used in our study. We found a difference between the attire of attractive and unattractive females. We defined formally dressed as those wearing button-front collared shirts and the less formal as t-shirts. Generally, attractive females were wearing more formal clothing. A higher level of formality may have resulted in increased perceptions of religiosity. Additionally, accessories provided cues upon which perceptions may have been based. A notable example of this in our study was two female targets who were wearing religious medallions, which likely increased the subjects' perceptions of their religiosity.

A second confound in our study was the subjects' aversion to giving low attractiveness and religiosity ratings to targets. Two of the participants told the researcher that they felt they should not be making judgments about others. This aversion may have been caused by the religious atmosphere of the university attended by the majority of subjects. BYU is a religiously oriented university, where all students are required to take religion courses and ninety-eight percent have the same religious affiliation. A tenant of this religion is the belief that judgments should not be based upon outward appearance, which is what our study required participants to do. Some of the subjects expressed they experienced discomfort making judgments about the photographs in this manner. Because of this, subjects may have avoided giving low ratings to the photographs, causing our data points to generally be in the middle and upper parts of the scale.

A potential limitation of our study was that some of our subjects were familiar with targets in the photographs they were asked to rate. Based on post-experiment statements from subjects, we estimate this affected <1% of our 4480 data points. These data points were not excluded from our raw data because ratings were not linked to subjects' identity and we could not determine which data points were affected. This limitation posed a problem because participants were asked to rate the photographs solely on appearance. Because some participants knew targets personally, factors other than appearance likely influenced the way they rated the photographs.

The results of the present study may have implications about how society makes judgments of others based on stereotypes. The more people realize how and why society follows these stereotypes, the more likely individuals will be able to change their behavior.

Furthermore, the implications of this study could also affect the way people choose to present themselves. When individuals understand how their appearance affects the way they are perceived, then they can present themselves in the way they want to be perceived.

Future research should consider that people base their first impressions on more than a photograph. Mannerisms, speech, and body language all play a factor in the way people are perceived. Using photographs allows for high control in the studies, but the validity is reduced. We suggest that future research focus on implicit social cognition based on real people instead of a photograph, creating more validity. This would expand the understanding of how perceived religiosity is influenced by the halo effect.

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Effects of L.D.S. Doctrine Versus L.D.S. Culture on Self-Esteem

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It was hypothesized that BYU students would report a comparatively high self esteem when exposed to LDS doctrine and a lower self esteem when exposed to LDS culture. A self report survey on self esteem was administered to three groups of subjects. One group viewed a stimulus representing LDS doctrine, one viewed a stimulus representing LDS culture, and the control group viewed no stimulus. The hypothesis was supported by the results.

For many people, religion is a stimulus that can greatly influence feelings of self-worth (Hill & Pargament, 2003). James and Wells (2003) explain that religiosity may have many different effects on mental health. For example, Schieman, Pudrovska and Milkie (2005) found that a sense of divine control in one's life could either positively or negatively affect one's self-esteem depending on sex and race. Religious orientation, or the way people approach their religion, can also affect mental health in various ways.

Allport (1967) categorized people as having either an extrinsic or intrinsic religious orientation. People with an extrinsic orientation found their religion to provide comfort and refuge, friendliness and entertainment, status and self-justification. On the other hand, people with an intrinsic orientation live in harmony with their religious beliefs and practice what is taught (p. 434). In other words, some people use their religion on a superficial level as a personal source of security and social stability. Others internalize their religion, put their beliefs into practice, and feel satisfied with their spiritual selves.

Different ways that people use their religion, deeply and intrinsically or more shallowly and extrinsically, affect their mental health. Maltby and Day (2000) found that people who have an extrinsic religious orientation are more likely to exhibit symptoms of depression than people who have an intrinsic religious orientation (as cited in James & Wells, 2003). Similarly, research has shown that people who have an extrinsic religious orientation also exhibit more anxiety than people who have an intrinsic religious orientation (Baker & Gorsuch, 1982).

In addition to religious orientation, religious behaviors and practices also influence mental health. Research shows that the more people attend church, the more they report general happiness and life satisfaction (Gurin et al, 1960; McCann, 1962; Spreitzer & Snyder, 1974; Clement & Sauer, 1976; as cited in Petersen & Roy, 1985). Church attendance seems to be an expression of intrinsic religiosity because it is a way to actively participate and live one's religion. The way people pray can also affect their psychological health. Poloma and Pendelton (1991) found that people who had conversational and meditative prayers reported general well-being, while people who offered petitionary prayers, or requests to God for material things, did not report well-being. People who recited set prayers tended to experience negative feelings (p. 80-81). Conversational and meditative prayers seem to be intrinsic in nature, while petitionary and recited prayers seem to be extrinsic in nature.

Thus, people who engaged in intrinsically oriented religious activities—active participation in church worship and personal, thoughtful prayers were likely to report happiness and well-being. People whose behaviors were associated with an extrinsic religious orientation,infrequent church attendance and recited or petitionary prayers, were less likely to report happiness and well-being.

The majority of scientific studies that examine religious life demonstrate that people who sincerely practice their religion tend to have good mental health (Judd, 1999). Bergin (1983) conducted a meta-analysis which revealed that only twenty-three percent of studies indicate a negative relationship between religiosity and mental health, while forty-seven percent indicate a positive relationship. Thirty percent of studies indicate no relationship. Bergin (1983) explains that his results indicate that there are different kinds of religiosity and that these different types produce varying effects. More specifically, intrinsic and extrinsic religiosity can yield dramatically different results when studied side

by side.

This pattern holds true for members of The Church of Jesus Christ of Latter-day Saints (LDS). An examination of fifty-eight studies indicate that seventy-one percent of the scientific literature which studies mental health in the LDS culture shows a positive relationship between mental health and religiosity variables (Judd, 1999). As discussed earlier, intrinsic religiosity tends to yield positive mental health. The high percentage of studies pairing religiosity with good mental health in the LDS population may indicate that Latter-day Saints tend to be intrinsically oriented. Extrinsic religiosity tends not to be related to positive mental health. Since twenty-nine percent of studies indicated that LDS religion did not positively influence mental health, there are likely also many Latter-day Saints who may be extrinsically oriented.

There have been several studies indicating that some aspects of LDS lifestyle can be detrimental to self-esteem. Utah, with a high LDS population, leads the nation in anti-depressant use (Goodman, 2001). Adams and Clopton (1990) studied self-esteem in LDS returned missionaries. Ninety-three percent of the subjects indicated a change in self-esteem after their mission; self-esteem generally increased in males, while self-esteem in females generally decreased. The researchers hypothesized that these negative feelings in females may have come from perceived personal inadequacies. It was suggested that women blame themselves more and accept more responsibility for failure than men (Bar-Tal & Frieze, 1977). Feelings of personal inadequacies or self-blame often stem from maladaptive perfectionism (Rice, Leever, Christopher, & Porter, 2006). Research shows that parents of perfectionists tend to stress extrinsic motivations for behavior and tend to be extrinsically religious people (Sorotzkin, 1998).

Some Latter-day Saints struggle with issues of perfectionism, feeling the need to be perfect in their school work, perfect in their relationships, and perfect physically (Richards, Owen & Stein, 1993). A perceived need to be perfect physically can affect not only self-esteem, but can also affect body image, or attitudes and feelings about one's body. Carroll (1999) found that while male LDS college students had a more positive body image than their non-LDS counterparts, LDS females' body image was no greater than their non-LDS counterparts. Carroll (1999) suggests that there is greater cultural pressure on women when it comes to body image

than there is for their male counterparts. Carroll (1999) seems to imply that LDS males intrinsically apply this LDS doctrine about body image while LDS females are more likely to be extrinsically influenced by another source. We predicted that whether people intrinsically live LDS doctrine, or are mostly influenced by LDS culture and extrinsically live their religion will affect their self-esteem. We hypothesized that BYU students who experienced the intrinsic LDS doctrine stimulus would report higher self-esteem than BYU students who viewed the extrinsic LDS culture stimulus. We also hypothesized that female BYU students who experienced the extrinsic LDS culture stimulus would report lower self-esteem than male BYU students who experienced the same stimulus. We wanted to evaluate the different influences that LDS doctrine from LDS Church authorities and perceived LDS doctrine in LDS culture have on self-esteem within BYU students.

Method

The subjects for this study included 53 undergraduate students from Brigham Young University. They were male and female volunteers who were 18 years old and older. There were 30 females and 23 males who participated in the study. Nine participants were in the LDS doctrine stimulus group, 16 were in the LDS culture stimulus group, and 28 were in the no stimulus group. Informed consent was obtained. After debriefing, participants were given treats or extra credit as a reward for participation.

We exposed a group of subjects to stimuli representing an intrinsic religious orientation, or LDS doctrine. We then exposed a second group to a stimulus representing extrinsic religious orientation, or LDS culture. The LDS culture stimulus group viewed a series of video clips from LDS pop-culture movies including the LDS version of Pride and Prejudice (2003) and The RM (2003). Following the video clips they filled out a survey regarding self-esteem. The LDS doctrine stimulus group viewed a video of the President of The Church of Jesus Christ of Latter-day Saints, Gordon B. Hinckley, giving a speech entitled Each a Better Person from the October 2002 General Conference of the Church and filled out the same survey. The third group had no video stimulus and only filled out the survey. The sex variable

had 2 levels (male, female).

After viewing the stimuli, subjects reported their self-esteem by filling out a survey. Our instrument was a survey with several demographic questions including sex, age, marital status, religious affiliation, and length of time the participant's family have been members of the LDS church. The rest of the survey asked questions involving religious activity, self-esteem, and body image. These questions were based on a Likert Scale and were self-reported. The following is a list of questions used to measure self-esteem.

- How are you feeling now?
- How do you typically feel?
- How secure do you feel with your family relationships?
- Do you usually get along with the people you live with? (roommates, spouse, family)
- Are you satisfied with your dating life?
- Are you satisfied with your weight?
- Are you satisfied with your height?
- Are you satisfied overall with your body?
- Do you ever have thoughts about switching your eating habits to something that may be unhealthy for your body? (ex: extreme dieting, eating disorders?)
- Do you feel as though you have to be perfect in order to be worthy within the Church of Jesus Christ of Latter-day Saints?
- Are you content with the grades you receive in school?
- Do you feel like you have a good balance of school, work, social life, church, and family?
- Do you often leave your extracurricular activities (sports, dance, music, performances, etc.) content with the way you performed?
- Do you feel like you can be forgiven for your mistakes?
- Do you feel worthy to partake of the sacrament each Sunday?
- Do you feel as though God really listens to you as an individual?
- Do you or did you feel pressure to get married?
- Do you feel that if you were more attractive you would be happier?
- Do you feel pressure to have many children?
- How much do you feel that you are a child of God who is worthy of His love and blessings?
- How difficult is it for you to view other individuals as children of God?

- When you go out, do you feel confident about your appearance?
- Do you worry about the size of clothing that you purchase?
- Do you feel comfortable eating like you typically would when out on a date or with new people?
- Are you satisfied with the amount of exercise that you do?
- Do you feel satisfied with your spiritual self?
- When you pray do you really feel like you are personally speaking with God and that He is listening?

All questions were weighted similarly when scored . Each question ranged from one to five points, with one showing that the subject portrayed the highest level and five portraying the lowest level of self-esteem. The following questions were reverse scored:

- Do you ever have thoughts about switching your eating habits to something that may be unhealthy for your body? (ex: extreme dieting, eating disorders?)
- Do you feel as though you have to be perfect in order to be worthy within the Church of Jesus Christ of Latter-day Saints?
- Do you or did you feel pressure to get married?
- Do you feel that if you were more attractive you would be happier?
- Do you feel pressure to have many children?
- Do you worry about the size of clothing that you purchase?

When the questions had "Yes" or "No" answers, a one reflected high self-esteem and a five reflected low self-esteem. The dependent variable was the sum of the 28 relevant Likert-scale questions on the survey that the participants filled out. The following questions were excluded from the analysis because they did not address self-esteem.

- Do you feel like you get enough sleep on average?
- How active are you in Church Sunday activities?
- How active are you in weekly church activities? (Family Home Evening, temple attendance, etc.)
- How consistently have you attended church activities throughout your life?
- On average, how much time do you spend getting ready in the mornings? (i.e. picking out clothing, personal grooming, etc.)

- Did you receive your Eagle Scout or Young Womanhood Recognition Award?
- Do you feel like you deserved it?
- Do you feel like you have good/healthy eating habits?
- Do you consider what other people think of you when making decisions?
- Do you consider what God thinks of you when making decisions?
- Do you feel comfortable asking for/giving priesthood blessings?
- Do you feel that you fulfill/magnify your calling as a home/visiting teacher?

Results

Data was analyzed using an ANOVA with two grouping factors: Stimulus (None, Culture, Doctrine) and Sex (Male, Female). The dependent variable was the sum of the scores for the 28 relevant questions on the participants' questionnaires The Alpha level was set at 0.05.

There was a Stimulus Main Effect $(F(2,47)=8.866;$ p=0.001) indicating that subjects who viewed the LDS culture stimulus appeared to report lower self-esteem than those who viewed the LDS doctrine stimulus. The control group reported higher self-esteem than the LDS culture group, but reported lower self-esteem than the LDS doctrine group. This indicates that each of the video stimuli did have an effect. (See Figure 1.)

The Sex Main Effect was non-significant $(F(1,47)=2.858;$ p=0.098) Stimulus x Sex Interaction $(F=(2,47)=2.041;$ p=0.141) was also non-significant. Thus, the sex of the participants did not affect the relationship of reported self-esteem across the three conditions.

Discussion

We hypothesized that BYU students who experienced the intrinsic LDS doctrine stimulus would report higher self-esteem then BYU students who viewed the extrinsic LDS culture stimulus. Our results indicated a Stimulus Main Effect in which the LDS doctrine group reported significantly higher self-esteem than the LDS culture group. Therefore, the results supported our hypothesis. We also hypothesized that female BYU stu-
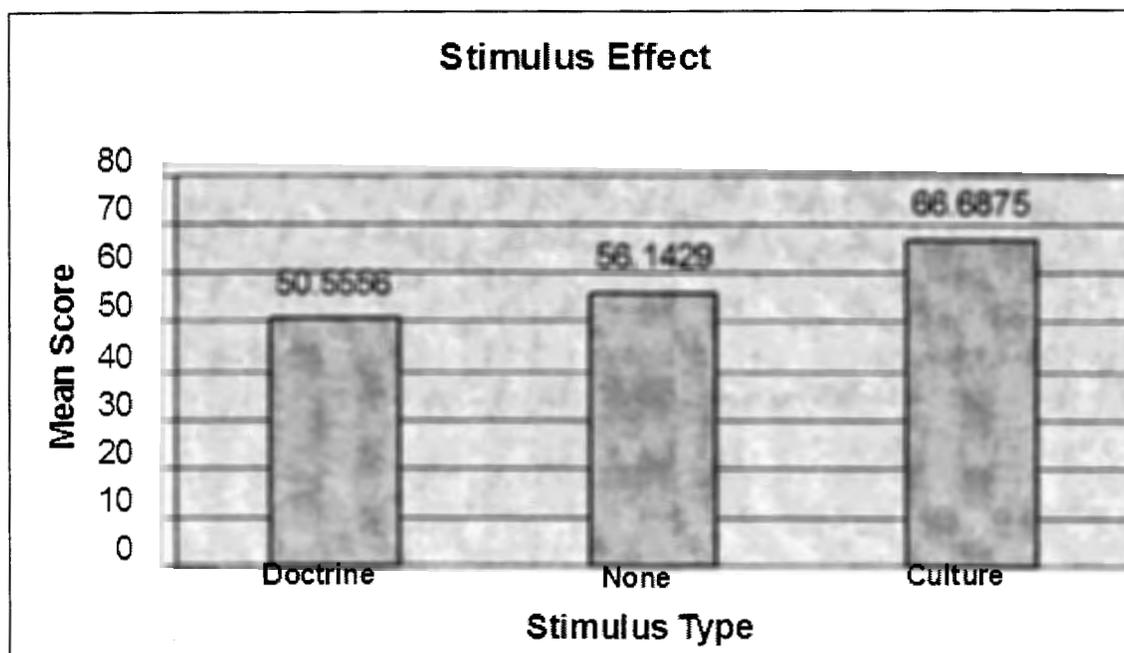

Figure. 1 *The mean scores for each stimulus. Lower numbers indicate a higher level of self-esteem*

dents who experienced the extrinsic LDS culture stimulus would report lower self-esteem then male BYU students who experienced the same stimulus. While there was a trend (p=.098) (have authors state what direction this was), there was no statistically significant difference between self-reported self-esteem in males and females in any of the stimulus groups .

Judd (1999) and Bergin (1983) showed that religion tends to positively affect self-esteem. Our results shed greater light on their findings by differentiating between the influences of religious doctrine and religious culture. We found that subjects exposed to the intrinsic LDS doctrine stimulus reported higher self-esteem and self-image than the control and extrinsic LDS culture groups.

There are several important elements of LDS doctrine that address positive self-esteem. The Church of Jesus Christ of Latter-day Saints teaches that individuals are sons and daughters of a Heavenly Father who loves them unconditionally. The LDS Church has made an important doctrinal statement regarding body image which has effects on self-esteem: "[God] knows your hopes and dreams, including your fears and frustrations....Be more accepting of yourselves, including your body shape and style" (Holland, 2005). These teachings encourage people to look more positively at themselves. It is not surprising then that exposure to LDS doctrine yielded higher self-reported self-esteem.

Feeling positive influences from a culture is often conditional upon living in a socially acceptable manner. LDS cultural pressure seems to place much emphasis on perfection in physical, mental, and spiritual matters. This perfectionism, as discussed by Rice, Leever, Christopher, and Porter (2006) is detrimental to self-esteem. Finding that the LDS cultural stimulus yielded lower self-esteem confirms our hypothesis.

Carroll (1999) suggested that females may be more easily influenced by extrinsic sources such as culture then men. Based on Carroll's research, we hypothesized that women would be more influenced by the LDS culture stimulus then men. Our findings did not support Carroll's theory nor did they support our hypothesis because the difference between reported self-esteem in males and females was non-significant.

Males and females were influenced similarly by the LDS culture stimulus. One possibility for this result may be be that low self-esteem in females is more publicly visible while low self-esteem in males is kept more private and personal. We formed our hypothesis under the assumption that females receive more LDS cultural pressure, especially in the area of beauty and marriage. However, we neglected to fully take into account that males often receive pressure to marry and provide for a family after returning from two years of church missionary service. Our survey seemed to accurately measure cultural pressure that both males and females experience even though our hypothesis did not correctly estimate cultural pressure on males. After further consideration we consider our hypothesis to be incorrect and our results to accurately depict what occurs in life.

There are potential confounds to our research. We did not control the time of day that data was collected. The LDS culture stimulus data was collected at the end of a night class. After a long school day participants may have been anxious to leave, and therefore, not focused on the survey. The control group data was collected on a Sunday after a church gathering. This may have influenced their self-esteem in some way based on the subject matter discussed that day. The LDS doctrine data was collected on a school day around noon. Also, the LDS doctrine and LDS culture groups may have been influenced by the fact that they were receiving extra credit for the study. Students receiving extra credit may not be motivated to be thorough in their responses as evidenced by students hurriedly filling out the survey so that they could leave.

The study had additional limitations. Having only 53 participants in the study was the biggest limitation. More participants would have increased external validity by making the sample more representative of the population . This is especially true in the LDS doctrine group which had only 9 participants total and just 2 female participants. Also, the instrument could have provided more information by including questions that evaluated religious aspects affecting males' self-esteem on the self-report survey. Questions could have addressed missionary service or the ability and pressure to provide for a family. Finally, we cannot prove that the questions we asked actually evaluate self-esteem. Self-esteem is a social construct—it exists because people agree that it exists and is, therefore, subjective. Though we consider our questions to be good measures of self-esteem, people with different concepts of self-esteem may not find the questions we asked on our survey to be good measures.

Very little research has been done comparing religious doctrine and influences of religious culture. This study has implications for future research because it is a beginning step towards understanding the different influences that doctrine and culture can have on people. An awareness of the difference between doctrine and culture and the different effects that these influences have on people's self-esteem and self-image can help individuals to limit negative contributions to culture that they sometimes make.

After studying BYU students we became curious as to how people of other ages would react to the stimuli. Future research could study teenagers involved in the LDS Young Men and Young Women's programs and older individuals with established families. These different groups would be interesting to study because society often views teenagers as more impressionable and influenced by culture, while older, more mature people with established families may be less pressured by extrinsic cultural influences than college students. Also, BYU students may not accurately represent LDS college students as a whole. Therefore, it would be interesting to study college-aged LDS Church members outside of Provo, Utah, where BYU is located. Similarly, it would be worthwhile to study LDS church members in other countries to see if the same LDS culture exists in other places.

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