

TOWSON UNIVERSITY  
COLLEGE OF GRADUATE STUDIES AND RESEARCH

Effects of Reinforcement and Punishment on Attitude Formation

By

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A thesis

Presented to the faculty of

Towson University

In partial fulfillment

Of the requirements for the degree

Master of Arts in Experimental Psychology

(May, 2012)

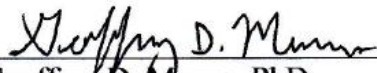
Towson University

Towson, Maryland 21252


**TOWSON UNIVERSITY  
COLLEGE OF GRADUATE EDUCATION AND RESEARCH**

**THESIS APPROVAL PAGE**


This is to certify that the thesis prepared by Julia B. Zirpoli, entitled Effects of Reinforcement and Punishment on Attitude Formation, has been approved by this committee as satisfactory completion of the thesis requirement for the degree of Master of Arts in Experimental Psychology.

  
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## Abstract

Peoples' attitudes may frequently be predicted by the attitudes of their peers or salient individuals of higher status. Previous research focuses on elaborative conditioning to explain this effect. The present study elaborates on this previous research by examining the role of reinforcement and punishment on attitude formation, and creating a paradigm that more accurately reflects real world interaction between the individual and his or her family members and peers. Participants expressed their opinions regarding a candidate running for a position in their university's student government. They received feedback that they were told came from graduate students, and were then given the opportunity to change their opinions. There was significantly more change in participants who received punishment as opposed to those who received reinforcement or the control group. However, rather than causing participants to change their minds, this punishment seemed to have a polarizing effect, causing participants who supported the candidate to become more supportive, and causing participants who opposed the candidate to form a stronger opposition.

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## **Introduction and Literature Review**

It is Tuesday morning, and Lauren is on her way to vote. After waiting in line, she enters the booth and votes for her favorite candidate. Afterwards, she goes about her day, not only proud that she has completed what many consider to be a civic duty, but confident that she has chosen the best person for the job. What has made Lauren so sure of herself, and what process did she go through to eventually settle on her final choice?

It is well known that the political party of an individual's parents is the leading predictor of party affiliation (Achen, 2002). In addition, family members have a large influence on general political ideologies, such as the importance of activism or duty to promote human welfare (Kraut & Lewis, 1975). Attitudes such as tolerance of those with whom the individual disagrees may also be predicted by the parents' attitudes (Owen & Dennis, 1987). Therefore, it is likely that Lauren's parents played a large role in her voting behavior. However, previous literature has not explained what mechanism is behind this relationship.

Parents are not the only people who may influence an individual's attitudes. Individuals tend to match their political attitudes with those of others within their own religion (Hoffman & Miller, 1997) as well as others within the same level of academic achievement (McClintock, Spaulding & Turner, 1965). Students at universities tend to converge in terms of political opinion (Moore & Garrison, 1932). In addition, an individual's presidential selection as well as an individual's approval of a president, may be predicted by the personality factors that are favored by social norms that are present during the time period of the election and term (McCann, 1992). This convergence of



opinions and beliefs among different time periods demonstrates the propensity to vote in accordance with the popular opinion, even as the popular opinion changes over time.

Of course, individuals also tend to vote similarly to others within their own political party, even if it means voting against their own beliefs (Caprara & Zimbardo, 2004). Cohen (2003) examined this effect using social policies, analyzing the influential value of participant party, policy content, and the party that supported the policy. There was a positive relationship found between participant party and the party that supported the policy. So, Democrats would support a policy only if the Democratic Party was said to support it, and Republicans would support a policy only if the Republican Party was said to support it. However, this effect was found regardless of policy content, even though participants denied political party influence, and reported using policy content to make their decision. Therefore, an individual's tendency to vote similarly to others within his or her own party is due to group influence, not shared attitudes.

It is clear that individuals of higher status, as well as peers, have a notable influence upon an individual's attitude formation. Should this relationship between a person's attitudes and that of other individuals be attributed to conformity? Conformity is defined as a change in a minority's behaviors towards the behaviors of the majority. In Asch's famous line study, participants conformed to the majority's perception when they were asked to state their opinions publicly. However, instances of conformity dropped considerably when opinions could be stated privately (Asch, 1956). Therefore, conformity may not be used to account for voting behavior, as it is a private activity. Inside of a voting booth, there is no fear of social rejection due to an unpopular vote, so

there must be something else at play during the formation of these political attitudes that are reflected during voting.

Many researchers use evaluative conditioning to explain the process of attitude formation (Rydell & Jones, 2009; Till, Stanley, & Priluck, 2008; Schemer et al., 2008; Walther, Nagengast, & Trasselli, 2005; Stahl, Unkelbach, & Corneille, 2009; Gibson, 2008). Evaluative conditioning is a specific type of classical conditioning that occurs when the conditioned response holds a degree of aversion or attraction. When a stimulus elicits attraction, it is said to be positively valenced. When a stimulus elicits aversion, it is said to be negatively valenced. During evaluative conditioning, an individual is conditioned to feel positively or negatively toward a neutral stimulus when it is paired with a positively or negatively valenced stimulus (Rydell & Jones, 2009).

Evaluative conditioning is frequently used in advertising, when a celebrity is paired with a product. Till, Stanley, and Priluck (2008) examined this practice of using celebrity endorsements to elicit positive attitudes towards products. The researchers found that pairing a celebrity with a product caused strong and long-lasting attitudes regarding the product, resistant to extinction procedures. This effect was enhanced when the participants felt as though the endorser was well-matched with the product. While celebrity endorsements are generally a successful method of eliciting a positive attitude toward a product, it is important to note that negative attitudes may also be formed via this method, if the celebrity is negatively valenced for the individual (Schemer et al., 2008).

In the above example, the individuals are usually aware of the purpose of the pairing. They know that the celebrity has been paired with the product in order to

increase positive attitudes toward the item, and likewise, they are aware that they like the item more because of the celebrity endorsement. There is conflicting research regarding the necessity of this awareness of the contingency. Some researchers have maintained that evaluative conditioning may occur with or without the individual's awareness that the valenced stimulus is contingent upon the neutral stimulus, demonstrating attitude formation without the individual's awareness of its cause (Walther, Nagengast, & Trasselli, 2005). Others contend that the individual must be unaware of the contingency in the definition of evaluative conditioning (Stahl, Unkelbach, & Corneille, 2009).

Some studies have not shown conditioning in paradigms that pair high-pitched noises with neutral stimuli but only in situations where the person was aware of the contingency between the noise and the response. If individuals demonstrated startle responses, such as blinking or flinching, when the neutral stimulus was presented, it could be inferred that conditioning occurred. In addition, a galvanic skin conductance device was used to measure startle response. In the contingency-aware condition, participants were made aware that the high-pitched noise was dependent upon the presentation of the neutral stimulus. In the contingency-unaware condition, participants were given a cover story to disguise the noise's dependence upon the neutral stimulus. While conditioning was demonstrated in participants who were aware of the contingency, participants in the contingency-unaware condition failed to show startle responses to the neutral stimulus after pairings with the negatively valenced noise.

In some circumstances, evaluative conditioning has been shown to affect implicit attitudes, but not explicit attitudes. Gibson (2008) studied the effect of evaluative conditioning on participant attitudes toward Coke and Pepsi. The conditioning did not

affect explicit participant preference. However, the conditioning altered brand choice when the participants were in a cognitive load situation, implying implicit attitude change.

Mood has also been shown to influence the effectiveness of evaluative conditioning. This effect has been to affect consumer attitudes, with participants in a negative mood showing stronger signs of conditioning than those in a positive mood (Walther & Grigoriadis, 2004). The researchers posit that a negative mood causes the participants to be in a more appetitive state, and thus be more influenced by the conditioning.

While evaluative conditioning has been demonstrated by research, it is difficult to see how it may be generalized to real-world situations, especially those concerning political attitudes. Certainly, advertisements make use of this type of conditioning, but it is unlikely that family member and peers influence attitudes via evaluative conditioning. Evaluative conditioning does not allow for the individual to play an active role. Rather, the individual simply experiences a pairing of stimuli. Because family and peer political attitudes are known to be reliable predictors of an individual's attitudes, and given the frequent interaction an individual has with family and peers, it is important to explore an attitude formation paradigm that includes this interaction.

Research regarding gossip may help create this paradigm. Gossip is generally looked upon as negative, frequently being described as unproductive, and a cause of stressful and negative environments (Difonzo, Bordia, & Rosnow, 1994). However, some social psychological researchers have painted a more positive picture of gossip, explaining its importance to the communication of information regarding social norms.

Kniffin (2005) explored this function, finding gossip to be an effective tool, frequently used to maintain social norms that are beneficial to a group. In fact, gossip has even been shown to have a more powerful effect on behavior than direct observation (Sommerfeld, 2007).

When people are gossiping, they are usually discussing something that a third party said or did and expressing approval or disapproval (Kniffin, 2005). A listener then learns about a social norm, and may modify his or her attitudes and behavior accordingly (Sommerfeld, 2007). This sequence of events could be described as the listener receiving reinforcement or punishment by proxy. That is, they are experiencing the consequences of the third party's behavior. However, it may be inferred that an active participant in the conversation may also be subjected to reinforcement or punishment during the interaction. If an individual begins to express his or her positive opinions regarding a third party's actions, and these opinions are met with disapproval, or opinions that are not congruent with the ones expressed, then the individual does not only experience the negative consequences of the third party's actions, but he or she also experiences direct punishment. Likewise, if an individual's opinions are met with approval, or opinions that are congruent with the ones expressed, he or she experiences direct reinforcement. It is likely that this direct reinforcement or punishment is more salient than the reinforcement or punishment that the listener experiences by proxy. The proposed study tests the hypothesis that attitudes regarding political candidates are significantly affected by the reinforcement or punishment that an individual receives from peers after asserting his or her preexisting attitudes.

## **The Present Study**

It is well established in research that an individual's political attitudes may be predicted by that of his or her family members or peers. This has been explained by evaluative conditioning, or a pairing of the neutral stimulus with a positively or negatively valenced stimulus. However, this paradigm may not adequately represent real world interactions between the individual and others. The present study explored a paradigm of reinforcement and punishment that more accurately reflects these interactions. Because participants' opinions are kept private, the effects elicited by the conditions may not be accounted for by conformity. The researcher predicted that little to no change in opinion would occur when participants were given positive or no feedback. However, it was expected that negative feedback would elicit a change in opinion regarding the candidate, such that participants who reported a positive opinion of the candidate would develop a more negative opinion, and vice-versa.

## **Method**

### *Participants*

Participants in this study consisted of 85 (with 30, 30, and 25 participants in the positive feedback, negative feedback, and control groups, respectively) undergraduates at a medium-sized public university. This number of participants was chosen to mirror the 20 to 30 participants-per-group standard found in social psychological research. They were recruited using an online research pool and received class credit for participation in the study. However, participation was not mandatory, and students are given alternative assignments should they decide against participation in studies.

Participants were asked to rate how carefully they read the study materials, how much they thought about the information they gained from the materials, and how involved they are in the Towson Student Government Association (SGA), all on a 1 to 9 likert-scale. On average, students read the materials carefully ( $M=7.02$ ,  $SD=1.19$ ), put effort into thinking about the materials ( $M=6.07$ ,  $SD=1.62$ ), and were not very involved in the Towson SGA ( $M=2.61$ ,  $SD=2.21$ ).

### *Procedure*

Participants completed the study in groups of seven or less, and were told that they were participating in a study that evaluated the type of student government candidate students prefer. They first completed a consent form, and then read instructions while they are read aloud by the researcher. Afterward, participants read about a student that is running for student government president from a single-page, bullet-point summary about the student. This summary included information regarding the candidate's academic credentials, extra-curricular experience, leadership skills, and future plans, should the candidate be elected. The summary included both positive and negative information, so that the information would elicit varying opinions regarding the candidate. After reading about the student, participants wrote a small paragraph, giving their opinion regarding the candidate. In addition, they completed a questionnaire containing 1 to 9 likert-scaled items assessing their attitudes toward the candidate. This questionnaire included statements such as, "What is your overall opinion of the strength of the student as a candidate," "What is your opinion of the strength of the student's leadership skills," and "What percentage of all voters would vote for the student candidate that you read about?" Participants were then told that a panel of graduate students would review their writing,

and were given a distracter task to complete. During this task, students were asked to answer the following open-ended question: “What characteristics do you look for in a leader? Which of these characteristics in particular are important to you in a student government candidate?” They also completed a questionnaire containing likert-scaled items regarding student government in general. After ten minutes, the participants were given positive, negative, or no feedback that they were told was written by one of the students on the panel, serving as either reinforcement, punishment, or a control group, respectively. In the reinforcement condition, responses said, “You really hit the nail on the head about this particular candidate. This is well written and well stated”. In the punishment condition, the response said, “I’m not sure you completely understand the positions the candidate is expressing. Your opinions seem to be carelessly formed and aren’t expressed very well here. Reread the section regarding on-campus smoking please.” In the control group, participants were told that the researcher was unable to find the members of the panel, so the participants would not be able to receive feedback. Participants were then told that they were to rewrite their paragraphs, and that this final draft will be submitted to a student committee that helps choose which candidates will appear on the ballot. Participants then completed a likert-scaled questionnaire regarding their current mood, in which they rated how much they feel each provided emotion on a scale of 1 to 9. In addition, they re-completed the questionnaire regarding their attitudes towards the candidate. In reality, the candidate, as well as the graduate student panel, was fake, and the researcher wrote all feedback. Finally, participants were debriefed about the real nature of the study, as well as the deception.

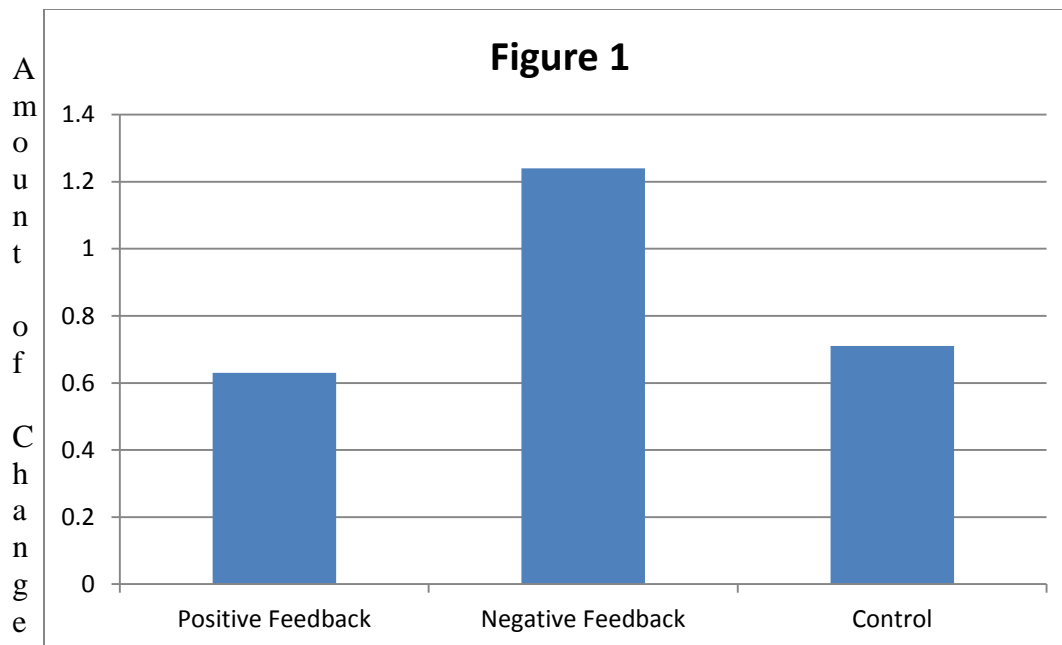


## Results

### *Open-Ended Responses*

The participants' pre and post-manipulation responses to the open-ended questions regarding their opinions of the candidate were coded on a likert-scale of 1 to 7 by three raters, with 1 representing the participant strongly disliked the candidate, and 7 representing the participant strongly liking the candidate. These raters consisted of the researcher, and two other individuals with graduate degrees in the field of psychological science. All raters were blind to the condition each participant was in. Raters were assessed for reliability using Cronbach's alpha. Cronbach's alphas for the pre and post-manipulation items were .87 and .88 respectively. The ratings of the three raters were averaged for both the pre and post-manipulation items. The absolute value of the difference between these two scores was used to create the "change in response variable," which quantified the amount of change between responses.

A one-way analysis of variance (ANOVA) was used to compare the three feedback conditions (positive, negative, or no feedback). The effect of the feedback conditions on the participants' change in response was statistically significant,  $F(2,82)=6.73, p<.05$ , Partial Eta Squared=.14, Power=.91. Post hoc comparisons using the Tukey HSD test indicated that participants in the negative-feedback condition demonstrated more change ( $M=1.24, SD=.92$ ) than participants in the positive-feedback condition ( $M=.63, SD=.47$ ) or control group ( $M=.71, SD=.62$ ). There were no significant differences between the positive-feedback and control conditions  $p>.05$ . See Figure 1.



Participants were divided into two groups according to their opinions of the candidate (level of opinion). Those whose first responses were coded as less than or equal to 4 were categorized as having a low opinion of the candidate ( $n=38$ ). Those whose first responses were coded as greater than 4 were categorized as having a high opinion of the candidate ( $n=47$ ). An ANOVA with repeated measures was used to evaluate the effect of level of opinion, feedback condition, and time on participants' opinions of the candidates. This test revealed a significant *time by level of opinion* interaction,  $F(1,79)=26.51$ ,  $p<.05$ , Partial Eta Squared=.25, Power=.99. Those with a high opinion of the candidate in their first response ( $M=5.01$ ,  $SD=.99$ ), had a significantly higher opinion of the candidate in their second response ( $M=5.41$ ,  $SD=.67$ ). Those with a low opinion of the candidate in their first response ( $M=3.93$ ,  $SD=.96$ ), had a significantly lower opinion of the candidate in their second response ( $M=3.22$ ,  $SD=.65$ ).

### *Questionnaire*

As with the open-ended responses, the absolute value of the difference between the first and second administration of the questionnaire was used to determine the amount of change between pre and post-manipulation scores. A MANOVA was used to compare the three feedback conditions on the questionnaire items. There were no significant differences between groups (in terms of change between the first and second administration),  $F(1,82) = 1.34, p > .05$ .

#### *Manipulation Check*

A factor analysis was used to categorize affect measure items (factor loadings  $> .40$ ). As a result, proud, happy, content, enthusiastic, pleased, and energetic were grouped and averaged together to create a positive emotion variable. Irritated, angry, and sad were grouped and averaged together to create negative emotion variable.

There was a significant difference between feedback conditions in terms of positive emotions,  $F(2,82) = 15.84, p < .05$ , Partial Eta Squared = .28, Power = .99. Those in the positive feedback ( $M = 5.57, SD = .78$ ) and control condition ( $M = 5.00, SD = .67$ ), reported more positive affect than those in the negative feedback condition ( $M = 4.17, SD = 1.29$ ). A post hoc comparison using the Tukey HSD test indicated a significant difference between the positive and negative feedback conditions,  $p < .05$ , as well as a significant difference between the control and negative feedback conditions,  $p < .05$ . There was not a significant difference between the control and positive feedback conditions,  $p > .05$ .

There was also a significant difference between feedback conditions in terms of negative emotions,  $F(2, 82) = 4.61, p < .05$ , Partial Eta Squared = .10, Power = .77. Those in the negative feedback condition reported more negative emotions ( $M = 3.86, SD = 1.10$ )

than those in the positive feedback condition ( $M=3.12$ ,  $SD=1.24$ ), and those in the control condition ( $M=3.10$ ,  $SD=.85$ ). A post hoc comparison using the Tukey HSD test indicated a significant difference between the positive and negative feedback conditions,  $p<.05$  as well as a significant difference between the control and negative feedback conditions,  $p<.05$ . There was not a significant difference between the control and positive feedback conditions,  $p>.05$ .

### **Discussion**

When completing open ended responses, participants who were given negative feedback demonstrated significantly more change in their opinions of the candidates than those who were given positive feedback, or no feedback at all. There were no differences between those given positive feedback or no feedback. These results are in line with the original hypothesis that punishment will have a significant effect upon political attitudes. Reinforcement seemed to provoke little change in attitudes, which is not counterintuitive; individuals are not likely to change their behavior when they are told they are doing something right.

While it was expected that negative feedback would illicit change in attitudes, the type of change was unexpected. The a priori hypothesis in this study was that negative feedback would cause participants to change their mind regarding the student government candidate. That is, if they had a positive opinion of the candidate, they would change their responses to reflect a negative opinion, and vice-versa. However, in all conditions, there seemed to be a polarizing effect in the second response. That is, participants who had a positive opinion of the candidate formed an even more positive opinion of the candidate. Likewise, participants who had a negative opinion of the candidate the first

time they wrote their response formed an even more negative opinion for their second response. It is also unexpected that this effect would be found across all conditions.

While more change was initially found in the negative feedback condition in the previously mentioned analysis, this within-groups analysis did not reveal significant differences. When examining means (*see Table 1*), there appears to be a trend towards a stronger polarizing effect in the negative feedback condition. However, these differences between groups are not statistically significant.

**Table 1**

	<i>High Opinion</i>			<i>Low Opinion</i>		
	<i>Positive Feedback</i>	<i>Negative Feedback</i>	<i>Control</i>	<i>Positive Feedback</i>	<i>Negative Feedback</i>	<i>Control</i>
<i>1st Response</i>	5.38	5.00	4.56	3.98	4.20	3.67
<i>2nd Response</i>	5.56	5.58	4.94	3.42	2.97	3.18

A manipulation check, in the form of an affect measure, was included. Those who received positive feedback reported significantly more positive emotions than those in the control and negative feedback conditions, exhibiting that the manipulation had the desired effect. Those who received negative feedback reported significantly more negative emotions than those in the control and positive feedback conditions, exhibiting that the manipulation had the desired effect.

### **Limitations and Future Direction**

The largest limitation of the present study involves the type of feedback given to participants. While the positive and negative feedback elicited positive and negative emotions, respectively, the feedback did not elicit the type of change in attitude that was expected. The researcher posits that this may be due to the superficial nature of the feedback. That is, the feedback may have been more effective if it were more constructive, or specific to each individual's response. Because there was only one script for positive feedback, and one script for negative feedback, the feedback was intentionally written to be very vague, and therefore apply to a wide range of responses. While vague negative feedback will elicit negative emotions, it seems as though more

depth in terms of criticism is required in order to change an individual's mind, instead of causing the individual to become more entrenched in his or her opinions. Therefore, in future studies, it is suggested that the researchers create a wider range in positive and negative feedback scripts, in order to further personalize the feedback to the participants, and therefore create more constructive criticism. Because this will be more time consuming than the methods of the present study, breaking the study session into two study sessions may become necessary.

Second, the source of the feedback is a limitation of the present study. A review of the literature revealed that individuals of a higher status, such as parents, have a large influence upon a person's political attitudes (Achen, 2002). However, given time and location constraints, it was not possible to use the parents of participants as confederates. In order to mimic this relationship, the researcher told participants that the feedback was coming from a panel of graduate students. It was hoped that graduate students would be viewed by undergraduate students as individuals of a higher status, and therefore the feedback would be looked upon as having more value. However, it is possible that the feedback did not elicit the expected results because the feedback was not coming from people that the participants were close with or knew personally. Therefore, it is recommended that future studies use friends of the participants as confederates in order to provide more salient feedback. In this suggested procedure, students would sign up for the study in pairs. One student from each pair would be recruited as a confederate to provide feedback, and one student would become the study participant.

Finally, the lack of significant results in questionnaire data suggests that participants were subject to practice effects. In other words, the second time a participant

completed the questionnaire, the participants simply remembered their answers from the previous questionnaire, and duplicated the results. In order to avoid this effect, future studies might omit the first administration of the questionnaire and rely on control group comparisons of the second administration.

### **Implications**

In terms of real world applications, the present study may be applied to campaign strategies for current political candidates. Given the results of the present study, it seems as though campaign strategies that rely upon punishing individuals for supporting a particular candidate without any significant logical arguments may not elicit the desired effect. Therefore, it is important to avoid campaign messages that elicit negative emotions in voters by using vague negative statements regarding the candidate, as this type of argument may cause defensiveness in voters. Rather, a campaign strategy that features logical arguments that do not put down, or punish, opposing candidates may be more effective, as higher quality arguments typically illicit less of this defensive response (Das, Vonkeman & Hartmann, 2012). Finally, the present study suggests that the biggest predictor of a voter's final opinion is their initial opinion, with time making this initial opinion stronger. Therefore, it is important for candidates to make a positive first impression with voters.

### **Conclusion**

It is Tuesday morning, and Lauren is on her way to vote. After waiting in line, she enters the booth and votes for her favorite candidate, confident that she has chosen the best person for the job. What processes did she go through to eventually settle on her



final choice? After reviewing the results of the present study, it is clear that if Lauren has discussed her opinions with her peers, their responses and feedback played a role in her confidence regarding her final decision. Perhaps some of her peers provided her with positive reinforcement for her opinions, while others punished her with negative feedback. While these peers attempted to change Lauren's mind, it is unlikely that they caused her to do anything except become more secure in her original opinions.

## APPENDICES

## APPENDIX A

**APPROVAL NUMBER: 12-A016**

To: Julia Zirpoli  
7824 Parke West Drive Apt 201  
Glen Burnie MD 21061

From: Institutional Review Board for the Protection of Human  
Subjects, Debi Gartland, Chair

Date: Thursday, November 10, 2011

RE: Application for Approval of Research Involving the Use of  
Human Participants



Office of University  
Research Services

Towson University  
8000 Park Drive  
Towson, MD 21286-2000

T 410 704 2238  
F 410 704 1146

Thank you for submitting an Application for Approval of Research Involving the Use of Human Participants to the Institutional Review Board for the Protection of Human Participants (IRB) at Towson University. The IRB hereby approves your proposal titled:

*Effects of Reinforcement and Punishment on Attitude Formation*

If you should encounter any new risks, reactions, or injuries while conducting your research, please notify the IRB. Should your research extend beyond one year in duration, or should there be substantive changes in your research protocol, you will need to submit another application for approval at that time.

We wish you every success in your research project. If you have any questions, please call me at (410) 704-2236.

CC: G. Munro  
File



Date: Thursday, November 10, 2011

### NOTICE OF APPROVAL

TO: Julia Zirpoli DEPT: PSYC

PROJECT TITLE: *Effects of Reinforcement and Punishment on Attitude Formation*

SPONSORING AGENCY:

APPROVAL NUMBER: 12-A016

The Institutional Review Board for the Protection of Human Participants has approved the project described above. Approval was based on the descriptive material and procedures you submitted for review. Should any changes be made in your procedures, or if you should encounter any new risks, reactions, injuries, or deaths of persons as participants, you must notify the Board.

A consent form:  is  is not required of each participant

Assent:  is  is not required of each participant

This protocol was first approved on: 10-Nov-2011

This research will be reviewed every year from the date of first approval.

*Debi Gartland*

Debi Gartland, Chair

Towson University Institutional Review Board

*WMP*

## APPENDIX B



### Consent Form: What Characteristics are the Most Desirable in Leaders?

This study is being conducted by Julia Zirpoli of the Department of Psychology at Towson University. The purpose of the study is to investigate which characteristics people find most desirable in leaders, such as political figures. If you agree to participate, you will be asked to read about one student government candidate. After reading the about the candidate, you will be asked to complete a questionnaire. This will include questions using rating scales in which you will respond simply by circling a number. In addition, you will be asked to write a couple of brief response regarding your opinions on the candidate you read about, as well as your personal preferences in a leader. Your response to the candidate will be reviewed and edited by a graduate panel, and then you will be asked to rewrite your response to be submitted to a committee of faculty members that advise the Towson Student Body Government. You should know that social science research sometimes involves the researcher(s) concealing some aspects of the study from the participants. It is hoped that the results of this study will further our understanding of how people make decision and come to conclusions.

You do not have to participate in this research, and you have the right to withdraw at any time during this research without penalty. Taking part in this study is entirely up to you, and no one will penalize you in any way if you decide not to do so. There are no known risks associated with participation in this study, however, if you should become distressed in any way, you have the right to terminate your participation immediately. Should you agree to participate in this study, your responses will be filed in a manner that will ensure complete anonymity and confidentiality. You will be assigned a code number such that the data will be stored with no record of your name kept along with the answers you provide. The study will last approximately 45 minutes.

If you want to know more about this research project, please contact Julia Zirpoli at [jzirpol@students.towson.edu](mailto:jzirpol@students.towson.edu). This project has been approved by the Institutional Review Board of Towson University. If you have questions about Towson University's rules for research, please contact Dr. Debi Gartland, Chairperson of the Institutional Review Board for the Protection of Human Participants at Towson University at 410-704-2236

I agree to take part in this project. I know what I will have to do and that I can stop at any time.

Signature \_\_\_\_\_ Date \_\_\_\_\_

## APPENDIX C

### INSTRUCTIONS

This study is investigating what types of characteristics people prefer in leaders such as political figures. In this study, you will read about a Towson Study Government (SGA) candidate and complete questionnaires regarding what you read. We would like to submit one portion of your response to the committee of faculty members that advises the Towson Student Body Government. Therefore, this particular portion will be reviewed by a panel of graduate students while you are completing other tasks.

Your task is to first complete read about the candidate you were given information about. Afterwards you may move on to the complete the questionnaires that are included in your folder. After everyone has completed this portion, you will receive a second questionnaire to be completed while your first response is reviewed and edited by the graduate student panel. After your responses have been reviewed, we ask that you rewrite a final draft of your responses to be submitted to the faculty committee. Once you have completed this final draft, you may quietly exit the study room.

## APPENDIX D

**Pat Davis****Running for: Student Body President****Student Government Experience:**

*“My freshman year I was the class secretary, and my sophomore year I was able to become vice-president of my class. This year, I made it to being class-president. I’ve loved every minute of being in SGA and serving my class. I look forward to serving the entire school next year, if I am granted the opportunity to become student body president.*”

**Extra-Curricular Activities:**

*“I’ve been playing soccer for Towson since my freshman year. Last year I joined the Spanish club. I find that it’s important to be involved in a wide range of extra-curricular activities to truly make the most of your experience at Towson, and take advantage of all the university has to offer.”*

**What do you love about Towson?**

*“I love all the diversity that you find here. There’s such a wide range of ethnicities and beliefs in all of my classes. It really promotes a huge variance in opinions during discussions, which I think is important when considering an issue.”*

**What would you like to see change at Towson?**

*“I’m not a fan of the recent smoking policy. I’m not a smoker myself, but if somebody wants to smoke, that’s their business.”*

## APPENDIX E

The following questions concern the candidate that you just read about. Please read each question carefully and answer them using the scales provided.

1. For which position was the student running?

2. How carefully did you read the brochure?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
not at all very

3. To what degree did you think a great deal about the information in the brochure?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
not at all very much

4. If you were definitely voting in the election, what is the overall likelihood that you would vote for the student candidate that you read about?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
very very  
unlikely likely

5. To what degree did the candidate advertised on the brochure make you feel positive emotions like happiness, satisfaction, excitement, or pride?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
not at all very much

6. To what degree did the candidate advertised on the brochure make you feel negative emotions like anger, irritation, disgust, or anxiety?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
not at all very much

7. What is your overall opinion of the strength of the student as a candidate?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
very very  
poor good



8. What is your opinion of the strength of the student's academic credentials?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
 very very  
 poor good

9. What is your opinion of the strength of the student's extra-curricular experience?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
 very very  
 poor good

10. What is your opinion of the strength of the student's leadership skills?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
 very very  
 poor good

11. What is your opinion of the student's plans should they be elected?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
 very very  
 poor good

12. What percentage of your close friends would you estimate would vote for the student candidate that you read about?

0% --- 10% --- 20% --- 30% --- 40% --- 50% --- 60% --- 70% --- 80% --- 90% --- 100%

13. What percentage of all voters would you estimate would vote for the student candidate that you read about?

0% --- 10% --- 20% --- 30% --- 40% --- 50% --- 60% --- 70% --- 80% --- 90% --- 100%

14. How involved are you in the Towson Student Body Government?

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
 not at all very







## APPENDIX I

Please indicate how much you are feeling or are not feeling each of the following emotions right now.

**1. Irritated**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**2. Proud**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**3. Happy**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**4. Content**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**5. Enthusiastic**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**6. Pleased**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**7. Angry**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**8. Sad**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**9. Frustrated**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

**10. Energetic**

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9  
Not at All Very

## APPENDIX J

**Debriefing script**

Now that the actual study is over, I would like to ask you a few questions and then say a few things about the study itself.

First of all, do you have any questions?

We are interested in the way in which people make form opinions and attitudes. Specifically, the goal of this study was to test whether you would change your opinion of the candidate one you received reinforcement or punishment. Our hypothesis is that people refer to reinforcement and punishment from their peers and families when forming opinions about political candidates.

In order to test these predictions, read about a student body candidate, and complete questionnaires regarding what you read. In order to have as much control as possible over what you read, and what type of feedback you were exposed to, the student body candidate, as well as the graduate panel and their responses, were completely made up. Thus, you should not exit this study session believing that the person you read about was real, or that feedback you received was real. We told you that candidate and responses were real so that you would respond in a normal and natural manner.

That's it. Do you have any questions before you go? Thank you for participating.

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## Curriculum Vita

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**Bridgewater College**, Bridgewater, VA

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#### PROFESSIONAL EXPERIENCE

**Kennedy Krieger Institute, Center for Genetic Disorders of Cognition and Behavior**

Baltimore, MD, *Research Coordinator I*, September 2011 – February 2012

**Johns Hopkins University, Behavioral Pharmacology Research Unit**

Baltimore, MD, *Research Program Assistant I*, September 2010 – September 2011

#### PRESENTATIONS

**Association for Psychological Science Convention**, Washington, DC – May 2011

*Poster Presentation*, Effects of Personal Threat on Reasoning and Quantity of Processing

**Association for Psychological Science Convention**, Washington, DC – May 2011

*Poster Presentation*, Political Partisanship: Third Party Labels Bias Evaluations of Political Candidates.

**Towson University Annual Student Research and Scholarship Exposition**,

Towson, MD – April 2011, *Poster Presentation*, D-Serine as a Cognitive Enhancer of Long Term Potentiation

**Alpha Chi Research Convocation**, Bridgewater, VA – April 2009

*Speaker*, The subjective nature of grading: How expectations alter performance evaluation.

**Virginia Psychological Association Annual Conference**, Williamsburg, VA – April 2009

*Poster Presentation*, The subjective nature of grading: How expectations alter performance evaluation.

**Neurobehavioral Teratology and Toxicology Annual Conference**, Monterey, CA – July 2008

*Poster Presentation*, How the interaction of age, sex, peer influence and ethanol impacts measures of anxiety in mice

## PUBLICATIONS

Munro, G.D., Schuman, A.R., & Zirpoli, J.B. (2010). Political Party Bias. Manuscript submitted for publication.

## GRANTS

209AS208 - A Randomized, Double-Blind, Placebo-Controlled Study of the Efficacy, Safety, and Tolerability of STX209 (Arbaclofen) Administered for the Treatment of Social Withdrawal in Subjects with Autism Spectrum Disorders.

*September 2011 to February 2012 at Kennedy Krieger Institute*

209AS209: An Open-Label Extension Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of STX209 (Arbaclofen) in Subjects with Autism Spectrum Disorders.

*September 2011 to February 2012 at Kennedy Krieger Institute*

209FX301: A Randomized, Double-Blind, Placebo-Controlled Study of the Efficacy, Safety, and Tolerability of STX209 (Arbaclofen) Administered for the Treat of Social Withdrawal in Adolescents and Adults with Fragile X Syndrome.

*September 2011 to February 2012 at Kennedy Krieger Institute*

209FX302: A Randomized, Double-Blind, Placebo-Controlled, Fixed-Dose Study of the Efficacy, Safety, and Tolerability of STX209 (Arbaclofen) Administered for the Treatment of Social Withdrawal in Children with Fragile X Syndrome.

*September 2011 to February 2012 at Kennedy Krieger Institute*

209FX303: An Open-Label Extension Study to Evaluate the Safety, Tolerability, and Pharmacokinetics of STX209 (Arbaclofen) in Subjects with Fragile X Syndrome.

*September 2011 to February 2012 at Kennedy Krieger Institute*

A Randomized, Double-Blind, 12-Week, Parallel-Group, Placebo-Controlled, Study of the Efficacy and Safety Of RO4917523 in Patients with Fragile X Syndrome.

*September 2011 to February 2012 at Kennedy Krieger Institute*

Epigenetic Influences in Idiopathic Autism.

*September 2011 to February 2012 at Kennedy Krieger Institute*

*Sponsor: Department of Defense*

1004: A Double-Blind, Randomized, Placebo-Controlled, Multi-Center Study to Assess the Clinical Efficacy, Safety, & Immunogenicity of a Human Cocaine Vaccine, TA-CD09, in the Treatment of Cocaine Dependence.

*September 2010 to September 2011 at Johns Hopkins, School of Medicine*

1005: Medications Development for Drug Abuse Disorders.

*September 2010 to September 2011 at Johns Hopkins, School of Medicine*

1003: A Within-Subject Comparison of Opioid Withdrawal in Opioid Dependent Individuals.

*September 2010 to September 2011 at Johns Hopkins, School of Medicine*

0810: A Bridge to Treatment: The Therapeutic Workplace & Methadone Treatment.

*September 2010 to September 2011 at Johns Hopkins, School of Medicine*

