

# Music's Effect on Mood and Helping Behavior

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## ABSTRACT

Helping behavior in humans ranges from generous selfless acts to ignoring real needs. Prior research has shown that both the nature of background music and lyrical content has an effect on helping behavior. Our study incorporated both of these variables by investigating the effects that music has on mood and helping behavior. Statistical significance was found for both positive mood change and negative mood change. Mood scores for participants in the prosocial lyrics and uplifting music conditions became more positive and less negative. In contrast, mood scores for participants in the antisocial lyrics and annoying music conditions became less positive and more negative. Mood scores for the control condition became both less positive and less negative. No statistical significance was found for helping behavior based on music condition. Despite the lack of significance in donating behavior, music still may have the power to influence an individual's willingness to help.

## INTRODUCTION

Helping behavior in humans ranges from generous selfless acts to ignoring real needs. The American Red Cross received \$2.4 billion to help victims of Hurricane Katrina (Strom, 2006). Yet, in 1964 the infamous murder of Kitty Genovese shook researchers and citizens alike when up to thirty-eight neighbors witnessed the attack and did nothing (Kassin, Fein, & Markus, 2008). As a result, social psychologists became more interested and concerned with the factors associated with helping behavior. Our study examined the role of music in creating conditions favorable or unfavorable to helping behavior.

### *Theories of Helping Behavior*

Several factors are involved in whether or not someone chooses to help another individual. Research suggests that individuals are less likely to help when others are around due to a "diffusion of responsibility" (Darley & Latané, 1968). Also, helping behavior is influenced by the potential rewards and costs of the situation, which is known as the "arousal: cost-reward" model (Kassin, Fein, & Markus, 2008). Generally, individuals are more likely to help if the rewards at stake are high and the consequences are low (Karakashian, Walter, Christopher, & Lucas, 2006). In addition, individual characteristics have been shown to play an important role in helping behavior. Individuals are more likely to help someone of the same race (Kunstman & Plant, 2008) and when the situation reflects culturally determined social roles. For example, men have been found to help women more often than men, demonstrating behavior consistent with social roles (Karakashian et al., 2006; Levine & Crowther, 2008).

### *Mood and Helping*

Evidence suggests that environmental factors may be manipulated to influence an individual's mood. Participants subjected to conditions designed to induce positive moods were more likely to engage in helping behavior (Guéguen & De Gail, 2003). For instance, people who have been the recipients of smiles, increased eye contact, or touch are more likely to help than others (Goldman & Fordyce, 1983; Guéguen & De Gail, 2003). Studies have also ascertained that helping behavior increases on sunny days, cooler days in summer, and warmer days in winter (Cunningham, 1979). Baron (1997) demonstrated that in the presence of pleasant smells, customers in a shopping mall were more likely to either retrieve a pen or provide change for a dollar for another customer. Several such environmental factors have been studied in relationship to enhancing mood and helping behavior, but an area that has received little attention is the effect of music on mood and helping behavior.

### *Mood, Music, and Helping*

Music has the potential to influence mood, feelings, and thoughts. In one study assessing the impact of music on mood and helping behavior, participants in two similar university gyms were exposed to either upbeat music

designed to induce a positive mood or annoying music designed to induce a negative mood. Participants who listened to upbeat music were subsequently more willing to engage in a helping behavior when asked to do immediately after exercising (North, Tarrant, & Hargreaves, 2004). Another study demonstrated the effect of music on thoughts and feelings; participants who were exposed to a rock song with violent lyrics showed higher levels of hostile feelings than participants who heard a nonviolent rock song (Anderson, Carnagey, & Eubanks, 2003). Also, participants who finished a word completion task produced a greater number of prosocial words after hearing a song with prosocial lyrics than participants who listened to a song with neutral lyrics (Greitmeyer, 2009). This shows a possible link between song lyrics and accessibility of prosocial thoughts.

Greitmeyer (2009) analyzed the relationship between music and actual behavior. Participants were told they were doing a marketing research study on music preference for which they would be paid. When they were given their money at the end of the fake study, the researcher mentioned that there was a donation box for a non-profit organization to which they could donate their earnings, but there was no obligation. Participants who heard music with prosocial content were more likely to donate money than participants who heard a neutral song.

Our study further explored the effect music has on mood and helping behavior. We expanded upon prior research by incorporating a condition with no music as a control. Previous research has shown that both the lyrical content and the nature of the music have an effect on helping behavior, but no known study has explored both variables simultaneously. Research has also suggested a link between music and mood as well as a link between mood and helping behavior. In order to incorporate all of these characteristics, we manipulated music conditions, assessed participants' moods, and measured helping behavior. We hypothesized that music with prosocial lyrical content and music with an uplifting nature would lead to an increase in helping behavior compared to a control condition. Furthermore, music with antisocial lyrical content or music with an annoying nature would lead to helping behavior below that of the control condition.

## METHOD

### *Participants*

We solicited 97 undergraduate students from the University of Wisconsin-La Crosse, consisting of 67 females and 30 males. Participants received a small amount of course credit for participating. There were 17 to 21 participants in each experimental condition.

### *Materials and Procedure*

Participants were assigned to one of the five conditions in which they completed questionnaires in a room in which all participants could clearly hear the music and lyrics. The five conditions included music with prosocial lyrics, music with antisocial lyrics, uplifting music, annoying music, and no music. The uplifting music includes songs that are popular and have an upbeat tempo. Annoying music included computer animated music with no lyrics. See the Appendix for a complete list of the songs used in each condition. We told participants that we were studying the effect of various types of music on a variety of measures. The first and last measure participants completed was the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988). The other measures were used to engage the respondents for the full amount of time and included various filler tasks. Filler tasks included various personality measures and a word completion task. In each condition, music was played for 25 minutes allowing for equal exposure.

When all of the measures were completed, each participant received an envelope with five one-dollar bills in it (based on the methodology of Greitmeyer, 2009). They were instructed to put all their materials in the envelope and told the money was a payment for their participation. They were not told beforehand about receiving payment so that they would not have previous intentions of how to spend the money. We mentioned that we were collecting donations for United Way and that they have the option of leaving in the envelope as much of their payment as they desire, but there is no obligation.

## RESULTS

Changes in positive and negative mood were established via a pre and post administration of the PANAS. As seen in Table 1, music conditions influenced the direction of both positive and negative mood change. A one-way ANOVA indicated statistical significance in positive mood score change across music conditions,  $F(4, 91) = 5.07, p < .05$ . Pos hoc comparisons were conducting using an alpha level of .05. For the annoying, antisocial lyrics, and no music conditions positive mood scores decreased. In contrast, positive mood scores increased for the prosocial lyrics and uplifting conditions.

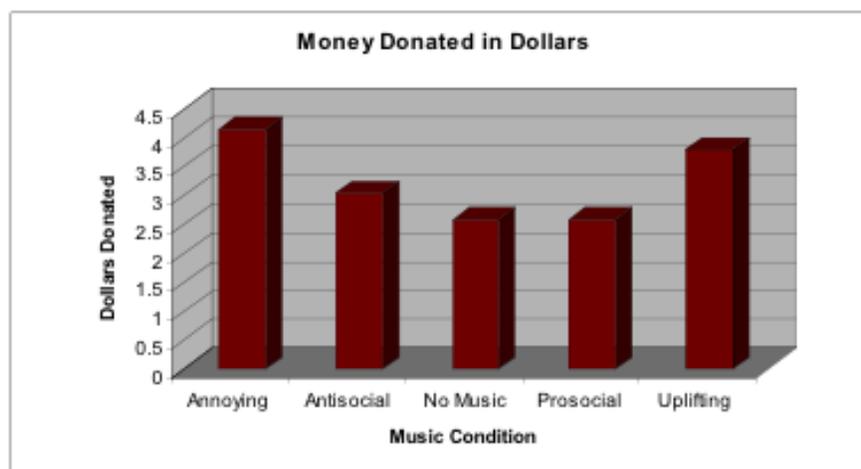
**Table 1.** Positive and Negative Mood Change Scores

	Annoying	Antisocial	No Music	Prosocial	Uplifting
Positive Mood Change*	-4.45	-1.67	-4.18	2.79	2.11
Negative Mood Change*	1.33	2.40	-1.18	-2.53	-2.37

\*Statistically significant

In addition, a one-way ANOVA found statistical significance for negative mood score change based on music condition,  $F(4, 91) = 3.98, p < .05$ . Negative mood scores increased for the annoying and antisocial lyrics music conditions. For the prosocial lyrics, uplifting, and no music conditions negative mood scores decreased.

Music condition was not found to have an influence on helping behavior. A one-way ANOVA yielded no statistical significance regarding the amount of money donated based on music condition,  $F(4, 92) = 2.11, p > .05$ . Figure 1 illustrates the average amount of money donated in each music condition. Overall, the average amount donated in each condition was \$3.26.



**Figure 1.** Average Money Donated by Music Condition

## DISCUSSION

Our study demonstrated music has the power to influence mood both positively and negatively. As hypothesized, participants' mood was positively influenced by uplifting music and prosocial lyrics. Also as predicted, participants' mood was negatively influenced by annoying music and antisocial lyrics. However, the no music control condition produced unexpected results in which participants' positive and negative mood scores both decreased.

There are several possible explanations as to why an individual's mood would change based on music. As previously found, music with prosocial lyrics gives an individual access to more prosocial thoughts (Greitmeyer, 2009). We believe the prevalence of prosocial thoughts would make a person more inclined to rate themselves higher on the positive affect items present in the PANAS. This being the case, we can make the argument that music with antisocial lyrics would have the opposite effect. We believe individuals would have more access to antisocial thoughts, thus rating themselves higher on negative affect items.

In addition, there are several reasons why the uplifting and annoying music successfully manipulated participants' moods. We believe a main factor influencing the uplifting condition is the popularity of the songs, which have an upbeat tempo and are easily recognizable. Due to the popularity of these songs, they are often heard on the radio and at social events, which may make them associated with positive thoughts and feelings. In contrast, the annoying condition involved music without lyrics that is not played on the radio for enjoyment. We chose computer-animated music from video games that has an extremely fast tempo and is repetitive. The fast tempo and repetitive nature was distracting and likely annoyed participants which decreased their moods.

Music-induced mood was expected to influence helping behavior. However, music did not significantly affect the amount of money participants donated. Even though our helping behavior results were not statistically significant, music may still have the power to influence helping behavior due to limitations specific to our study.

Previous research conducted by Greitemeyer (2009) found a significant difference in money donated based on whether participants listened to music with prosocial lyrics or neutral lyrics. Similar to our study, the experimenter paid participants for their participation and then gave them the option to donate to a non-profit organization. Despite the similar methodology, experimenters in Greitemeyer's study left the room once participants were given the option of donating whereas we were in the room for the entire duration of the study. We believe being in the room may have influenced the donation behavior of our participants.

A few limitations experienced in our study include the proximity of participants, problems with technology equipment, and the expectation that music would be heard during the no music condition. The proximity of participants allowed them to view each other's behavior, which may have possibly influenced their own behavior. Problems with technology equipment occurred during the annoying music condition, causing the study to be delayed. In addition, the same song played on repeat for the entire condition. These factors were extraneous variables that may have influenced the participants' behavior in ways other than expected. Furthermore, participants in every condition expected to hear music. Given this expectation, participants in the no music condition may have been disappointed or simply bored due to the lack of other stimulation.

To improve upon these limitations in future research, given the proper resources we would find it beneficial to test participants individually as well as leave the room after offering the option of donating money. This eliminates the influence of the presence of others as participants make a decision. Future research may be improved by eliminating the mention of music from the sign-up sheets so that no expectations are developed. Along with these factors, our research may be expanded upon by testing a variety of age groups as well as varying the amount given for participation.

Beyond helping behavior, there is practical value in further study involving music, mood, and behavior in general. Music is heard in numerous settings including elevators, restaurants, and shopping centers. Knowing how music can influence both mood and behavior can aid in creating the desired atmosphere in each of these situations. For example, research has shown that music can influence willingness to spend money in a cafeteria setting (North & Hargreaves, 2006). Knowing how music can influence spending is helpful in a variety of situations. Knowledge of how music influences mood may help induce a positive environment or avoid situations fostering negativity. Proper use can either inhibit or elicit the types of moods and behaviors appropriate for the setting. There is still much to be discovered about the impact of music.

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## REFERENCES

- Anderson, C. A., Carnagey, N. L., & Eubanks, J. (2003). Exposure to violent media: The effects of songs with violent lyrics on aggressive thoughts and feelings. *Journal of Personality and Social Psychology, 84*(5), 960-971.
- Baron, R. (1997). The sweet smell of...helping: Effects of pleasant ambient fragrance on prosocial behavior in shopping malls. *Personality and Social Psychology Bulletin, 23*(5), 498-503.
- Cunningham, M. (1979). Weather, mood, and helping behavior: Quasi experiments with the sunshine samaritan. *Journal of Personality and Social Psychology, 37*(11), 1947-1956.
- Darley, J., & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology, 8*(4), 377-383.
- Goldman, M., & Fordyce, J. (1983). Prosocial behavior as affected by eye contact, touch, and voice expression. *Journal of Social Psychology, 121*(1), 125-129.
- Greitemeyer, T. (2009). Effects of songs with prosocial lyrics on prosocial thoughts, affect, and behavior. *Journal of Experimental Social Psychology, 45*(1), 186-190.
- Guéguen, N., & De Gail, M. (2003). The effect of smiling on helping behavior: Smiling and good Samaritan behavior. *Communication Reports, 16*(2), 133-140.
- Karakashian, L., Walter, M., Christopher, A., & Lucas, T. (2006). Fear of negative evaluation affects helping behavior: The bystander effect revisited. *North American Journal of Psychology, 8*(1), 13-32.

- Kassin, S., Fein, S., & Markus, H. R. (2008). Helping others. In *Social psychology* (pp. 344-386). Boston: Houghton Mifflin Company.
- Kunstman, J., & Plant, E. (2008). Racing to help: Racial bias in high emergency helping situations. *Journal of Personality and Social Psychology*, 8(4), 377-383.
- Levine, M., & Crowther, S. (2008). The responsive bystander: How social group membership and group size can encourage as well as inhibit bystander intervention. *Journal of Personality and Social Psychology*, 95(6), 1429-1439.
- North, A., & Hargreaves, D. (1998). The effect of music on atmosphere and purchase intentions in a cafeteria. *Journal of Applied Social Psychology*, 28(24), 2254-2273.
- North, A., Tarrant, M., & Hargreaves, D. (2004). The effects of music on helping behavior: A field study. *Environment and Behavior*, 36(2), 266-275.
- Strom, S. (2006, June 19). Report finds disasters fueled rise in giving in 2005. *New York Times*.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.

## APPENDIX

### *Uplifting Music*

- “I believe in a thing called love”- The Darkness
- “Barbara Ann”- The Beach Boys
- “Girls just wanna have fun”- Cindy Lauper
- “ABC”- The Jackson Brothers
- “Land down under”- Australia
- “Brown-eyed girl”- Van Morrison
- “Pocket full of sunshine”- Natasha Bedingfield

### *Music with Prosocial Lyrics*

- “Waiting on the world to change”- John Mayer
- “100 Years”- Five for Fighting
- “Lean on me”- Al Green
- “All you need is love”- The Beatles
- “Stand by me”- Playing for Change
- “One love”- Bob Marley
- “We are here to change the world”- Michael Jackson

### *Annoying Music*

- “Beethoven’s 5th (Techno remix)- Dance Dance Revolution
- “Boom Boom Dollar”- Dance Dance Revolution
- “Manamanah”- The Muppets
- “Butterfly”- Dance Dance Revolution
- “Idle Chatter”- Hannah MacKay & Paul Lansky

### *Music with Antisocial Lyrics*

- “This could be love”- Alkaline Trio
- “Criminal”- Eminem
- “Breaking rules”- Lucky Boys Confusion
- “F\*\*k it”- Eamon
- “Shut up”- Blink 182
- “Screwed Up”- Ludacris
- “Havin’ a bad day”- Blue Flannel