

Running Head: INCREASING ONLINE CHARITY BEHAVIOUR

Empathy leads to increased online charitable behaviour when time is the currency

Daniel Farrelly

Michael Bennett

University of Worcester

Correspondence concerning this article should be addressed to Daniel Farrelly,
Psychology, Institute of Health and Society, University of Worcester, UK, WR2 6AJ. Tel. no.:
(+44)1905 542 345; E-mail: d.farrelly@worc.ac.uk

Abstract

This study shows how the empathy-altruism hypothesis can affect helping behaviour where time spent is the currency, through the novel use of a real world charity. Using an online charity task (www.freerice.com) we show that inducing empathy and also anger cause participants to spend more time donating rice to the United Nations World Food Programme. These findings therefore supports the empathy-altruism hypothesis, and adds to previous research that have mainly used artificial and/or hypothetical scenarios by further showing that its effects can be applied to real world scenarios where helping behaviours are beneficial.

Keywords: Prosociality; empathy; altruism; charity; experimental

Empathy leads to increased online charitable behaviour when time is the currency

Research has often applied theoretical accounts of why we are prosocial to real charitable behaviour. For example, competitive altruism (Roberts, 1998) has been used to explain giving behaviour towards individuals via online charity sites (Raihani & Smith, 2015) and laboratory-based tasks linked to charitable donations (Böhm & Regner, 2013). Elsewhere, peer observation (Smith, Windmeijer, & Wright, 2015), peer pressure (Reyniers & Bhalla, 2013) and nominal cues of being observed (Powell, Roberts, & Nettle, 2012) have been shown to have a positive effects on individuals' charitable donations. Overall, this shows the importance of applying such psychological theories to help understand and promote engagement with charities within communities.

However, a potential limitation of the existing research is that it has focussed on financial donations as the currency with which to measure charitable behaviour. Although common, it is not the sole means by which charity can occur, and this narrow focus may limit applications to other currencies. For example, research has also used non-financial tasks such as everyday helping behaviours (e.g. Macrae & Johnston, 1998), enduring pain (Madsen et al., 2007) and laboratory-based time costs (Farrelly, Moan, White, & Young, 2015) to also empirically test theories of prosocial behaviours.

Such studies, however, have focused on hypothetical or artificially created scenarios where helping behaviours can occur. Therefore there is a need to apply the above to real world scenarios, such as actual charitable causes where it is not money that is requested, which is the aim of the current study. To do so, this study will test the established theory from social psychology that empathic feelings can lead to increased altruistic behaviour or attitudes to others (Batson, Batson, Slingsby, & Harrell, 1991; Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Edele, Dziobek, & Keller, 2013; Klimecki, Mayer, Jusyte, Scheeff, & Schönenberg, 2016; Pavey, Greitemeyer, & Sparks, 2012). To achieve this, this study will examine whether inducing

empathic emotions in individuals leads to them behaving more altruistically, which has been shown to happen previously (Farrelly et al., 2015; Klimecki et al., 2016), via the novel use of a real world online charity. This will be compared to levels of altruistic behaviour when other emotions (in this case anger) or when no emotions are induced.

Here, altruistic behaviour will be measured via a unique real world online charity where time spent, rather than money, is the cost that donators incur. This is a particularly relevant change of behaviour to explore here, as the proximate explanation for why empathy with others causes altruism is that such responses can lessen the negative mood and feelings the altruist experiences (Batson et al., 1991, 1981). In the case of financial charitable donations in a single act (e.g. putting coins in collection tin), this change will occur instantaneously. However, by examining time spent as the charitable act, this study will allow an assessment of how empathic feelings contribute to charitable behaviour over a longer period, where alleviation of negative mood will presumably be more gradual. Based on previous research, therefore, it is predicted that when induced with empathic feelings, individuals will spend more time on charitable tasks than when induced with a different emotion (anger) or no emotion.

Method

Participants

Ninety participants took part in this experiment (mean/SD age = 21.73/4.12), of which 40 were female and 50 were male. The majority of participants were undergraduate students recruited via opportunity sampling on campus of a university in central UK. This experiment was approved by the university research ethics committee.

Materials

Emotional content videos. Three different videos were used with different emotional content to them. All videos used were accessible via YouTube, a free video platform available on the internet, and were between two to four minutes in length and had a common theme (dogs). The video in the empathy condition showed Norton the miracle rescue dog who had been abandoned and made a successful recovery (<https://www.youtube.com/watch?v=kIAaJXTrUpo>), the anger condition video reported on a dog who was wrongly shot and killed by police (<https://www.youtube.com/watch?v=bIAbnLKNVAo>), and the neutral condition video was a demonstration of how to correctly groom a dog (<https://www.youtube.com/watch?v=Jb8PKrqtWI8>). These videos have previously been used in previous research to examine altruistic behaviour in hypothetical lab-based scenarios (Farrelly et al., 2015).

Online charitable task. Freerice (www.freerice.com) is a non-profit website owned and supported by the United Nations World Food Programme. Here, individuals can answer an unlimited number of multiple choice questions from a number of different subjects, and for each question they answer correctly, Freerice donate ten grains of rice to the United Nations World Food Programme. As participants answer questions, their total number of grains donated is reported on the right hand side of the screen, which also shows a visual image of a bowl with increasing amount of rice in it. In this experiment, only English vocabulary questions were used, which involved participants having to identify the correct definition of a word from a choice of four (e.g. *beast means: delight, heap, pail, animal*).

Procedure

Participants were recruited over a two week period from the Students' Union building, during the times of 8am to 6pm. A standardized greeting was used for all participants inviting them to take part in the study and informing them that their efforts will be benefiting a charitable cause and that there were no further incentives for participating. Participants were randomly assigned to

watch one of the three video conditions and then began answering questions on www.freerice.com on a tablet device. Participants were informed they could play the game for as long as they wished. Posters advertising the study were located around the surrounding area of the study on tables for students to read.

Results

A two-way ANOVA with gender (female, male) and video (empathy, anger, neutral) as between subjects independent variables was conducted, with number of grains donated as the dependent variable. This revealed a significant main effect of video condition ($F_{[2,84]} = 14.35, p < .001, \eta^2 = .26$), see figure 1. Post-hoc pairwise analysis (Tukey) revealed that participants in both the empathy video condition ($M = 484, SD = 171$) and the anger video condition ($M = 549, SD = 255$) donated significantly more rice than those in the neutral video condition ($M = 279, SD = 125$), both $p < .001$. There was no significant difference between the empathy and anger video conditions ($p = .4$). There was no significant main effect of gender ($F_{[1,84]} = .16, p = .69, \eta^2 = .002$) nor interaction ($F_{[2,84]} = .18, p = .84, \eta^2 = .004$).

Discussion

The findings of this study provide partial support for the hypothesis, as it was found that participants induced with empathic feelings spent more time to donate grains of rice to charity than participants not induced with emotions at all. Therefore this finding supports previous research (e.g. Farrelly et al., 2015; Klimecki et al., 2016) that empathic feelings can lead to altruistic behaviour by revealing that such effects are present in interactions with real world charities where time spent is the donation requested. Furthermore, by using time as the currency we show that inducing empathy can lead to longer lasting prosocial behaviour to alleviate negative mood that is similar to the instantaneous effects of donating money which previous studies have found (e.g. Klimecki et al., 2016).

Interestingly, however, this effect of induced empathy did not lead to greater charitable donations as predicted than when another emotion, anger, was induced. Furthermore, individuals induced with anger also spent more time donating grains of rice to charity than participants not induced with emotions. Why was anger also successful in inducing prosocial behaviour here? One explanation is that the mood and emotions that were induced in association with anger can have a similar adaptive effect on our subsequent behaviour. In other words, when individuals feel anger at an injustice another faces (as was the case in the video used here), this will induce empathy that can be alleviated by subsequent prosocial behaviour. Similar effects of feelings related to anger have been found previously (Lyer, Schmader, & Lickel, 2007; Montado & Schneider, 1989; van Doorn, Zeelenberg, & Breugelmans, 2017) however the current finding differs somewhat in that the prosocial behaviour here had no direct connection to the cause of individuals' anger. Therefore it is perhaps no surprise that similar results were found with regards to time spent donating rice to charity for individuals induced with empathy and anger, and that this was significantly more than for individuals who were not induced with either emotion, although why this is a different finding to Farrelly et al., (2015) who used the same methods but with hypothetical scenarios remains unclear.

Certain limitations should be heeded though when interpreting these results. The stimuli used to induce different emotional states were idiosyncratic to one context (dogs), and it remains to be seen how other contexts and scenarios used could affect the findings, as well as the use of different methods to induce emotions (such as autobiographical recall of emotional memories). Future studies using different contexts and methods of priming emotions in individuals before measuring their real world helping behaviour will therefore be of use. Furthermore, the specific emotions induced by the different videos may have been confounded by other emotions being induced at the same time. This may have contributed to the unexpected findings from when anger was induced, as it is possible that individuals in this condition may have also felt empathic.

Although the materials used were considered suitable and produced clear effects on helping behaviour both here and in Farrelly et al., (2016), future research can explore this in more detail, perhaps with pre- and post-test of individuals' different emotive states, to improve the validity of any stimuli used.

A further limitation may be that the tasks on www.freerice.com, which we interpret here as being costly due to participants needing to spend time completing them, may not have been perceived as such. For many individuals, completed trivia and/or tests of knowledge are enjoyable and therefore may not have been viewed as a 'cost' to them, however this is predicted to be only the case for a minority of participants. Furthermore another limitation of the task used was that they were actually tests of knowledge, and this may explain why some individuals stopped playing, as they found them too difficult rather than losing motivation to behave prosocially. However, it is anticipated that this would only have a minimal effect, as all participants were university students and therefore can be expected to have a sophisticated enough vocabulary to cope with the demands of this task.

To conclude, this study adds to previous applied psychological research that examines what can cause and increase charitable behaviour, by showing that existing hypotheses about why humans can be prosocial (in this case, the empathy-altruism hypothesis [Batson, 1991]) can influence real charitable donations when time, rather than money, is the currency requested. Future research can therefore follow a similar methodology here to see if other theories of prosociality, such as competitive altruism (Roberts, 1998), indirect reciprocity (e.g. Nowak & Sigmund, 1998) or mate choice (e.g. Farrelly, Lazarus, & Roberts, 2007), can explain why individuals spend their time to donate to charity in different social contexts. By doing so, the value of such theories can be shown to be more than purely academic, by demonstrating how they can lead to positive influences on charitable causes in modern society.

References

- Batson, C. D. (1991). *The altruism question: Towards a social psychological answer*. Mahwah, NJ: Erlbaum.
- Batson, C. D., Batson, J. G., Slingsby, J. K., & Harrell, K. L. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, *61*, 413–426.
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, *40*, 290–302.
- Böhm, R., & Regner, T. (2013). Charitable giving among females and males: An empirical test of the competitive altruism hypothesis. *Journal of Bioeconomics*, *15*, 251–267.
- Edele, A., Dziobek, I., & Keller, M. (2013). Explaining altruistic sharing in the dictator game: The role of affective empathy, cognitive empathy, and justice sensitivity. *Learning and Individual Differences*, *24*, 96–102.
- Farrelly, D., Lazarus, J., & Roberts, G. (2007). Altruists attract. *Evolutionary Psychology*, *5*, 313–329.
- Farrelly, D., Moan, E., White, K., & Young, S. (2015). Evidence of an Alternative Currency for Altruism in Laboratory-Based Experiments. *Europe's Journal of Psychology*, *11*, 100–111.
- Klimecki, O. M., Mayer, S. V., Jusyte, A., Scheeff, J., & Schönberg, M. (2016). Empathy promotes altruistic behavior in economic interactions. *Scientific Reports*, *6*, 31961.
- Lyer, A., Schmader, T., & Lickel, B. (2007). Why individuals protest the perceived transgressions of their country: the role of anger, shame, and guilt. *Personality and Social Psychology Bulletin*, *33*, 572–587.

- Macrae, C. N., & Johnston, L. (1998). Help, I need somebody: automatic action and inaction. *Social Cognition, 16*, 400–417.
- Madsen, E. A., Tunney, R. J., Fieldman, G., Plotkin, H. C., Dunbar, R. I. M., Richardson, J.-M., & McFarland, D. (2007). Kinship and altruism: a cross-cultural experimental study. *British Journal of Psychology, 98*, 339–59.
- Montado, L., & Schneider, A. (1989). Justice and emotional reactions to the disadvantaged. *Social Justice Research, 3*, 313–344.
- Nowak, M. A., & Sigmund, K. (1998). Evolution of indirect reciprocity by image scoring. *Nature, 393*, 573–577.
- Pavey, L., Greitemeyer, T., & Sparks, P. (2012). “I Help Because I Want to, Not Because You Tell Me to.” *Personality and Social Psychology Bulletin, 38*, 681–689.
- Powell, K. L., Roberts, G., & Nettle, D. (2012). Eye Images Increase Charitable Donations: Evidence From an Opportunistic Field Experiment in a Supermarket. *Ethology, 118*, 1096–1101.
- Raihani, N. J., & Smith, S. (2015). Competitive helping in online giving. *Current Biology, 25*, 1183–1186.
- Reyniers, D., & Bhalla, R. (2013). Reluctant altruism and peer pressure in charitable giving. *Judgement and Decision Making, 8*, 7–15.
- Roberts, G. (1998). Competitive altruism: from reciprocity to the handicap principle. *Proceedings of the Royal Society B: Biological Sciences, 265*, 427–431.
- Smith, S., Windmeijer, F., & Wright, E. (2015). Peer effects in charitable giving: Evidence from the (Running) field. *Economic Journal, 125*, 1053–1071.

van Doorn, J., Zeelenberg, M., & Breugelmans, S. M. (2017). The impact of anger on donations to victims. *International Journal of Victimology*, 23, 303–312.