

Abstract

In an Internet-based study, 419 participants responded to measures of Empathy, Interpersonal Guilt, Altruism and Depression. Ethnic and religious groups were compared, and the relationships between empathy-based guilt, altruism, religious affiliation and ethnicity were examined. A hierarchical linear regression was used to predict altruism towards friends, family, and strangers. Empathic Concern and Extraversion were significant predictors of altruistic acts. Survivor Guilt was significantly correlated with altruism to strangers and to friends, but not towards family. An interaction of culture and religion played a role in altruism to strangers. The results of this study lend support to inclusive fitness theory as an explanation for altruistic acts towards friends and family. Across cultures, altruism towards family and friends were at levels significantly higher than altruistic acts towards strangers. The theory of Reciprocal Altruism provides a viable explanation for acts of altruism directed towards friends. Empathy-based guilt may be a mechanism by which people extend altruism towards strangers, a long-standing mystery among evolutionary scientists. Guilt, like other emotions, is an evolved capacity, designed to hold our social groups together, promoting fitness at the level of the individual and, we suggest, at the level of the group. The results of this study demonstrate a potentially positive role played by survivor guilt, broadly defined. Our findings suggest that this hard-wired capacity for empathy and guilt, promote cooperation and acts of altruism towards strangers, lending support for a third evolutionary explanation of altruism, that is group selection. Cooperative or altruistic individuals may be selected through group competition. Groups with a high number of cooperators, or altruists, tend to be the winners in between group competition. An evolved emotional capacity that appears to promote kindness to strangers, demonstrates a viable mechanism for the evolution of cooperation and altruism. Differences between ethnicities and religions suggest that there may be room for a cultural component to factors involved in altruism towards strangers

Introduction

Altruism has been hypothesized to be a pro-social, fundamental motivation for human behavior (Hoffman, 2000; Lewis, Amini & Lannon, 2000; O'Connor, 1997, 2000; Preston & de Waal, 2002). Recent clinical theory and experimental studies have revised our view of the unconscious mind. Where it had been regarded as self-centered, hostile, and anti-social, the new unconscious is described as adaptive, organized and organizing, and capable of thinking and feeling, much like the conscious mind.

In prior research, we have investigated empathy-based altruism through the lens of interpersonal guilt. A series of studies demonstrated a significant association between excessive empathy-based interpersonal guilt and psychological problems including depression and anxiety (O'Connor, Berry & Weiss, 1999). When guilt is excessive or ruminative, it tends to lead to inhibitions of normal developmental goals. However, our studies have demonstrated that even the most inhibiting type of guilt, that is survivor guilt, functions as a motivator across cultures, promoting acts of altruism. Guilt may be

a source of motivation for altruistic behavior; in response to an internal discomfort, that is to feeling guilty, people attempt narrow the discrepancy between their own well-being and that of others

The connections between empathy-based guilt and altruism suggest that these motivations might be a universal, and found across cultures and that guilt may serve a positive function in the social life of our species. In prior research we found that while there were differences in the mean levels of guilt across cultures, the correlations with both negative factors such as depression, and with positive factors such as acts of altruism, did not differ significantly, suggesting that empathy-based guilt functions universally. Serving as a leveling mechanism in our species, guilt may be the social glue that binds us together. In this current study, we examined the relationships between altruism towards friends, family, and strangers to ethnicity, religion, guilt-proneness, empathy, and personality traits.

Methods

Participants

Participants were 419 Internet volunteers (n=348 females, n=59 males, n=12 unidentified). Participants were obtained by posting an advertisement on craigslist.org, a web-based public forum. The self-identified ethnicities of the sample can be found in Table 1.

Table 1. Ethnicity of Participants

Ethnicity	Frequency	Percent
African American	5	3.6
Asian American*	25	6.0
Chinese American	17	4.1
Ethnicity Unspecified	25	6.0
European American*	169	40.3
Filipino American	23	5.5
Indian American	12	2.9
Irish American	15	3.6
Italian American	25	6.0
Jewish American	33	7.9
Latin American	10	2.4
Middle Eastern American	8	1.9
Mixed/Biracial	18	4.3
Native American	3	.7
N. European American	15	3.6
Pacific Islander	6	1.4
Total	419	100.0

*specific subgroups unspecified

Instruments

Interpersonal Guilt Questionnaire-67 (IGQ-67; O'Connor, Berry, Weiss, Bush & Sampson, 1997). The IGQ-67 is a 67-item measure that includes four subscales:

Survivor Guilt – the belief that pursuing normal goals will harm others (e.g., "It makes me very uncomfortable to receive better treatment than the people I am with").

Separation Guilt – the belief that if a person separates, leads their own life, or differs from their loved ones in some way, they will cause their loved ones to suffer (e.g., "I am reluctant to express an opinion that is different from the opinions held by my family or friends").

Omnipotent Responsibility Guilt – the belief that one is responsible for the happiness and well being of others (e.g., "I often find myself doing what someone else wants me to do rather than doing what I would most enjoy").

Self-hate – the acceptance of extreme negative self-views in order to maintain a connection to parents and loved ones (e.g., "I do not deserve other people's respect or admiration").

Brief Big Five Inventory (BFI): John, Donahue & Kentle, 1991). The BFI-44 is a 44-item self-report inventory for assessing five personality traits: openness to new experiences, conscientiousness, extraversion, agreeableness, and neuroticism. Items from this questionnaire include statements such as "I see myself as someone who is easily distracted."

The Impact of Diversity on Evolved Emotional Capacities: Empathy, Guilt, and Altruism Across Cultures

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Results

Three hierarchical regressions were conducted to predict altruism (toward strangers, friends, and family) from ethnic identity, religion, the Big-Five personality factors, and empathy-related traits. At the first step, dummy-coded ethnicity variables were entered into the prediction equation. At the second step, dummy-coded religion variables were entered. At the third step, the big-five personality factors were entered. At the final step, survivor guilt, perspective taking, and empathic concern were entered.

Altruism to Strangers. Ethnic identity (block 1) significantly predicted altruism to strangers (R-squared=.05, p<.01). Asian-American identity was the only significant independent predictor, which was negatively associated with altruistic acts toward strangers (beta= -.25, p<.001). Religious identity (block 2) did not significantly improve the prediction equation, although Roman Catholic affiliation (beta=-.27, p<.05) and no religion (beta=-.27, p<.05) were negatively associated with altruism to strangers. Personality factors significantly improved prediction (R-squared change=.09, p<.001), with extraversion (beta=.13, p<.05) and openness (beta=.24, p<.001) being significant independent predictors. The final block of empathy-related traits also significantly improved the prediction equation (R-squared change=.05, p<.001). Both survivor guilt (beta=.14, p<.05) and empathic concern (beta=.18, p<.01) were independently associated with altruism to strangers. Asian-American identity, extraversion, openness, empathic concern, and survivor guilt remained significant predictors of altruism to strangers in the final model.

Altruism to Friends. Neither ethnic identity (block 1) nor religion (block 2) significantly predicted altruism to friends. Personality factors (block 3) significantly improved prediction (R-squared change=.12, p<.001). Extraversion (beta=.24, p<.001) and agreeableness (beta=.21, p<.001) were significant independent predictors. Surprisingly, neuroticism was positively associated with altruism to friends as well (beta=.18, p<.01). The block of empathy-related traits also significantly improved the prediction equation (R-squared change=.07, p<.001). As with altruism to strangers, survivor guilt (beta=.13, p<.05) and empathic concern (beta=.21, p<.001) were independent predictors of altruism to friends. Only extraversion, agreeableness, empathic concern, and survivor guilt remained significant independent predictors of altruism to strangers.

Altruism to Family. Neither ethnic identity (block 1) nor religion (block 2) predicted altruism to family. Personality variables (block 3) significantly increased prediction (R-squared change = .10, p<.001). In this block, agreeableness (beta=.22, p < .001) and extraversion (beta=.17, p < .01) were independent predictors. The final block of empathy-related traits did not significantly increase prediction (p=.14), although in the final model empathic concern remained a significant independent predictor of altruism to family (beta=.13, p<.05). Only extraversion, agreeableness, and empathic concern remained significant independent predictors of altruism to families.

Table 2. Summary of Hierarchical Regressions

Block Number and Description	Altruism to Strangers R2	Altruism to Strangers p	Altruism to Friends R2	Altruism to Friends p	Altruism to Family R2	Altruism to Family p
1-Ethnicity (E)	0.05	p<0.01*	0.03	p<0.10	0.01	p<0.50
2-E + Religion (R)	0.02	p<0.30	0.02	p<0.40	0.02	p<0.10
3-E+R+Personality Traits (P)	0.09	p<0.001**	0.12	p<0.001**	0.10	p<0.001**
4-E+R+P+Empathy Subscales and Guilt Subscales (G)	0.05	p<0.001**	0.07	p<0.001**	0.12	p<0.143

* Significant at p<0.01
** Significant at p<0.001



Table 3: Predictors of Altruism

Block Number Description	Noteworthy Correlations	Altruism to Strangers Standardized Coefficients (beta)	Altruism to Strangers Significance	Altruism to Friends Standardized Coefficients (beta)	Altruism to Friends Significance	Altruism to Family Standardized Coefficients (beta)	Altruism to Family Significance
1-Ethnicity (E)	Asian American	-0.25	p<0.001	--	--	--	--
2-E + Religion (R)	Roman Catholic	-0.27	p<0.05	--	--	--	--
	No Religion	-0.27	p<0.05	0.24	p<0.001	0.17	p<0.01
3-E+R+Personality Traits (P)	Extraversion	0.13	p<0.05	--	--	--	--
	Openness	0.24	p<0.001	--	--	--	--
	Agreeableness	--	--	0.21	p<0.001	0.22	p<0.001
	Neuroticism	--	--	0.18	p<0.01	--	--
4-E+R+P+Empathy Subscales and Guilt Subscales (G)	Empathic Concern	0.18	p<0.01	0.21	p<0.001	0.13	p<0.05
	Survivor Guilt	0.14	p<0.05	0.13	p<0.05	--	--

Bolded text=significant predictors

Discussion

Our findings suggest that there are cultural and religious variations in the motivations for altruism. We found that Empathic Concern and Survivor Guilt significantly predict altruism towards strangers, across cultures, although the mean level of these empathy related variables may differ in different ethnic and religious groups. Furthermore, in this and prior studies, we have found that gender and age may have an effect on acts of altruism, across cultures, and the most motivating of emotions, survivor guilt, may serve as a mediator in the relationship between empathy, and acts of altruism. Levels of empathic-concern may lead to empathy-based guilt, which then may go several directions. In response to empathy and guilt, a person may become paralyzed with depression. However, others may respond to guilt as a motivation for altruism, and thus act altruistically when feeling empathy-based survivor guilt. An evolved capacity is likely to have both "positive" and "negative" ramifications on the level of the individual, and less discussed but perhaps more important in the evolution of emotions, on the level of

the group. In between group competition, groups with a high percentage of altruists or cooperators, do better than groups with fewer altruists. Thus the theory of group selection is added to the other viable explanations of altruism and our more highly developed proneness to kindness to strangers. Future analysis of our data will focus on gender. In addition, the cross cultural similarities and differences in the prediction of depression from survivor guilt will be a focus of a future study. Anecdotal data from ethnographers who frequently visit groups in African, living as hunter gatherers, suggest low rates of depression in hunter-gatherer groups. Data providing levels of guilt and acts of altruism in African hunter-gatherers, when gathered, may help to explain some contradictions in our empirical studies in industrialized nations. Cross disciplinary research using MRI technology, and involving anthropologists, psychologists, evolutionary biologists and sociologists may in the future, expand our understanding of the role of emotional capacities, and further explain what, if anything, is unique to our species of primate.