ALTRUISM TOWARDS PANHANDLERS: WHO GIVES?

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This study investigates an example of human altruism which is neither kin-directed nor reciprocal: giving to a panhandler. Data were collected on the proportions of passers-by who gave to panhandlers in Boston and Cambridge, Massachusetts. Three hypotheses were tested, each predicting that passers-by should behave "selfishly," capitalizing on opportunities that, in an evolutionarily appropriate context, could increase mating success. Male passers-by, when alone, gave disproportionately to female panhandlers. Male passers-by, when in the company of a female partner, disproportionately avoided giving to female panhandlers. Male passers-by in the company of a female partner did not "show off" by giving disproportionately to male panhandlers.

KEY WORDS: **Altruism; Panhandling; Sex differences.**

Behaviors that increase the fitness of the recipient at the expense of the actor pose a problem for Darwinian theory, which rests on the notion that individuals succeed evolutionarily by maximizing their own fitness. When directed towards kin, altruistic behaviors may benefit the actor indirectly, by enhancing the proliferation of shared genes (Hamilton 1964). Altruism may also benefit the actor when directed towards indi-

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viduals likely to reciprocate in the future (Trivers 1971). Certain altruistic behaviors, however, seem directed neither towards kin nor towards individuals likely to reciprocate ("disinterested altruism"; Dawkins 1976).

In humans, charitable acts are likely candidates for disinterested altruism. One example of a disinterested charitable act is giving money to a panhandler. In the United States, most panhandlers are homeless, jobless men and women, many of whom suffer physical and mental handicaps (Burt and Cohen 1989; Gibbs 1988; Rossi et al. 1987). Clearly, such individuals will not likely reciprocate altruistic acts directed towards them. The probability that panhandlers are kin of people from whom they solicit donations is equally low.

Previous studies of panhandling have noted sex differences in the success of panhandlers and in the generosity of passers-by. In general, females are helped more than males, and males help more than females (Dutton and Lake 1973; Kleinke 1977; Kleinke et al. 1978; Latané 1970; Lockard et al. 1976; but see Emswiller et al. 1971). These sex differences are influenced by the social context of both the panhandler and the passer-by. Latané (1970) found that the presence of a female companion increased success for panhandlers of either sex. Both Latané (1970) and Lockard et al. (1976) reported that dyads and larger groups of passers-by were resistant to being panhandled. This effect was greatest for groups containing the highest proportion of males (Lockard et al. 1976). Other factors which modify the success of panhandlers include dress (Emswiller et al. 1971; Kleinke 1977), race (Dutton and Lake 1973; Rosenfield et al. 1982), season (Lockard et al. 1976), physical disability (Levitt and Kornhaber, 1977), nature of request (Kleinke et al. 1978; Latané, 1970), dominant or submissive approach tactics (Lockard et al. 1976), and whether potential helpers are eating (Lockard et al. 1976).

This study expands on previous work by asking whether "selfish" trends exist within the broader sex-differences described above. This study does not attempt to answer the more general question of why people give to panhandlers in the first place. Rather, it asks whether selfish (evolutionarily adaptive) motivations modify giving behavior, whatever its ultimate cause. If the incidence of giving to a panhandler is high when giving entails a high net benefit to the giver and low when it entails a low net benefit, or a cost, this would be evidence for selfishness.

Specifically, this study tests three hypotheses: (1) that male passers-by, when alone, will give preferentially to female panhandlers; (2) that male passers-by, when in the company of a female companion, will preferentially avoid giving to female panhandlers; and (3) that male passers-by, when in the company of a female companion, will give preferentially to male panhandlers. Hypothesis 1 rests on the prediction that males will

behave as if to attract potential mates, hypothesis 2 that males will behave as if to avoid inciting sexual conflict caused by philandery, and hypothesis 3 that males will behave as if to demonstrate to potential mates their generosity ("show off").

In the present context, passers-by would probably not actually achieve increased mating success by treating panhandlers as "potential mates." Hypotheses 1 and 2 rest on the assumption that passers-by act, at least in part, according to subconscious motivations that have evolved to elicit adaptive behavior (Tooby and Cosmides 1992). Trends in the giving behavior of female passers-by are also examined, although predictive hypotheses about the directions of these trends are not as obvious.

METHODS

Between June and September, 1992, the streets of Boston and Cambridge, Massachusetts, were searched for panhandlers. Panhandlers were chosen in an effort to minimize uninformative variance in panhandling success, which could reduce the power of statistical analyses. Panhandlers had to be alone. Panhandlers with children and panhandlers who solicited money in pairs or larger groups were omitted. Panhandlers could not use "props." Panhandlers with dogs, musical instruments, and the like were omitted. Panhandlers could not have serious physical disabilities. Panhandlers in wheelchairs, blind panhandlers, and panhandlers with physical deformities were excluded.

When a suitable panhandler was located, observation was initiated from a vantage point no closer than fifteen meters from the panhandler, and preferably farther away. The sex, approximate age, and a description of the panhandler's general appearance were recorded, as were the date, time, and location. All persons who walked within five meters of the panhandler were considered to have "passed by." The sex of each passer-by was recorded, as well as whether the person was walking alone or in a couple or group as defined below:

Couples. Couples were male-female dyads, defined such that sexual attraction was a likely force influencing their affiliation. To be classed as a couple, a female had to be no more than twice, and no less than half, the age of the male with whom she was walking. Ages of individuals were estimated visually.

Groups. Male-female dyads not classified as couples (because they failed to meet age criteria) were classified as groups, as were all unisex dyads and all parties of greater than two individuals. The size and sex composition of all groups was recorded.

When an individual, couple, or group passed by a panhandler, it was noted whether the panhandler successfully solicited a donation. A donation was defined as the giving of any object to a panhandler. Donations were usually monetary but also included cigarettes and food. Notes were taken on the behavior of the panhandler, the behavior of the passers-by, and the duration and causes of breaks in data collection. Observation was aborted if panhandlers were joined by other people, if they changed location, or if, during data collection, they violated any of the aforementioned criteria (e.g., by producing a "prop").

The data collected for each panhandler were limited to 500 passer-by units (individuals, couples, or groups). This typically entailed approximately one hour of observation and tended to minimize the likelihood that passers-by were sampled twice as they traveled both to and from their destinations. Similarly, the times of day and days of the week on which data were collected were varied. This minimized the probability of multiple-sampling of passers-by who adhere to daily schedules and walk the same daily routes.

Control observations were also made. During control observations, a location where a panhandler had previously been was observed and data were recorded as if a panhandler were present. Comparing the proportions of different classes of passers-by in control and experimental observations tested the possibility that individuals of certain classes alter their routes of travel to avoid passing by panhandlers.

Where paired comparisons of means were appropriate, Wilcoxon signed ranks tests were performed. Where non-paired comparisons were appropriate, Mann-Whitney U tests were used. All statistical tests were two-tailed. Results were considered significant at the 0.05 level.

RESULTS

Eleven male and seven female panhandlers were observed. Results for each panhandler, broken down by passer-by type, are given in Table 1. Although equal sample sizes of males and females would have been preferable, a dearth of female panhandlers made this impossible. The difficulty of finding suitable female panhandlers accords well with estimates of the composition of homeless populations, which indicate that homeless men may outnumber homeless women by as much as 4:1 (Burt and Cohen 1989; Rossi et al. 1987). Also consistent with these statistics, all panhandlers were estimated to be between 25 and 45 years of age. No control observation differed significantly from its respective experimental, indicating that people do not generally alter their routes of travel to avoid panhandlers.

Table 1. Panhandling Success for 18 Panhandlers in Boston and Cambridge.

	*Passers-by**			
Panhandler	*Males alone*	*Females alone*	*Couples†*	*Groups†*
Male				
1	34 (1)	26 (0)	24 (0, 0)	25, 28 (0, 0)
2	87 (0)	93 (2)	26 (1, 0)	26, 60 (0, 0)
3	121 (4)	108 (2)	70 (1, 1)	44, 53 (6, 2)
4	39 (3)	31 (0)	56 (0, 1)	32, 28 (1, 0)
5	102 (5)	88 (1)	38 (0, 0)	54, 40 (0, 0)
6	80 (1)	39 (2)	80 (3, 0)	59, 81 (1, 2)
7	58 (2)	26 (1)	136 (2, 0)	127, 106 (0, 0)
8	109 (1)	99 (0)	34 (0, 0)	19, 43 (0, 0)
9	87 (3)	71 (4)	80 (1, 0)	44, 82 (0, 0)
10	6 (0)	12 (0)	14 (0, 0)	6, 13 (3, 0)
11	16 (1)	8 (1)	16 (3, 0)	2, 2 (0, 0)
Female				
12	28 (2)	21 (0)	12 (0, 0)	7, 20 (0, 0)
13	72 (1)	36 (0)	118 (0, 0)	112, 116 (0, 0)
14	79 (3)	53 (1)	76 (0, 0)	58, 81 (0, 0)
15	195 (7)	181 (2)	72 (0, 0)	45, 72 (2, 0)
16	153 (7)	95 (2)	252 (0, 0)	132, 177 (1, 1)
17	241 (7)	202 (1)	74 (2, 3)	36, 50 (0, 0)
18	231 (6)	189 (2)	80 (1, 0)	55, 49 (0, 0)

*Numbers outside parentheses are total numbers of passers-by; numbers inside parentheses are numbers of passers-by who made donations.
†Pairs of numbers separated by commas are numbers of male and female passers-by, respectively.

Descriptive Statistics

Of the 6,396 passers-by, 104 (1.63%) made donations to the 18 panhandlers in the study (Table 2). In all 18 cases, the proportion of males who made donations was greater than the proportion of females (Wilcoxon $Z = 3.724$; $p < 0.01$). Females were not, however, helped more frequently than males overall (Mann-Whitney $U = 30.000$; $p = 0.441$). Individuals walking alone were more likely to give than were individuals in couples (Wilcoxon $Z = 1.965$; $p = 0.049$) or individuals in groups (Wilcoxon $Z = 2.243$; $p = 0.025$). Individuals in couples and individuals in groups were equally likely to give (Wilcoxon $Z = 0.622$; $p = 0.534$). In no case did more than one individual from a couple or group give.

Hourly income was calculated based on an estimated $0.50 per donation. This estimate is a "best guess" derived from a qualitative impression of the typical donation. Hourly income ranged from $1.25 to $30.00 for males and from $2.00 to $20.00 for females. Female panhandlers tended to beg more passively, by sitting quietly with a cup and a sign,

Table 2. Summary Statistics for Panhandlers in Boston and Cambridge.

Variable	*Sex of panhandler*		
	Male	*Female*	*Total*
Proportion of passers-by who give*			
Individuals alone	0.025 (1340)	0.023 (1776)	0.024 (3116)
Individuals in couples	0.023 (574)	0.009 (684)	0.015 (1258)
Individuals in groups	0.017 (991)	0.003 (1031)	0.010 (2022)
Total	0.022 (2905)	0.014 (3491)	0.016 (6396)
Estimated hourly income (dollars)†	7.84 ± 2.31	8.11 ± 2.15	7.94 ± 1.60

*Means across individual panhandlers; numbers in parentheses are sample sizes of passers-by.
†Based on an estimate of $0.50 per donation: ± standard error of the mean

or by politely soliciting passers-by. While some male panhandlers adopted similar strategies, others were more aggressive. One extremely aggressive male panhandler received six donations in six minutes, giving him by far the highest estimated hourly income in the study ($30.00). This rate of earning was probably not maintainable for more than several minutes. Mean income was no different for male panhandlers than for female panhandlers (Mann-Whitney $U = 30.000$; $p = 0.441$).

Context-dependent Sex Differences

Individuals walking alone. Males alone passing by male panhandlers were no more likely than were females to give (Figure 1; Wilcoxon $Z = 0.102$; $p = 0.919$). However, a sex difference emerged when individuals alone passed by female panhandlers. In this situation, males were significantly more likely than were females to give (Wilcoxon $Z = 2.366$; $p = 0.018$). This difference resulted both from an increased propensity for males to give to female (relative to male) panhandlers and from a decreased propensity for females to give to female (relative to male) panhandlers. Individually, neither of these trends was significant (Mann-Whitney $U = 30.5$ and 48.5; $p = 0.468$ and 0.355, respectively).

Individuals in couples. When they passed by a female panhandler, males in couples were influenced by the presence of a female partner (Figure 2). Males in couples walking by male panhandlers were as likely to give as were males walking alone (Wilcoxon $Z = 0.204$; $p = 0.838$). However, males in couples walking by female panhandlers were significantly *less* likely to give than were males walking alone (Wilcoxon $Z = 2.197$; $p = 0.028$).

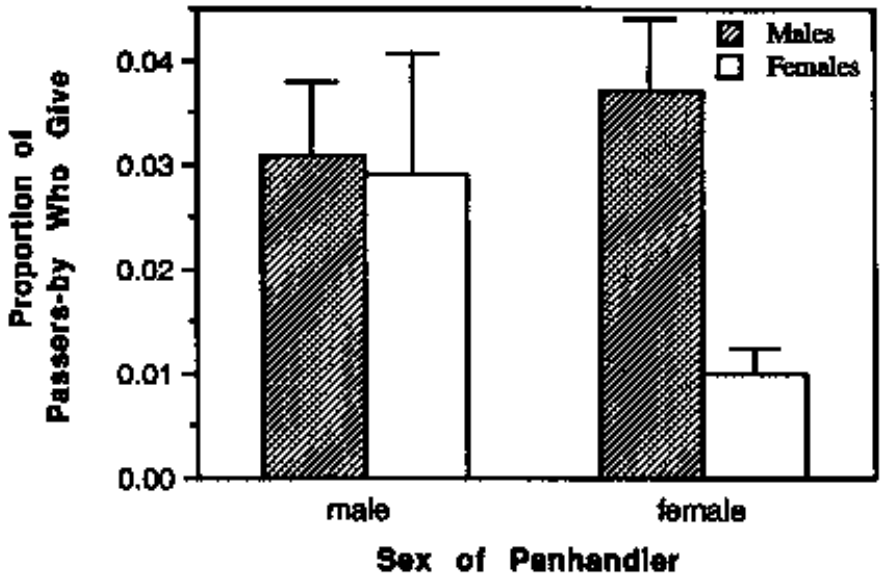

Figure 1. Proportions of males and females walking alone who make donations to panhandlers of different sexes. Hatched bars represent proportions of male passers-by who made donations; open bars represent proportions of female passers-by who made donations. Error bars represent standard errors of the mean (for 11 male and 7 female panhandlers).

There was no indication that males in couples gave to male panhandlers more often than individual males did (Wilcoxon $Z = 0.204$; $p = 0.838$). Similarly, females in couples did not significantly give less often to male panhandlers than did females alone (Wilcoxon $Z = 1.820$; $p = 0.069$).

Individuals in groups. The small number of groups in which individuals made donations ($n = 10$) precluded meaningful statistical analysis. Although males in groups had a slightly higher propensity to give than did females, this trend was not significant (Wilcoxon $Z = 1.782$; $p = 0.075$). Small sample size rendered analysis of context-dependencies in this trend, as well as analyses of group size and group composition effects, uninformative.

DISCUSSION

The overall result that males gave more frequently than did females replicates the findings of most previous work on helping behavior (Eagley and Crowley 1986), including panhandling (see the introductory

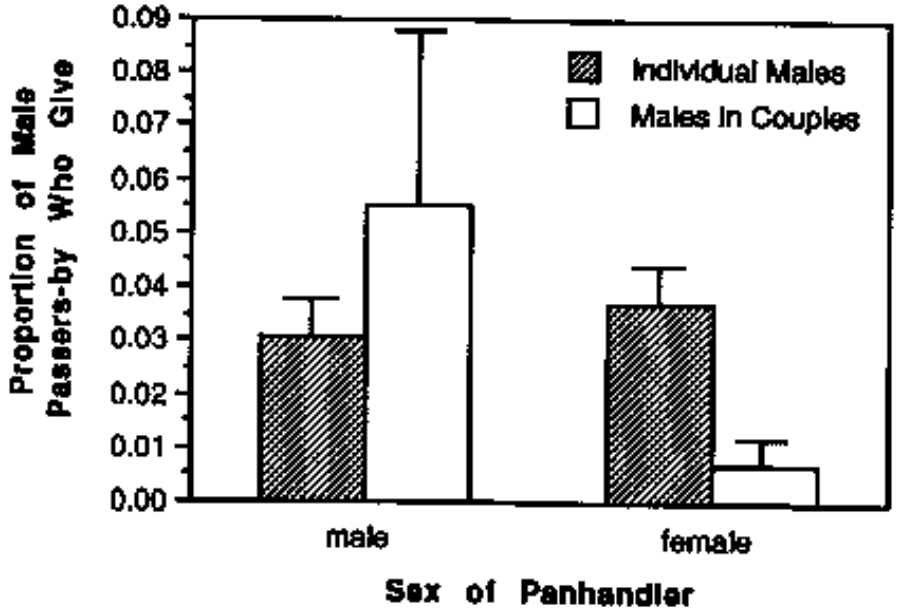

Figure 2. Differences in the propensity of males alone and males in male-female couples to make donations to panhandlers of different sexes. Hatched bars represent proportions of individual male passers-by who made donations; open bars represent proportions of male passers-by in male-female couples who made donations. Error bars represent standard errors of the mean (for 11 male and 7 female panhandlers).

section, above). The reluctance of individuals in couples and groups to give has also been previously noted, and it probably results from a "diffused" sense of responsibility for individuals in group situations (Latané and Darley 1970). Unlike other studies, this study did not record an overall trend for females to receive more help than males. Also inconsistent with past work is the overall rate of giving reported in the present study (1.63%), which is markedly lower than previously reported rates (e.g. 34% reported by Latané 1970; 53% reported by Lockard et al. 1976).

Discrepancies between the present data and previous work may exist because past studies have used actors to play the parts of panhandlers (Dutton and Lake 1973; Emswiller et al. 1971; Latané 1970; Levitt and Kornhaber 1977; Lockard et al. 1976; Kleinke 1977; Kleinke et al. 1978; Rosenfield et al. 1982). These actors were not blind to the hypotheses being tested, and they may not have resembled "real" panhandlers physically or behaviorally. By using real panhandlers, this study avoids experimenter bias and provides data relevant to the actual social phenomenon of panhandling. Furthermore, past studies have often used only one or a few actors but have treated each passer-by as an inde-

pendent unit of statistical analysis. This practice leads to problems of pseudoreplication. By treating each panhandler as an independent unit of analysis, the present study avoids such problems.

This study supports the hypothesis that lone males are particularly inclined to give to female panhandlers. This trend was caused, in part, by a propensity for lone males to give to females. Empathy towards potential mates would function adaptively for males. Even though the female panhandlers in this study are unlikely to be "potential mates," males who pass by them may still respond as if they were, in accordance with evolved psychological tendencies. This sex difference, however, was also due to a decreased propensity for lone females to give to female panhandlers. This trend was not predicted at the outset of the study, but it could operate in an analogous way to the male trend, as an adaptive response to competition among females over resources (Hrdy 1981; Wrangham 1980).

The tendency for lone males to give to female panhandlers was reversed when males were in the company of similarly aged females. This result supports the hypothesis that pair-bonded males avoid "philanderous" behavior, which has played an important role in female mate choice (Trivers 1985). Even though female panhandlers in actuality pose little threat to the stability of a couple's pair bond, males in couples nevertheless curtail their tendency to give as if to avoid inciting sexual conflict. There was no analogous tendency for females to respond to a male "fear of cuckholdry" by curtailing their tendency to give to male panhandlers. However, this latter trend was only marginally nonsignificant ($p = 0.069$; *see* "Results").

There was no support for the hypothesis that males in couples were "showing off." Males in couples did not significantly enhance their tendency to give to male panhandlers in order to demonstrate their generosity to female partners. The absence of this trend is particularly surprising, since such a demonstration of generosity could function adaptively even in the present context.

This paper assumes that the motivations of the passer-by are responsible for the trends observed. However, the causality could also operate in the opposite direction if panhandlers preferentially "target" likely donors (Wilson 1991). This explanation would not affect the interpretations of the trends, however, since one would be forced to conclude that prior experiences with donor behavior have caused panhandlers to discriminate along these lines.

The context-dependent sex differences described in this paper suggest that the charitable act of giving money to panhandlers contains selfish elements. Further investigations entailing a larger sample of panhandlers may help explain a greater proportion of the variation in the

propensity of passers-by to make donations. Interviews with both panhandlers and passers-by could identify the direction of causality underlying these trends, as well as additional social and psychological factors affecting giving behavior.

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