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Citizenship Status, Warm Glow, and Prosocial Behavior: A Quasi-Experiment on Giving Behavior by Host-Country Citizens and Asylum Seekers

https://doi.org/10.1515/auk-2018-0007

Abstract: This paper is concerned with the question of whether and how social class and status affect prosocial behavior among status groups. We conducted dictator games in which both host-country citizens (high social status) as well as asylum seekers (low social status) make monetary donations towards their respective in- and out-groups. As a novelty, we varied the number of recipients in the dictator game (i.e. one, two or three recipients). Our results indicate that host-country citizens donate significantly more than asylum seekers and that asylum seekers receive significantly higher donations than host-country citizens. Donations vary only marginally with the number of recipients. These findings and answers to a follow-up questionnaire show that prosocial behavior among status groups, and in particular prosocial behavior from high-status towards low-status actors, might be instances of impure altruism, i.e., motivated by a warm glow of giving or a purchase of moral satisfaction.

Keywords: altruism, dictator games, experiment, in-group bias, relationships

1 Introduction

Since 2010 the questions of whether and how social class and status affect prosocial behavior has attracted increasing attention in sociology and social psychology (cf. Piff et al. 2010; Piff et al. 2012; Liebe/Tutić 2010; Liebe et al. 2017). Empirical research on such diverse fields as educational attainment (e.g. Collins 1979; Bourdieu/Passeron 1977), cultural consumption (e.g. Bourdieu 1984; DiMaggio/Useem 1978), and collective action (e.g. Simpson et al., 2012; Kumru/Vesterlund 2010) provides plenty of evidence for both cooperative as well

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as conflictual forms of behavior among members of different social strata. Still, these insights from applied research do not tackle the more fundamental questions regarding the *status-prosociality nexus*: Are high-status actors more or less prosocial and ethical than low-status actors? Do social strata show an in-group bias, i.e., do they act more prosocial towards themselves than towards other social strata? To what extent do prosocial forms of behavior among different social strata stem from altruistic concerns for the welfare of others? Considering the tradition of Marxian conflict sociology with its emphasis on conflictual collective action based on class consciousness and class-based solidarity, gaining insights into the nexus between status groups and prosocial behavior across groups seems vital for a better understanding of the conditions of social order and integration. Also, the question of whether solidarity is restricted within social strata or stretches across the dividing lines of social stratification is highly relevant for many problems in policy making and institutional design. For instance, when implementing forced contributions (e.g. taxation) as part of funding schemes for welfare policies, the possibility of crowding-out voluntary contributions by high-status actors must be taken into account. Whether or not such crowding-out is likely to occur, depends to a considerable extent on the high-status actors' kind of prosocial motives towards low-status actors (cf. Andreoni 1990).

In this paper, we study prosocial behavior among two groups, whose relationship is often described in conflictual and even antagonistic terms: Host-country citizens and asylum seekers. Given our interest in the effects of social class and status on prosociality, it might seem bewildering at first that we focus on citizenship status in this study. However, it has to be kept in mind that citizenship status, a qualitative status variable (Jasso 2001), in fact correlates with classic dimensions of socioeconomic status, resulting in a status-related ordering. That is, on average asylum seekers are less educated than host-country citizens, have no or lower incomes, and lack occupation or face considerable problems getting more prestigious jobs (cf. Hinte et al. 2015). Hence, citizenship status indeed induces a status hierarchy, in which host-country citizens are on the top and asylum seekers on the bottom. In this study, we focus on a particular form of prosocial behavior—altruistic giving. We conducted dictator games, in which one actor, the so-called dictator, is endowed with 10 CHF and has to decide how to allocate this money between herself and a varying number of other actors, called the recipients. The study was conducted in a Swiss city and both host-country citizens as well as asylum seekers acted as dictators and recipients.

Our core findings are as follows: Host-country citizens donate significantly more than asylum seekers to both types of recipients. Asylum seekers obtain significantly higher donations than host-country citizens from both types of dictators. The latter finding implicates that we do not find any evidence for an in-

group bias among social strata. Since the average amount of donations does only marginally increase with the number of recipients, these donations seem not so much motivated by altruistic concerns for the welfare of others. Instead, donations can be considered as purchases of moral satisfaction ("warm glow of giving", Andreoni 1990; Kahneman/Knetsch 1992).

These empirical observations are highly informative for a recent literature which studies the status-prosociality nexus by using diverse measures of social class and status as well as incentivized and direct measures of prosocial behavior adapted from behavioral economics (cf. Piff et al. 2010; Piff et al. 2012; Liebe/Tutić 2010; Liebe et al. 2017). By now, this literature is plagued by conflicting findings regarding the very basic question of whether high-status actors act more or less prosocial than low-status actors. While Piff and colleagues argue on theoretical grounds and provide evidence for the hypothesis that high-status actors are less prosocial and less ethical than low-status actors, Liebe and colleagues take the contradicting stance. Our results strengthen the arguments by Liebe and colleagues, who found similar patterns of the effects of social status on prosociality in schools (Liebe/Tutić 2010) and hospitals (Liebe et al. 2017). In addition, the fact that the current study varies the number of recipients allows to make inferences regarding the kind of prosocial motivations underlying donations in the dictator game. If high-status actors are primarily concerned with the welfare of low-status actors, they should donate considerable more when faced with two or three instead of one recipient. However, as Kahneman and Knetsch (1992) as well as Andreoni (1990) have argued, actors might as well behave prosocially, because the very *act* of helping the good cause is rewarding per se.[1] From this point of view donations in the dictator game, especially from high-status to low-status actors, are considered as purchases of moral satisfaction (Kahneman/Knetsch 1992), i.e. instances of warm glow giving (Andreoni 1990). In contrast to donations motivated by purely altruistic concerns for the welfare of recipients, warm glow giving should be much less sensitive to the number of recipients. Since we find only marginal effects of the number of recipients, our results indicate that donations from host-country citizens to asylum seekers can be considered as purchases of moral satisfaction. This interpretation is also backed by additional findings, which show that an attitudinal measure of warm glow giving contained

1 Similar arguments can be found in several works: "a donor might be more interested in the goodwill a charitable act can gain for himself than the benefits it might bring to others" (Schwartz 1970, 1264); "[…], which I will label 'participation altruism', our sample individual (Smith) gains utility from giving resources away for the benefit of others. He has a taste for participation in social acts." (Margolis 1982, 21); "[i]f altruists receive utility from the act of transferring as well […]" (Roberts 1984, 147).

in a questionnaire, which was administered to our subjects, affected donations from host-country citizens to asylum seekers but had no effect on other types of donations.

The remainder of this paper is organized as follows: *Section 2* provides theoretical arguments linking class and status to prosociality, dwells on altruistic versus warm glow giving, and states testable hypotheses. In *section 3*, our empirical procedure and variables are described. *Section 4* contains our empirical observations and statistical analyses. *Section 5* concludes and suggests directions for future research.

2 Theory

To give a systematic account of the theoretical arguments regarding the impact of social class and status on prosociality, it is useful to make recourse on the wide version of Rational Choice Theory (cf. Opp 1999; Esser 1993; Hedström 2005). This action-theoretic approach explains individual and social behavior in terms of preferences, beliefs, and restrictions (or desires, beliefs, and opportunities). Against this background, differences in prosocial behavior among status groups stem from differences in these primitive variables.

Indeed, the various theoretical arguments invoked in the literature on the status-prosociality nexus can be captured along these lines. Liebe and Tutić (2010) as well as Liebe et al. (2017) focus on restrictions. According to their argument, high-status actors generally control more resources and in particular material resources than low-status actors. According to standard microeconomic consumption theory, the demand for some good increases in income, as long as the good under consideration is not an inferior good. Assuming some form of prosocial preferences, we should, ceteris paribus, expect high-status actors to act more prosocial than low-status actors.

Hypothesis 1 (Income Effect): *High-status dictators donate more than low-status dictators in the dictator game*.

Piff et al. (2010) and Piff et al. (2012) draw on social-psychological research on contextualism (Kraus et al. 2009; Kraus/Keltner 2009) in developing a somewhat more involved theoretical argument. According to their reasoning, status correlates with restrictions which in turn affect preferences. That is, because low-status actors control less resources than high-status actors, they are more dependent on others and hence more attentive and empathic towards others. Research by Bat-

son (e.g. Batson/Moran 1999) and others (e.g. Eisenberg 2002) has shown that more empathic actors have stronger prosocial preferences.

Hypothesis 2 (Empathy Effect): *Low-status dictators donate more than high-status dictators in the dictator game*.

The theory of social identity (Tajfel/Turner 1986; Tajfel et al. 1971) as well as plenty of empirical research on the in-group bias (e.g. Yamagishi/Mifune 2008; Yamagishi/Kiyonari 2000) suggest another argument which focuses on preferences. That is, actors are intrinsically motivated to maintain a positive identity, which derives, among other things, from their membership in positively evaluated groups. If members of the in-group obtain higher payoffs than members of the out-group, this provides one criterion under which the in-group fares better than the out-group, and hence a source for positive identity. Consequently, actors are motivated to treat members of their in-group better than members of the out-group.

Hypothesis 3 (In-Group Effect): *High-status dictators donate more to high-status recipients than to low-status recipients in the dictator game, and low-status dictators donate more to low-status recipients than to high-status recipients*.

Note that by now all theoretical arguments have focused on differences in restrictions or preferences among status groups and none argued for behavioral effects of differences in beliefs. In fact, there is an elaborated and empirically sound theory that does, i.e., status characteristics theory (Berger et al. 1977). This theory argues that status differentials provide the foundation for performance expectations which in turn affect performance outputs in group tasks. Simpson et al. (2012) argue that this theory applies to collective action problems, and hence to some form of prosocial behavior. However, status characteristics theory does not readily apply to dictator games, because this type of game does not constitute a so-called group task.

To theorize on the effects of the status of the recipient as well as of the number of recipients, we have to take the kind of prosocial preferences into consideration. From the literature on the status-prosociality nexus (cf. Liebe/Tutić 2010) as well as from seminal scholarly work on voluntary contributions to public goods (Andreoni 1990; Kahneman/Knetsch 1992) we adopt the stance that especially two kinds of prosocial motivations are relevant in our context: Altruistic concern for the welfare of others and warm glow giving. Andreoni (1990) explicates the difference among these two kinds of preferences in the context of a public good model as follows: The utility of a purely altruistic actor depends only on the total sum of contributions toward the public good by all actors under consideration. In contrast, the utility of an impurely altruistic actor, who carries some warm glow motivation, also depends on his own contributions towards the public good. The up-

shot is that the giving behavior under the premise of a warm glow motivation is decoupled from the *effectiveness* of giving. Two profiles of contributions toward the public good can be rated differently by an actor, even if the sum of total contributions is identical, just because the actor's own contribution level differs. Some intriguing evidence for warm glow giving comes from a study by Crumpler and Grossman (2008). In this experiment, participants could use parts of their monetary endowment to donate to charity. However, participants were informed about the fact that the experimenters will also donate to charity and any contribution by the participant crowds out dollar-for-dollar giving by the experimenters. In this setup, a pure altruist who does not enjoy the act of giving per se, has no incentive to donate. Still, on average the participants donated 20% of their endowment and approximately 57% of the participants donated a positive amount. Kahneman and Knetsch (1992) argue that warm glow giving can be understood as purchases of moral satisfaction. Hence, the willingness to pay for a public good reflects the extent to which an actor can derive moral satisfaction from her contributions toward this public good.

These ideas regarding prosocial motivations provide testable hypotheses regarding the effects of both the status of the recipient as well as the number of recipients. Regarding the status of the recipient, we argue that both pure altruism as well as warm glow giving suggest that low-status recipients obtain higher donations than high-status recipients.

Hypothesis 4 (Welfare Effect): *Low-status recipients are donated more than high-status recipients in the dictator game*.

However, note that the psychological mechanisms underlying this hypothesis differ, depending on whether the dictator is an altruist or a warm glow giver. With respect to altruism, we argue that low-status actors are in greater need than high-status actors and hence any donation towards them is more *effective* in promoting their welfare. Assuming warm glow giving, the hypothesis follows because giving to those in greater need provides more *moral satisfaction*.

Hence, with respect to the effects of the status of the recipient, both kinds of prosocial preferences under consideration support the same hypothesis. At the same time, the assumptions of altruistic or warm glow motivations for giving lead to divergent conclusions regarding the effects of the number of recipients (see the appendix for a theoretical model which illustrates the implications of pure and impure altruism in the context of dictator game giving).

Hypothesis 5 (Altruism Effect): *Total donations in the dictator game are considerably higher, if the number of recipients increases*.

Hypothesis 6 (Warm Glow Effect): *Total donations in the dictator game are only marginally higher, if the number of recipients increases*.

In our experimental set-up, the number of recipients varied between one and three. If there was more than one recipient, all recipients belonged to the same status group. Irrespective of the number of recipients, the endowment of the dictator was fixed to 10 CHF. Since the main difference between a purely altruistic actor and an actor with a taste for warm glow giving lies in the concern for the *effectiveness* of giving and giving to two or three recipients is de facto two- or three-times as effective as giving to one recipient, we expect purely altruistic dictators to donate considerably more when facing a greater number of recipients. Put differently, we argue that the moral satisfaction of donating a certain amount of money to two or three recipients does not necessarily exceed the moral satisfaction of giving the very same amount to just one recipient (similar to the so-called embedding effect, cf. Kahneman/Knetsch 1992).

3 Experimental Design and Data

In March and April 2017, we conducted paper-and-pencil experiments in an asylum seeker home and as part of a street survey in a large Swiss city. Each participant received an envelope including a block of sheets which gave instructions, the measurement instruments for the dictator game, and a short follow-up questionnaire. Participants filled in the tasks and questionnaire at (high) tables, and anonymity of decision making was realized by using dividers and a self-administered payment instrument.

For the dictator game, participants were informed that they had to make six decisions in which they were asked to allocate 10 CHF between themselves and other persons. Participants were also informed that they could allocate any amount between 0 and 10 CHF and that this would be their decision alone. Moreover, participants were asked to make each of the six decisions independently of the other decisions. It was pointed out that anonymity was guaranteed.

Participants were further informed that they would only receive payoff from one of the six decisions and that the relevant decision would be chosen at random. Using a dice, the participants revealed the decision that was paid out themselves after completing the follow-up survey and they were asked to take out the corresponding money amount from an envelope which contained 10 CHF in coins and was part of their experimental documents. Average payouts amount to 5.73 CHF for asylum seekers and 2.18 CHF for citizens.

To facilitate a better understanding of our measurement instruments, we present an experimental task worded thus:[2]

> You receive 10 CHF. You can allocate these 10 CHF between you and an asylum seeker (e.g. from Eritrea, Afghanistan or Syria). The asylum seeker is accommodated in another city in Switzerland. It is your decision alone.
>
> How do you decide?
> Please enter the amounts of money in the places marked! Use full CHF amounts, that is, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 CHF.
>
> Of 10 CHF
>
> I keep ___ CHF for me
> and give ___ CHF to the asylum seeker.

The variant with three recipients was worded as follows:

> You receive 10 CHF. You can allocate these 10 CHF between you and three asylum seekers (e.g. from Eritrea, Afghanistan or Syria). The asylum seekers are accommodated in another city in Switzerland. It is your decision alone.
>
> How do you decide?
> Please enter the amounts of money in the places marked! Use full CHF amounts, that is, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 CHF.
>
> Of 10 CHF
>
> I keep ___ CHF for me
> and give ___ CHF to the first asylum seeker
> and give ___ CHF to the second asylum seeker
> and give ___ CHF to the third asylum seeker.

We varied the type of recipient and number of recipients. Each participant made one decision for each possible type of recipient—citizen or asylum seeker—and for each of the three variants regarding the number of recipients—one, two, or three recipients. If there was more than one recipient, all recipients were of the same type. Taking case numbers into account we could not use all possible orders of type of recipient and number of recipients. Instead we used 16 orders which were fully randomized. Eight orders started with one recipient, followed by two and

2 Note that the German language allows the usage of neutral words with respect to gender. In the following translation of the experimental tasks, we substitute words referring to females for the gender-neutral, German expressions.

three recipients, but within this setup all orders of type of recipient were randomized. Another eight orders started with three recipients, followed by two recipients and one recipient and within these orders the order of type of recipient was randomized. The asylum seekers received the experimental tasks and questionnaire in German or English; asylum seekers who do not speak one of these languages could not be considered. Further, due to question context, i.e. applicability of questions, and concerns about language skills the follow-up questionnaire for asylum seekers contained less questions than the one for citizens.

Tab. 1: Overview on sample characteristics

	Pooled	Citizen	Asylum Seeker
Sex (1 = women)	0.41	0.52	0.05
	n = 157	n = 120	n = 37
Age in years	38.48 (17.80)	42.69 (17.82)	24.03 (6.76)
	16 – 75	16 – 75	18 – 51
	n = 155	n = 120	n = 35
Education			
Low		0.23	0.33
Medium		0.33	0.34
High		0.44	0.33
		n=121	n=33
Perceived financial situation (0 = very bad, 3 = very good)	1.92 (0.76)	2.01 (0.71)	1.43 (0.87)
	0 – 3	0 – 3	0 – 3
	n = 140	n = 119	n = 21
Subjective social status in Swiss society (1 = lowest status, 10 = highest status)	6.17 (2.27)	6.36 (1.99)	4.67 (3.64)
	1 – 10	1 – 10	1 – 10
	n = 136	n = 121	n = 15

Notes: Education refers to 'low = no to some vocational training', 'medium = high school', and 'high = university' for citizen, and 'low = up to five years of education', 'medium = six to ten years of education', and 'high = more than ten years of education' for asylum seekers. Subjective social status was measured using a modified version of the MacArthur Scale (Adler et al. 2000): 'In our society in Switzerland there are groups at the bottom of society and those who are at the top of society. If you think of yourself: Where would you place yourself on the following scale from 1 (bottom) to 10 (top)?'

Table 1 provides an overview on the sample. We obtained answers by 37 asylum seekers and 120 citizens. Most of the asylum seekers come from Afghanistan, Eritrea, Ethiopia, and Iran. In both samples, we have heterogeneity regarding age and education. However, the sample of asylum seekers comprises almost only

men (35 out of 37). We asked both citizens and asylum seekers questions on their financial situation and perceived status in Swiss society. Confirming the 'objective' status differences between the two groups, we see that citizens perceive their financial situation better than asylum seekers and also place themselves higher in Swiss society. Taking into account the comparatively high item non response regarding perceived financial situation and subjective social status in the sample of asylum seekers, the values for asylum seekers might be overestimated (i.e. bias towards those with better language skills, education, job opportunities, etc.).

In order to shed more light on the motives for giving behavior, the questionnaire for the citizens included items on attitudes towards general warm glow giving—contributions to good causes—and perceived responsibility for such contributions. *Table 2* gives an overview on the items, which were partly adapted from Nunes and Schokkaert (2003), and results of a factor analysis with subsequent varimax rotation. This results in two factors with factor loadings of at least 0.636 and Eigenvalues of 2.176 and 1.673, respectively. The first factor represents a warm glow giving attitude (WGGA) and the second one responsibility denial (RD) as discussed, e.g. by Schwartz and Howard (1980) regarding the moderation of personal norms-behavior relationships. RD refers to causes such as 'others should pay' and 'lack of money' why someone cannot contribute to a good cause. We constructed two additive indices with higher values representing stronger WGGA and RD (if necessary items were recoded). The WGGA has a mean value of 11.65, standard deviation of 3.00, a minimum of 0, maximum of 16; the RD a mean value of 4.37, standard deviation of 2.29, a minimum of 1, maximum of 11. Conbach's alpha values are 0.73 (WGGA) and 0.55 (RD). In the sample of citizens, we find a strong warm glow giving attitude and comparatively low levels of responsibility denial. However, we have sufficient variance in the sample to test whether both constructs affect giving behavior in the experimental tasks.

Tab. 2: Items used to measure warm glow giving attitude and responsibility denial

Items	Strongly/rather agree in %	Warm glow giving attitude, factor loadings	Responsibility denial, factor loadings
There are charitable organizations whose work I am happy to support by making a donation.	82%	0.788	
I have high regard for people who regularly make donations to charities.	78%	0.636	
I like to provide financial support to charitable projects. I will rarely refuse to make a contribution for something like that.	51%	0.686	
Making a donation for charitable causes makes me feel good.	60%	0.787	
As long as those who do have enough money are not donating enough to worthy causes, I don't see why I should give anything.	10%		-0.668
I have enough problems of my own without having to donate money to charitable organizations and projects as well.	9%		-0.645
If I donate money for a 'good cause', that's no big deal. After all, I have an obligation to help other people.	52%		0.772

Note: All items were measured on a five-point response scale (0 = strongly disagree to 5 = strongly agree).

4 Results

4.1 Descriptive and Bivariate Analyses

Figure 1 and 2 give the main results at a descriptive level, separately for dictator games with one, two, and three recipients. These figures depict the average *total* donations, i.e., the donation to the recipient in games with one recipient or the sum of donations to the recipients in games with two or three recipients. As can be seen high-status dictators (citizens) donate on average at least 2 CHF more than low-status dictators (asylum seekers). This is in strong support for Hypothesis 1 (Income Effect) and in strict contrast to Hypothesis 2 (Empathy Effect). All

differences are highly statistically significant.[3] Further, high-status recipients (citizens) receive on average more than 2 CHF less than low-status recipients (asylum seekers). Again, all differences are highly statistically significant. This is in line with Hypothesis 4 (Welfare Effect).[4]

With respect to altruism and warm glow giving, we find that donations increase with the number of recipients. Abstracting away from the type of dictator and recipients, on average one recipient receives 5.34 CHF, two recipients receive 6.11 CHF in total, and three recipients receive 6.33 CHF in total. Clearly, these differences are rather low and with 0.77 CHF more pronounced for comparing games with one and two recipients versus 0.22 CHF for comparing games with two and three recipients. The first difference is highly statistically significant (t-value = 2.013, t-test); the second difference is not significant (t-value = 0.551, t-test). These figures rather support Hypothesis 6 (Warm Glow Effect) and are not in line with Hypothesis 5 (Altruism Effect).

Table 3 helps to answer the question whether individuals donate more to members of their own status group than to out-group members. The results are striking and do not support Hypothesis 3 (In-Group Effect). Independent of the number of recipients, high-status actors (citizens) donate about 3 CHF more to out-group members (asylum seekers) than to in-group members (citizens). These differences are statistically significant (more details in the section on multivariate analysis). While low-status actors (asylum seekers) tend to donate on average more to their in-group (asylum seekers) than to out-group members (citizens), the differences are small in magnitude (maximum of 0.51 CHF for games with one recipient) and statistically non-significant (based on t-test).

3 Bivariate regression models with donations as dependent variable and type of dictator as independent variable (1 = citizen), standard errors were adjusted taking into account that each participant made two decisions. Results are coef. = 2.359, t-value = 5.45, R^2 = 0.087 for games with one recipient; coef. = 2.444, t-value = 5.40, R^2 = 0.093 for games with two recipients; coef. = 2.387, t-value = 4.53, R^2 = 0.093 for games with three recipients.

4 Bivariate regression models with donations as dependent variable and type of recipient as independent variable (1 = citizen), standard errors were adjusted taking into account that each participant made two decisions. Results are coef. = -2.882, t-value = -10.28, R^2 = 0.180 for games with one recipient; coef. = -2.358, t-value = -8.17, R^2 = 0.121 for games with two recipients; coef. = -2.310, t-value = -7.77, R^2 = 0.101 for games with three recipients.

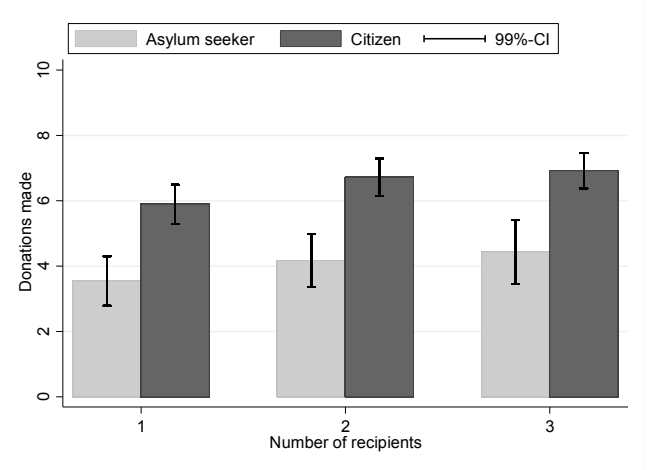

Fig. 1: Average donations per type of dictator and number of recipients

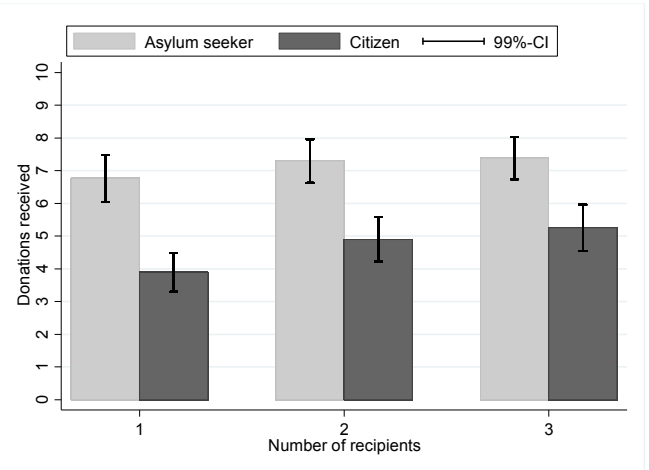

Fig. 2: Average donations per type of recipient and number of recipients

Tab. 3: Average donations between status groups, separately for one, two and three recipients

	One recipient		Two recipients		Three recipients	
Recipient / Dictator	Asylum seeker	Citizen	Asylum seeker	Citizen	Asylum seeker	Citizen
Asylum seeker to ...	3.81 (2.53) 4	3.30 (2.30) 3	4.25 (2.59) 4	4.27 (2.68) 4	4.61 (3.02) 5	4.42 (3.26) 4
Swiss citizen to ...	7.78 (3.03) 10	4.12 (2.94) 5	8.26 (2.63) 10	5.17 (3.39) 6	8.27 (2.40) 9	5.55 (3.35) 6

Note: Reported are mean value, standard deviation, and median.

4.2 Multivariate Analyses

We employ linear multilevel regression models considering status effects, in-group effects and effects of warm glow giving as well as responsibility denial. These models take into account the hierarchical structure of the data. Each participant (level 2) made decisions in six games varying in the status of the recipient and number of recipients (level 1). The first model in *table 4* presents the results of a null or empty model. The Intraclass Correlation Coefficient (ICC) reveals that 42% ($p < 0.001$) of variance are explained at the level of decision makers, supporting the use of a multilevel model.

The second model in *table 4* shows similar to the bivariate analysis above that in games with one recipient participants donate 0.78 CHF less than in games with two recipients, and they donate 0.22 CHF more in games with three recipients than two recipients. The first difference is statistically significant; the second difference is non-significant.

Looking at the third model on status effects in *table 4*, we see that, independent of the number of recipients, high-status actors (citizens) receive with -2.48 CHF significantly less than low-status actors (asylum seekers) but donate with 2.47 CHF significantly more than low-status actors (asylums seekers). This is in support of Hypothesis 1 (Income Effect) and Hypothesis 4 (Welfare Effect). We would like to stress that the status effects are more substantial than the effects of the number of recipients, indicated by higher effect sizes of the status variables and much

lower log-likelihood values in the model including the status variable compared with a model on the number of recipients only.[5]

The fourth model in *table 4* shows that high-status actors (citizens) donate with 2.91 CHF significantly less to other high-status actors (citizens) than to low-status actors (asylum seekers), contradicting Hypothesis 3 (In-group Effect). Further low-status actors (asylum seekers) do not donate significantly more to their own group than to the out group (see the main effect for 'citizen recipient', model 'in-group effects', *table 4*).

With respect to warm glow giving attitude (WGGA) and responsibility denial (RD), the fifth model in *table 4* lends further support to the finding that donations can partly be explained by warm glow giving. Note that this model only uses data on host-country citizens, because the items referring to WGGA and RD were not contained in the asylum seekers' questionnaire. Stronger WGGA do significantly increase donation amounts towards low-status actors (asylum seekers) by 0.22 CHF per unit (see the main effects of WGGA). Yet if the recipient is a high-status actor (citizen) WGGA does almost have no effect. The corresponding interaction effects between type of dictator and WGGA has the same size as the main effect. This might indicate that high-status actors (citizens) are more likely to perceive donations towards low-status actors (asylum seekers) as a good cause, associated with warm glow utility. Yet donations towards other high-status actors (citizens) do not seem to qualify as a good cause and might be motivated by other factors. This interpretation is supported by the findings on RD for contributions to good causes. RD has a negative and statistically significant effect on donations (-0.38 CHF per unit). As indicated by the positive and statistically significant interaction effect, this RD effect tends to be less negative if high-status actors (citizens) are the recipients of donations compared with low-status actors (asylum seekers). In other words: Responsibility denial is more relevant for donations towards low-status actors (asylum seekers) than high-status actors (citizens). This is in line with the WGGA finding that donations towards low-status actors (asylum seekers), but not high-status actors (citizens), are associated with a good cause. Furthermore, similar to previous studies on the dictator game we find that women donate significantly more than men (Engel, 2011).

5 Using McFadden's R^2 as a measure of the explanatory power of a model, we find that the second model, which includes only the number of recipients as independent variables, improves only 0.57 % upon the null model. The third model however, which takes status effects into account, improves in explanatory power upon the second model in the order of 6.24 %.

Tab. 4: Results of multilevel linear regression models

	Null / Empty Model	Number Recipients	Status Effects	In-Group Effects	WGGA / RD
Number of Recipients					
One Recipient (vs. two)		-.777*** (-3.75)	-.768*** (-4.39)	-.776*** (-4.67)	-.846*** (-4.12)
Three recipients (vs. two)		.216 (1.05)	.224 (1.28)	.217 (1.31)	.192 (0.93)
Status Effects					
Citizen Recipient (vs. Asylum Seeker)			-2.477*** (-17.33)	-0.262 (-0.94)	-3.008*** (-17.91)
Citizen Dictator (vs. Asylum Seeker)			2.472*** (5.83)	3.915*** (8.65)	
In-group Effect					
Citizen Recipient X Citizen Dictator				-2.906*** (-9.13)	
Personal Charact.					
Sex (1 = Woman)					.980** (2.47)
WGGA / RD					
Warm Glow Giving Attitude (WGGA)					0.215* (2.52)
Citizen Recipient X WGGA					-.202** (-3.23)
Responsibility Denial (RD)					-.383*** (-3.61)
Citizen Recipient X RD					0.157* (2.01)
Constant	5.921*** (29.64)	6.108*** (26.24)	5.455*** (13.99)	4.363*** (10.75)	9.384*** (10.88)
ICC	0.424*** (11.22)	0.434*** (11.50)	0.474*** (12.71)	0.504*** (13.74)	0.425*** (9.30)
LL	-2,273.292	-2,260.7642	-2,119.1284	-2,079.6258	-1,417.5139
Decisions (subjects)	906 (152)	906 (152)	906 (152)	906 (152)	618 (103)

Note: Reported are results of multilevel linear regression models, maximum likelihood estimation, z-values in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The model including WGGA (warm glow giving attitude, mean centered) and RD (responsibility denial, mean centered) refer to citizen respondents only and also control for respondents' age, education and perceived financial situation.

5 Discussion and Conclusions

Conducting dictator games with varying number of recipients among host-country citizens and asylum seekers, we find that host-country citizens donate significantly more as well as obtain significantly smaller donations than asylum seekers. Further, our study rejects the notion of in-group favoritism among these groups. Finally, considering the very marginal effects of the number of recipients on donations, this research also provides evidence that donations are instances of impure altruism, which are not only motivated by the altruistic concern for the welfare of others, but also by a warm glow of giving.

Regarding the recent literature on the status-prosociality nexus, our study consolidates the findings by Liebe and colleagues (Liebe/Tutić 2010; Liebe et al. 2017), who, using different measures of social status and studying different social contexts such as schools and hospitals, found similar effects of both the status of the dictator as well as the status of the recipient. At the same time, our findings are in stark contrast to Piff and colleagues (Piff et al. 2010; Piff et al. 2012), who report that high-status actors should generally show less prosocial behavior than low-status actors. Among other things, future research on the status-prosociality nexus should make attempts to clarify the underlying reasons for these contradictory observations. Two methodological differences between the studies by Piff and colleagues and our research might be of relevance. First, in many of their empirical studies, Piff and colleagues use subjective measures of social status. While subjective social status is generally highly correlated with objective socioeconomic status, it might as well be systematically biased by other properties of the subjects (for instance: narcissism) which in turn impact prosocial behavior. This potential bias might explain why a per se positive effect of social status on prosociality appears as a negative effect in studies using subjective measures of social status. Another potential reason for the contradictory findings might relate to the fact that Piff and colleagues draw on data from the U.S., whereas this study and the work by Liebe and colleagues observe the behavior of subjects residing in Europe. Since both the attitude towards social stratification as well as prosociality differs between cultural environments, it seems reasonable to assume that cultural aspects might also mediate the effects of social status on prosocial forms of behavior. These considerations strongly suggest to conduct intercultural and comparative studies which use the full range of measurements of social status as well as incentivized and direct measure instruments for diverse forms of prosocial behavior.

Besides tackling the problem of contradictory findings on the status-prosociality nexus, future research should also try to overcome two methodological short-

comings of our study. A limitation regarding the generalizability of our results lies in the fact that only 37 asylum seekers participated. Considering the variance in age, ethnicity, and educational background in our sample of asylum seekers as well as the sheer effect strengths of the status variables, it seems unlikely that our study draws a wrong picture due to selection bias. Yet replicating our findings with a higher number of subjects seems a worthwhile task for future research. Another threat for the generalizability of our results stems from the underrepresentation of females in the group of asylum seekers. Since females make higher donations in the dictator game, this implicates that our estimates regarding the effect of the status of the dictator are somewhat exaggerated. However, our results do not change substantially if we drop all females from both groups from the analyses (see *table A1* in the appendix).

More generally, future studies could investigate to what extent windfall gains (Cherry et al. 2002) and stake sizes (Diekmann 2004) affect status effects in the dictator game. Further, it seems worthwhile to study how social-norm compliance, a desire for prestige, guilt, etc. (Andreoni 1990) affect prosocial behavior and warm-glow giving and how this differs between status groups. Another aspect is the operationalization of social status via citizenship. The question emerges whether the labeling of status groups (i.e. citizen vs. asylum seekers) itself, even if based on real-world categories and differences, influences behavioral outcomes. However, various previous studies carried out in different social contexts obtained similar results to the ones presented here (e.g., Korndörfer et al. 2015), including the lack of consistent in-group effects (e.g., Liebe/Tutić 2010; Liebe et al. 2017). This supports the assumption that differences in socio-economic status and not the mere effects of social-class labeling explain observed patterns in prosociality across status groups.

Next to consolidating previous findings on the status-prosociality nexus, the current research also extends the literature in a significant respect. This study provides some evidence for the consequential claim, that prosocial acts among status groups and in particular prosocial acts from high-status actors towards low-status actors are to a significant degree motivated not so much by altruistic concerns for the welfare of others, but by a warm glow of giving. This claim carries the significant implications that voluntary acts of prosocial behavior tend to be selective and ineffective. The prevalence of impure altruism is that the amount of prosocial behavior should vary according to the degree to which the behavior under question—the good/worthy cause—provides moral satisfaction (Kahneman/Knetsch 1992). For example, it might make a difference for the extent of prosocial behavior (and moral satisfaction) whether asylum seekers, the unemployed, or low-status workers are targets of prosocial behavior. This, in turn, provides a mechanism by which appeals towards idealistic notions and moral agenda setting can influence both

the target and the scope of prosocial behavior. Among other things, this might explain why voluntary donations towards specific causes are quite volatile and seem to depend on the kind and the extent of media coverage (Olson et al. 2003). Next to this selectiveness, voluntary donations tend to be ineffective because impure altruists derive utility from prosocial acts per se, irrespective of the factual consequences of these acts. For example, according to the embedding effect (Kahneman/Knetsch 1992) and in line with our results, the number of beneficiaries or inclusiveness should hardly affect behavioral outcomes. Voluntary contributions might therefore not be substitutes for public contributions aiming to improve the situation of disadvantaged groups in society. This also applies to the complex relationship between aid and immigration across countries, and the integration of immigrants in countries.

Acknowledgment: We would like to thank Sebastian Bahr for his invaluable support in the data collection process for this study. Financial support from the Alexander von Humboldt Foundation ('Feodor Lynen Research Fellowship', Andreas Tutić) is gratefully acknowledged.

References

Adler, N. E./E. S. Epel/G. Castellazzo/J. R. Ickovics (2000), Relationship of Subjective and Objective Social Status with Psychological and Physiological Functioning: Preliminary Data in Healthy, White Women, in: *Health Psychology* 19, 586–592

Andreoni, J. (1990), Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving, in: *Economic Journal* 100, 464–477

Batson, C. D./T. Moran (1999), Empathy-Induced Altruism in a Prisoner's Dilemma, in: *European Journal of Social Psychology* 29, 909–924

Berger, J./M. H. Fisek/R. Z. Norman/Jr. M. Zelditch (1977), *Status Characteristics and Social Interaction: An Expectation-States Approach*, New York

Bourdieu, P. (1984), *Distinction: A Social Critique of the Judgement of Taste*, Cambridge

—/J. C. Passeron (1977), *Reproduction in Education, Culture and Society*, London

Cherry T .L./P. Frykblom/J. F. Shogren (2002), Hardnose the Dictator, in: *American Economic Review* 92, 1218–1221

Collins, R. (1979), *The Credential Society*, New York

Crumpler, H./P. J. Grossman (2008), An Experimental Test of Warm Glow Giving, in: *Journal of Public Economics* 92, 1011–1021

Diekmann, A. (2004), The Power of Reciprocity. Fairness, Reciprocity, and Stakes in Variants of the Dictator Game, in: *Journal of Conflict Resolution* 48, 487–505

DiMaggio, P./M. Useem (1978), Social Class and Arts Consumption: The Origins and Consequences of Class Differences in Exposure to the Arts in America, in: *Theory and Society* 5, 141–161

Engel, C. (2011), Dictator Games: A Meta Study, in: *Experimental Economics* 14, 583–610
Eisenberg, N. (2002), Empathy-Related Emotional Responses, Altruism, and Their Socialization, in: Davidson, J./A. Harrington (eds.), *Visions of Compassion: Western Scientists and Tibetan Buddhists Examine Human Nature*, New York, 131–164
Esser, H. (1993), *Soziologie. Allgemeine Grundlagen*, Frankfurt
Hedström, P. (2005), *Dissecting the Social. On the Principles of Analytical Sociology*, Cambridge
Hinte, H./U. Rinne/K. F. Zimmermann (2015), *Flüchtlinge in Deutschland: Realismus statt Illusionen*, IZA Standpunkte, No. 83
Jasso, G. (2001), Studying Status: An Integrated Framework, in: *American Sociological Review* 66, 96–124
Kahneman, D./J. L. Knetsch (1992), Valuing Public Goods: The Purchase of Moral Satisfaction, in: *Journal of Environmental Economics and Management* 22, 57–90
Korndörfer, M./B. Egloff/C. Schmukle (2015), A Large Scale Test of the Effect of Social Class on Prosocial Behavior, in: *PLOS ONE* 10, e0133193
Kraus, M. W./D. Keltner (2009), Signs of Socioeconomic Status: A Thin-Slicing Approach, in: *Psychological Science* 20, 99–106
—/P. K. Piff/D. Keltner (2009), Social Class, the Sense of Control, and Social Explanation, in: *Journal of Personality and Social Psychology* 97, 992–1004
Kumru, C. S./L. Vesterlund (2010), The Effect of Status on Charitable Giving, in: *Journal of Public Economic Theory* 12, 709–735
Liebe, U./E. Naumann/A. Tutić (2017), Sozialer Status und prosoziales Handeln: Ein Quasi-Experiment im Krankenhaus, in: *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 69, 109–129
—/A. Tutić (2010), Status Groups and Altruistic Behavior in Dictator Games, in: *Rationality and Society* 22, 353–380
Margolis, H. (1982), *Selfishness, Altruism, and Rationality: A Theory of Social Choice*, Chicago
Nunes, P. A. L. D./E. Schokkaert (2003), Identifying the Warm Glow Effect in Contingent Valuation, in: *Journal of Environmental Economics and Management* 45, 231–245
Opp, K.-D. (1999), Contending Conceptions of the Theory of Rational Action, in: *Journal of Theoretical Politics* 11, 171–202
Olson, G. R./N. Carstensen/K. Hoyen (2002), Humanitarian Crises: What Determines the Level of Emergency Assistance?, in: *Disasters* 27, 109–126
Piff, P. K./M. W. Kraus/S. Côté/B. H. Cheng/D. Keltner (2010), Having Less, Giving More: The Influence of Social Class on Prosocial Behavior, in: *Journal of Personality and Social Psychology* 99, 771–784
—/D. M. Stancato/S. Côté/R. Mendoza-Denton/D. Keltner (2012), Higher Social Class Predicts Increased Unethical Behavior, in: *Proceedings of the National Academy of Sciences* 109, 4086–4091
Roberts, R. D. (1984), A Positive Model of Private Charity and Public Transfers, in: *The Journal of Political Economy* 92, 136–148
Schwartz, R. A. (1970), Personal Philanthropic Contributions, in: *The Journal of Political Economy* 78, 1264–1291
Schwartz, S. H./J. A. Howard (1989), Explanations of the Moderating Effect of Responsibility Denial on the Personal Norm-Behavior Relationship, in: *Social Psychology Quarterly* 43, 441–446
Simpson, B./R. Willer/C. L. Ridgeway (2012), Status Hierarchies and the Organization of Collective Action, in: *Sociological Theory* 30, 149–166

Tajfel, H./M. Billig/R. Bundy/C. Flament (1971), Social Categorization in Intergroup Behavior, in: *European Journal of Social Psychology* 1, 149–178

Tajfel, H./J. C. Turner (1986), The Social Identity Theory of Intergroup Behavior, in: Worchel, S./W. G. Austin (eds.), *Psychology of Intergroup Relations*, Chicago, 7–24

Yamagishi, T./T. Kiyonari (2000), The Group as a Container of Generalized Reciprocity, in: *Social Psychology Quarterly* 63, 116–132

—/N. Mifune (2008), Does Shared Group Membership Promote Altruism? Fear, Greed, and Reputation, in: *Rationality and Society* 20, 5–30

Appendix: An elementary model of pure and impure altruism in the context of dictator games

In the following, we develop an elementary model, which illustrates the implications of pure and impure altruism in the context of dictator games. To this end, we assume the following parametric utility function

$$u_D\left(x_D,(x_r)_{r\in R}\right) = ln(x_D) + \alpha\sum_{r\in R} ln(x_r) + \beta I(\sum_{r\in R} x_r - c)$$

in which D denotes the dictator, R denotes the set of recipients, and α as well as β are nonnegative constants, which measure the extent of pure and warm-glow altruism, respectively. $10 \geq c \geq 0$ is a treshold such that the dictator derives moral satisfaction from her donation if and only if the aggregate donations exceed this threshold. I is an indicator function, i.e., $I : R \rightarrow \{0, 1\}$ satisfying $I(y) = 1 \Leftrightarrow y \geq 0$. We use the natural log of material payoffs x_D and x_r for all $r \in R$ to give justice to the common assumption of decreasing marginal utility of money.

Against this background, the notions of pure and impure altruism can be explicated as follows: A pure altruist is an actor, for whom $\alpha > 0$ and $\beta = 0$ hold true. An impure altruist is an actor, whose preferences satisfy $\beta > 0$.

Let us start with the case of pure altruism, i.e. $\beta = 0$. Since $x_D = 10 - \sum_{r\in R} x_r$, the first-order conditions for an interior solution $(x_D, x_r \in (0, 10), \forall r \in R)$ are

$$\frac{\partial u_D\left(x_D,(x_r)_{r\in R}\right)}{\partial x_r} = \frac{-1}{10 - \sum_{r\in R} x_r} + \frac{\alpha}{x_r} = 0, \forall r \in R.$$

It follows immediately that all recipients receive the same monetary amount as a donation. Let $x = x_r = \sum_{r\in R} x_r/n$ for all $r \in R$, in which n denotes the number of recipients. This simplifies the utility function of the dictator,

$$u_D = \ln(10 - nx) + \alpha n ln(x) + \beta I(nx - c).$$

Assuming an interior solution, the first-order condition reads

$$\frac{\partial u_D}{\partial - x} = \frac{-n}{10 - n - x} + \frac{n\alpha}{-x} = 0,$$

which gives the donation to each recipient in equilibrium

$$-x = \frac{10\alpha}{n\alpha + 1}.$$

Hence, the aggregate donation in equilibrium equals

$$n - x = \frac{10\alpha}{\alpha + 1/n},$$

which is strictly positive in the number of recipients

$$\frac{\partial(n - x)}{\partial n} = \frac{10\alpha}{(1 + n\alpha)^2} > 0.$$

That is, assuming pure altruism aggregate donations strictly increase in the number of recipients.

Now, consider $\beta > 0$. Clearly, if $c \leq n - x$ holds true, the dictator donates $-x$ in equilibrium, because the lump-sum utility β from moral satisfaction is secured anyway and hence has no impact on the margin. However, if $c > n - x$ applies, there are two possibilities. If $\beta > u_D\left(10 - n - x, (-x)_{r \in R}\right) - u_D\left(10 - c, (c/n)_{r \in R}\right)$ holds true, the dictator donates c/n to each recipient to secure the lump-sum payoff from moral satisfaction. If the latter inequality does not apply, the lump-sum payoff from moral satisfaction is not worth it and the dictator sticks to $-x$. We conclude: Given that the dictator's pure altruistic motivation is small enough and given that her warm-glow motivation is strong enough, the number of recipients does not affect aggregate donations.

Tab. A1: Results of multilevel linear regression models, only male participants

	Null / Empty Model	Number Recipients	Status Effects	In-Group Effects
Number of Recipients				
One Recipient		-.827***	-.814***	-.825***
(vs. two)		(-3.00)	(-3.36)	(-3.65)
Three recipients		.268	.281	.270
(vs. two)		(0.97)	(1.16)	(1.19)
Status Effects				
Citizen Recipient			-2.287***	-0.297
(vs. Asylum Seeker)			(-11.54)	(-0.98)
Citizen Dictator			1.820***	3.398***
(vs. Asylum Seeker)			(3.64)	(6.35)
In-group Effect				
Citizen Recipient X				-3.174***
Citizen Dictator				(-8.31)
Constant	5.262***	5.448***	5.439***	4.460***
	(20.35)	(17.94)	(12.62)	(10.09)
ICC	0.405***	0.416***	0.453***	0.494***
	(8.31)	(8.54)	(9.37)	(10.40)
LL	-1,387.097	-1,378.691	-1,314.202	-1,282.045
Decisions (subjects)	546 (91)	546 (91)	546 (91)	546 (91)

Note: Reported are results of multilevel linear regression models, maximum likelihood estimation, z-values in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.